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TRAFFIC ENGINEERING • CIVIL ENGINEERING • TRANSPORTATION PLANNING

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## MEMORANDUM

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**To:** Heidi Siegel, AICP  
**From:** Juan Espinosa, PE  
**Date:** November 5, 2019  
**RE:** Point Royale Trip Generation and Access Review - #18158  
**cc:** Graham Penn, Joe Akar

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The purpose of this memo is to document the revised Trip Generation Analysis and DPA's comments to the on-site circulation improvements recommended by KCI on a memo dated October 8, 2019.

### **Trip Generation Analysis**

The previously approved traffic study (dated May 2019) was based on a development program consisting of 236 residential units. The project is now proposing a development program consisting of 199 residential units. An updated trip generation analysis was conducted for the new development program using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. Other factors used in the analysis such as internalization, mode of transportation and pass-by are consistent with the previously approved traffic study. The revised trip generation analysis shows that the new development program will generate 12 less trips during the AM peak hour and 4 less trips during the PM peak hour when compared with the approved traffic study. Therefore, all conclusions of the approved traffic study will remain the same. Detailed trip generation calculations are provided in Attachment A.

### **On-site Circulation**

DPA reviewed the on-site circulation improvements provided by KCI in a memo dated October 8, 2019 (see Attachment B). Below are our comments on the recommendations.

**1. Right-turn only for apartments at US-1.**

*DPA – We agree with this recommendation.*

**2. No-Left-Turn allowed off main apartment egress drive to internal circulation.**

*DPA – We agree with this recommendation.*

**3. Introduce a physical concrete, raised curb and landscaped barrier between north end of main shopping center frontage drive and apartment access corridor.**

*DPA – This alternative was discussed with the shopping center owners and they expressed concerns with this concept preventing truck access to the loading area. However, the project developed an alternative to minimize residential traffic from using the main shopping center frontage drive. To achieve this, the entrance to the parking garage was relocated to the north side of the building. Residents leaving the parking garage will circulate in front of the building and be forced to make a right turn onto the existing internal northern east-west corridor connecting the proposed apartments with US-1. This will be accomplished with a “pork chop” with a raised mountable curb and a “Right Turn Only” sign. Attachment C shows the proposed configuration.*

**4. Introduce (install) additional pedestrian crosswalks.**

*DPA – We agree with this recommendation.*

**5. Install pedestrian zone striping along frontage of Winn-Dixie Supermarket.**

*DPA – We agree with this recommendation.*

**6. Reinstate continuous fire lane along main frontage drive.**

*DPA – We agree with this recommendation.*

**7. Introduce (install) Stop and Pedestrian Crossing signs at selected points along main shopping center frontage drive.**

*DPA – We agree with this recommendation.*

**8. Install Stop signs along Internal North-South Collector.**

*DPA – We agree with this recommendation. The developer will coordinate with Town staff to determine the location of the stop signs.*

**9. Install Speed Humps.**

*DPA – We agree with this recommendation. The developer will coordinate with Town staff to determine the location of the speed humps.*

# **Attachment A**

## **Trip Generation Information**

## Point Royale Apartments New Development Program

Proposed ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily (Mid-Rise) <i>Land Use Code: 221</i>	199 DU	1,082	17	50	67	52	33	85
Existing Shopping Center to Remain <i>Land Use Code: 820</i>	258,362 SF	11,464	151	92	243	527	570	1,097
<b>Total Gross Trips</b>		<b>12,546</b>	<b>168</b>	<b>142</b>	<b>310</b>	<b>579</b>	<b>603</b>	<b>1,182</b>
Internalization (AM, PM) <sup>2</sup>	0.6%	6.4%	-1	-1	-2	-38	-38	-76
Other Modes of Transportation <sup>3</sup>		-6.1%	-10	-9	-19	-33	-34	-67
Pass-by Retail <sup>2</sup>		-34%	-39	-39	-78	-169	-169	-338
<b>Net Existing Trips</b>			<b>118</b>	<b>93</b>	<b>211</b>	<b>339</b>	<b>362</b>	<b>701</b>

<sup>1</sup> Based on ITE Trip Generation Manual, 10<sup>th</sup> Edition<sup>2</sup> Based on ITE Trip Generation Manual User's Guide and Handbook, Third Edition<sup>3</sup> Based on data published by the US Census Bureau for zip code 33157

## Approved Development Program

Approved ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily (Mid-Rise) <i>Land Use Code: 221</i>	236 DU	1,284	21	59	80	62	39	101
Existing Shopping Center to Remain <i>Land Use Code: 820</i>	258,362 SF	11,464	151	92	243	527	570	1,097
<b>Total Gross Trips</b>		<b>12,748</b>	<b>172</b>	<b>151</b>	<b>323</b>	<b>589</b>	<b>609</b>	<b>1,198</b>
Internalization (AM, PM) <sup>2</sup>	0.6%	7.5%	-1	-1	-2	-45	-45	-90
Other Modes of Transportation <sup>3</sup>		-6.1%	-10	-10	-20	-33	-34	-67
Pass-by Retail <sup>2</sup>		-34%	-39	-39	-78	-168	-168	-336
<b>Net Proposed Trips</b>			<b>122</b>	<b>101</b>	<b>223</b>	<b>343</b>	<b>362</b>	<b>705</b>

<sup>1</sup> Based on ITE Trip Generation Manual, 10<sup>th</sup> Edition<sup>2</sup> Based on ITE Trip Generation Manual User's Guide and Handbook, Third Edition<sup>3</sup> Based on data published by the US Census Bureau for zip code 33157

## AM Peak Hour Trip Generation and Internalization

### *New Development Program Point Royale Apartments*

Multifamily (Mid-Rise) Land Use 221 199 DU		Existing Shopping Center to Remain Land Use 820 258,362 SF		
In	Out	In	Out	
17	50	151	92	310 ITE Trips
<b>UNBALANCED INTERNALIZATION</b>				
<div> <div>1%</div> <div>1</div> <div>2%</div> <div>0</div> </div>		1	<div> <div>17%</div> <div>26</div> <div>14%</div> <div>13</div> </div>	
		0		
Multifamily (Mid-Rise)		Existing Shopping Center to Remain		
In	Out	In	Out	
17	50	151	92	310 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
<div> <div>-1</div> <div>0</div> </div>		-1	<div> <div>-1</div> <div>0</div> </div>	
0	-1	-1	0	-2 Internal
17	49	150	92	308 External Trips
	1.5%		0.4%	0.6% % Internal
-1	-3	-9	-6	-19 6.1% Transit/Pedestrian
16	46	141	86	289 External Vehicle Trips
		-39	-39	-78 34.0% % Pass-by (Retail)
16	46	102	47	211 Net New External Trips

## PM Peak Hour Trip Generation and Internalization

*New Development Program Point Royale Apartments*

Multifamily (Mid-Rise)			Existing Shopping Center to Remain		
Land Use 221 199 DU			Land Use 820 258,362 SF		
In	Out		In	Out	
52	33		527	570	1,182 ITE Trips
UNBALANCED INTERNALIZATION					
42%			10%		
14	14		53		
46%			26%		
24	24		148		
Multifamily (Mid-Rise)			Existing Shopping Center to Remain		
In	Out		In	Out	
52	33		527	570	1,182 Vehicle Trips
BALANCED INTERNALIZATION					
-14			-14		
-24			-24		
-24	-14		-14	-24	-76 Internal
28	19		513	546	1,106 External Trips
	44.7%			3.5%	6.4% % Internal
-2	-1		-31	-33	-67 6.1% Transit/Pedestrian
26	18		482	513	1,039 External Vehicle Trips
			-169	-169	-338 34.0% % Passby (Retail)
26	18		313	344	701 Net New External Trips

**Scenario - 4**

Scenario Name: New Proposed Dev Program Oct 2019

User Group:

Dev. phase: 1

No. of Years  
to Project 0

Analyst Note:

Warning: The time periods among the land uses do not appear to match.

**VEHICLE TRIPS**

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
221 - Multifamily Housing (Mid-Rise)	General	Dwelling Units	199	Weekday	Best Fit (LIN)	541	541	1082
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				$T = 5.45(X) + -1.75$	50%	50%	
820 - Shopping Center	General	1000 Sq. Ft. GLA	258.36	Weekday	Best Fit (LOG)	5732	5732	11464
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				$\ln(T) = 0.68\ln(X) + 5.57$	50%	50%	
221(1) - Multifamily Housing (Mid-Rise)	General	Dwelling Units	199	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)	17	50	67
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				$\ln(T) = 0.98\ln(X) + -0.98$	26%	74%	
820(2) - Shopping Center	General	1000 Sq. Ft. GLA	258.36	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	151	92	243
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				0.94	62%	38%	
221(2) - Multifamily Housing (Mid-Rise)	General	Dwelling Units	199	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	52	33	85
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				$\ln(T) = 0.96\ln(X) + -0.63$	61%	39%	
820(1) - Shopping Center	General	1000 Sq. Ft. GLA	258.36	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	527	570	1097
Data Source: Trip Generation Manual, 10th Ed	Urban/Suburban				$\ln(T) = 0.74\ln(X) + 2.89$	48%	52%	

# **Attachment B**

## KCI Memorandum





**DATE:** October 8, 2019

**TO:** Heidi Siegel, AICP, Planning Practice Leader

**FROM:** José L. Rodríguez, P. E., Project Engineer

**SUBJECT:** Point Royale Traffic and Pedestrian Circulation Assessment

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This memo presents a number of ideas developed to address potential vehicular circulation for the proposed Point Royale Apartments at Point Royale Shopping Center in Cutler Bay, Florida.

**1. Right-turn only for apartments at US-1**

**ALL** apartment and non-apartment traffic at the north access driveway at US-1 have to turn right.

**2. No-Left-Turn allowed off main apartment egress drive to internal circulation drive (West Internal Collector Drive)**

The objective of this action is to restrict outbound apartment traffic from accessing the shopping center via the west internal collector drive. The restriction would be located at the four-way leg intersection adjacent to Panera and MD Urgent Care Now. A No Left Turn sign is installed on the westbound approach of the intersection, facing exiting vehicles. Note: The westbound traffic on the drive will include not only apartment traffic but also traffic from the east service road, traffic from the retail outparcel north of the north access drive (e.g. Armed Forces, Bijou Hair and Wigs, Sonic Sounds among others), and traffic from the retail stores/offices on the northern end of the main shopping center building (Sneaker Town, Pizza Hut, Ground Zero, College of Business and Technology, and others.) This latter area also has 15 retail parking spaces.

**3. Introduce a physical concrete, raised curb and landscaped barrier between north end of main shopping center frontage drive and apartment access corridor.**

The objective of this action is to segregate as much as possible the apartment traffic from the main shopping center traffic along the frontage of the center's main buildings. Access to and from the proposed apartments would be oriented along the existing internal northern east-west corridor connecting the proposed apartments with US-1. This action is expected to avoid an increase in non-shopping center traffic along the center's main frontage and enhance pedestrian safety.

The action would consist of installing a raised curb concrete separator at the north end of the shopping center's main frontage road, closing off the existing access to the main north access drive between the apartment site and US-1. The separator would redirect

northbound frontage drive traffic to the northernmost west-east parking aisle towards the west internal collector drive (Note: This is the internal north-south collector which extends from the north access driveway at Panera south to the access driveway at TD Bank/Chipotle.) The northernmost west-east parking aisle would serve to direct traffic off the west internal collector to the center's main frontage drive.

The primary impacts of this action include:

1. Partially segregates vehicular traffic of both the shopping center and the proposed apartments.
2. Maintains access to the stores and offices in the northernmost area of the shopping center including those on the north end of the main center building;
3. Maintains vehicular access to and from the shopping center's rear service corridor; and
4. Provides for a more defined and accessible pedestrian corridor.

#### **4. Introduce (install) additional pedestrian crosswalks**

These additional crosswalks will help enhance pedestrian safety between the stores and the parking aisles. The marked crossings serve to visually warn motorists of the pedestrians and help to maintain low speeds along the frontage drive.

#### **5. Install pedestrian zone striping along frontage of Winn-Dixie Supermarket**

This action would create a highly visible 250-300 foot long pedestrian crossing zone in front of the Winn-Dixie. This action will help enhance pedestrian safety and help maintain low vehicular speeds without the need of "speed humps".

#### **6. Reinstate continuous fire lane along main frontage drive**

This action is required by code.

#### **7. Introduce (install) Stop and Pedestrian Crossing signs at selected points along main shopping center frontage drive**

Stop signs are applied in conjunction with some of the pedestrian crossings, again to enhance pedestrian safety and maintain low speeds along the frontage drive. Care must be taken so as to not install more than necessary.

#### **8. Stop signs along Internal North-South Collector**

Final locations to be coordinated between applicant and staff.

#### **9. Speed Humps**

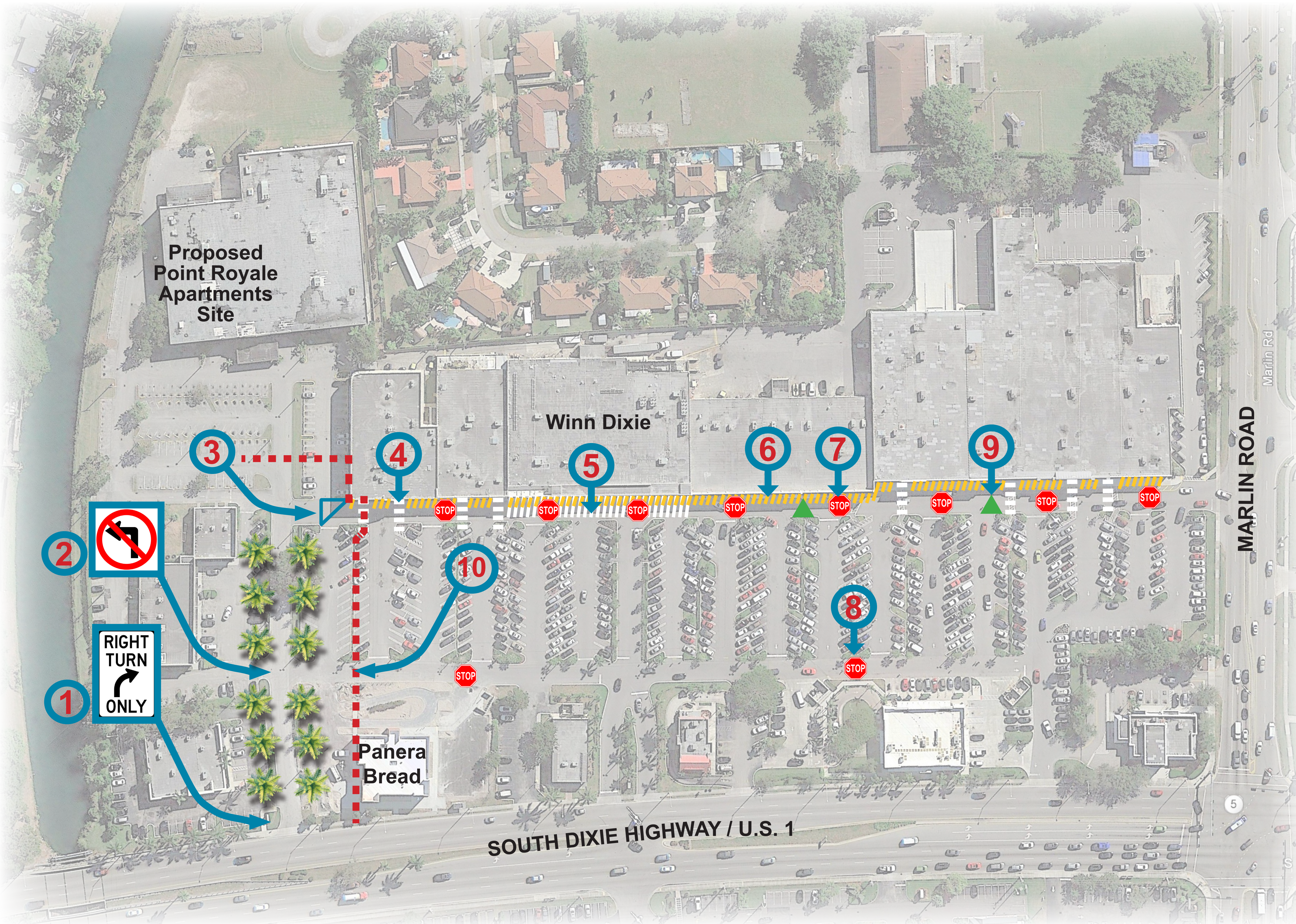
Final locations to be coordinated between applicant and staff.

#### **10. Pedestrian circulation to U.S. 1 / S. Dixie Highway**

Refer to Sheet A0.05 in proposed plans.



# SUGGESTED POINT ROYALE CIRCULATION



## LEGEND



1. Right turn only from apartment drive aisle onto US-1



2. No Left Turn from Apartment Egress at Panera Bread



3. Introduce concrete / landscape barrier between Shopping center and apartment



4. Introduce Crosswalks



5. Create pedestrian zone striping in front of all of Winn Dixie



6. Re-instate fire lane striping



7. Stop and Pedestrian Crossing signs are needed along the drive aisle closest to shopping center



8. Stop Signs along internal North-South Collector



9. Speed Humps



10. Pedestrian Circulation to U.S. 1



# **Attachment C**

## **New Access Configuration**

# Point Royale Apartments

ROBERT K. MORISETTE, AIA, NCARB, LEED AP BD+C, CDP  
FLORIDA REGISTERED ARCHITECT # AR 93259

Rev. 1 10/31/2019

# PEDESTRIAN WALKWAY & VEHICLE ACCESS TO U.S.1

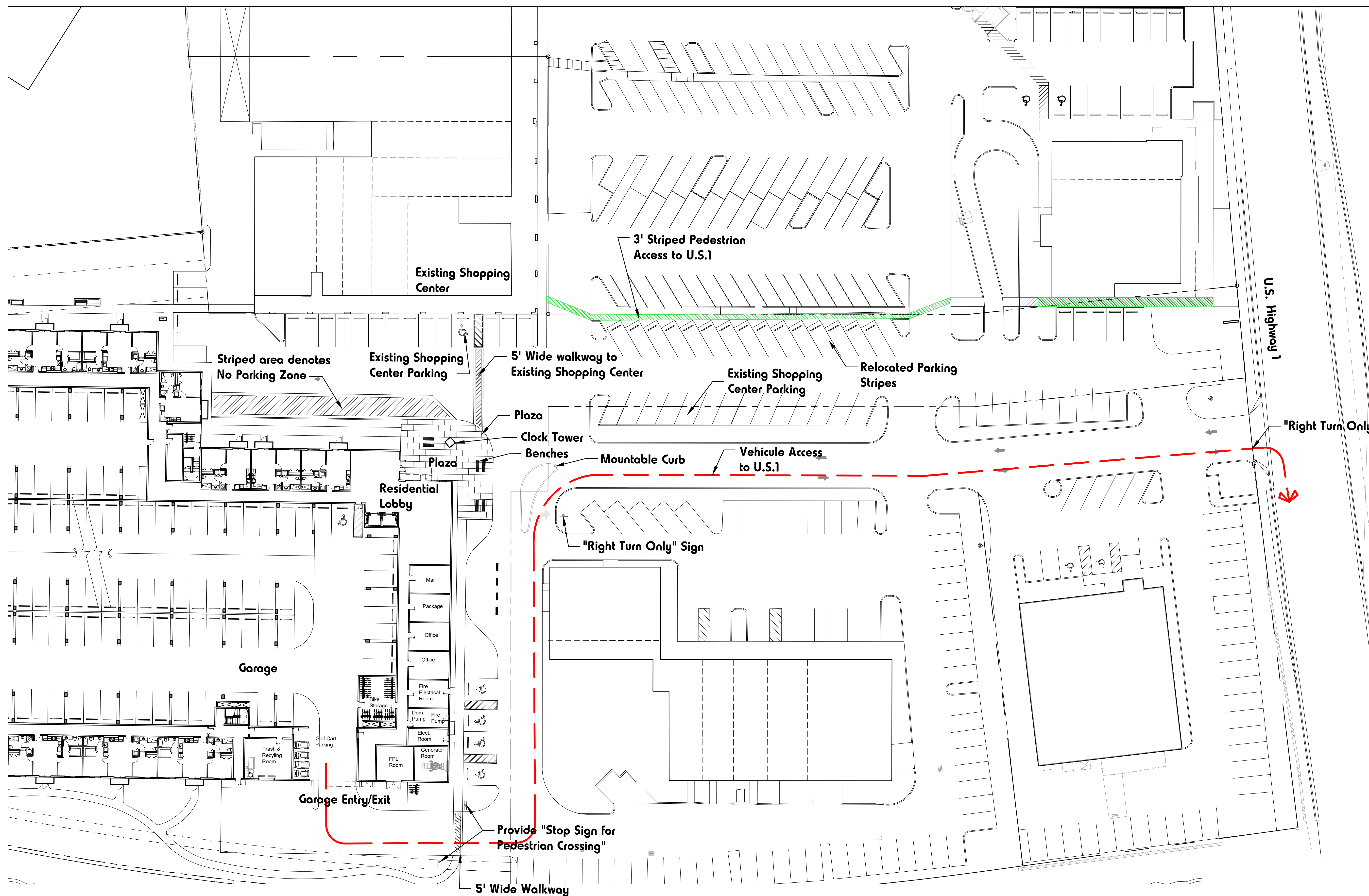
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As Shown	10/25/2019
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## Site Plan Review

# A0.05



### **Pedestrian Walkway & Vehicule access to U.S.1**

**NOTE:  
SEE SHEET A0.09 FOR  
SHOPPING CENTER  
VEHICLE CIRCULATION**