

Memorandum

To: Mr. Eddie Avila
Agave Ponce, LLC

From: John McWilliams, P.E. 

Date: May 27, 2015
Revised May 28, 2015

Subj: Mediterranean Village – Coral Gables, Florida
Responses to Outstanding Transportation/Parking Items

The purpose of this memorandum is to provide updates/responses addressing outstanding transportation/parking related items identified by City Planning and Zoning staff the week of May 18, 2015. Note that this memorandum serves as a follow up the supplemental information provided to City staff on the traffic impact study, valet operations study, and shared parking study dated May 18, 2015. The following summarizes updates/responses to these outstanding items:

1. Miami-Dade County Coordination on Proposed Traffic Flow Modifications

A second meeting was held with Miami-Dade County Traffic Engineering staff on April 14, 2015 with members of the City Public Works staff and the City's traffic review consultant present to discuss the proposed development along with the traffic flow modifications along the adjacent City roadways. At that meeting, Miami-Dade County reiterated their willingness to continue to work with the development team and the City on the appropriate improvements within the adjacent neighborhoods. An email summary of that meeting was sent to all attendees on April 24, 2015. The development team is committed to continuing the dialogue with both County and City staff and will revised the streetscape plan/traffic studies as needed if the proposed traffic calming measures currently planned are not approved by Miami-Dade County.

2. Eastbound Palermo Avenue Valet Station Relocation

Staff has indicated a desire to relocate the eastbound valet drop-off station along Palermo Avenue to the east away from the Arts Center. In response to this request, the valet station has been moved as far east as feasible while maintaining the same number of valet service positions. Refer to Attachment A.

3. Parking Garage North-South Connector Bridges Traffic Flow Operations

Staff has indicated that the proposed two-way operation of the 15' wide north-south parking garage connecting bridges east of the Capote residence is not acceptable. Although two-way operation of these bridges is desirable, the revised plan proposes to operate these connectors as one-way facilities alternating the direction of flow on each floor (Floors 3-7). Wayfinding signage will be developed to direct patrons to the appropriate crossing locations for each direction of travel. Refer to Attachment B.

4. Hotel Special Event Valet/Self-Park Operations Plan

It is our understanding that staff has concerns regarding the parking operations (valet and self-park) during a special event at the hotel's ballroom facility. The current hotel valet operations plan proposed that all valet drop-off/pick-up activity occur at the main hotel roundabout via Malaga Avenue. Valet vehicles would then enter/exit the lower floors of the parking garage via the parking helix located along the same access driveway mixing with self-parking vehicles visiting the project.

In order to facilitate the peak volumes associated with an event at the hotel, operational and site plan modifications can be implemented to separate valet vehicles from self-parking patrons as they enter the parking helix. The revised site plan includes the construction of a direct access ramp from the hotel along the northern edge of the current helix design to/from the lower parking levels. This one-way, reversible, valet-only ramp would supplement the existing hotel helix. During peak arrival times, the ramp would operate as a one-way downward ramp while operating as an upward ramp during peak departure times. In addition, a lower level valet stand can also be provided during hotel events. Refer to Attachment C for additional details.

5. Traffic Signal Warrant Analysis at SW 37th Avenue/Douglas Road/Coconut Grove Drive

At the request of both Miami-Dade County's Traffic Engineering Division and the City's Public Works Department, the developer will perform a traffic signal warrant analysis at the intersection of SW 37th Avenue/Douglas Road and Coconut Grove Drive. It is assumed that City staff will direct the developer as to the timing of performing the analysis (pre- or post- development).

6. Roadway Improvements at Ponce De Leon Boulevard/Malaga Avenue/University Drive

At the request of both Miami-Dade County's Traffic Engineering Division and the City Public Works Department, Kimley-Horn proposed roadway geometric improvements to eliminate the existing east-west traffic signal split phasing operation at the intersection of Ponce De Leon Boulevard and Malaga Avenue/University Drive. These improvements included the construction of an additional eastbound left-turn lane to provide for three (3) eastbound approach lanes and the construction of an additional westbound left-turn lane to provide for two (2) westbound approach lanes. This option required the elimination of portions of on-street parking on both sides of the intersection.

City Planning and Zoning staff indicated that the construction of additional approach lanes and elimination of proposed/existing on-street parking is not desirable. Therefore, the intersection was examined again to determine the minimum improvements needed to eliminate the east-west split signal phasing. It was determined that the elimination of the eastbound left-turn movement from the outside (southernmost) lane would allow for the elimination of the split phase signal operation and would require roadway widening.

In summary, the following options were identified that would allow for the elimination of the existing east-west split phasing while providing for an overall intersection level of service of LOS E or better:

- Option 1 – Construction of an additional eastbound and westbound approach lane and to eliminate portions of on-street parking. Operational analysis results of this option were presented in our traffic impact analysis update memorandum dated May 17, 2015.
- Option 2 – Reconfiguration of the existing eastbound approach to provide for an exclusive left-turn lane and a shared through/right-turn lane. This option would not require roadway widening or the removal of existing/proposed on-street parking. The operational analysis results for this option are included in Attachment D.

Note that the intersection is expected to operation at LOS E or better with the east-west split signal phasing after the construction of the project as summarized in our May 17, 2015 memorandum. Therefore, it should be noted that any improvement at the intersection would be voluntary and not required to meet acceptable intersection LOS standards.

It should also be noted that the elimination of the existing southbound right-turn connector roadway from Ponce De Leon Boulevard to University Drive as recommended by City Public Works staff is not necessary to meet LOS standards. Therefore, this modification is considered optional and is no longer part of the project's proposed program of traffic improvements.

Further comment from City staff received on May 28, 2015 indicates a concern on the potential of westbound queues along Malaga Avenue extending east blocking the proposed project driveway which is located approximately 140 feet east of Ponce De Leon Boulevard. Note that, in the event that queues block entry at this location, supplemental parking garage entries are provided along Sevilla and Palermo Avenues. Hotel patrons can also utilize a proposed event valet stand within the lower parking levels from the additional garage access points and self-parkers can access the hotel directly from certain self-parking levels. Note that implementation of an additional westbound approach lane at the intersection of Malaga Avenue and Ponce De Leon Boulevard by eliminating a portion of on-street parking would provide additional queue storage at this location.

7. Galiano Street Bicycle Friendly Design

City staff has requested that Galiano Street be design to encourage cyclist use. The developer is committed to designing and constructing Galiano Street/Malaga Avenue on the perimeter of the site consistent with bicycle-friendly features including, but not limited, to signing and pavement markings. Refer to Attachment E.

In summary, this memorandum provides additional information/responses to outstanding traffic and parking issues identified and provided by City staff. We trust that this memorandum satisfactorily addresses these concerns. Please let us know if we can be of further assistance.

Attachments

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ATTACHMENT A:
RELOCATED EASTBOUND VALET STAND ON
PALERMO AVENUE

ATTACHMENT B:
REVISED GARAGE CIRCULATION
PLANS FOR UPPER NORTH-SOUTH
CONNECTOR BRIDGES

ATTACHMENT C:
HOTEL SPECIAL EVENT VALET
OPERATIONAL PLAN OPTIONS

ATTACHMENT D:
SUPPLEMENTAL INTERSECTION ANALYSIS
PONCE DE LEON BOULEVARD AT
MALAGA AVE/UNIVERSITY DRIVE

Timings

Future Total, Non-Restrictive, Proposed Geometry

13: Ponce De Leon Boulevard & Malaga Avenue

PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	156	114	165	168	55	533	14	62	594
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8		4		6			2
Permitted Phases	8		4		6		2	2	
Detector Phase	3	8	4	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	4.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	8.0	28.0	12.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	8.0	44.0	36.0	36.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.9%	48.9%	40.0%	40.0%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0		0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0		5.0		4.3			4.3
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90

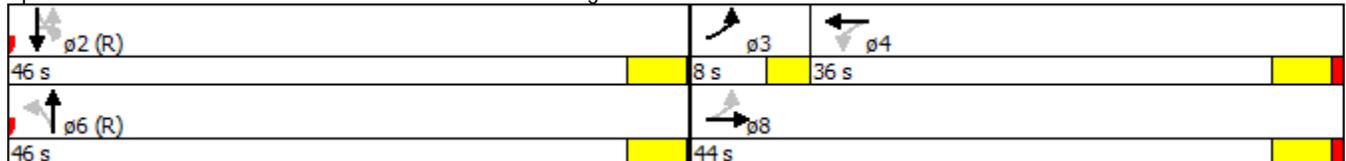
Actuated Cycle Length: 90

Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue



HCM Signalized Intersection Capacity Analysis - Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT		
Lane Configurations														
Volume (vph)	156	114	18	165	168	123	55	533	187	14	62	594		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	3.0	5.0			5.0			4.3				4.3		
Lane Util. Factor	1.00	1.00			1.00			0.95				0.95		
Frbp, ped/bikes	1.00	1.00			1.00			0.99				0.99		
Flpb, ped/bikes	1.00	1.00			0.99			1.00				1.00		
Frt	1.00	0.98			0.96			0.96				0.95		
Flt Protected	0.95	1.00			0.98			1.00				1.00		
Satd. Flow (prot)	1770	1816			1751			3370				3318		
Flt Permitted	0.42	1.00			0.82			0.72				0.75		
Satd. Flow (perm)	778	1816			1466			2437				2503		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94		
Adj. Flow (vph)	166	121	19	176	179	131	59	567	199	15	66	632		
RTOR Reduction (vph)	0	6	0	0	15	0	0	34	0	0	0	70		
Lane Group Flow (vph)	166	134	0	0	471	0	0	791	0	0	0	998		
Confl. Peds. (#/hr)			20	20			7		14		14			
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	Perm	NA		
Protected Phases	3	8			4			6				2		
Permitted Phases	8			4			6			2	2			
Actuated Green, G (s)	39.6	39.6			30.6			41.1				41.1		
Effective Green, g (s)	39.6	39.6			30.6			41.1				41.1		
Actuated g/C Ratio	0.44	0.44			0.34			0.46				0.46		
Clearance Time (s)	3.0	5.0			5.0			4.3				4.3		
Vehicle Extension (s)	3.0	2.5			2.5			1.0				1.0		
Lane Grp Cap (vph)	408	799			498			1112				1143		
v/s Ratio Prot	c0.03	0.07												
v/s Ratio Perm	0.15				c0.32			0.32				c0.40		
v/c Ratio	0.41	0.17			0.95			0.71				0.87		
Uniform Delay, d1	17.9	15.2			28.9			19.7				22.1		
Progression Factor	1.00	1.00			1.00			1.00				1.00		
Incremental Delay, d2	0.7	0.1			27.0			3.9				9.3		
Delay (s)	18.5	15.3			55.9			23.5				31.4		
Level of Service	B	B			E			C				C		
Approach Delay (s)		17.0			55.9			23.5				31.4		
Approach LOS		B			E			C				C		
Intersection Summary														
HCM 2000 Control Delay			31.8									HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio			0.87											
Actuated Cycle Length (s)			90.0						12.3					
Intersection Capacity Utilization			107.0%										ICU Level of Service	G
Analysis Period (min)			15											
c Critical Lane Group														

HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

Movement	SBR
<hr/>	
Lane Configurations	
Volume (vph)	334
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
<hr/>	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	355
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
<hr/>	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
<hr/>	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
<hr/>	
Intersection Summary	
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Timings

Future Total, Non-Restrictive, Proposed Geometry

13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	223	196	68	54	53	549	17	51	401
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8		4		6			2
Permitted Phases	8		4		6		2	2	
Detector Phase	3	8	4	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	10.0	28.0	12.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	17.0	44.0	27.0	27.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	18.9%	48.9%	30.0%	30.0%	51.1%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0		0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0		5.0		4.3			4.3
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

$\phi 2$ (R)	$\phi 3$	$\phi 4$
46 s	17 s	27 s
$\phi 6$ (R)	$\phi 8$	
46 s	44 s	

HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	223	196	24	68	54	52	53	549	159	17	51	401	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	1.00	1.00			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			1.00				0.99	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.98			0.96			0.97				0.97	
Flt Protected	0.95	1.00			0.98			1.00				0.99	
Satd. Flow (prot)	1770	1830			1753			3399				3396	
Flt Permitted	0.51	1.00			0.77			0.87				0.78	
Satd. Flow (perm)	944	1830			1380			2952				2653	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	235	206	25	72	57	55	56	578	167	18	54	422	
RTOR Reduction (vph)	0	6	0	0	19	0	0	22	0	0	0	21	
Lane Group Flow (vph)	235	225	0	0	165	0	0	779	0	0	0	596	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8			4			6				2	
Permitted Phases	8			4			6			2	2		
Actuated Green, G (s)	31.8	31.8			15.2			48.9				48.9	
Effective Green, g (s)	31.8	31.8			15.2			48.9				48.9	
Actuated g/C Ratio	0.35	0.35			0.17			0.54				0.54	
Clearance Time (s)	3.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	458	646			233			1603				1441	
v/s Ratio Prot	c0.08	0.12											
v/s Ratio Perm	0.10				c0.12			c0.26				0.22	
v/c Ratio	0.51	0.35			0.71			0.49				0.41	
Uniform Delay, d1	22.4	21.5			35.3			12.7				12.1	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	0.7	0.2			8.8			1.1				0.9	
Delay (s)	23.2	21.7			44.1			13.8				13.0	
Level of Service	C	C			D			B				B	
Approach Delay (s)		22.4			44.1			13.8				13.0	
Approach LOS		C			D			B				B	
Intersection Summary													
HCM 2000 Control Delay			18.2									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			76.7%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue AM Peak Hour

Movement	SBR
13	
Lane Configurations	
Volume (vph)	117
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	123
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total, Restrictive, Proposed Geometry
AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	224	196	71	54	53	545	17	51	398
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8		4		6			2
Permitted Phases	8		4		6		2	2	
Detector Phase	3	8	4	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	10.0	28.0	12.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	16.0	45.0	29.0	29.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	17.8%	50.0%	32.2%	32.2%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0		0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0		5.0		4.3			4.3
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

$\phi 2$ (R)	$\phi 3$	$\phi 4$
45 s	16 s	29 s
$\phi 6$ (R)	$\phi 8$	
45 s	45 s	

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	224	196	24	71	54	79	53	545	163	17	51	398	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	1.00	1.00			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			0.99				0.99	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.98			0.95			0.97				0.97	
Flt Protected	0.95	1.00			0.98			1.00				0.99	
Satd. Flow (prot)	1770	1830			1735			3396				3395	
Flt Permitted	0.47	1.00			0.79			0.87				0.77	
Satd. Flow (perm)	866	1830			1398			2950				2640	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	236	206	25	75	57	83	56	574	172	18	54	419	
RTOR Reduction (vph)	0	6	0	0	28	0	0	23	0	0	0	21	
Lane Group Flow (vph)	236	225	0	0	187	0	0	779	0	0	0	593	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8			4			6				2	
Permitted Phases	8			4			6			2	2		
Actuated Green, G (s)	32.8	32.8			16.4			47.9				47.9	
Effective Green, g (s)	32.8	32.8			16.4			47.9				47.9	
Actuated g/C Ratio	0.36	0.36			0.18			0.53				0.53	
Clearance Time (s)	3.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	450	666			254			1570				1405	
v/s Ratio Prot	c0.08	0.12											
v/s Ratio Perm	0.11				c0.13			c0.26				0.22	
v/c Ratio	0.52	0.34			0.74			0.50				0.42	
Uniform Delay, d1	21.9	20.7			34.8			13.4				12.7	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	0.8	0.2			10.0			1.1				0.9	
Delay (s)	22.8	21.0			44.8			14.5				13.6	
Level of Service	C	C			D			B				B	
Approach Delay (s)		21.9			44.8			14.5				13.6	
Approach LOS		C			D			B				B	
Intersection Summary													
HCM 2000 Control Delay			19.0									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			78.5%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

Movement	SBR
Input Data	
Volume (vph)	117
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	123
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Output Data	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total, Restrictive, Proposed Geometry
PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	156	114	171	168	55	530	14	62	588
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8		4		6			2
Permitted Phases	8		4		6		2	2	
Detector Phase	3	8	4	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	5.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	8.0	28.0	12.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	8.0	45.0	37.0	37.0	45.0	45.0	45.0	45.0	45.0
Total Split (%)	8.9%	50.0%	41.1%	41.1%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0		0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0		5.0		4.3			4.3
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

ø2 (R) 45 s	ø3 8 s	ø4 37 s
ø6 (R) 45 s	ø8 45 s	

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT		
Lane Configurations														
Volume (vph)	156	114	18	171	168	160	55	530	190	14	62	588		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	3.0	5.0			5.0			4.3				4.3		
Lane Util. Factor	1.00	1.00			1.00			0.95				0.95		
Frbp, ped/bikes	1.00	1.00			1.00			0.99				0.99		
Flpb, ped/bikes	1.00	1.00			0.99			1.00				1.00		
Frt	1.00	0.98			0.96			0.96				0.95		
Flt Protected	0.95	1.00			0.98			1.00				1.00		
Satd. Flow (prot)	1770	1816			1741			3367				3317		
Flt Permitted	0.40	1.00			0.83			0.71				0.74		
Satd. Flow (perm)	744	1816			1470			2399				2467		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94		
Adj. Flow (vph)	166	121	19	182	179	170	59	564	202	15	66	626		
RTOR Reduction (vph)	0	6	0	0	19	0	0	36	0	0	0	71		
Lane Group Flow (vph)	166	134	0	0	512	0	0	789	0	0	0	991		
Confl. Peds. (#/hr)			20	20			7		14		14			
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	Perm	NA		
Protected Phases	3	8			4			6				2		
Permitted Phases	8			4			6			2	2			
Actuated Green, G (s)	41.1	41.1			32.5			39.6				39.6		
Effective Green, g (s)	41.1	41.1			32.5			39.6				39.6		
Actuated g/C Ratio	0.46	0.46			0.36			0.44				0.44		
Clearance Time (s)	3.0	5.0			5.0			4.3				4.3		
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0		
Lane Grp Cap (vph)	403	829			530			1055				1085		
v/s Ratio Prot	c0.03	0.07												
v/s Ratio Perm	0.16				c0.35			0.33				c0.40		
v/c Ratio	0.41	0.16			0.97			0.75				0.91		
Uniform Delay, d1	17.1	14.3			28.2			21.0				23.6		
Progression Factor	1.00	1.00			1.00			1.00				1.00		
Incremental Delay, d2	0.5	0.1			30.5			4.9				13.1		
Delay (s)	17.6	14.4			58.7			25.9				36.7		
Level of Service	B	B			E			C				D		
Approach Delay (s)		16.2			58.7			25.9				36.7		
Approach LOS		B			E			C				D		
Intersection Summary														
HCM 2000 Control Delay			35.4									HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio			0.90											
Actuated Cycle Length (s)			90.0						12.3					
Intersection Capacity Utilization			109.4%										ICU Level of Service	H
Analysis Period (min)			15											
c Critical Lane Group														

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

PM Peak Hour

Movement	SBR
13	
Lane Configurations	
Volume (vph)	334
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	355
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

ATTACHMENT E:
BICYCLE CIRCULATION PLAN

NOTE:
 • ONE BICYCLE PARKING SPACE SHALL BE PROVIDED PER 10 VEHICLE PARKING SPACES PER FBPAD 3-510-4 J2.

PROJECT

MEDITERRANEAN VILLAGE at Ponce Circle

CLIENT
 AGAVE PONCE LLC
 2801 2901, 3001 PONCE DE LEON BOULEVARD

ISSUE DRAWING LOG

SEAL

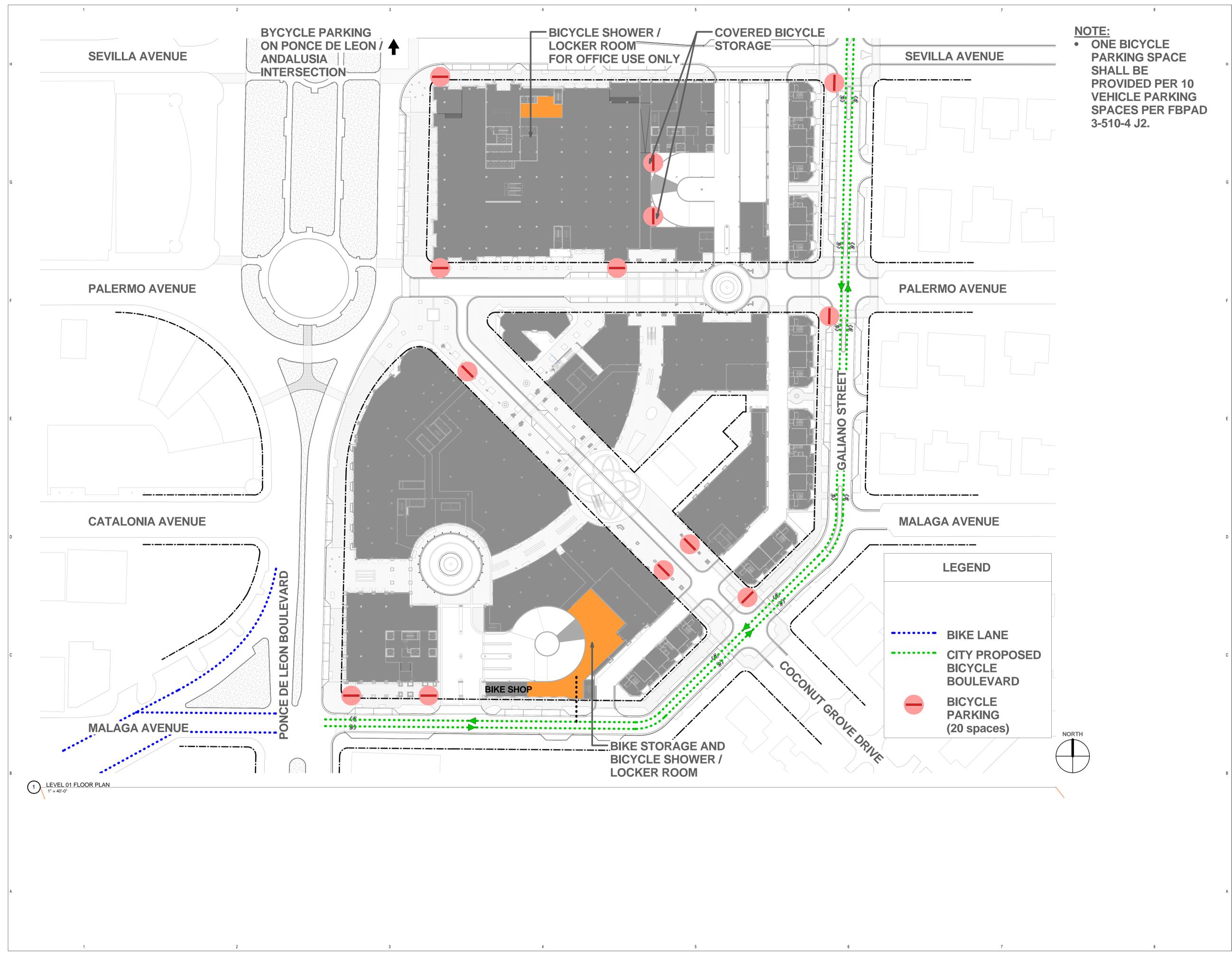
SHEET IDENTIFICATION

TITLE
BICYCLE CIRCULATION PLAN

NUMBER

A-0.10.3

2014 RTKL ASSOCIATES INC.



1 LEVEL 01 FLOOR PLAN
 1" = 40'-0"

THE 5/26/2015 4:56:01 PM
 FILE NAME: C:\Users\jgarcia\Documents\OSV\Podium-Central
 04_jgarcia\RTKL.com.rvt

Memorandum

To: Mr. Eddie Avila
Agave Ponce, LLC

From: John McWilliams, P.E.



Date: May 17, 2015

Subj: Mediterranean Village – Coral Gables, Florida
Traffic Impact Analysis Updates

The purpose of this memorandum is to summarize our analysis of the recently proposed development plan modifications as it relates to traffic impacts. Two (2) significant modifications have occurred since the completion of the previous traffic operations analysis dated January 27, 2015. The development plan has been modified as follows:

- Elimination of the of cinema, gym, and daycare center uses
- Increase of retail space from 242,000 s.f. to 265,000 s.f.
- Increase of office space from 314,000 s.f. to 317,000 s.f.

Note that no changes to the residential or hotel intensities are proposed as part of these development plan modifications. The second significant site plan modification impacting the traffic operations analysis is the relocation of the hotel valet/porte cochere from Ponce De Leon Boulevard to a location internal to the site accessed from the proposed driveway located along Malaga Avenue. Previous site plans included the subject driveway. However, the driveway only provided access the parking garage previously. Refer to Attachment A for the subject site plan excerpt. The following sections summarize the resulting changes to the traffic impact analysis as a result of these modifications.

Development Plan Modifications

A trip generation analysis was conducted to compare the trip generation potential of the previous site plan to the proposed site plan. The analysis of the previous site plan was obtained from the traffic impact analysis submittal dated January 27, 2015. The proposed development plan was previously expected to generate 864 net new a.m. peak hour trips and 1,468 net new p.m. peak hour trips. Utilizing the same analysis assumptions, rates, and sources; a trip generation analysis was conducted with the proposed development plan. As Table 1 indicates, the proposed development is expected to generate 761 net new a.m. peak hour trips and 1,210 net new p.m. peak hour trips. When compared to the previous development plan, the proposed development represents a reduction of approximately 12 to 18 percent in peak hour trips generated. Refer to Attachment B for detailed trip generation calculations. Since the proposed development plan generates less traffic than the previous analysis assumed, a full update of the traffic impact analysis was not conducted.

Table 1: Peak Hour Trip Generation					
Proposed Land Use	ITE Code	Scale	New Project Trips		
			Enter	Exit	Total
<i>A.M. Peak Hour (P.M. Peak Hour)</i>					
Shopping Center	820	265,000 s.f.	111 (337)	43 (384)	154 (721)
Residential/ Condominium Townhouse	230	15 du	1 (6)	8 (1)	9 (7)
High-Rise Residential Condo/ Townhouse	232	214 du	9 (34)	66 (12)	75 (46)
Hotel	310	184 rooms	47 (30)	29 (28)	76 (58)
General Office Building	710	317,000 s.f.	417 (55)	51 (340)	468 (395)
Quality Restaurant	931	21,750 s.f.	0 (45)	4 (0)	4 (45)
High-Turnover (Sit-Down) Restaurant	932	7,250 s.f.	16 (15)	8 (0)	24 (15)
<i>Subtotal</i>	-	-	601 (522)	209 (765)	810 (1,287)
6% Multimodal Reduction			36 (31)	13 (46)	49 (77)
Net New Trips			565 (491)	196 (719)	761 (1,210)

Table 2: Peak Hour Trip Generation Comparison			
Development Plan	New Project Trips		
	Enter	Exit	Total
<i>A.M. Peak Hour (P.M. Peak Hour)</i>			
January 27, 2015	619 (620)	245 (848)	864 (1,468)
May, 17 2015	565 (491)	196 (719)	761 (1,210)
Difference	-54 (-129)	-49 (-129)	-103 (-258)
% Difference			-11.9% (-17.6%)

Hotel Porte Cochere Relocation

The relocation of the hotel porte cochere from Ponce De Leon Boulevard to a location internal to the site accessing the proposed Malaga Avenue project driveway is expected to result in operational changes that warranted updates to portions of the traffic impact analyses. As previously mentioned, the subject driveway previously provided access to only the parking garage. In order to estimate the impact of this change to traffic circulation, the project traffic distribution and assignment were updated to reflect (a) the changes in the development plan and (b) the change to traffic circulation resulting from the hotel access modification. Refer to Attachment C for detailed information regarding these updates. Note that the previous traffic analysis examined both a restrictive and non-restrictive measures scenario related to traffic calming features along Galiano Street/Malaga Avenue. Both scenarios were revised as part of this update to maintain consistency with the January 27, 2015 submittal.

Note that currently the signalized intersection of Malaga Avenue and Ponce De Leon Boulevard currently operates with east-west split signal phasing due to the limited number of approach lanes along the minor street. At the request of both City staff and Miami-Dade County's Traffic Engineering Division staff, this updated analysis examined the impacts of geometric improvements that will allow for the elimination of east-west signal phasing. The improvements would require the following:

- Widening of the eastbound approach (west leg) to the north to provide for two (2) eastbound exclusive left-turn lanes and one (1) shared through/right-turn lane.
- Widening of the westbound approach (east leg) to the north to provide for one (2) exclusive westbound left-turn lane and one (1) shared through/right-turn lane. This widening will require the elimination of the on-street parking lane previously proposed as part of the proposed development.

In addition, City staff requested that the free-flowing, separated southbound right-turn movement from Ponce De Leon Boulevard to University Drive be eliminated and the right-turn movement to occur at the signalized intersection. Refer to Attachment D for a conceptual sketch of the proposed improvements. An operational analysis for the intersections of University Drive/Ponce De Leon Boulevard, Malaga Avenue/Ponce De Leon Boulevard, and South Driveway/Malaga Avenue was conducted using the same methodologies from the previous traffic impact analysis submittal. As Tables 3 and 4 indicate, all intersections are expected to operate at LOS D better under future total traffic conditions with and without the suggested improvements. Refer to Attachment E for detailed operational analysis results.

Table 3: A.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS			
			EB	WB	NB	SB
<i>Future Total Conditions with Non-Restrictive Measures</i> (Future Total Conditions with Non-Restrictive Measures – Proposed Geometry) [Future Total Conditions with Restrictive Measures] {Future Total Conditions with Restrictive Measures – Proposed Geometry}						
University Drive and Ponce De Leon Boulevard ⁽⁴⁾	One-Way Stop-Controlled	(1)	N/A	N/A	(2)	(2)
Malaga Avenue and Ponce De Leon Boulevard	Signalized ⁽³⁾	C/25.3 (B/18.5) [C/26.9] {B/18.9}	D (D) [D] {D}	C (C) [C] {C}	C (B) [C] {B}	B (A) [C] {B}
South Driveway and Malaga Avenue	One-Way Stop-Controlled	(1)	(2)	(2)	N/A	A (A) [A] {A}

- Notes: ⁽¹⁾ Overall intersection LOS is not defined, as intersection operates under stop-control conditions.
⁽²⁾ Approach operates under free-flow conditions. LOS is not defined.
⁽³⁾ HCM 2010 does not provide LOS result; therefore, HCM 2000 results were provided.
⁽⁴⁾ Intersection removed with proposed geometry.

Table 4: P.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS			
			EB	WB	NB	SB
<i>Future Total Conditions with Non-Restrictive Measures</i> (Future Total Conditions with Non-Restrictive Measures – Proposed Geometry) [Future Total Conditions with Restrictive Measures] {Future Total Conditions with Restrictive Measures – Proposed Geometry}						
University Drive and Ponce De Leon Boulevard ⁽⁴⁾	One-Way Stop-Controlled	(1)	N/A	N/A	(2)	(2)
Malaga Avenue and Ponce De Leon Boulevard	Signalized ⁽³⁾	D/42.0 (C/21.4) [D/42.6] {C/22.5}	D (D) [D] {D}	C (D) [C] {D}	D (B) [D] {B}	D (B) [D] {B}
South Driveway and Malaga Avenue	One-Way Stop-Controlled	(1)	(2)	(2)	N/A	B (B) [B] {B}

- Notes: ⁽¹⁾ Overall intersection LOS is not defined, as intersection operates under stop-control conditions.
⁽²⁾ Approach operates under free-flow conditions. LOS is not defined.
⁽³⁾ HCM 2010 does not provide LOS result; therefore, HCM 2000 results were provided.
⁽⁴⁾ Intersection removed with proposed geometry.

Other Considerations

City staff has indicated that recent comments have been received regarding the operations of several driveways within the proposed site plan. The site plan currently proposed three (3) adjacent driveways along Sevilla Avenue accessing the parking levels, the underground service area, and the residential townhome garages. Although separation between driveways is preferred, two (2) of these three (3) driveways are expected to experience low volumes. The service driveway will include a roll up door and all deliveries (entering and exiting) will be coordinated with a site dockmaster. If necessary, additional site personnel can be provided to direct traffic when large delivery vehicles enter and exit the facility.

The private roadway providing access to the townhouse units along Galiano Street will experience minimal traffic as the driveway only provides access to five (5) townhouse units between Sevilla and Palermo Avenues. Similarly, the central private townhouse driveway between Palermo Avenue and Coconut Grove Drive provides access to only seven (7) units in addition to the rear yard of an existing single-family residence. Finally, the south private townhouse driveway between Coconut Grove Drive and Malaga Avenue provides access to only three (3) units. Note that these private driveways are designed in an effort to strongly discourage cut through traffic as they are intended strictly for the use of property access.

Conclusions

In summary, this memorandum provides an update to the impacted portions of the previously subjected traffic impact analysis provides supplemental information on site driveway configuration. The results of the updates are consistent with the findings of the previously submitted traffic study. Please let us know if we can be of further assistance.

Attachments

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ATTACHMENT A:
SITE PLAN EXCERPT

ATTACHMENT B:
TRIP GENERATION CALCULATIONS

WEEKDAY AM PEAK HOUR TRIP GENERATION

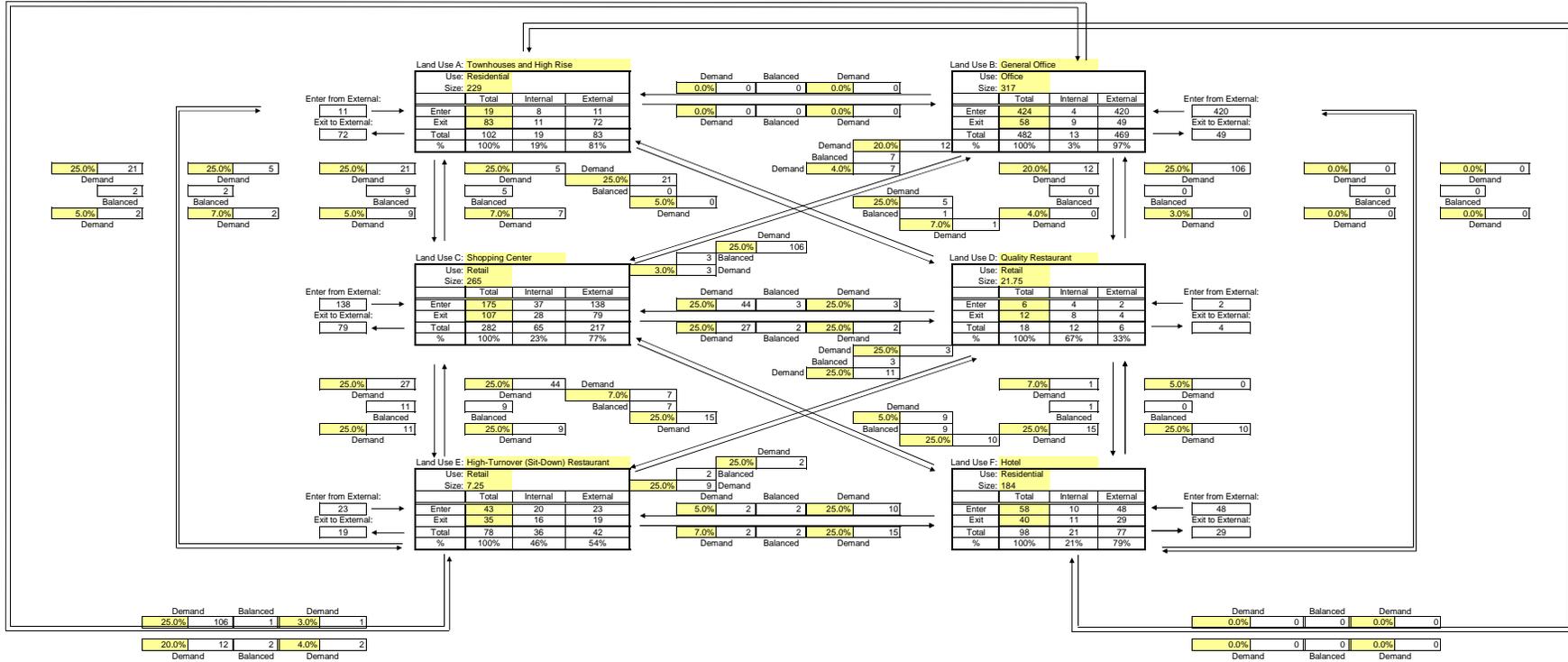
ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
					In	Out																
1 Shopping Center	9	820	265	ksf	62%	38%	175	107	282	23.0%	64	143	75	218	29.4%	64	111	43	154			
2 Residential Condominium/Townhouse	9	230	15	du	17%	83%	2	9	11	18.6%	2	1	8	9	0.0%	0	1	8	9			
3 High-Rise Residential Condominium/Townhouse	9	232	214	du	19%	81%	17	74	91	18.6%	16	9	66	75	0.0%	0	9	66	75			
4 Hotel	9	310	184	room	59%	41%	58	40	98	21.4%	22	47	29	76	0.0%	0	47	29	76			
5 General Office Building	9	710	317	ksf	88%	12%	424	58	482	2.7%	14	417	51	468	0.0%	0	417	51	468			
6 Quality Restaurant	9	931	21.75	ksf	33%	67%	6	12	18	66.7%	12	0	6	6	44.0%	2	0	4	4			
7 High-Turnover (Sit-Down) Restaurant	9	932	7.25	ksf	55%	45%	43	35	78	46.2%	36	25	17	42	43.0%	18	16	8	24			
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
ITE Land Use Code					Rate or Equation		Total:			725	335	1,060	15.7%	166	642	252	894	9.4%	84	601	209	810
820					LN(Y) = 0.61*LN(X)+2.24																	
230					LN(Y) = 0.8*LN(X)+0.26																	
232					Y=0.29*(X)+28.86																	
310					Y=0.53(X)																	
710					LN(Y) = 0.8*LN(X)+1.57																	
931					Y=0.81(X)																	
932					Y=10.81(X)																	
																6% Multimodal Reduction	36	13	49			
																Net New External Trips	565	196	761			

WEEKDAY PM PEAK HOUR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS					
Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
					In	Out																
1 Shopping Center	9	820	265	ksf	48%	52%	552	599	1,151	11.3%	130	487	534	1,021	29.4%	300	337	384	721			
2 Residential Condominium/Townhouse	9	230	15	du	67%	33%	9	4	13	47.5%	6	6	1	7	0.0%	0	6	1	7			
3 High-Rise Residential Condominium/Townhouse	9	232	214	du	62%	38%	55	33	88	47.5%	42	34	12	46	0.0%	0	34	12	46			
4 Hotel	9	310	184	room	51%	49%	56	54	110	47.3%	52	30	28	58	0.0%	0	30	28	58			
5 General Office Building	9	710	317	ksf	17%	83%	74	359	433	8.6%	38	55	340	395	0.0%	0	55	340	395			
6 Quality Restaurant	9	931	21.75	ksf	67%	33%	109	54	163	50.9%	82	68	13	81	44.0%	36	45	0	45			
7 High-Turnover (Sit-Down) Restaurant	9	932	7.25	ksf	60%	40%	43	28	71	64.8%	46	20	5	25	43.0%	10	15	0	15			
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
ITE Land Use Code					Rate or Equation		Total:			898	1,131	2,029	19.5%	396	700	933	1,633	21.2%	346	522	765	1,287
820					LN(Y) = 0.67*LN(X)+3.31																	
230					LN(Y) = 0.82*LN(X)+0.32																	
232					Y=0.34*(X)+15.47																	
310					Y=0.6(X)																	
710					Y=1.12*(X)+78.45																	
931					Y=7.49(X)																	
932					Y=9.85(X)																	
																6% Multimodal Reduction	31	46	77			
																Net New External Trips	491	719	1,210			

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET
(ITE, Chapter 7, *Trip Generation Handbook*, 2nd Edition, June 2004)

Analysis Period: PM ___ Daily ___ AM ___ X ___ Project Number: _____ Task Number: _____
 Analyst: _____ Project Name: _____
 Date: _____ Scenario: _____

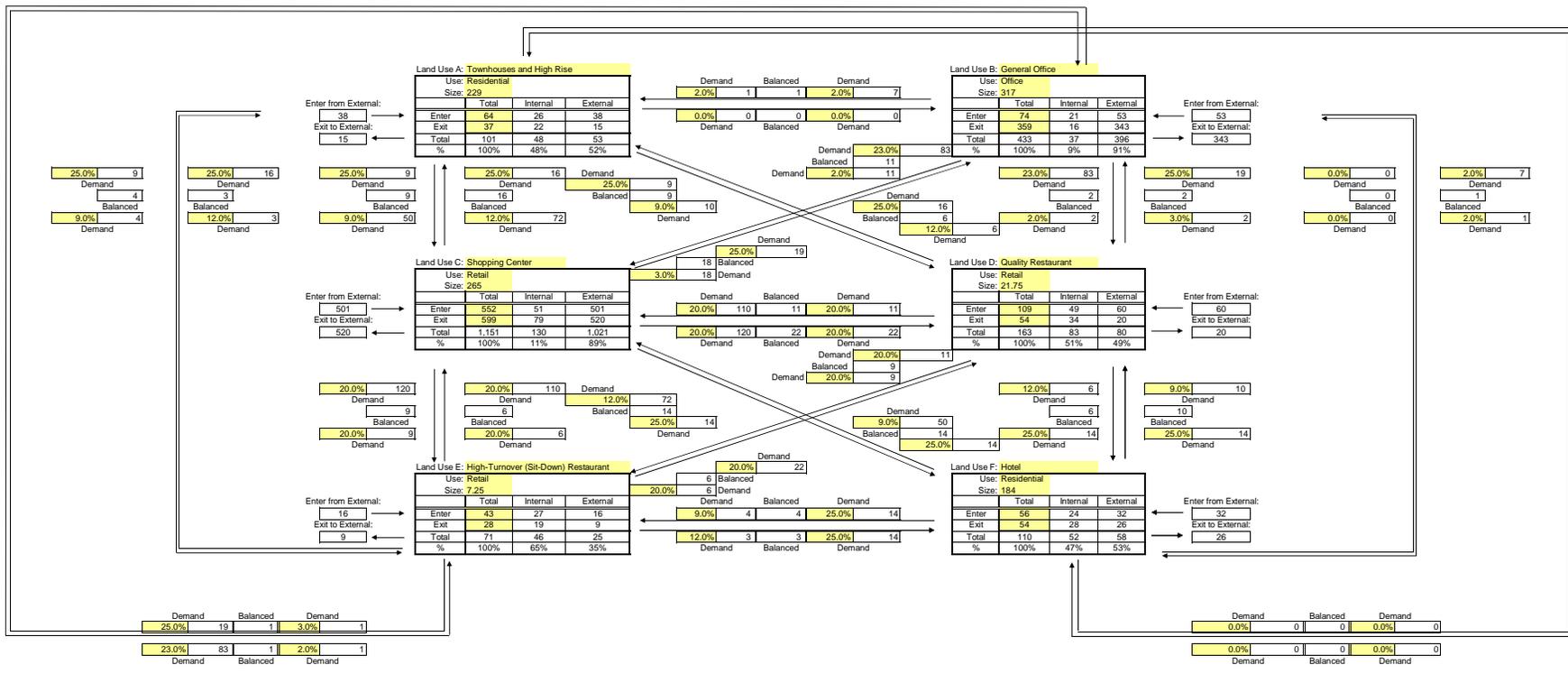


NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT							
Category	Land Use						Total
	A	B	C	D	E	F	
Enter	11	420	138	2	23	48	642
Exit	72	49	79	4	19	29	252
Total	83	469	217	6	42	77	894
Single Use Trip Gen Estimate	102	482	282	18	78	98	1,060
	18.63%	2.70%	23.05%	66.67%	46.15%	21.43%	

Internal Capture = 15.66%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET
(ITE, Chapter 7, *Trip Generation Handbook*, 2nd Edition, June 2004)

Analysis Period: PM X, Daily, AM _____ Project Number: _____ Task Number: _____
 Analyst: _____ Project Name: _____
 Date: _____ Scenario: _____



Category	Land Use						Total
	A	B	C	D	E	F	
Enter	38	53	501	80	16	32	700
Exit	15	343	520	20	9	26	933
Total	53	396	1,021	80	25	58	1,633
Single Use Trip Gen Estimate	101	433	1,151	163	71	110	2,029
	47.52%	8.55%	11.29%	50.92%	64.79%	47.27%	

Internal Capture = **19.52%**

**ATTACHMENT C:
UPDATED TRIP DISTRIBUTION AND
ASSIGNMENT FIGURES**



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX% Entering Distribution
 - (XX%) Exiting Distribution

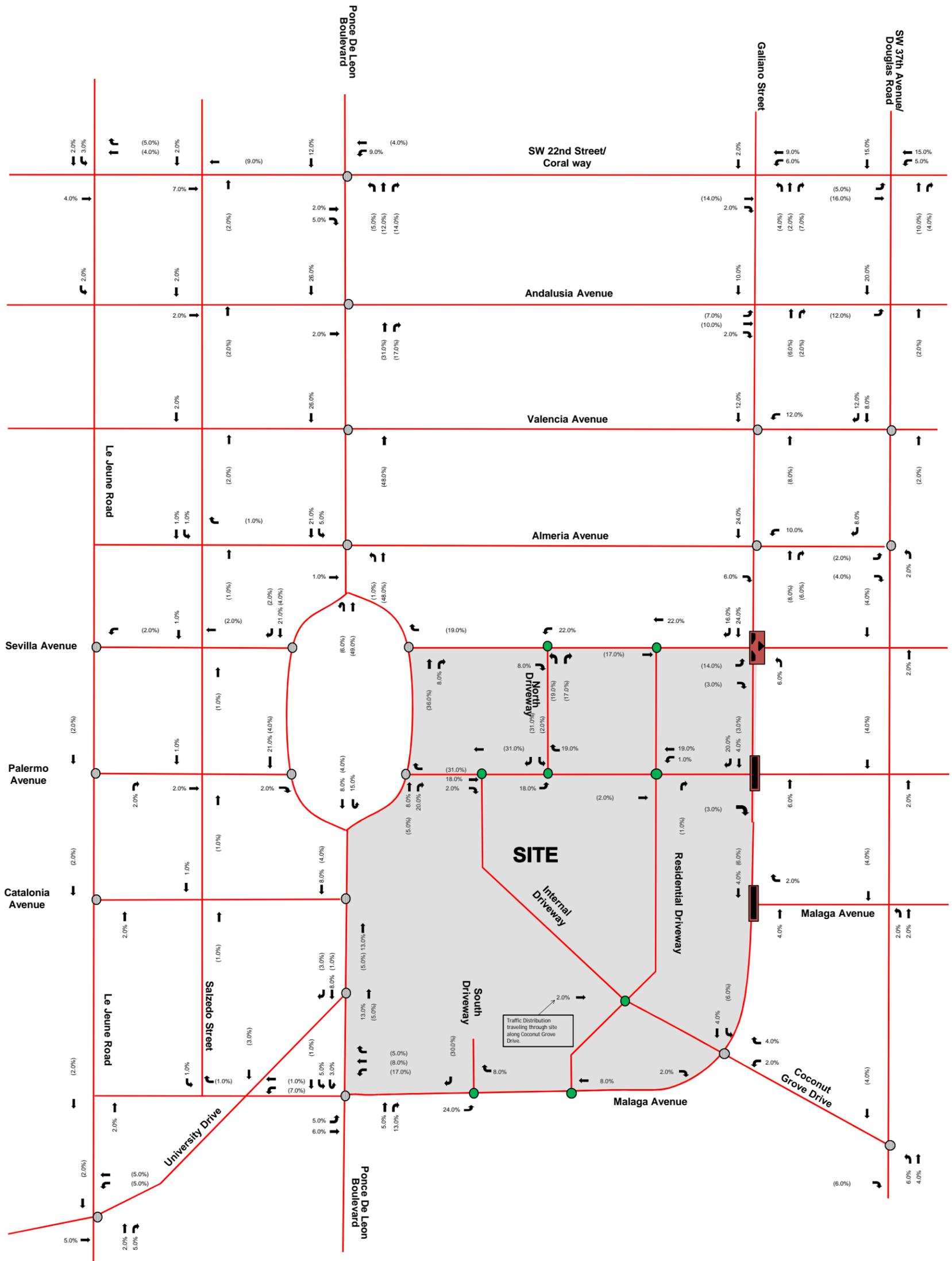


Figure 3 - Revised
Project Distribution with Restrictive Measures
A.M. and P.M. Peak Hours
Mediterranean Village
Coral Gables, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX A.M. Peak Hour Traffic Assignment
 - (XX) A.M. Peak Hour Pass-By Traffic

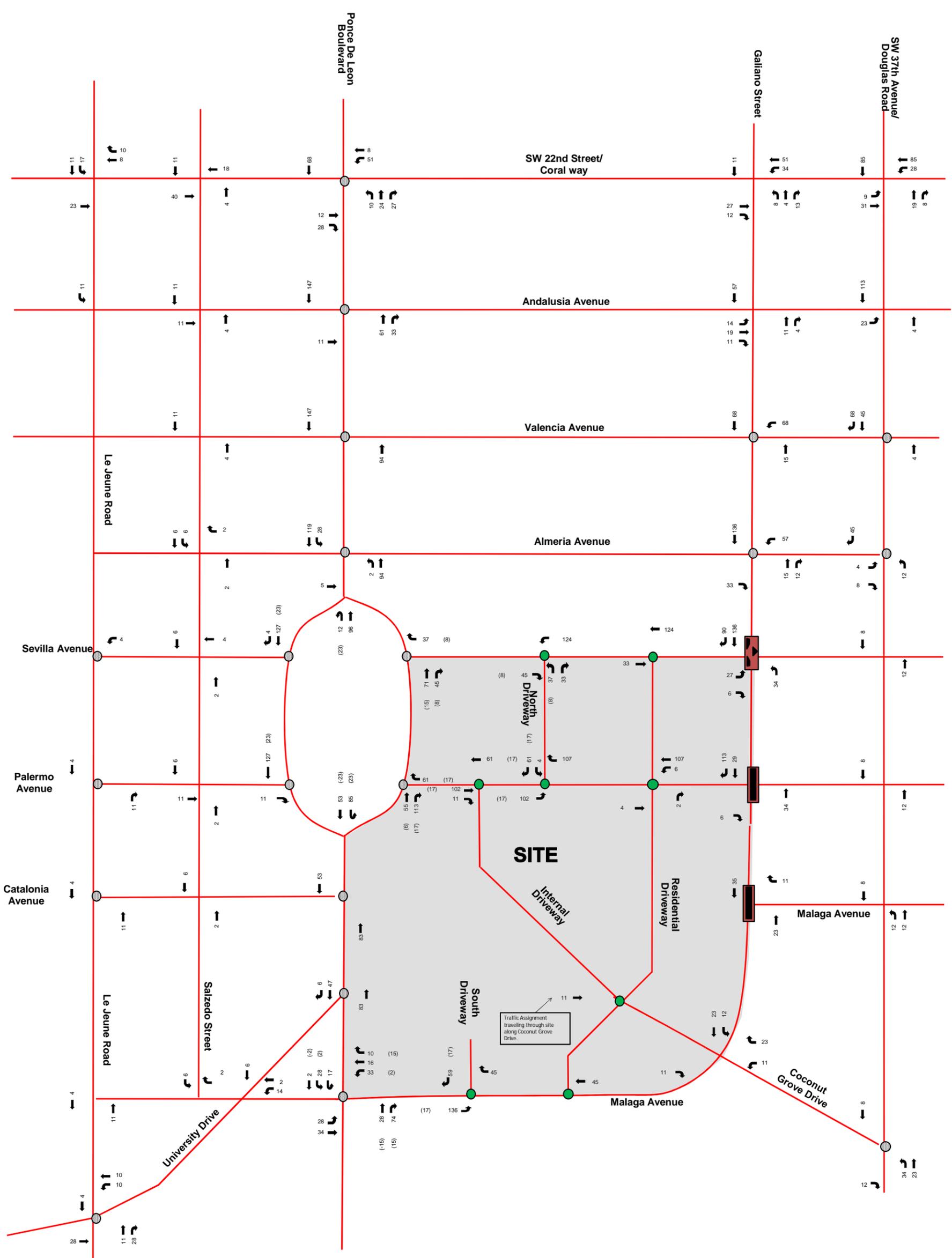


Figure 7 - Revised
 Project and Pass-By Assignment with Restrictive Measures
 A.M. Peak Hour
 Mediterranean Village
 Coral Gables, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX P.M. Peak Hour Traffic Assignment
 - (XX) P.M. Peak Hour Pass-By Traffic

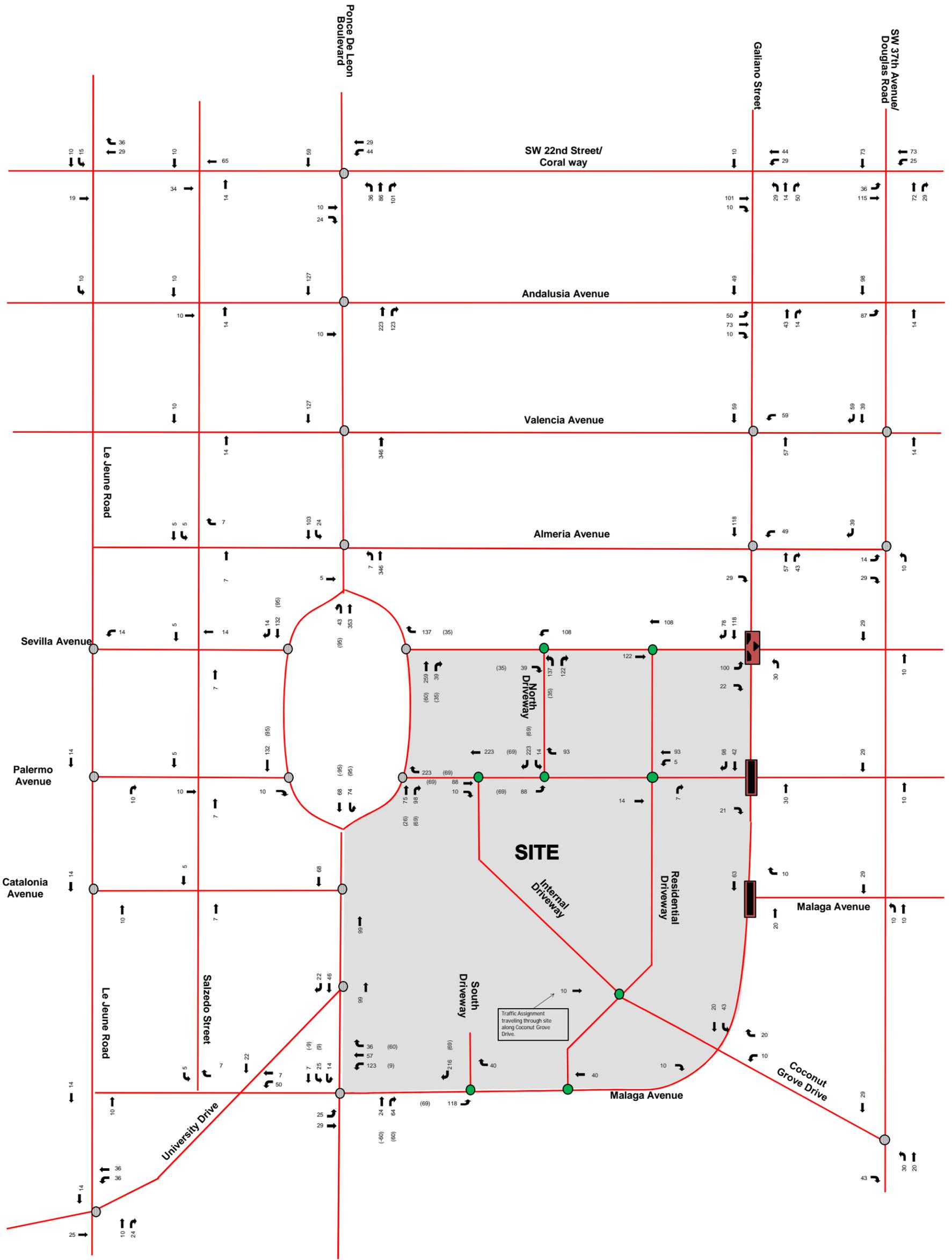


Figure 8 - Revised
 Project and Pass-By Assignment with Restrictive Measures
 P.M. Peak Hour
 Mediterranean Village
 Coral Gables, Florida

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX AM Peak Hour Traffic
 - (XX) PM Peak Hour Traffic



NOT TO SCALE

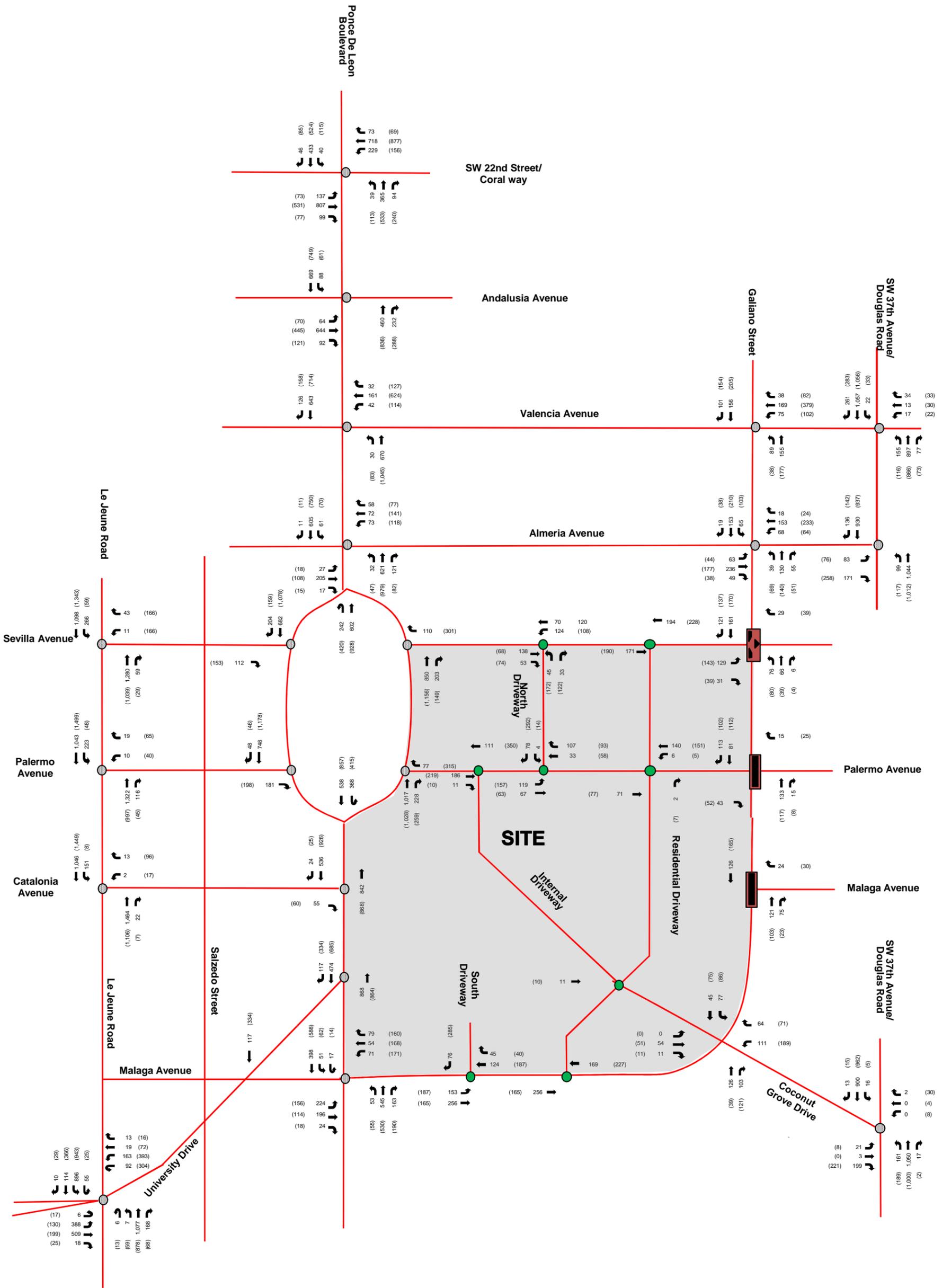


Figure 12 - Revised
 Future Total Traffic Conditions with Restrictive Measures
 A.M. and P.M. Peak Hours
 Mediterranean Village
 Coral Gables, Florida



NOT TO SCALE

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX% Entering Distribution
 - (XX%) Exiting Distribution

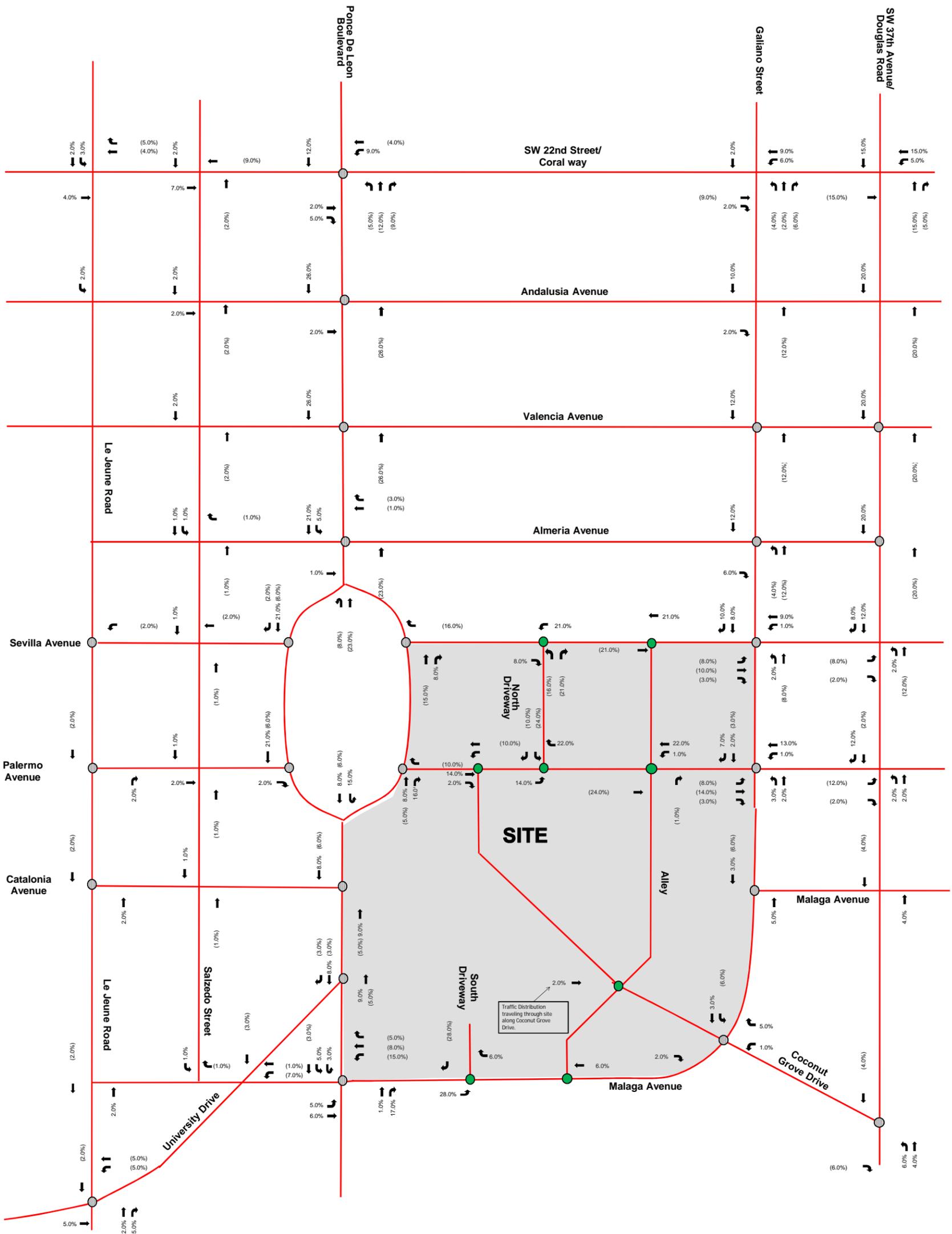


Figure 2 - Revised
 Project Distribution with Non-Restrictive Measures
 A.M. and P.M. Peak Hours
 Mediterranean Village
 Coral Gables, Florida

- Legend**
- Study Roadway
 - Study Intersection
 - Project Driveway
 - XX AM Peak Hour Project Traffic
 - (XX) AM Peak Hour Pass-By Traffic



NOT TO SCALE

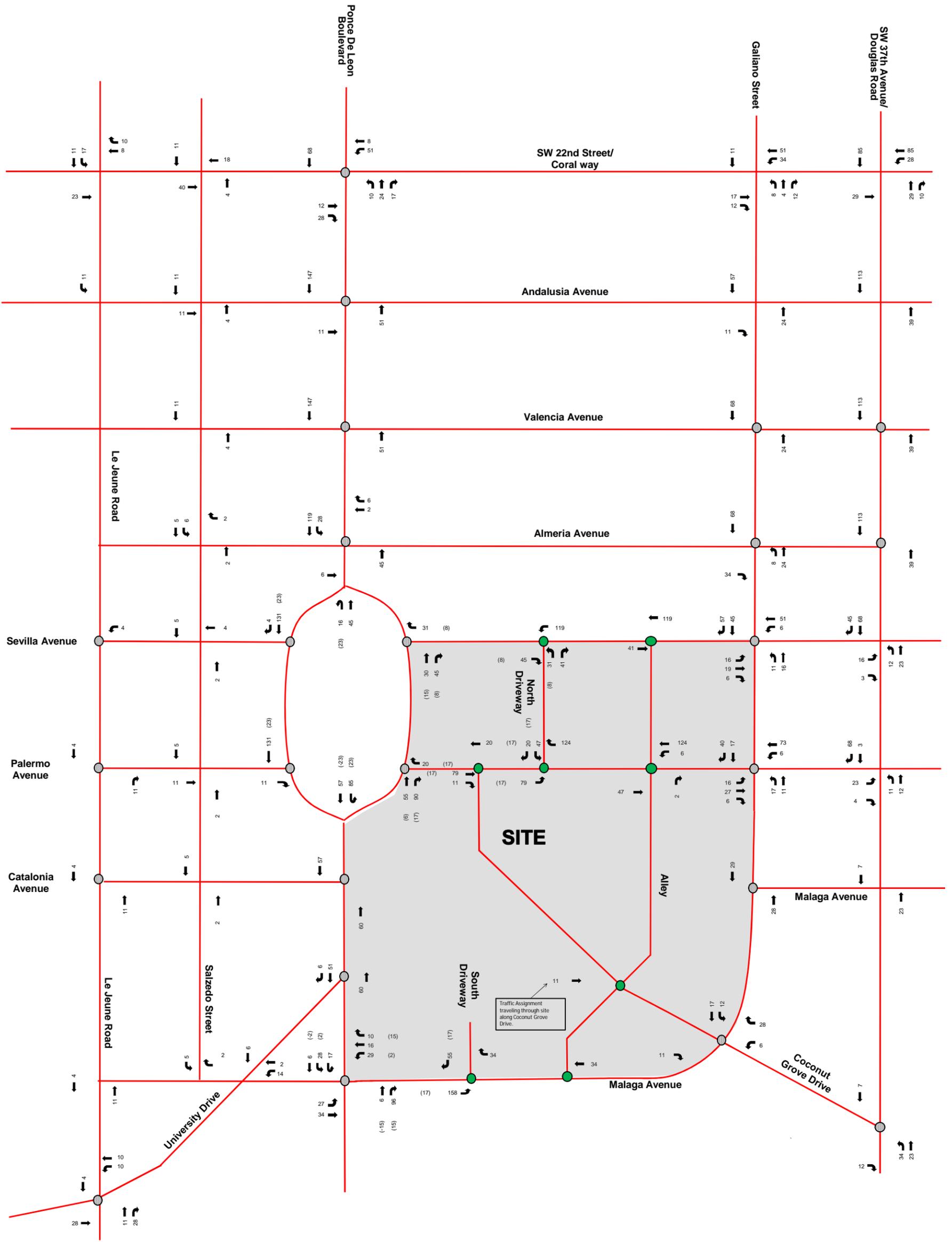


Figure 5 - Revised
Project and Pass-By Assignment with Non-Restrictive Measures
A.M. Peak Hour
Mediterranean Village
Coral Gables, Florida

- Legend**
-  Study Roadway
 -  Study Intersection
 -  Project Driveway
 -  PM Peak Hour Project Traffic
 -  PM Peak Hour Pass-By Traffic



NOT TO SCALE

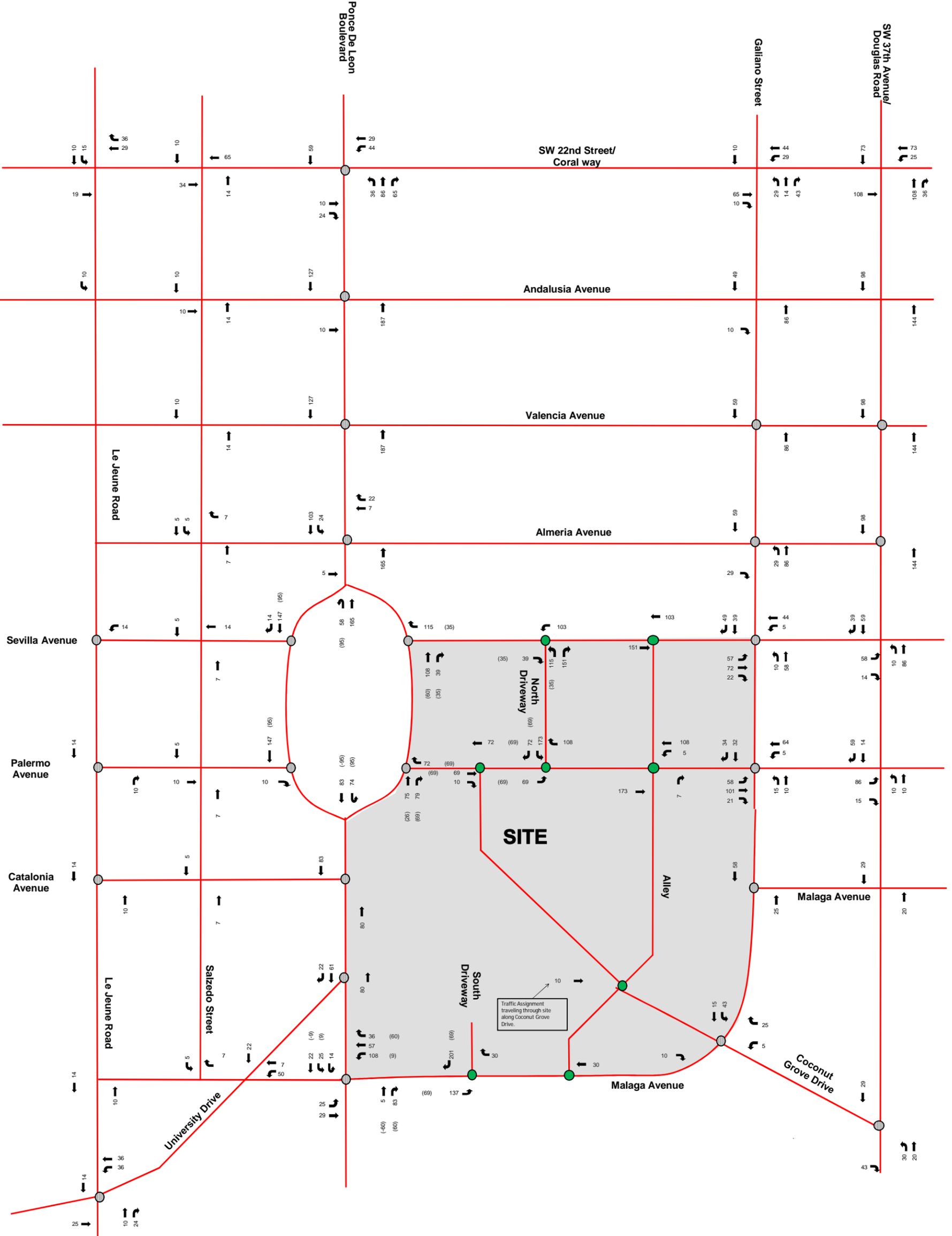


Figure 6 - Revised
Project and Pass-By Assignment with Non-Restrictive Measures
P.M. Peak Hour
Mediterranean Village
Coral Gables, Florida

- Legend**
-  Study Roadway
 -  Study Intersection
 -  Project Driveway
 - XX AM Peak Hour Traffic
 - (XX) PM Peak Hour Traffic



NOT TO SCALE

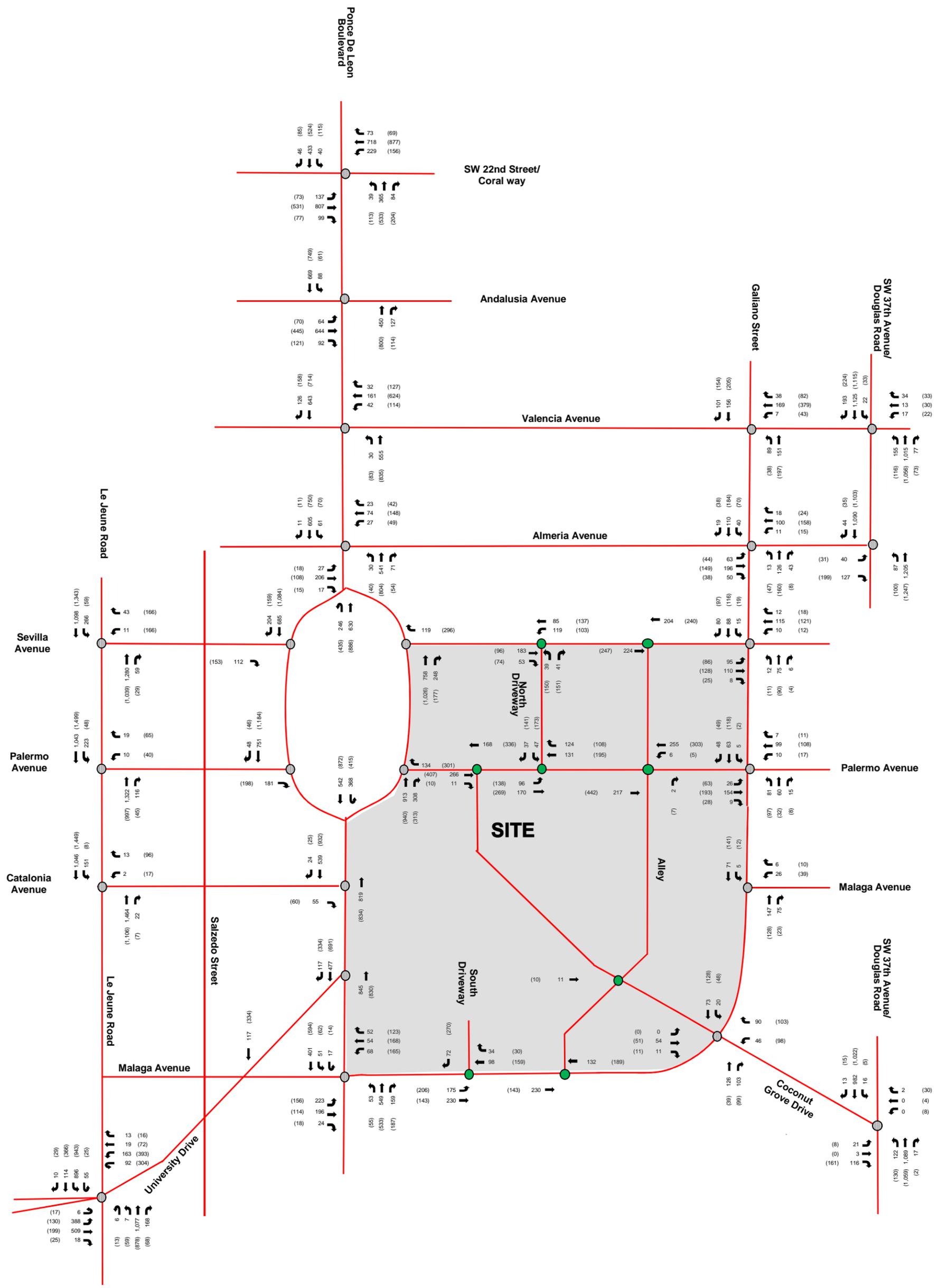
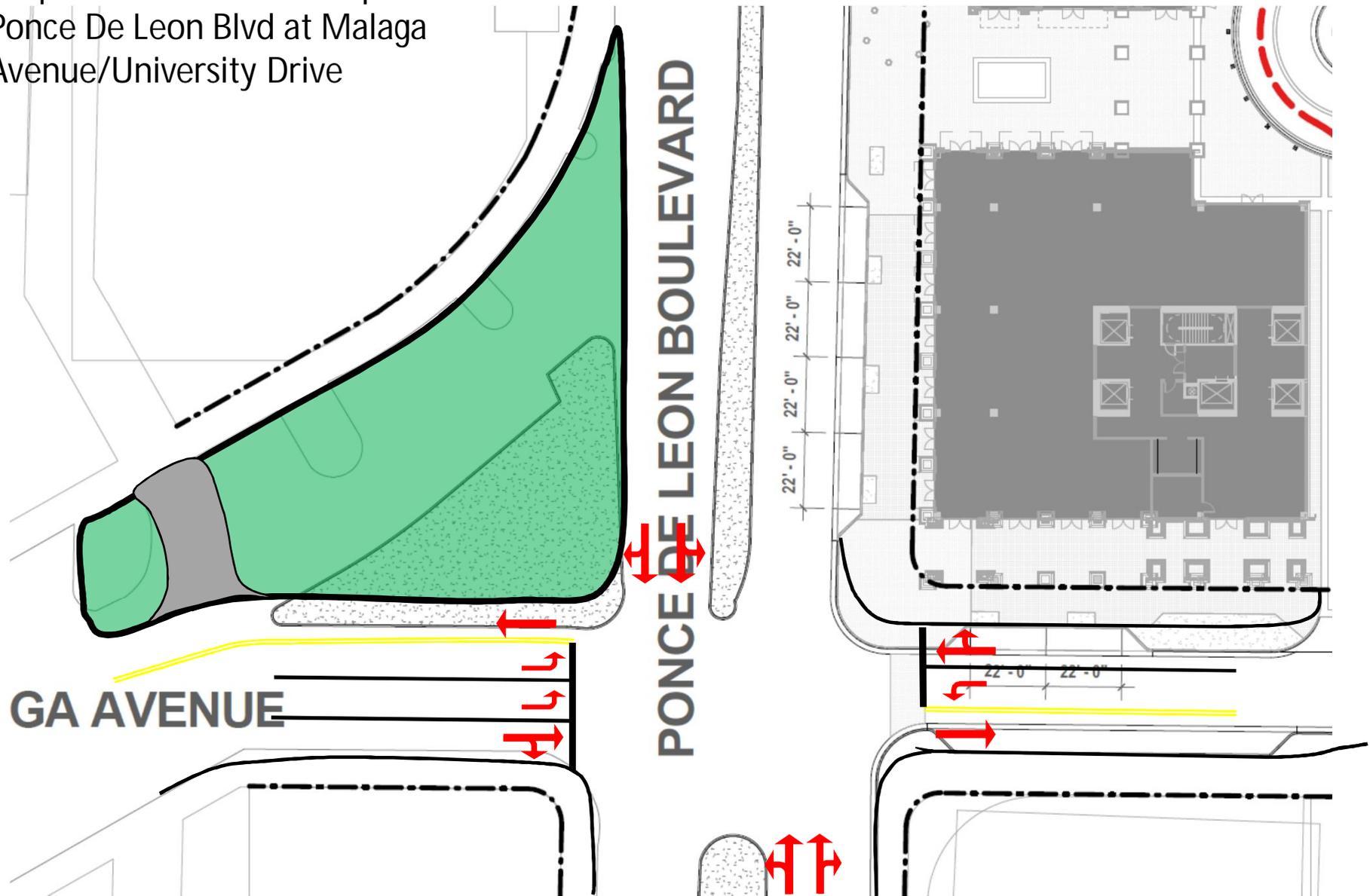


Figure 11 - Revised
 Future Total Traffic Conditions with Non-Restrictive Measures
 A.M. and P.M. Peak Hours
 Mediterranean Village
 Coral Gables, Florida

ATTACHMENT D:

PONCE DE LEON BLVD/MALAGA AVE/UNIVERSITY
DRIVE PROPOSED INTERSECTION IMPROVEMENTS

Proposed Intersection Improvements
Ponce De Leon Blvd at Malaga
Avenue/University Drive



Preliminary – Not to Scale

**ATTACHMENT E:
INTERSECTION CAPACITY ANALYSES**

HCM Unsignalized Intersection Capacity Analysis Future Total with Non-Restrictive Measures
 12: Ponce De Leon Boulevard & University Drive AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑	↑↑	
Volume (veh/h)	0	0	0	845	477	117
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	0	909	513	126
Pedestrians	6					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)				129		
pX, platoon unblocked	0.85					
vC, conflicting volume	1036	325	645			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	694	325	645			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	321	670	936			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	454	454	342	297		
Volume Left	0	0	0	0		
Volume Right	0	0	0	126		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.27	0.27	0.20	0.17		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			26.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis Future Total with Non-Restrictive Measures
 12: Ponce De Leon Boulevard & University Drive PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑	↑↑	
Volume (veh/h)	0	0	0	830	691	334
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	874	727	352
Pedestrians	8					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)				129		
pX, platoon unblocked	0.81					
vC, conflicting volume	1348	547	1087			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	971	547	1087			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	204	481	638			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	437	437	485	594		
Volume Left	0	0	0	0		
Volume Right	0	0	0	352		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.26	0.26	0.29	0.35		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.4%		ICU Level of Service	A
Analysis Period (min)			15			

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Non-Restrictive Measures
PM Peak Hour

Lane Group	EBL	EBT	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations								
Volume (vph)	156	114	168	55	533	14	62	594
Turn Type	Split	NA	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	3	4		6			2
Permitted Phases				6		2	2	
Detector Phase	3	3	4	6	6	2	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	28.0	28.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	31.0	31.0	15.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	34.4%	34.4%	16.7%	48.9%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0		4.3			4.3
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

ø2 (R) 44 s	ø3 31 s	ø4 15 s
ø6 (R) 44 s		

HCM Signalized Intersection Capacity Analysis Future Total with Non-Restrictive Measures
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	156	114	18	165	168	123	55	533	187	14	62	594	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	0.95	0.95			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			0.99				1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.98			0.96			0.96				1.00	
Flt Protected	0.95	0.99			0.98			1.00				0.99	
Satd. Flow (prot)	1681	1721			1763			3365				3517	
Flt Permitted	0.95	0.99			0.98			0.76				0.63	
Satd. Flow (perm)	1681	1721			1763			2576				2243	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	
Adj. Flow (vph)	166	121	19	176	179	131	59	567	199	15	66	632	
RTOR Reduction (vph)	0	7	0	0	11	0	0	40	0	0	0	0	
Lane Group Flow (vph)	149	150	0	0	475	0	0	785	0	0	0	713	
Confl. Peds. (#/hr)			20	20			7		14		14		
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	3		4	4			6				2	
Permitted Phases							6			2	2		
Actuated Green, G (s)	12.8	12.8			32.5			30.4				30.4	
Effective Green, g (s)	12.8	12.8			32.5			30.4				30.4	
Actuated g/C Ratio	0.14	0.14			0.36			0.34				0.34	
Clearance Time (s)	5.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	239	244			636			870				757	
v/s Ratio Prot	c0.09	0.09			c0.27								
v/s Ratio Perm								0.30				c0.32	
v/c Ratio	0.62	0.62			0.75			0.90				0.94	
Uniform Delay, d1	36.3	36.3			25.2			28.4				28.9	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	4.3	3.9			4.5			14.3				21.3	
Delay (s)	40.7	40.2			29.7			42.7				50.2	
Level of Service	D	D			C			D				D	
Approach Delay (s)		40.4			29.7			42.7				50.2	
Approach LOS		D			C			D				D	
Intersection Summary													
HCM 2000 Control Delay			42.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.80										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	14.3
Intersection Capacity Utilization			95.7%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Non-Restrictive Measures
 PM Peak Hour

Movement	SBR
Approach	
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Control	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Performance	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total with Non-Restrictive Measures
 PM Peak Hour

Intersection

Intersection Delay, s/veh 5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	206	143	159	30	0	270
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	155	173	33	0	293

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	205	0	189
Stage 1	-	-	189
Stage 2	-	-	603
Follow-up Headway	2.218	-	3.318
Pot Capacity-1 Maneuver	1366	-	853
Stage 1	-	-	843
Stage 2	-	-	546
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1366	-	853
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	843
Stage 2	-	-	448

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	11.4
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1366	-	-	-	853
HCM Lane V/C Ratio	0.164	-	-	-	0.344
HCM Control Delay (s)	8.151	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.586	-	-	-	1.54

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Timings

Future Total, Non-Restrictive, Proposed Geometry

13: Ponce De Leon Boulevard & Malaga Avenue

PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	156	114	165	168	55	533	14	62	594
Turn Type	Prot	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8	7	4		6			2
Permitted Phases			4		6		2	2	
Detector Phase	3	8	7	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	4.0	7.0	4.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	8.0	28.0	10.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	10.0	28.0	10.0	28.0	52.0	52.0	52.0	52.0	52.0
Total Split (%)	11.1%	31.1%	11.1%	31.1%	57.8%	57.8%	57.8%	57.8%	57.8%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	0.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0	3.0	5.0		4.3			4.3
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

ø2 (R)					ø3		ø4
52 s					10 s		28 s
ø6 (R)					ø7		ø8
52 s					10 s		28 s

HCM Signalized Intersection Capacity Analysis - Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	156	114	18	165	168	123	55	533	187	14	62	594	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99				0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00				1.00	
Frt	1.00	0.98		1.00	0.94			0.96				0.95	
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	
Satd. Flow (prot)	3433	1816		1752	1745			3372				3320	
Flt Permitted	0.95	1.00		0.57	1.00			0.78				0.80	
Satd. Flow (perm)	3433	1816		1059	1745			2655				2674	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	
Adj. Flow (vph)	166	121	19	176	179	131	59	567	199	15	66	632	
RTOR Reduction (vph)	0	6	0	0	31	0	0	31	0	0	0	64	
Lane Group Flow (vph)	166	134	0	176	279	0	0	794	0	0	0	1004	
Confl. Peds. (#/hr)			20	20			7		14		14		
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8		7	4			6				2	
Permitted Phases				4			6			2	2		
Actuated Green, G (s)	8.6	16.9		28.3	18.3			50.8				50.8	
Effective Green, g (s)	8.6	16.9		28.3	18.3			50.8				50.8	
Actuated g/C Ratio	0.10	0.19		0.31	0.20			0.56				0.56	
Clearance Time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Vehicle Extension (s)	3.0	2.5		3.0	2.5			1.0				1.0	
Lane Grp Cap (vph)	328	341		409	354			1498				1509	
v/s Ratio Prot	c0.05	0.07		c0.05	c0.16								
v/s Ratio Perm				0.09				0.30				c0.38	
v/c Ratio	0.51	0.39		0.43	0.79			0.53				0.67	
Uniform Delay, d1	38.7	32.0		23.6	34.0			12.2				13.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Incremental Delay, d2	1.2	0.5		0.7	10.7			1.3				2.3	
Delay (s)	39.9	32.6		24.3	44.7			13.5				16.0	
Level of Service	D	C		C	D			B				B	
Approach Delay (s)		36.6			37.3			13.5				16.0	
Approach LOS		D			D			B				B	
Intersection Summary													
HCM 2000 Control Delay			21.4									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			89.1%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

Movement	SBR
13	
Lane Configurations	
Volume (vph)	334
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	355
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total, Non-Restrictive, Proposed Geometry
 PM Peak Hour

Intersection

Intersection Delay, s/veh 5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	206	143	159	30	0	270
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	155	173	33	0	293

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	205	0	189
Stage 1	-	-	189
Stage 2	-	-	603
Follow-up Headway	2.218	-	3.318
Pot Capacity-1 Maneuver	1366	-	853
Stage 1	-	-	843
Stage 2	-	-	546
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1366	-	853
Mov Capacity-2 Maneuver	-	-	294
Stage 1	-	-	843
Stage 2	-	-	448

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	11.4
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1366	-	-	-	853
HCM Lane V/C Ratio	0.164	-	-	-	0.344
HCM Control Delay (s)	8.151	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.586	-	-	-	1.54

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Unsignalized Intersection Capacity Analysis
 12: Ponce De Leon Boulevard & University Drive

Future Total with Restrictive Measures
 PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑	↑↑	
Volume (veh/h)	0	0	0	864	685	334
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	909	721	352
Pedestrians	8					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)				129		
pX, platoon unblocked	0.81					
vC, conflicting volume	1360	544	1081			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	985	544	1081			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	200	483	641			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	455	455	481	592		
Volume Left	0	0	0	0		
Volume Right	0	0	0	352		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.27	0.27	0.28	0.35		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.2%		ICU Level of Service	A
Analysis Period (min)			15			

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
PM Peak Hour

Lane Group	EBL	EBT	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations								
Volume (vph)	156	114	168	55	530	14	62	588
Turn Type	Split	NA	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	3	4		6			2
Permitted Phases				6		2	2	
Detector Phase	3	3	4	6	6	2	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	28.0	28.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	31.0	31.0	15.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	34.4%	34.4%	16.7%	48.9%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0		4.3			4.3
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

φ2 (R) 44 s	φ3 31 s	φ4 15 s
φ6 (R) 44 s		

HCM Signalized Intersection Capacity Analysis
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	156	114	18	171	168	160	55	530	190	14	62	588	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	0.95	0.95			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			0.99				1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.98			0.96			0.96				1.00	
Flt Protected	0.95	0.99			0.98			1.00				0.99	
Satd. Flow (prot)	1681	1721			1752			3363				3517	
Flt Permitted	0.95	0.99			0.98			0.76				0.63	
Satd. Flow (perm)	1681	1721			1752			2580				2238	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	
Adj. Flow (vph)	166	121	19	182	179	170	59	564	202	15	66	626	
RTOR Reduction (vph)	0	7	0	0	13	0	0	41	0	0	0	0	
Lane Group Flow (vph)	149	150	0	0	518	0	0	784	0	0	0	707	
Confl. Peds. (#/hr)			20	20			7		14		14		
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	3		4	4			6				2	
Permitted Phases							6			2	2		
Actuated Green, G (s)	12.8	12.8			32.6			30.3				30.3	
Effective Green, g (s)	12.8	12.8			32.6			30.3				30.3	
Actuated g/C Ratio	0.14	0.14			0.36			0.34				0.34	
Clearance Time (s)	5.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	239	244			634			868				753	
v/s Ratio Prot	c0.09	0.09			c0.30								
v/s Ratio Perm								0.30				c0.32	
v/c Ratio	0.62	0.62			0.82			0.90				0.94	
Uniform Delay, d1	36.3	36.3			26.0			28.5				29.0	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	4.3	3.9			7.8			14.5				20.9	
Delay (s)	40.7	40.2			33.8			43.0				49.8	
Level of Service	D	D			C			D				D	
Approach Delay (s)		40.4			33.8			43.0				49.8	
Approach LOS		D			C			D				D	
Intersection Summary													
HCM 2000 Control Delay			42.6									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.83										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	14.3
Intersection Capacity Utilization			98.1%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
 PM Peak Hour

Movement	SBR
Left	
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Through	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Right	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total with Restrictive Measures
 PM Peak Hour

Intersection

Intersection Delay, s/veh 5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	187	165	187	40	0	285
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	203	179	203	43	0	310

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	247	0	225
Stage 1	-	-	225
Stage 2	-	-	586
Follow-up Headway	2.218	-	3.318
Pot Capacity-1 Maneuver	1319	-	814
Stage 1	-	-	812
Stage 2	-	-	556
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1319	-	814
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	812
Stage 2	-	-	461

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	12.1
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1319	-	-	-	814
HCM Lane V/C Ratio	0.154	-	-	-	0.381
HCM Control Delay (s)	8.226	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.544	-	-	-	1.792

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total, Restrictive, Proposed Geometry
PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	156	114	171	168	55	530	14	62	588
Turn Type	Prot	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8	7	4		6			2
Permitted Phases			4		6		2	2	
Detector Phase	3	8	7	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	5.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	8.0	28.0	10.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	9.0	28.0	10.0	29.0	52.0	52.0	52.0	52.0	52.0
Total Split (%)	10.0%	31.1%	11.1%	32.2%	57.8%	57.8%	57.8%	57.8%	57.8%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	0.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0	3.0	5.0		4.3			4.3
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

52 s				9 s		29 s		
52 s				10 s		28 s		

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue PM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations	 			 	 			 				 	
Volume (vph)	156	114	18	171	168	160	55	530	190	14	62	588	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			0.99				0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00				1.00	
Frt	1.00	0.98		1.00	0.93			0.96				0.95	
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00	
Satd. Flow (prot)	3433	1816		1751	1727			3370				3319	
Flt Permitted	0.95	1.00		0.58	1.00			0.78				0.80	
Satd. Flow (perm)	3433	1816		1078	1727			2639				2656	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94	
Adj. Flow (vph)	166	121	19	182	179	170	59	564	202	15	66	626	
RTOR Reduction (vph)	0	6	0	0	41	0	0	33	0	0	0	66	
Lane Group Flow (vph)	166	134	0	182	308	0	0	792	0	0	0	996	
Confl. Peds. (#/hr)			20	20			7		14		14		
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8		7	4			6				2	
Permitted Phases				4			6			2	2		
Actuated Green, G (s)	8.3	18.3		29.4	19.7			49.7				49.7	
Effective Green, g (s)	8.3	18.3		29.4	19.7			49.7				49.7	
Actuated g/C Ratio	0.09	0.20		0.33	0.22			0.55				0.55	
Clearance Time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5		2.5	2.5			1.0				1.0	
Lane Grp Cap (vph)	316	369		424	378			1457				1466	
v/s Ratio Prot	c0.05	0.07		c0.05	c0.18								
v/s Ratio Perm				0.09				0.30				c0.37	
v/c Ratio	0.53	0.36		0.43	0.82			0.54				0.68	
Uniform Delay, d1	39.0	30.8		22.8	33.4			12.9				14.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Incremental Delay, d2	1.2	0.4		0.5	12.4			1.5				2.6	
Delay (s)	40.2	31.3		23.3	45.9			14.4				17.0	
Level of Service	D	C		C	D			B				B	
Approach Delay (s)		36.1			38.1			14.4				17.0	
Approach LOS		D			D			B				B	
Intersection Summary													
HCM 2000 Control Delay			22.5									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			89.8%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

PM Peak Hour

Movement	SBR
13	
Lane Configurations	
Volume (vph)	334
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	355
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total, Restrictive, Proposed Geometry
 PM Peak Hour

Intersection

Intersection Delay, s/veh 5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	187	165	187	40	0	285
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	203	179	203	43	0	310

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	247	0	811
Stage 1	-	-	225
Stage 2	-	-	586
Follow-up Headway	2.218	-	3.518
Pot Capacity-1 Maneuver	1319	-	349
Stage 1	-	-	812
Stage 2	-	-	556
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1319	-	289
Mov Capacity-2 Maneuver	-	-	289
Stage 1	-	-	812
Stage 2	-	-	461

Approach	EB	WB	SB
HCM Control Delay, s	4.4	0	12.1
HCM LOS			B

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1319	-	-	-	814
HCM Lane V/C Ratio	0.154	-	-	-	0.381
HCM Control Delay (s)	8.226	0	-	-	12.1
HCM Lane LOS	A	A			B
HCM 95th %tile Q(veh)	0.544	-	-	-	1.792

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Timings
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Non-Restrictive Measures
 AM Peak Hour

Lane Group	EBL	EBT	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations								
Volume (vph)	223	196	54	53	549	17	51	401
Turn Type	Split	NA	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	3	4		6			2
Permitted Phases				6		2	2	
Detector Phase	3	3	4	6	6	2	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	28.0	28.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	34.0	34.0	12.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	37.8%	37.8%	13.3%	48.9%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0		4.3			4.3
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

ø2 (R) 44 s				ø3 34 s		ø4 12 s	
ø6 (R) 44 s							

HCM Signalized Intersection Capacity Analysis Future Total with Non-Restrictive Measures
 13: Ponce De Leon Boulevard & Malaga Avenue AM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	223	196	24	68	54	52	53	549	159	17	51	401	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	0.95	0.95			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			0.99				1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.99			0.96			0.97				1.00	
Flt Protected	0.95	1.00			0.98			1.00				0.99	
Satd. Flow (prot)	1681	1733			1753			3398				3513	
Flt Permitted	0.95	1.00			0.98			0.88				0.72	
Satd. Flow (perm)	1681	1733			1753			3001				2531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	235	206	25	72	57	55	56	578	167	18	54	422	
RTOR Reduction (vph)	0	5	0	0	15	0	0	26	0	0	0	0	
Lane Group Flow (vph)	211	250	0	0	169	0	0	775	0	0	0	494	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	3		4	4			6				2	
Permitted Phases							6			2	2		
Actuated Green, G (s)	18.3	18.3			17.2			40.2				40.2	
Effective Green, g (s)	18.3	18.3			17.2			40.2				40.2	
Actuated g/C Ratio	0.20	0.20			0.19			0.45				0.45	
Clearance Time (s)	5.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	341	352			335			1340				1130	
v/s Ratio Prot	0.13	c0.14			c0.10								
v/s Ratio Perm								c0.26				0.20	
v/c Ratio	0.62	0.71			0.51			0.58				0.44	
Uniform Delay, d1	32.7	33.4			32.6			18.6				17.1	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	2.8	6.2			0.9			1.8				1.2	
Delay (s)	35.5	39.6			33.5			20.4				18.4	
Level of Service	D	D			C			C				B	
Approach Delay (s)		37.7			33.5			20.4				18.4	
Approach LOS		D			C			C				B	
Intersection Summary													
HCM 2000 Control Delay			25.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.59										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	14.3
Intersection Capacity Utilization			72.8%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Non-Restrictive Measures
 AM Peak Hour

Movement	SBR
Approach	
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Control	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Performance	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total with Non-Restrictive Measures
 AM Peak Hour

Intersection

Intersection Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	175	230	98	34	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	250	107	37	0	78

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	143	0	125
Stage 1	-	-	125
Stage 2	-	-	630
Follow-up Headway	2.218	-	3.318
Pot Capacity-1 Maneuver	1440	-	926
Stage 1	-	-	901
Stage 2	-	-	531
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1440	-	926
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	901
Stage 2	-	-	450

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	9.2
HCM LOS			A

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1440	-	-	-	926
HCM Lane V/C Ratio	0.132	-	-	-	0.085
HCM Control Delay (s)	7.88	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.455	-	-	-	0.276

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Timings

Future Total, Non-Restrictive, Proposed Geometry

13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	223	196	68	54	53	549	17	51	401
Turn Type	Prot	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8	7	4		6			2
Permitted Phases			4		6		2	2	
Detector Phase	3	8	7	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	10.0	28.0	10.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	15.0	31.0	10.0	26.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	16.7%	34.4%	11.1%	28.9%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	0.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0	3.0	5.0		4.3			4.3
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90

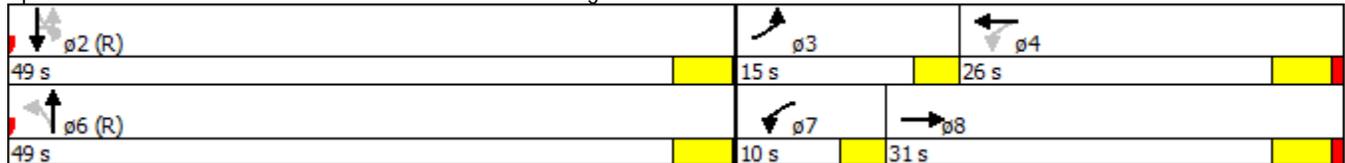
Actuated Cycle Length: 90

Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue



HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	223	196	24	68	54	52	53	549	159	17	51	401	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	
Frt	1.00	0.98		1.00	0.93			0.97				0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00				0.99	
Satd. Flow (prot)	3433	1830		1769	1726			3400				3396	
Flt Permitted	0.95	1.00		0.57	1.00			0.87				0.78	
Satd. Flow (perm)	3433	1830		1068	1726			2956				2659	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	235	206	25	72	57	55	56	578	167	18	54	422	
RTOR Reduction (vph)	0	6	0	0	44	0	0	20	0	0	0	19	
Lane Group Flow (vph)	235	225	0	72	68	0	0	781	0	0	0	598	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8		7	4			6				2	
Permitted Phases				4			6			2	2		
Actuated Green, G (s)	11.8	16.3		17.9	11.2			54.7				54.7	
Effective Green, g (s)	11.8	16.3		17.9	11.2			54.7				54.7	
Actuated g/C Ratio	0.13	0.18		0.20	0.12			0.61				0.61	
Clearance Time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5		2.5	2.5			1.0				1.0	
Lane Grp Cap (vph)	450	331		264	214			1796				1616	
v/s Ratio Prot	c0.07	c0.12		0.02	0.04								
v/s Ratio Perm				0.03				c0.26				0.22	
v/c Ratio	0.52	0.68		0.27	0.32			0.43				0.37	
Uniform Delay, d1	36.5	34.4		30.1	35.9			9.4				8.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Incremental Delay, d2	0.8	5.2		0.4	0.6			0.8				0.7	
Delay (s)	37.3	39.6		30.5	36.6			10.2				9.6	
Level of Service	D	D		C	D			B				A	
Approach Delay (s)		38.4			34.2			10.2				9.6	
Approach LOS		D			C			B				A	
Intersection Summary													
HCM 2000 Control Delay			18.5									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.51										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			71.3%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis - Figure Total, Non-Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue AM Peak Hour

Movement	SBR
13	
Lane Configurations	
Volume (vph)	117
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	123
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total, Non-Restrictive, Proposed Geometry
 AM Peak Hour

Intersection

Intersection Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	175	230	98	34	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	250	107	37	0	78

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	143	0	755
Stage 1	-	-	125
Stage 2	-	-	630
Follow-up Headway	2.218	-	3.518
Pot Capacity-1 Maneuver	1440	-	376
Stage 1	-	-	901
Stage 2	-	-	531
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1440	-	318
Mov Capacity-2 Maneuver	-	-	318
Stage 1	-	-	901
Stage 2	-	-	450

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	9.2
HCM LOS			A

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1440	-	-	-	926
HCM Lane V/C Ratio	0.132	-	-	-	0.085
HCM Control Delay (s)	7.88	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.455	-	-	-	0.276

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM Unsignalized Intersection Capacity Analysis
 12: Ponce De Leon Boulevard & University Drive

Future Total with Restrictive Measures
 AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑↑	↑↑	
Volume (veh/h)	0	0	0	868	474	117
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	0	933	510	126
Pedestrians	6					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				129		
pX, platoon unblocked	0.84					
vC, conflicting volume	1045	324	641			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	679	324	641			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	324	672	939			
Direction, Lane #	NB 1	NB 2	SB 1	SB 2		
Volume Total	467	467	340	296		
Volume Left	0	0	0	0		
Volume Right	0	0	0	126		
cSH	1700	1700	1700	1700		
Volume to Capacity	0.27	0.27	0.20	0.17		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.0	0.0		
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			27.3%		ICU Level of Service	A
Analysis Period (min)			15			

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
AM Peak Hour

								
Lane Group	EBL	EBT	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations								
Volume (vph)	224	196	54	53	545	17	51	398
Turn Type	Split	NA	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	3	4		6			2
Permitted Phases				6		2	2	
Detector Phase	3	3	4	6	6	2	2	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	28.0	28.0	12.0	20.5	20.5	20.5	20.5	20.5
Total Split (s)	34.0	34.0	12.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	37.8%	37.8%	13.3%	48.9%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0		4.3			4.3
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue

 $\phi 2$ (R)	 $\phi 3$	 $\phi 4$
44 s	34 s	12 s
 $\phi 6$ (R)		
44 s		

HCM Signalized Intersection Capacity Analysis
13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	224	196	24	71	54	79	53	545	163	17	51	398	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0	5.0			5.0			4.3				4.3	
Lane Util. Factor	0.95	0.95			1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00			1.00			0.99				1.00	
Flpb, ped/bikes	1.00	1.00			1.00			1.00				1.00	
Frt	1.00	0.99			0.95			0.97				1.00	
Flt Protected	0.95	1.00			0.98			1.00				0.99	
Satd. Flow (prot)	1681	1733			1735			3395				3513	
Flt Permitted	0.95	1.00			0.98			0.88				0.70	
Satd. Flow (perm)	1681	1733			1735			2998				2469	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	236	206	25	75	57	83	56	574	172	18	54	419	
RTOR Reduction (vph)	0	5	0	0	21	0	0	29	0	0	0	0	
Lane Group Flow (vph)	212	250	0	0	194	0	0	773	0	0	0	491	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	3		4	4			6				2	
Permitted Phases							6			2	2		
Actuated Green, G (s)	18.3	18.3			20.0			37.4				37.4	
Effective Green, g (s)	18.3	18.3			20.0			37.4				37.4	
Actuated g/C Ratio	0.20	0.20			0.22			0.42				0.42	
Clearance Time (s)	5.0	5.0			5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5			2.5			1.0				1.0	
Lane Grp Cap (vph)	341	352			385			1245				1026	
v/s Ratio Prot	0.13	c0.14			c0.11								
v/s Ratio Perm								c0.26				0.20	
v/c Ratio	0.62	0.71			0.50			0.62				0.48	
Uniform Delay, d1	32.7	33.4			30.7			20.7				19.2	
Progression Factor	1.00	1.00			1.00			1.00				1.00	
Incremental Delay, d2	3.0	6.2			0.8			2.3				1.6	
Delay (s)	35.7	39.6			31.4			23.1				20.8	
Level of Service	D	D			C			C				C	
Approach Delay (s)		37.8			31.4			23.1				20.8	
Approach LOS		D			C			C				C	
Intersection Summary													
HCM 2000 Control Delay			26.9									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	14.3
Intersection Capacity Utilization			74.7%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 13: Ponce De Leon Boulevard & Malaga Avenue

Future Total with Restrictive Measures
 AM Peak Hour

Movement	SBR
Approach	
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Control	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Performance	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total with Restrictive Measures
 AM Peak Hour

Intersection

Intersection Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	153	256	124	45	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	278	135	49	0	83

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	184	0	159
Stage 1	-	-	159
Stage 2	-	-	611
Follow-up Headway	2.218	-	3.318
Pot Capacity-1 Maneuver	1391	-	886
Stage 1	-	-	870
Stage 2	-	-	542
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1391	-	886
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	870
Stage 2	-	-	466

Approach	EB	WB	SB
HCM Control Delay, s	3	0	9.5
HCM LOS			A

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1391	-	-	-	886
HCM Lane V/C Ratio	0.12	-	-	-	0.093
HCM Control Delay (s)	7.939	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.406	-	-	-	0.308

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Timings
13: Ponce De Leon Boulevard & Malaga Avenue

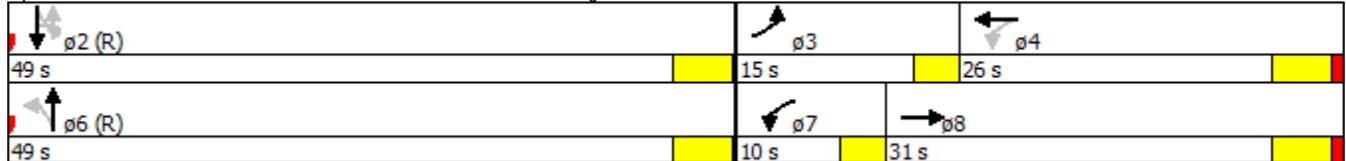
Future Total, Restrictive, Proposed Geometry
AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Volume (vph)	224	196	71	54	53	545	17	51	398
Turn Type	Prot	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	3	8	7	4		6			2
Permitted Phases			4		6		2	2	
Detector Phase	3	8	7	4	6	6	2	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	16.0	16.0	16.0	16.0	16.0
Minimum Split (s)	10.0	28.0	10.0	12.0	20.3	20.3	20.3	20.3	20.3
Total Split (s)	15.0	31.0	10.0	26.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	16.7%	34.4%	11.1%	28.9%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	1.0	0.0	1.0	0.3	0.3	0.3	0.3	0.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0
Total Lost Time (s)	3.0	5.0	3.0	5.0		4.3			4.3
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Ponce De Leon Boulevard & Malaga Avenue



HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Volume (vph)	224	196	24	71	54	79	53	545	163	17	51	398	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Lane Util. Factor	0.97	1.00		1.00	1.00			0.95				0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00	
Frt	1.00	0.98		1.00	0.91			0.97				0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00				0.99	
Satd. Flow (prot)	3433	1830		1769	1697			3396				3395	
Flt Permitted	0.95	1.00		0.55	1.00			0.87				0.78	
Satd. Flow (perm)	3433	1830		1017	1697			2953				2655	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.95	0.95	
Adj. Flow (vph)	236	206	25	75	57	83	56	574	172	18	54	419	
RTOR Reduction (vph)	0	6	0	0	65	0	0	22	0	0	0	20	
Lane Group Flow (vph)	236	225	0	75	75	0	0	780	0	0	0	594	
Confl. Peds. (#/hr)			1	1			6		4		4		
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA	
Protected Phases	3	8		7	4			6				2	
Permitted Phases				4			6			2	2		
Actuated Green, G (s)	11.0	17.5		20.1	13.3			53.4				53.4	
Effective Green, g (s)	11.0	17.5		20.1	13.3			53.4				53.4	
Actuated g/C Ratio	0.12	0.19		0.22	0.15			0.59				0.59	
Clearance Time (s)	3.0	5.0		3.0	5.0			4.3				4.3	
Vehicle Extension (s)	2.5	2.5		2.5	2.5			1.0				1.0	
Lane Grp Cap (vph)	419	355		283	250			1752				1575	
v/s Ratio Prot	c0.07	c0.12		0.02	0.04								
v/s Ratio Perm				0.04				c0.26				0.22	
v/c Ratio	0.56	0.63		0.27	0.30			0.44				0.38	
Uniform Delay, d1	37.2	33.3		28.4	34.2			10.1				9.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00	
Incremental Delay, d2	1.4	3.2		0.4	0.5			0.8				0.7	
Delay (s)	38.6	36.5		28.7	34.7			10.9				10.3	
Level of Service	D	D		C	C			B				B	
Approach Delay (s)		37.6			32.6			10.9				10.3	
Approach LOS		D			C			B				B	
Intersection Summary													
HCM 2000 Control Delay			18.9									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.51										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.3
Intersection Capacity Utilization			71.3%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis Future Total, Restrictive, Proposed Geometry
 13: Ponce De Leon Boulevard & Malaga Avenue

AM Peak Hour

Movement	SBR
Approach Configurations	
Volume (vph)	117
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frbp, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	123
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	6
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM 2010 TWSC
 35: Malaga Avenue & South Driveway

Future Total, Restrictive, Proposed Geometry
 AM Peak Hour

Intersection

Intersection Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	153	256	124	45	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	278	135	49	0	83

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	184	0	770
Stage 1	-	-	159
Stage 2	-	-	611
Follow-up Headway	2.218	-	3.518
Pot Capacity-1 Maneuver	1391	-	369
Stage 1	-	-	870
Stage 2	-	-	542
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	1391	-	317
Mov Capacity-2 Maneuver	-	-	317
Stage 1	-	-	870
Stage 2	-	-	466

Approach	EB	WB	SB
HCM Control Delay, s	3	0	9.5
HCM LOS			A

Minor Lane / Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1391	-	-	-	886
HCM Lane V/C Ratio	0.12	-	-	-	0.093
HCM Control Delay (s)	7.939	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.406	-	-	-	0.308

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined



Memorandum

To: Eddie Avila
Agave Ponce, LLC

From: John J. McWilliams, P.E. 

Date: May 17, 2015

**Subject: Mediterranean Village
Valet Operations Analysis Update**

Kimley-Horn and Associates, Inc. previously prepared the most recent valet operations analysis for the proposed Mediterranean Village redevelopment dated March 6, 2015. Since that time, the proposed development plan has been modified resulting in an overall reduction in the trips generated by the project. Refer to the most recent traffic impact analysis update. Therefore, the previous operations report provides for a conservative analysis of the valet operations as volumes are projected to be lower than previously assumed. As a result, a complete update of the previous analysis was not performed.

However, the hotel valet area/porte cochere was relocated from Ponce De Leon Boulevard to a location internal to the site accessed from the proposed driveway connection on Malaga Avenue. Refer to Attachment A for the current valet operations plan. The previous valet analysis indicated that a total of seven (7) valet service positions were needed for sufficient operations. The proposed plan provides for seven (7) service positions. In addition, the proposed plans provides for valet processing times equal to or less than the assumptions included in the March 6, 2015 for this valet station. Therefore, the analysis previously provided is applicable to the proposed configuration/plan and no further updates to the analysis are warranted.

It should be noted that projected vehicular volumes and estimated valet processing times were conservatively assumed in the previously submitted analysis. If it is determined that valet processing times can be performed more efficiently and/or actual traffic volumes are lower than projected, a reduced number of valet attendants may be adequate to serve the site.

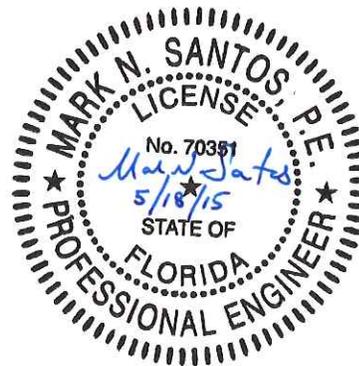
K:\FTL_TPTO\043567000-Old Spanish Village\Correspondence\05 17 15 valet operations analysis memo update.docx

Attachment A



Parking Demand Reduction Analysis

Mediterranean Village Coral Gables, Florida



Kimley»»Horn

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May 2015



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To: Mr. Ramon Trias, AIA, AICP, LEED AP
Development Services Department
Planning and Zoning Division
City of Coral Gables

From: Mark N. Santos, P.E.

Cc: Eddie Avila
Mario Garcia-Serra, Esq.
Dan Freed, AIA

Date: May 18, 2015

Subject: *Mediterranean Village Parking Demand Reduction Analysis*

INTRODUCTION

On May 8, 2014, a Mediterranean Village project workshop was held at the City of Coral Gables Development Services Department, where an agenda item included status of the parking demand reduction analysis. On May 16, 2014, a Parking Reduction Methodology draft memorandum was submitted to the City of Coral Gables by Kimley-Horn.

On June 13, 2014, a Mediterranean Village project workshop was held at the City of Coral Gables City Commission Chambers, where concepts of parking demand reduction, including shared parking were discussed. Subsequently, the Parking Demand Reduction Analysis dated July 3, 2014 was provided to the City of Coral Gables for review. Comments on the analysis were received from David Plummer & Associates dated August 4, 2014 and were addressed in the report dated August 20, 2014 (2nd submission) and in a comments responses memorandum submitted.

Comments on the analysis 2nd submission were received from David Plummer & Associates dated October 1, 2014 and were responded to via separate memorandum and this updated Parking Reduction Analysis dated August 20, 2014.

On December 18, 2014, a meeting with Planning & Zoning staff meeting was held to discuss comments on the project. Subsequently, David Plummer & Associates (DPA) provided comments on Traffic Impact Analysis and Parking Demand Reduction Analysis dated December 19, 2014. A comments response memorandum has been submitted separately addressing parking demand reduction analysis. An updated Parking Reduction analysis dated January 12, 2015 was submitted.

On January 23, 2015, City comments on the Planning and Zoning Board submittal were received from various departments and consultants including: Planning and Zoning (Ramon Trias and Charles Wu), David Plummer & Associates, City Engineer (Yamilet Senespleda), Parking (Kevin Kinney), and Fire (Robert Lowman). A comments response memorandum has been submitted separately addressing parking demand reduction analysis.

The project was presented at the February 11, 2015 Planning and Zoning Board meeting and to the City Commission on March 25, 2015 and April 2, 2015.

This memorandum provides the analysis supporting the proposed parking demand reduction and is divided in the following sections:

- Shared Parking Concept
- Zoning Ordinance Research
- Project Research
- Parking Reduction

The parking demand reduction analysis utilizes the Mediterranean Village plans produced by RTKL. The proposed development plan provides for a mix of land uses and is listed as follows:

- 265,000 square feet of retail space
- 317,000 square feet of office space
- 15 residential townhouses
- 214 high-rise residential condominiums
- 184-room hotel
- 29,000 square feet of restaurant (separated into 25% family type and 75% fine/causal type)

SHARED PARKING CONCEPT

The parking reduction analysis implements the concept of shared parking, where a parking facility accommodates the parking demands of multiple adjacent land uses without preventing each individual use's ability to provide parking for its patrons. The shared nature of this concept reduces the number of parking spaces required and subsequently reduces the size of the project's parking garage, and utilizes the space more efficiently. Shared parking is dependent upon the user groups and the associated peak hour demand.

In this concept, parking spaces are shared by the group of patron serviced by the parking facility rather than parking spaces being assigned to them. In many instances, users of a parking facility arrive and leave at differing times, do not stay for as long as other users, or utilize alternative modes of transportation. Ultimately, the demand for parking spaces does not equal the amount of users at any given time.

Shared parking can be applied in many situations. It is particularly appropriate where:

- ❖ Land values and parking facility costs are significant
- ❖ Grouped development is proposed
- ❖ Overbuild of parking is a possibility

The parking demands of the adjacent uses vary by hour, by day, or by season. Due to the variance in peak demand times, the parking facility is able to adequately serve the demands of the adjacent uses with less than the maximum parking spaces needed to serve the adjacent on an individual basis in private parking facilities. Ultimately, the concept of shared parking focuses on the peak parking demand based on user peak times as opposed to considering that the entire parking demand from all users are consistently present at any time.

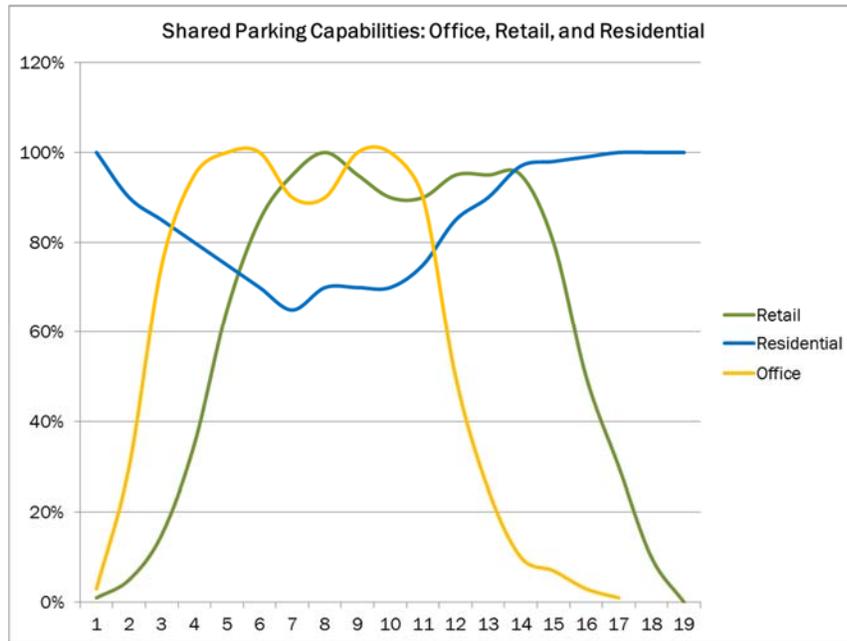
The table below provides typical peak timeframes for various uses and is an excerpt from *Shared Parking: Sharing Parking Facilities Among Multiple Users*, Victoria Transport Policy Institute (VTPI).

Weekday Peaks	Evening Peaks	Weekend Peaks
Banks	Auditoriums	Religious Institutions
Schools	Bars and Clubs	Parks
Medical Clinics	Meeting Halls	Shops and Malls
Offices	Restaurants	
Professional Services	Theaters	

As an example, reference hypothetical development scenario below:

Development Description: A moderate sized mixed-use development containing office, retail, and residential uses.			
Land Use	Units	Parking Demand Ratio	Stand-alone Parking Requirement
Office	90,000 Sq. Ft.	4 spaces / 1,000 Sq. Ft.	360 spaces
Retail	10,000 Sq. Ft.	4 spaces / 1,000 Sq. Ft.	40 spaces
Residential	165 dwelling units	1.5 spaces / Unit	250 space
Total:			650 spaces

The following graphs illustrate the typical parking accumulation patterns for a mix of office, retail, and residential uses. The patterns for office and retail have opposite peaks, while office/retail and residential are virtually inverse of each other.



Through the application of shared parking, the 650-space demand for the uses can be minimized by several hundred spaces. A parking demand reduction of 250 spaces can be applied.

Shared Parking Technical References

Shared Parking 2nd Edition, Urban Land Institute (ULI)

Shared Parking is considered as one of the most comprehensive resources in the parking industry in addressing the concept of shared parking. This reference contains an introduction to shared parking, methodology, and specific values for parking demand ratios for various land uses. This reference also contains specific user parking adjustment factors for different months, time of day during weekdays (6 a.m. to 12 a.m.), and time of day during weekends (6 a.m. to 12 a.m.)



Shared Parking: Sharing Parking Facilities Among Multiple Users, Victoria Transport Policy Institute (VTPI)

Per the VTPI website (www.vtpi.org), VTPI is an independent research organization dedicated to developing innovative and practical solutions to transportation problems. *Shared Parking* provides information on techniques for sharing parking facilities among various users to increase efficiency. Parking occupancy rates per user group is provided.



Modal Split Concept

The modal split concept considers the use of alternative modes of transportation to personal vehicles, including bicycling, walking, and transit. Accessibility, convenience, and pricing of alternate modes of transportation directly affect the extent of associated parking demand reduction.

In order to account for the urban environment in which the project site is located, Kimley-Horn has considered the use of a multimodal reduction (public transit, bicycle, and pedestrian) to the various proposed uses. It is expected that employees, nearby residents, and guests in adjacent hotels will choose to walk to the proposed development. It is also anticipated that hotel guests within the development will walk to the adjacent retail stores, other restaurants, and local places of interest. Additionally, it is expected that a portion of the trips including employee trips will utilize transit. Further information is provided in the section titled Parking Reduction Methodology.

Internal Capture Concept

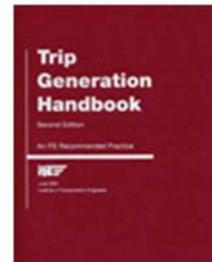
Internal capture is expected between the complementary land uses within a project where trips are trips made among the on-site uses. Through the Traffic Impact Analysis conducted separately by Kimley-Horn, internal capture trips for the project during A.M. and P.M. peak periods were determined based upon methodology contained in the ITE's, *Trip Generation Handbook*, 2nd Edition June 2004.

Upon further investigation, internal capture between the various uses has not been applied to parking reduction based on conflicts with the shared parking concept.

Internal Capture Technical References

Trip Generation Handbook, 2nd Edition, Institute of Transportation Engineers (ITE)

Per ITE.org, This recommended practice provides guidelines for application and interpretation of trip generation data. Topics covered in the handbook include guidelines for estimating site trip generation, collecting local trip generation data, developing local trip generation rates, estimating pass-by trips and estimating trip generation for multiuse land developments.



Report 684 Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, 2011, National Cooperative Highway Research Program (NCHRP)

Per the Foreword section of this reference, this report provides an improved methodology to estimate how many internal trips will be generated in mixed-use developments—trips for which both the origin and destination are within the development. The methodology estimates morning and afternoon peak-period trips to and from six specific land use categories: office, retail, restaurant, residential, cinema, and hotel.



Notably, a Districtwide Trip Generation Study was conducted by FDOT in March 1995 where six mixed-use sites in Florida were surveyed. The tables obtained from this report are provided below showing the user groups and resulting daily internal capture rates.

Table 5. Characteristics of mixed-use sites surveyed by FDOT.

Mixed-Use Site	Site Size (acres)	Office (sq ft)	Commercial (sq ft)	Hotel (rooms)	Residential (units)
Crocker Center	26	209,000	87,000	256	0
Mizner Park	30	88,000	163,000	0	136
Galleria Area	165	137,000	1,150,000	229	722
Country Isles	61	59,000	193,000	0	368
Village Commons	72	293,000	231,000	0	317
Boca Del Mar	253	303,000	198,000	0	1,144

Table 6. Daily internal capture rates at FDOT sites.

Mixed-Use Development Site	Internal Capture Rate
Crocker Center	41%
Mizner Park	40%
Galleria Area	38%
Country Isles	33%
Village Commons	28%
Boca Del Mar	33%
Average	36%

ZONING ORDINANCE RESEARCH

Parking Reduction

Various zoning ordinances have been researched to identify municipalities that currently address parking reduction. South Florida, other areas within Florida, and regions outside of Florida have been included in the research. Twelve (12) municipalities were identified to contain zoning ordinances that addressed parking reductions, including:

- Five (5) South Florida municipalities: Miami, Miami Beach, Fort Lauderdale, Broward County, West Palm Beach
- Four (4) Florida municipalities: Sarasota, St. Petersburg, Tampa, Orlando
- Three (3) National municipalities: Greensboro, NC, San Antonio, TX, Fort Collins, CO

The zoning ordinance content addressing parking reductions varied from a simplified calculation with municipality provided parking reduction values to a comprehensive study to determine project specific parking reduction values. The table below provides a summary of the types of parking reduction identified from the various municipalities.

Parking Reduction Type Summary			
City Provided Reduction Values	ULI Reduction Values	General	Project Specific
FLORIDA			
Miami	Orlando	Tampa	Miami
Miami Beach			Fort Lauderdale
West Palm Beach			Broward County
St. Petersburg			Sarasota
NATIONAL			
Greensboro, NC		Fort Collins, CO	
San Antonio, TX			

The table below provides a summary of findings including municipality location, zoning code section, and specific requirements listed for parking reductions.

Parking Demand Reduction and Shared Parking – Florida Municipalities																																						
Municipality (2012 US Census Population)	Code Section	Parking Reduction Content	Comments																																			
1. Miami (413,892)	Miami 21 Article 4 Table 5 Building Function: Parking and Loading	Provided chart allows parking reduction of two uses by applying a reduction factor to the lesser parking demand of each use. Reduced lesser demand (#1) is then added to larger base demand (#2). Additional sharing is by Warrant.	More than 2 uses would require additional studies and pursuit through warrant.																																			
<p style="text-align: center;">MIAMI 21 ARTICLE 4. TABLE 5 BUILDING FUNCTION: PARKING AND LOADING AS ADOPTED - APRIL 2012</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>SHARED PARKING STANDARDS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SHARING FACTOR</th> </tr> <tr> <th>Function</th> <th>with Function</th> </tr> </thead> <tbody> <tr> <td>RESIDENTIAL</td> <td>RESIDENTIAL</td> </tr> <tr> <td>LODGING</td> <td>LODGING</td> </tr> <tr> <td>OFFICE</td> <td>OFFICE</td> </tr> <tr> <td>COMMERCIAL</td> <td>COMMERCIAL</td> </tr> </tbody> </table> </div> <div style="width: 50%;"> <p>The shared Parking Standards Table provides the method for calculating shared parking for buildings with more than one Use type. It refers to the parking requirements that appear in Table 4.</p> <p>The parking required for any two Functions on a Lot is calculated by dividing the number of spaces required by the lesser of the two uses by the appropriate factor from this Table and adding the result to the greater use parking requirement.</p> <p>For instance: for a building with a Residential Use requiring 100 spaces and a Commercial Use requiring 20 spaces, the 20 spaces divided by the sharing factor of 1.2 would reduce the total requirement to 100 plus 17 spaces. For uses not indicated in this chart on a mixed use lot a sharing factor of 1.1 shall be allowed. Additional sharing is allowed by Warrant.</p> </div> </div> <div style="margin-top: 10px;"> <p>OFF-STREET PARKING STANDARDS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">ANGLE OF PARKING</th> <th colspan="3">ACCESSIBLE WIDTH</th> </tr> <tr> <th>ONE WAY TRAFFIC SINGLE LOADED</th> <th>ONE WAY TRAFFIC DOUBLE LOADED</th> <th>TWO WAY TRAFFIC DOUBLE LOADED</th> </tr> </thead> <tbody> <tr> <td>90</td> <td>23 ft</td> <td>23 ft</td> <td>23 ft</td> </tr> <tr> <td>60</td> <td>12.8 ft</td> <td>11.8 ft</td> <td>19.3 ft</td> </tr> <tr> <td>45</td> <td>10.8 ft</td> <td>9.5 ft</td> <td>18.5 ft</td> </tr> <tr> <td>Parallel</td> <td>10 ft</td> <td>10 ft</td> <td>20 ft</td> </tr> </tbody> </table> <p>Standard stall: 8.5 ft x 18 ft minimum</p> <ul style="list-style-type: none"> • Driveways shall have a minimum of 10 feet of paved width of a one-way drive and 20 feet for a two-way drive for parking area providing 10 or more stalls. • Pedestrian entrances shall be at least 3 feet from stall, driveway or access aisle. • Allowable slopes, paving, and drainage as per Florida Building Code. • Off-street Parking facilities shall have a minimum vertical clearance of 7 feet. Where such a facility is to be used by trucks or loading Uses, the minimum clearance shall be 12 feet Residential and 15 feet Commercial and Industrial. • Ingress vehicular control devices shall be located so as to provide a minimum driveway of 20 feet in length between the Base Building Line and dispenser. • For requirements of parking lots, refer to Article 9 and the City of Miami Off-street Parking Guides and Standards. </div>				SHARING FACTOR		Function	with Function	RESIDENTIAL	RESIDENTIAL	LODGING	LODGING	OFFICE	OFFICE	COMMERCIAL	COMMERCIAL	ANGLE OF PARKING	ACCESSIBLE WIDTH			ONE WAY TRAFFIC SINGLE LOADED	ONE WAY TRAFFIC DOUBLE LOADED	TWO WAY TRAFFIC DOUBLE LOADED	90	23 ft	23 ft	23 ft	60	12.8 ft	11.8 ft	19.3 ft	45	10.8 ft	9.5 ft	18.5 ft	Parallel	10 ft	10 ft	20 ft
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2. Miami Beach (90,588)	Subpart B - LAND DEVELOPMENT REGULATIONS Chapter 130 - OFF-STREET PARKING ARTICLE VIII. SHARED PARKING Sec. 130-221. Requirements.	Two or more uses shall be permitted to share the same required off-street parking spaces in a common parking facility on the same lot if the hours or days of peak parking for the uses are so different that a lower total will provide an adequate number of spaces for all uses served by the facility, according to the following table.	Simplified analysis with parking occupancy percentages per time of day per user group.																																			

Sec. 130-221. Requirements.

Two or more uses shall be permitted to share the same required off-street parking spaces in a common parking facility on the same lot if the hours or days of peak parking for the uses are so different that a lower total will provide an adequate number of spaces for all uses served by the facility, according to the following table.

	Weekdays		Weekends		
	Daytime (6:00 a.m.— 6:00 p.m.) (percent)	Evening (6:00 p.m.— 6:00 a.m.) (percent)	Daytime (6:00 a.m.— 6:00 p.m.) (percent)	Evening (6:00 p.m.— midnight) (percent)	Nighttime (midnight— 6:00 a.m.) (percent)
Office or banks	100	5	10	5	5
Retail	60	20	80	60	5
Hotels	50	60	60	100	75
Restaurant	50	75	75	90	10
Theatre	10	70	20	90	10
Nightclubs	5	50	5	100	90
Other uses	100	100	100	100	100

- (1) Method of calculation:
- a. Step 1: For each of the five time periods, multiply the minimum number of parking spaces required by sections 130-32, 130-33 and 130-34.
 - b. Step 2: Add the results of each column. The required number of parking spaces shall equal the highest column total.
- (2) The land uses served by the shared parking facility shall be in single ownership or unity of title or long term lease.

<p>3. Ft. Lauderdale (170,747)</p>	<p>Unified Land Development Code Sec. 47-20.3. - Reductions and exemptions.</p>	<p>A-3-d. Application Parking study which documents and supports the criteria submitted by the applicant for a parking reduction. The parking study shall be certified by a state licensed engineer, architect or landscape architect or American Institute of Certified Planners certified planner and shall document the existence of certain facts related to the projected use of the parking facility and its relationship to surrounding rights-of-way and properties. The methodology for conducting the study shall be submitted for review and approval by the city engineer and shall include, but not be limited to the week and day the study will be conducted, the number of days and duration of the study, and the time intervals and locations for data collection.</p> <p>A-5-d. Criteria (partial) If the application is based on two (2) or more different users sharing the same parking spaces at different hours, the peak hours for each use will be at different hours;</p> <p>A-5-e. If the application is based on two (2) or more users sharing the same parking spaces at the same time as one use derives a portion of its customers as walk-in traffic from the other use, the two (2) or more uses share the same users.</p>	<p>Previous shopping center parking reduction studies completed by Kimley-Horn.</p> <p>Comprehensive analysis.</p>
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<p>4. Broward County (1,838,844)</p>	<p>Broward County, Florida, Code of Ordinances PART II - CODE OF ORDINANCES Chapter 39 - ZONING ARTICLE XII. OFF-STREET PARKING AND LOADING Sec. 39-222. Shared usage.</p>	<p>Required parking spaces may be permitted to be utilized for meeting the parking requirements of two (2) separate permitted uses when it is clearly established by the applicant that the two (2) uses will utilize the spaces at different times of the day, week, month or year, such as a church sharing spaces with a retail store. A recordable covenant, with the correct legal description, shall be submitted by the owners of the property and the two (2) businesses or tenants involved in a form acceptable to the office of the county attorney. The covenant shall be recorded in the public records of Broward County at the applicant's expense, and shall run with the land. The covenant shall provide that the use or portion of a use, that requires the shared parking in order to obtain the necessary permits or licenses, shall cease and terminate upon any change in their respective schedules of operation that results in conflicting or overlapping usage of the parking facilities, and no nonresidential use may be made of that portion of the property until the required parking facilities are available and provided. The covenant shall also provide that the county may collect attorneys' fees if litigation is necessary to enforce the requirements of this section.</p>	
<p>5. West Palm Beach (101,903)</p>	<p>West Palm Beach, Florida, Code of Ordinances >> PART II - CODE OF ORDINANCES >> Chapter 94 - ZONING AND LAND DEVELOPMENT REGULATIONS >> ARTICLE XV. PARKING >>Sec. 94-484. Shared parking requirements.</p>	<p>a. <i>Intent.</i> The intent of this section is to permit a reduction in the total number of required parking spaces when property is occupied by two or more uses which typically do not experience peak parking demands at the same time.</p> <p>b. <i>Calculation of shared parking requirements.</i> Notwithstanding the provisions of subsection 94-481(c), when any land or building is used for two or more distinguishable purposes as listed in this section, the minimum total number of required parking spaces shall be determined by the following procedure:</p> <p>1. Multiply the minimum parking requirement for each individual use as provided in section 94-486 by the appropriate percentage listed in Table</p>	<p>Simplified analysis with parking occupancy percentages per time of day per user group.</p> <p>25% maximum reduction.</p>

		<p>XV-1 for each of the five designated time periods.</p> <p>2. Add the resulting sum for each of the five vertical columns for the table.</p> <p>3. The minimum parking requirement is given by the highest sum resulting from subsection (b)(2) of this section.</p> <p>4. Limitations: a) Parking spaces which are reserved for use by specified individuals or classes of individuals shall not be counted toward meeting parking requirements. b) The provisions in this section shall not result in a reduction of more than 25 percent from the requirements which would apply in the absence of this section.</p>	
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TABLE XV-1

CALCULATION OF SHARED PARKING REQUIREMENTS

Uses	Weekdays			Weekend	
	Night Midnight 6:00 a.m. (percent)	Day 9:00 a.m. 4:00 p.m. (percent)	Eve. 6:00 p.m. Midnight (percent)	Day 9:00 a.m. 6:00 p.m. (percent)	Eve. 6:00 p.m. 4:00 a.m. (percent)
Residential	100	60	90	80	90
Office/Industrial	5	100	10	10	5
Comm./Retail (nonoffice)	5	90	70	100	70
Hotel (city center)	80	80	100	80	100
Hotel (noncity center)	70	70	100	70	100
Restaurant	10	50	100	50	100
Ent./Recr. (theatres, bowling alleys, etc.)	10	40	100	80	100
Movie theatres	10	40	85	80	100
All others	100	100	100	100	100

<p>6. Sarasota (52,811)</p>	<p>Unofficial Zoning Code Section VII-211. Shared Parking Facilities</p>	<p>A. Two (2) or more non-residential uses located on the same or separate zoning lots may provide for shared parking facilities, upon receiving the approval of the Planning Board. The applicant shall demonstrate to the satisfaction of the Planning Board that the uses upon the zoning lot(s) are able to share the same parking spaces because their parking demands occur at different times (for example if one use operates during evenings or weekdays only). The Planning Board shall hold a public hearing at which the applicant shall be required to demonstrate to the satisfaction of the Planning Board that the type of use(s) indicates that the periods of usage will not overlap or be concurrent and that a reduction in the total number of required off-street parking spaces is</p>	
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		<p>justified. The applicant shall submit documentation supporting the request for shared parking spaces that shall, at a minimum, include:</p> <ol style="list-style-type: none"> 1. The uses proposed to share parking and the number of parking spaces required for those uses by this article; 2. The location and number of parking spaces that are being shared including a legal description of the property upon which the uses are located and upon which the shared parking spaces are located; 3. An analysis showing that peak parking times of uses occur at different times and that parking area(s) will have a sufficient number of parking spaces to meet the minimum anticipated demands of all uses sharing the joint parking area(s); and 4. If the shared parking spaces are located off-site then the applicant shall also demonstrate that a safe pedestrian route exists, or will be provided, for the safety of pedestrians traveling between the premises and the off-site parking facilities. 	
<p>7. St. Petersburg (246,541)</p>	<p>St. Petersburg, Florida, Code of Ordinances PART II - ST. PETERSBURG CITY CODE Chapter 16 - LAND DEVELOPMENT REGULATIONS SECTION 16.40.090. PARKING AND LOADING, DESIGN STANDARDS 16.40.090.3.2. Minimum number of parking spaces required.</p>	<p><i>C. Administrative adjustment of standards.</i> The purpose of this subsection is to provide flexibility in reducing or modifying parking standards for certain uses. An adjustment to a parking standard or requirement may be approved based on a determination by the POD that the adjustment is consistent with the purpose and intent of the parking standards and requirements. The POD's final determination may be appealed to the Development Review Commission.</p> <p><i>1. Joint use/shared parking.</i> Joint use of required nonresidential parking spaces may occur where two or more uses on the same or separate sites are able to share the same parking spaces because their parking demands occur at different times. Joint use of required nonresidential parking spaces is allowed when either of the following conditions applies:</p> <ol style="list-style-type: none"> a. Two or more owners or operators of buildings or uses requiring off-street parking may share a parking facility if the 	<p>Simplified analysis with parking occupancy percentages per time of day per user group.</p>

		<p>total minimum number of required spaces conforms to the Matrix: Use Permissions and Parking Requirements when computed separately for each use or building type.</p> <p>b. Two or more owners or operators of buildings or uses requiring offstreet parking that share a parking facility may reduce the total amount of required parking spaces in accordance with the following methodology:</p>					
<p>Shared Parking Ratios (Numbers are listed as percent)</p>						Weekday	Weekend
Use	Morning 12:00 am - 6:00 am	Day 9:00 am - 4:00 pm	Evening 6:00 pm - 12:00 pm	Day 9:00 am - 4:00 pm	Evening 6:00 pm - 12:00 pm		
Office	5.0	100	10	10	5.0		
Retail	5.0	60	90	100	70		
Restaurant	10	50	100	100	100		
Entertainment	10	40	100	80	100		
Hotel	75	75	100	75	100		
Others	100	100	100	100	100		
<p>8. Tampa (347,645)</p>	<p>Tampa, Florida, Code of Ordinances - CODE OF ORDINANCES CITY OF TAMPA, FLORIDA Chapter 27 - ZONING AND LAND DEVELOPMENT ARTICLE VI. - SUPPLEMENTAL REGULATIONS DIVISION 3. ACCESS, PARKING AND LOADING Sec. 27-283.10. Administrative variance of required parking spaces.</p>	<p>(a) The zoning administrator may authorize a reduction of the required number of parking spaces for the following situations:</p> <p>1) The parking requirements of a specific use or development necessitate fewer parking spaces than this article requires. The applicant must demonstrate to the department the reduced parking demand for the development by submitting the appropriate traffic data. However, no reduction of parking for a medical office use may be approved administratively or by any appeal process.</p>	<p>General type analysis for parking reductions.</p>				

<p>9. Orlando (249,562)</p>	<p>Orlando, Florida, Code of Ordinances TITLE II - CITY CODE Chapter 61 - ROADWAY DESIGN AND ACCESS MANAGEMENT PART 3. - PARKING AND LOADING 3C. NUMBER OF PARKING SPACES Sec. 61.323. Adjustments to Parking Requirements.</p>	<p>(3) a. Shared Parking. A reduction in the minimum number of required parking spaces may be approved for mixed-use developments where the uses have parking demands that peak at different times of the day, days of the week or seasons of the year, and if open and unreserved parking spaces are provided to share between the complementary uses. Shared parking shall be subject to the following standards:</p> <ol style="list-style-type: none"> 1. The study shall identify the properties and uses for the study. The study may include properties and uses not subject to the building permit. All land uses considered for shared parking analysis shall be within the Pedestrian Shed of those facilities providing parking for the analysis. 2. If parking is to be supplied by a party other than the applicant requesting the adjustment, where covenants are required, the applicant shall provide written confirmation, approved in form by the City, from all property owners involved, agreeing to the covenants, should the adjustment be approved. This requirement shall not apply in the MXD/T, MU/T, O/T and AC/T zoning districts. 3. The latest edition of <i>Shared Parking</i> published by the Urban Land Institute shall be used to estimate parking demand, except that the maximum parking ratios in Figure 27 of this chapter shall be used where the numbers differ from the maximums in <i>Shared Parking</i>. 4. Reductions for alternative transportation services shall be considered in the analysis. <p>b. A Parking Management Plan shall be submitted, outlining the provisions that parking is shared as assumed in the shared parking study, and that the shared parking arrangement provides for all required parking to be located within the Pedestrian Shed of the use served. The Parking Management Plan shall include the following:</p>	<p>Comprehensive analysis. ULI Shared Parking referenced.</p> <p>City utilizes range of parking demand ratios, minimum to maximum.</p>
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		<p>1. A site plan showing parking spaces intended for shared parking and their proximity to the uses they will serve.</p> <p>2. Designation of parking facilities or portions thereof for each particular use or group of uses, if such distinctions are made. Directional signs to the assigned locations shall also be included in the plans.</p> <p>3. A pedestrian circulation plan that shows connections and walkways between vehicular use areas and land uses.</p> <p>4. A written plan to outline practices that will support successful shared parking including, but not limited to: access controls, parking rate schedules, and enforcement techniques.</p> <p>c. Where multiple parties own distinct portions of a single development proposing a reduction in parking due to shared parking, shared use agreements, approved in form by the City, must be formalized between the owners of the shared parking facilities and the properties served by the shared parking facilities.</p>	
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Parking Demand Reduction and Shared Parking – U.S. Municipalities					
Municipality (2012 US Census Population)	Code Section	Parking Reduction Content			Comments
Greensboro, NC (277,080)	Land Development Ordinance Article 11. Off-Street Parking and Loading 30-11-4 Exemptions and Reductions	Various reductions of 10% to 25% based on zoning district. 25% for Traditional Neighborhood District (TN). 33% for Mixed Use District (MU).			http://www.zoningplus.com/regs/greensboro/
San Antonio, TX (1,382,951)	San Antonio, Texas, Unified Development Code >> ARTICLE V - DEVELOPMENT STANDARDS >> DIVISION 6. PARKING AND STORAGE STANDARDS >>	(h) Shared Parking Facilities - Mixed-Use Developments. Developments which contain a mix of uses on the same parcel, as set forth in Table 526-2 below, may reduce the amount of required parking in accordance with the following methodology: 1. Determine the minimum parking requirements in accordance with Table 526-2 for each land use as if it were a separate use; 2. Multiply each amount by the corresponding percentages for each of the five (5) time periods set forth in columns (B) through (F) of Table 526-2; 3. Calculate the total for each time period; and 4. Select the total with the highest value as the required minimum number of parking spaces.			Chart provided for various times and uses. Min and max parking ratios
Table 526-2					
(A) Land Use	Weekday		Weekend		(F) Nighttime (midnight - 6 a.m.)
	(B) Daytime (9 a.m. - 4 p.m.)	(C) Evening (6 p.m. - midnight)	(D) Daytime (9 a.m. - 4 p.m.)	(E) Evening (6 p.m. - midnight)	
Office/ Industrial	100%	10%	10%	5%	5%
Retail	60%	90%	100%	70%	5%
Hotel	75%	100%	75%	100%	75%
Restaurant	50%	100%	100%	100%	10%
Entertainment/ Commercial	40%	100%	80%	100%	10%

<p>Fort Collins, CO (148,612)</p>	<p>Fort Collins Land Use Code, Article 3 General Development Standards, 3.2.2 Access, Circulation, and Parking</p>	<p>(G) Shared Parking. Where a mix of uses creates staggered peak periods of parking demand, shared parking calculations shall be made to reduce the total amount of required parking. Retail, office, institutional and entertainment uses may share parking areas. In no case shall shared parking include the parking required for residential uses.</p>	
		<p>(K) Parking Lots – Required Number of Off-Street Spaces for Type of Use, (3) Alternative Compliance:</p> <p>(a) Procedure. Alternative compliance parking ratio plans shall be prepared and submitted in accordance with the submittal requirements for plans as set forth in this Section. Each such plan shall clearly identify and discuss the modifications and alternatives proposed and the ways in which the plan will better accomplish the purpose of this Section than would a plan which complies with the standards of this Section. The request for alternative compliance must be accompanied by either a traffic impact study containing a trip generation analysis or by other relevant data describing the traffic impacts of any proposed recreational or institutional land use or activity.</p>	

Parking Demand Ratios

Parking demand ratios represent the number of required parking spaces for each land use, per defined unit. Several zoning ordinances and parking references have been researched to provide a comparison of parking demand ratios with those currently defined in the City of Coral Gables Zoning Code/Development Standards. The table below summarizes the parking demand ratios from five (5) local municipalities and from *ULI Shared Parking*, in comparison to those of Coral Gables.

Parking Demand Ratio Comparison Summary								
Municipality	Parking Demand Ratio							
	Retail (spa. / SF)	Cinema (spa. / unit)	Restaurant (spa. / SF)	Daycare (spa. / SF)	Hotel (spa. / room)	Office (spa. / SF)	Gym (spa. / SF)	Residential (spa. / unit)
Coral Gables (Zoning Code Art.5 Development Standards / Div 14 / Section 5-1409.B)	1 / 250 = 4 / 1000	1 / 300 = 3.33 / 1000 (Indoor Rec.)	12 / 1000	1 / 100 = 10 / 1000	1.125 / room	1 / 300 = 3.33 / 1000	1 / 300 = 3.33 / 1000 (Indoor Rec.)	1.75 / unit (1BR, 2BR) 2.25 / unit (3BR)
Miami (Miami 21 – Article 4 Table 4 / T5 Zone)	3 / 1000 (comm- ercial use)	3 / 1000 (comm- ercial use)	3 / 1000 (comm- ercial use)	3 / 1000 (comm- ercial use)	1 / 2 rooms = 0.5 / room + 0.1 / unit = (visitors) 0.6 /unit	3 / 1000	3 / 1000 (comm- ercial use)	1.5 / unit + 0.1 / unit = (visitors) 1.6 /unit
Miami Dade County (Zoning Article VII / Section 33-124)	1 / 250 = 4 / 1000	1 / 1000	1 / 50 = 20 / 1000 (Table svc) 1 / 250 = 4 / 1000 (Take out)	N/A	1 / 40 rooms + 1 / 2 rooms = 0.525 / room	1 / 300 = 3.33 / 1000	1 / 100 = 10 / 1000	1.5 / unit (1BR) 1.75 / unit (2BR) 2 / unit (3BR)
Miami Beach (Land Development Regulations / Ch. 130 / Dist. 2 - 6)	1 / 300 = 3.33 / 1000	1 / 4 seats	1 / 4 seats + 1 / 60 SF (not seating)	N/A	1 / room	1 / 400 = 2.5 /1000	1 / 4 seats or 1 / 60 SF	1.5 / unit (< 1ksf) 1.75 / unit (1ksf - 1.2ksf) 2.0 / unit (> 1.2ksf)
Ft. Lauderdale (Unified Land Development Code / Section 47 -20 / Varies)	1 / 250 = 4 / 1000	1 / 3 seats	1 / 30 + 1 / 250	1 / 325 = 3.08 / 1000	1 / room	1 / 250 = 4 / 1000	1 / 200 = 5 / 1000	1.75 / unit (1BR) 2.0 / unit (2BR) 2.1 / unit (3BR)
Broward County (Zoning Ch 39 / Article XII / Section 215)	1 / 200 (< 40 ksf) 1 / 250 (40-200 ksf) 1 / 300 (>200 ksf)	1 / 4 seats	1 / 100 = 10 / 1000	1 / 400 = 2.5 / 1000	3 / 4 rooms = 0.75 / room	1 / 200 = 5 / 1000	1 / 150 = 6.67 / 1000	1.5 / unit (1BR) 2 / unit (2BR) 2.25 / unit (3BR)
ULI Shared Parking (2 nd edition / Table 2-2 / combined weekday visitor and employee)	3.6 / 1000	0.20 / seat	18 / 1000 (Fine/Cas.) 10.5 / 1000 (Family)	N/A	1.25 / room (Business) 1.15 / room (Leisure)	3.8 / 1000 (< 25 ksf) 3.35 / 1000 (100 ksf) 2.8 / 1000 (500 ksf)	7 / 1000	1.65 / unit (Rental) 1.85 / unit (Owned)

PROJECT RESEARCH

Several various existing mixed-use projects have been researched to provide a comparison to the Mediterranean Village project with respect to user characteristics, size, and parking spaces. Three (3) mixed-use projects were identified for similarities to the Old Spanish Village project and are listed below. It should be noted that limited public information for these existing sites was obtained from each location’s website and key information is presented.

- CityPlace, West Palm Beach
- Mizner Park, Boca Raton
- Village of Merrick Park, Coral Gables

	CityPlace	Mizner Park	Village of Merrick Park
Year Opened	2000	1991	2002
Retail	Yes	236,000 SF	731,000 SF GLA
Hotel	-	-	-
Apartments	Yes	-	-
Office	280,300 (two towers)	267,000 SF	-
Cinema	Yes	5,000 seats	-
Parking	3,450 spaces	2,500 spaces	3,800 spaces

Reference Appendix A Project Research Fact Sheets for additional information.

One project currently under construction in downtown Miami, Brickell CityCentre, was identified as a significantly comparable project. This project is located in the Brickell financial district area of downtown Miami encompassing multiple city blocks and two levels of underground, interconnected parking.

Per the project website (www.brickellcitycentreconnect.com), project information includes:

Project Highlights

- 9.1 acres along South Miami Avenue between 8th Street and 6th Street
- 5.4 million square feet of office, residential, hotel, retail, and entertainment space, in addition to a two-level underground parking garage that spans seven acres below the property
- An environmentally progressive architectural feature that will provide innovative climate control so shoppers can walk in comfort between stores and restaurants
- Incorporates key transportation centers with the Miami Metromover while offering easy access to Interstate 95.

Project Statistics

- 625,000 square-foot shopping center
- 128,580 square feet of Class A offices
- 131,651 square-foot wellness center
- 820 condominiums in two towers
- 263 hotel rooms
- 89 serviced apartments
- 2,600 parking spaces

A comparison of Brickell City Centre and Mediterranean Village is provided below.

Brickell CityCentre (BCC)		Mediterranean Village			
	Use	Value	Use	Value	Comparison to BCC
Commercial					
	Shopping Center (SF)	625,000	Retail (SF)	242,000	
			Cinema (SF)	32,000	
			Restaurant (SF)	29,000	
			Daycare (SF)	12,000	
		625,000		315,000	50.40%
Office					
	Class A Office (SF)	128,580	Office (SF)	314,000	244.21%
Gym					
	Wellness Center (SF)	131,651	Gym (SF)	9,500	7.22%
Residential					
	Condominiums (units)	820	Townhouse	15	
	Apartments (units)	89	2 BR	128	
			3 BR	86	
		909		229	25.19%
Hotel					
	Hotel (rooms)	263	Hotel (rooms)	184	69.96%
Parking					
	Required Parking (spaces) *	3,477	Required Parking (spaces)	3,284	94.45%
	<i>*Per Arquitectonica Contract Documents dated 3/8/13</i>		<i>Per City of Coral Gables Zoning Code (without transit modal reduction)</i>		
	Provided Parking (spaces)	2,600			
	Parking Reduction	25.22%			

PARKING REDUCTION

Methodology

Appendix B Parking Reduction Calculations contains the shared parking analysis spreadsheet separated into eight sections and are listed below with supporting narrative of parking reduction methodology and assumptions.

1. Land Use Inputs

Proposed land uses are categorized into Commercial/Hotel and Residential. Commercial/Hotel category also includes uses of retail, restaurant, and office. Residential category contains townhouses, 2BR units, and 3BR units. Notes are included for square footage sizes (GLA and GFA).

2. Parking Ratio

For the proposed land uses, the parking ratios utilized were obtained from the City of Coral Gables Zoning Code Section 5-1409. The corresponding city use is listed for each proposed land use.

The restaurant uses have been separated into “family” and “fine/casual dining” type as defined by *ULI Shared Parking*. Family type restaurants are defined as typically lower priced, do not accept reservations, and lack bars or lounges. Family type is defined by ITE as High Turnover without Bar. Fine dining type restaurants include more leisurely dining, reservations, and lower turnover. Fine dining type is defined by ITE as Quality restaurant (931). Casual dining type restaurants are moderately priced, often chains, and generally do not accept reservations. Casual dining type is defined by ITE as High Turnover with Bar (932).

The type of hotel assumed is “business type” as defined by *ULI Shared Parking* and ITE to have limited restaurant or meeting facilities compared with full service hotels.

Understanding *ULI Shared Parking* contains separate parking demand ratios for employees/residents and visitors, the City of Coral Gables base parking demand ratios have been separated into employee and visitor ratios based on ULI relationships of employees/residents and visitors.

3. Trip Reductions

The mode split utilized in the shared parking analysis has been updated to provide separate mode splits for employees/residents and visitors. ULI Shared Parking Table 3-1 Examples of Journey-to-Work Data lists examples of transportation modes information provided by the 2000 U.S. Census Bureau. The mode split for employees/residents utilized is based upon the 2009-2013 American Community Survey 5-Year Estimates, from the U.S. Census Bureau, which provides Means of Transportation to Work values. This study has considered the modes of public transportation, walked, and bicycle to determine the percentage of employees not utilizing a vehicle and therefore not requiring a parking space.

The mode splits utilized include public transportation (excluding taxicab) at 5.4%, walked at 2.3%, and bicycle at 0.6%. The updated shared parking analysis has been updated for an 8.0% mode split employees/residents and a 4.0% visitor mode split (1/2 of employee/resident). Reference Appendix C 2009-2013 American Community Survey 5-Year Estimates, Miami-Dade County, Florida.

4. Parking Calculations

The required parking for each land use, separated into employee/resident and visitor, is calculated based on City of Coral Gables parking demand ratios for employee/resident and visitor to determine the single use parking demand. Daycare is an accessory use to the project, and therefore, only employee generated parking demand is considered. The appropriate mode split is applied to the single use parking demand to determine the trip reduction demand, with the exception of residential townhouses where no trip reduction is applied.

5. Internal Capture

Internal capture is not considered in this parking reduction analysis.

6. Time of Day Trends

Weekday time-of-day factors for employees/residents and visitors were obtained from *ULI Shared Parking* Table 2-5 Recommended Time-of-Day Factors for Weekdays between the hours of 6:00 am and 12:00 am. Retail utilizes the ULI land use of "Shopping Center – Typical", Restaurant utilizes the ULI land use of "Family Restaurant" and "Fine/Casual Restaurant", and Hotel utilizes the ULI land use of "Hotel – Business". Townhouse residents utilize the ULI land use of "Residential Reserved", and 2BR and 3BR residents utilize the ULI land use of "Residential – Resident".

7. Shared Parking Calculations

Shared parking values are calculated for each land use, separated into employee/resident and visitor categories. The shared parking values are calculated by multiplying the appropriate land use input, City of Coral Gables parking ratio (employee/resident or visitor), and the appropriate time-of-day factor. The employee/resident and visitor shared parking values are added together to determine the peak shared parking demand of 2,867 spaces on a weekday at 2:00 pm. Note, the calculations in this section does not account for trip reduction.

8. Peak Parking Demand

Similar to Section 4, the shared required parking for each land use, separated into employee/resident and visitor, is calculated based on City of Coral Gables parking demand ratios for employee/resident and visitor to determine the single use shared parking demand of 2,867 spaces. The appropriate mode split is applied to the single use shared parking demand to determine the trip-reduced, shared parking demand of 2,687 spaces. Note, trip reduction was not applied to the residential townhouses.

Summary tables of employee/resident, visitor, and total parking spaces for shared parking values and shared parking with trip reduction values are compared with the City of Coral Gables single use parking demand of 3,126 spaces.

Proposed Parking Demand

The proposed parking demand for Mediterranean Village utilizes the current uses per the Owner and Architect’s latest program and the City of Coral Gables Zoning Code parking demand ratios. Parking adjustments include multi-modal trips (based upon traffic impact analysis), and time of day trends for visitors, employees, and residents for each use (based upon ULI *Shared Parking*).

Below is a summary of the proposed parking demand in comparison to that required by the City of Coral Gables Zoning Code.

PARKING DEMAND		
City of Coral Gables Zoning Code Single Use Base Demand	+ Shared Parking	+ Modal Split
3,126 spaces		
	2,867 spaces (8% reduction)	
		2,687 spaces (14% total reduction)

Appendix B Parking Reduction Calculations contain the shared parking analysis values with a peak parking value identified on a weekday at 2 P.M.

Appendix A
Project Research Fact Sheets

Florida Huddle “Must See” Spots at CityPlace

One of the most inspired and admired downtown centers in the nation, CityPlace’s imaginative architecture, public plazas and destination restaurants and shopping have made it a signature of Downtown West Palm Beach. The open-air, Italian-inspired, 72-acre property offers more than 80 shopping, dining and entertainment options for people of all ages and tastes. Stop by Guest Services, show your hotel key or out of town ID to receive a complimentary gift.

SHOP:

Shoppers of every stripe, from casual strollers to dedicated fashionistas, will find something they must have at CityPlace, which features some of the most popular stores in the nation, mixed with local and regional specialty shops. New retailers include **H&M** and fashion accessory boutique **Charming Charlie**. Popular lifestyle brand **Tommy Bahama** recently remodeled its store to evoke a modern beach house and stay true to the brand’s bright, airy, and relaxed feel. Features include clean white walls, limestone counter tops and dark hardwood floors. Apparel brands on the property include **Macy’s; Anthropologie; Francesca’s Collections; Lucky Brand Jeans; Victoria’s Secret; Banana Republic; Nine West; BCBG MaxAzria; Gap; Apricot Lane; Gymboree; Cache; Armani Exchange** and more. For cosmetic needs, CityPlace offers **Sephora, Bath & Body Works** and nationally renowned **Anushka Spa, Salon & Cosmedical Centre**.

DINE:

If you work up an appetite while shopping, CityPlace’s restaurant and bar collection is unparalleled in South Florida. Recent additions include the wildly popular **Brio Tuscan Grille**, the Brazilian churrascaria **Pampas Grille**, and **Mojito Latin Cuisine & Bar**. Be ready to fall in love with the newly remodeled **Il Bellagio**, which reopened this season after an extensive renovation to its piazza-inspired setting. The restaurant is known for its authentic Italian cuisine and fountain-side plaza location, where guests can enjoy the water show set to music every half-hour.

For sweet treats, CityPlace offers the Italian market and gelato shop, **ITALY**; cupcake boutique, **Sugar Chef**; the whimsical ice cream and candy shop, **Sloan’s**; perfect pretzels from **Auntie Anne’s; Tutti Frutti Frozen Yogurt**; and **Rita’s Italian Ice**.

New on the menu are **Moes Southwest Grill, Copper Blues Rock Pub & Kitchen, 100 Montaditos**, and **Burger Fi**. Other top dining options include **Mellow Mushroom Pizza Bakers; Cheesecake Factory; Thai Jo by Sushi Jo**; and more.

DRINK:

Conquer the night like a cowboy at **Tequila Cowboy Bar & Grill** in CityPlace. Guests looking for some true southern hospitality will appreciate this new hot spot’s blend of music, food and fun straight from Nashville, Tennessee. Featured on ABC’s hit television series, “Nashville,” the entertainment venue features national country acts and local musicians, a spacious dance floor and mechanical “bull riding.” **WannaB’s Karaoke Bar** is right next door, giving patrons two entertainment venues under one rocking roof. Guests can brave the center stage and become rock stars for the evening with the D.J. offering more than 300,000 songs to choose from. There’s a full service bar and a high quality sound system that helps even the most off-key “star.” Other hot spots include **Blue Martini, City Cellar Wine Bar & Grill, Brewzzi** and more.

FUN:

CityPlace is more than a shopping or dining destination – it’s an experience. The latest addition to the entertainment lineup is **Revolutions Bowling, Bar & Grille**, the ultimate upscale bowling experience geared to both family and nightlife fun. Beyond bowling, the destination located at the north end of the property features delicious dishes from its Red Brick Grille, a sports viewing center, an arcade, billiards and more.

Visitors love the free live music and entertainment in front of the fountain on the CityPlace plaza on weekends and monthly Family Fun Fests all year round, plus art fairs, marquee cultural events, charity walks, and top national music acts. CityPlace has hosted free, live concerts from musicians such as Vanessa Carlton, Julianne Hough, Scotty McCreery, Gloriana, Craig Morgan, Plain White T's, Colbie Caillat and many more.

TROLLEY: CityPlace, in a partnership with the West Palm Beach Downtown Development Authority, also operates a free trolley service that links the center with the Clematis District and has more than 50,000 people riding the trolleys each month. This service has, in itself, become a popular tourist attraction, and runs from 11 A.M. to 9 P.M. Sunday through Wednesday, and 11 A.M. to 11 P.M. Thursday through Saturday.

HARRIET HIMMEL THEATER: CityPlace's centerpiece – The Harriet Himmel Theater for the Performing Arts – is a restored 1920s church, which now hosts a variety of cultural performances, weddings, corporate events, community functions, art exhibits, educational forums and more.

FOUNTAIN: The \$3.5 million, eco-friendly “show” fountain on the plaza dazzles guests with a choreographed performance to music every half-hour and serves as CityPlace's centerpiece. The fully automated water feature is also illuminated in an array of colors.

LOCATION: Strategically positioned just east of the intersection of Interstate 95 (exit 70), the major north-south artery in South Florida, and Okeechobee Boulevard, the gateway to the Palm Beaches. Located across from the Palm Beach County Convention Center and the renowned Kravis Center for the Performing Arts in Downtown West Palm Beach. For visitors using Florida's Turnpike, CityPlace is a few miles east of exit 99 at Okeechobee Boulevard.

PARKING: Covered parking for 3,300 vehicles in four garages, plus a 150-space parking lot on the northern end of the property across, all of which include 24-hour security. Valet parking is available in several locations and private on-site parking is provided for CityPlace residents.

MANAGEMENT OFFICE ADDRESS: 700 South Rosemary Ave., Suite 200, West Palm Beach, FL 33401

PHONE: (561) 366-1000

FAX: (561) 366-1001

WEBSITE: cityplace.com

SOCIAL MEDIA: Facebook: facebook.com/cityplace
Twitter: twitter.com/cityplacewpb
Pinterest: pinterest.com/cityplace
YouTube: youtube.com/Cityplacwestpalm
Instagram: Search: CityPlace

HOURS: CityPlace is open to the public Monday through Thursday from 10 A.M. to 9 P.M.; Friday and Saturday from 10 A.M. to 10 P.M.; and Sunday from noon until 6 P.M. Restaurant, entertainment, Macy's, Muvico IMAX, Anushka Spa & Salon, Publix Supermarket, Revolutions Bowling Bar, & Grille and other entertainment venues and holiday hours may vary.

For more information, call CityPlace Guest Services at (561) 366-1000 or visit CityPlace.com.

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CITYPLACE

MIZNER PARK

BOCA RATON, FLORIDA



THE MERCHANDISING

- Boca Raton's Mizner Park is a pioneering downtown mixed-use project that includes 236,000 square feet of retail space, 267,000 square feet of office space, luxury retail apartments, town homes and cultural arts space, as well as a 5,000-person-capacity amphitheater. Mizner Park offers a signature business address for professionals. Choose from the seven-story Office Tower or the Plaza Real offices overlooking the vibrant setting of Mizner Park. Named one of America's Top Public Places in 2010 by the American Planning Association, Mizner Park offers visitors a remarkable experience of culture, shopping, dining and entertainment in an open-air environment.
- Mizner Park's design is inspired by a setting reminiscent of a charming European city. The project is configured as two city blocks of luxury retail, restaurants, offices and apartments surrounding a beautifully landscaped park with gazebos, fountains and lush tropical gardens. Center for the Arts at Mizner Park adds a unique dimension to the property, with the Count de Hoernle Amphitheater featuring a diverse lineup of concerts and entertainment and the Boca Raton Museum of Art showcasing works of art in a variety of media of national and international importance. For movie buffs, the iPic Theaters features dining at Tanzy's and first-run movies under one roof!
- The retail component is the heartbeat of Mizner Park, offering discriminating clientele a high level of luxury choices. World-renowned luxury jewelers include F.P. Journe, Jaeger-LeCoultre, Hublot Geneve, Martier, Van Cleef & Arpels and fashion anchor Lord & Taylor. One-of-a-kind boutiques can be found alongside nationally known retailers such as Tommy Bahama, Janie & Jack, Mephisto, Sur La Table and Z Gallerie.
- Top categories include restaurants, jewelry and women's apparel.
- Dine in or al fresco at an amazing collection of restaurants for every taste. Savor the offerings of Truluck's Seafood, Steak and Crab House, Max's Grille and Ruth's Chris Steakhouse. For a casual experience, enjoy the Dubliner Irish Pub, Villagio, Uncle Julio's Fine Mexican Food or Yard House. Nightlife includes Jazziz, the new hot spot in town with headlining performers offering live entertainment and fine dining nightly.

THE LOCATION

- Mizner Park is an established landmark situated among luxurious residences located less than one mile from the oceanfront condominiums.
- The prestigious Boca Raton Resort & Club, with over 1,000 rooms, is nearby and caters to the corporate and celebrity client. The private Royal Palm Yacht & Country Club caters to the elite residents.
- I-95 is less than two miles west, enhancing the project's ability to maximize its draw of both residents and visitors to the area.

THE TRADE AREA

- Approximately 80% of the commercial activity at Mizner Park is generated by full-time and seasonal residents of Palm Beach and Broward Counties. The remainder is generated by visitors from outside the southeast Florida area.

THE FUTURE

- Mizner Park will continue to be one of South Florida's most coveted addresses for living, working, shopping and dining. As the jewel of downtown Boca Raton, its foundation for sustained sales growth is well established.

THE NEW TENANTS

Bang & Olufsen, ECJ Lux Collection and La Macaron

PROPERTY INFORMATION

LOCATION: Mizner Park is conveniently located on the east side of Federal Highway, between Glades and Palmetto Park roads

MARKET: West Palm Beach, FL

DESCRIPTION: One-level, open-air, mixed-use project

TOTAL RETAIL SQUARE FOOTAGE: 236,000

TOTAL OFFICE SQUARE FOOTAGE: 267,000

PARKING SPACES: 2,500

OPENED: 1991

TRADE AREA PROFILE

2013 POPULATION 623,519

2018 PROJECTED POPULATION 654,330

2013 HOUSEHOLDS 274,388

2018 PROJECTED HOUSEHOLDS 287,167

2013 MEDIAN AGE 48.7

2013 AVERAGE HOUSEHOLD INCOME \$77,204

2018 PROJECTED AVERAGE HOUSEHOLD INCOME \$92,426

5 - MILE RADIUS

2013 POPULATION 171,924

2018 PROJECTED POPULATION 179,386

2013 HOUSEHOLDS 80,137

2018 PROJECTED HOUSEHOLDS 83,487

2013 MEDIAN AGE 48.9

2013 AVERAGE HOUSEHOLD INCOME \$81,185

2018 PROJECTED AVERAGE HOUSEHOLD INCOME \$98,110

DAYTIME EMPLOYMENT

1 - MILE RADIUS 16,408

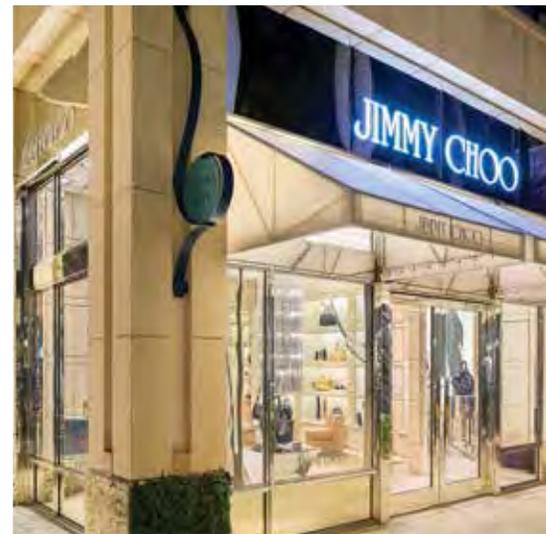
3 - MILE RADIUS 79,010

Source: Esri 2013



VILLAGE OF MERRICK PARK

CORAL GABLES, FLORIDA



THE MERCHANDISING

- World renowned luxury retailers, including Gucci, Burberry, CH Carolina Herrera, Diane von Furstenberg, Jimmy Choo and Tiffany & Co. complement the fashion anchors.
- Neiman Marcus and Nordstrom maintain flagship stores. These stores are both the largest for their respective chains in Florida.
- Popular brands such as J.Crew, Athleta, Banana Republic, Ann Taylor, Anthropologie, White House | Black Market and Pottery Barn help round out the merchant mix.
- A variety of dining options include Yard House, Villagio, SAWA Restaurant and Lounge, CRAVE, Mariposa at Neiman Marcus and Nordstrom Café Bistro.
- Featuring fine shopping, dining, offices and residences, Village of Merrick Park caters to a clientele that appreciates style and substance and can afford the best. It is a magnet for both residents and visitors.
- Top categories include family and women's apparel, jewelry and home furnishings.

THE LOCATION

- Village of Merrick Park is located in the heart of Coral Gables. This South Florida city is one of the nation's most affluent communities, with a greater percentage of young millionaire households under the age of 45 than any other community in the U.S.
- A strong zoning code protects the city's elegance, earning Coral Gables the moniker, "City Beautiful."
- Coral Gables is a major commercial hub, with 10.8 million square feet of office space and more than 1,600 hotel rooms.

THE TRADE AREA

- Sustained growth in international commerce has transformed Miami into a cosmopolitan urban center that attracts 7.1 million international visitors annually. This international market is led by Brazil, Canada, Argentina, Colombia and Venezuela with a total increase of international visitors up 4.4% in 2013.
- Village of Merrick Park's trade area is home to 969,950 residents in 355,681 households.
- Luxury residences on Brickell Avenue and Key Biscayne as well as in Coconut Grove provide seasonal housing for Latin American business leaders who spend lavishly on luxury retail goods.
- Affluent South Miami residents are younger than their North Miami counterparts, have growing families, live in magnificent homes and maintain strong ties to the community's cultural and philanthropic organizations.

THE FUTURE

- Always on the brink of fashion, this retail venue will soon welcome new additions to its fashion-forward repertoire, including kate spade new york and Boston Proper.

MALL INFORMATION

LOCATION: 358 San Lorenzo Avenue, Coral Gables

MARKET: Miami

DESCRIPTION: Open-air luxury retail center in mixed-use environment

ANCHORS: Neiman Marcus, Nordstrom

TOTAL RETAIL SQUARE FOOTAGE: 731,002

PARKING SPACES: 3,800

OPENED: 2002

TRADE AREA PROFILE

2013 POPULATION 969,950

2018 PROJECTED POPULATION 1,024,350

2013 HOUSEHOLDS 355,681

2018 PROJECTED HOUSEHOLDS 376,736

2013 MEDIAN AGE 40.7

2013 AVERAGE HOUSEHOLD INCOME \$69,135

2018 PROJECTED AVERAGE HOUSEHOLD INCOME \$82,165

5 - MILE RADIUS

2013 POPULATION 428,578

2018 PROJECTED POPULATION 453,316

2013 HOUSEHOLDS 167,096

2018 PROJECTED HOUSEHOLDS 177,344

2013 MEDIAN AGE 41.3

2013 AVERAGE HOUSEHOLD INCOME \$61,540

2018 PROJECTED AVERAGE HOUSEHOLD INCOME \$73,851

DAYTIME EMPLOYMENT

1 - MILE RADIUS 18,706

3 - MILE RADIUS 109,069

Source: Esri 2013



Appendix B
Parking Reduction Calculations

Mediterranean Village - Parking Reduction Calculations

1. Land Use Inputs

Commercial and Hotel Uses		
Retail	265,000	SF
Cinema	0	SF
Restaurant (Family)	7,250	SF
Restaurant (Fine/Casual)	21,750	SF
Daycare	0	SF
Hotel	184	Rooms
Office	317,000	SF
Gym	0	SF
Residential Uses		
Townhouse	15	DU
2 BR	128	DU
3 BR	86	DU

Notes:
 GLA
 Phase 1 (3 screens, 290 seats)
 GLA
 GLA
 GLA
 GFA
 GFA

2. Parking Ratio

Parking Ratio **Coral Gables**

Commercial and Hotel Uses		
Retail	4.00	per KSF
Cinema	3.33	per KSF
Restaurant (Family)	12.00	per KSF
Restaurant (Fine/Casual)	12.00	per KSF
Daycare	10.00	per KSF
Hotel	1.13	per room
Office	3.33	per KSF
Gym	3.33	per KSF
Residential Uses		
Townhouse	2.00	per DU
2 BR	1.75	per DU
3 BR	2.25	per DU

Coral Gables Notes: City Use (Section 5-14.09)
 Retail sales and services
 Indoor recreation/entertainment
 Restaurants
 Restaurants
 Daycare
 Overnight accommodations
 Offices
 Indoor recreation/entertainment
 Townhouses
 Multi-family dwellings
 Multi-family dwellings

ULI Notes:
 Family Type (ITE - High Turnover without Bar).
 Fine (ITE - Quality 931) / Casual (ITE - High Turnover with Bar 932) Type
 Business Type
 Owned
 Owned
 Owned

Parking Ratio Separation (ULI Based)		
Visitor	Employee/Resident	
3.22	0.78	per KSF
3.17	0.17	per KSF
10.29	1.71	per KSF
10.17	1.83	per KSF
8.57	1.43	per KSF
0.90	0.23	per room
0.25	3.09	per KSF
3.14	0.19	per KSF
0.16	1.84	per DU
0.14	1.61	per DU
0.18	2.07	per DU

3. Trip Reductions

Multimodal Trip Reductions (Miami-Dade County 5 Year Average)
 8.00% (Employee and Resident) 4.00% (Visitor)

4. Parking Calculations

Commercial and Hotel Uses			
	Visitor	Empl./Res.	Total
Retail	854	207	1061
Cinema	0	0	0
Restaurant (Family)	75	13	88
Restaurant (Fine/Casual)	222	40	262
Daycare	0	0	0
Hotel	166	42	208
Office	78	979	1057
Gym	0	0	0
Residential Uses			
Townhouse	3	28	31
2 BR	19	206	225
3 BR	16	178	194
SINGLE USE DEMAND	1,433	1,693	3,126

Commercial and Hotel Uses				Trip Reduction
	Visitor	Empl./Res.	Total	
Retail	820	191	1011	Y
Cinema	0	0	0	Y
Restaurant (Family)	72	12	84	Y
Restaurant (Fine/Casual)	214	37	251	Y
Daycare	0	0	0	Y
Hotel	160	39	199	Y
Office	75	901	976	Y
Gym	0	0	0	Y
Residential Uses				
Townhouse	3	28	31	N
2 BR	19	190	209	Y
3 BR	16	164	180	Y
TRIP REDUCTION DEMAND	1,379	1,562	2,941	

5. Internal Capture

Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

6. Time of Day Trends

ULI Weekday Visitor

	Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR
6am	1%	0%	25%	0%	50%	95%	0%	70%	0%	0%	0%
7am	5%	0%	50%	0%	60%	90%	1%	40%	10%	10%	10%
8am	15%	0%	60%	0%	100%	80%	20%	40%	20%	20%	20%
9am	35%	0%	75%	0%	80%	70%	60%	70%	20%	20%	20%
10am	65%	0%	85%	15%	20%	60%	100%	70%	20%	20%	20%
11am	85%	0%	90%	40%	20%	60%	45%	80%	20%	20%	20%
12pm	95%	20%	100%	75%	20%	55%	15%	60%	20%	20%	20%
1pm	100%	45%	90%	75%	20%	55%	45%	70%	20%	20%	20%
2pm	95%	55%	50%	65%	20%	60%	100%	70%	20%	20%	20%
3pm	90%	55%	45%	40%	60%	60%	45%	70%	20%	20%	20%
4pm	90%	55%	45%	50%	90%	65%	15%	80%	20%	20%	20%
5pm	95%	60%	75%	75%	100%	70%	10%	90%	40%	40%	40%
6pm	95%	60%	80%	95%	100%	75%	5%	100%	60%	60%	60%
7pm	95%	80%	80%	100%	70%	75%	2%	90%	100%	100%	100%
8pm	80%	100%	80%	100%	20%	80%	1%	80%	100%	100%	100%
9pm	50%	100%	60%	100%	0%	85%	0%	70%	100%	100%	100%
10pm	30%	80%	55%	95%	0%	95%	0%	35%	100%	100%	100%
11pm	10%	65%	50%	75%	0%	100%	0%	10%	80%	80%	80%
12am	0%	40%	25%	25%	0%	100%	0%	0%	50%	50%	50%

ULI Weekday Employee/Resident

	Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR
6am	10%	0%	50%	0%	100%	5%	3%	75%	100%	100%	100%
7am	15%	0%	75%	20%	100%	30%	30%	75%	100%	100%	100%
8am	40%	0%	90%	50%	100%	90%	75%	75%	100%	100%	100%
9am	75%	0%	90%	75%	100%	90%	95%	75%	100%	100%	100%
10am	85%	0%	100%	90%	100%	100%	100%	75%	100%	100%	100%
11am	95%	0%	100%	90%	100%	100%	100%	75%	100%	100%	100%
12pm	100%	50%	100%	90%	100%	100%	90%	75%	100%	100%	100%
1pm	100%	60%	100%	90%	100%	100%	90%	75%	100%	100%	100%
2pm	100%	60%	100%	90%	100%	100%	100%	75%	100%	100%	100%
3pm	100%	75%	75%	75%	100%	100%	100%	75%	100%	100%	100%
4pm	100%	75%	75%	75%	100%	90%	90%	75%	100%	100%	100%
5pm	95%	100%	95%	100%	100%	70%	50%	100%	100%	100%	100%
6pm	95%	100%	95%	100%	100%	40%	25%	100%	100%	100%	100%
7pm	95%	100%	95%	100%	50%	20%	10%	75%	100%	100%	100%
8pm	90%	100%	95%	100%	0%	20%	7%	50%	100%	100%	100%
9pm	75%	100%	80%	100%	0%	20%	3%	20%	100%	100%	100%
10pm	40%	100%	65%	100%	0%	20%	1%	20%	100%	100%	100%
11pm	15%	70%	65%	85%	0%	10%	0%	20%	100%	100%	100%
12am	0%	50%	35%	35%	0%	5%	0%	0%	100%	100%	100%

Notes:

1. Daycare values provided are estimated based upon ITE Parking Generation Land Use 565, Day Care Center.
2. Business type hotel utilized per ULI Shared Parking.

7. Shared Parking Calculations

Weekday Visitor

	Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR	TOTAL
6am	9	0	19	0	0	158	0	0	0	0	0	185
7am	43	0	38	0	0	149	1	0	0	2	2	234
8am	128	0	45	0	0	133	16	0	1	4	3	329
9am	299	0	56	0	0	116	47	0	1	4	3	526
10am	555	0	64	33	0	100	78	0	1	4	3	837
11am	726	0	68	89	0	100	35	0	1	4	3	1025
12pm	811	0	75	167	0	91	12	0	1	4	3	1163
1pm	854	0	68	167	0	91	35	0	1	4	3	1222
2pm	811	0	38	144	0	100	78	0	1	4	3	1178
3pm	769	0	34	89	0	100	35	0	1	4	3	1033
4pm	769	0	34	111	0	108	12	0	1	4	3	1041
5pm	811	0	56	167	0	116	8	0	1	8	6	1173
6pm	811	0	60	211	0	125	4	0	2	11	10	1233
7pm	811	0	60	222	0	125	2	0	3	19	16	1257
8pm	683	0	60	222	0	133	1	0	3	19	16	1137
9pm	427	0	45	222	0	141	0	0	3	19	16	873
10pm	256	0	41	211	0	158	0	0	3	19	16	704
11pm	85	0	38	167	0	166	0	0	2	15	13	486
12am	0	0	19	56	0	166	0	0	2	10	8	259

Weekday Employee/Resident

	Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR	TOTAL
6am	21	0	7	0	0	2	29	0	28	206	178	471
7am	31	0	10	8	0	13	294	0	28	206	178	767
8am	83	0	12	20	0	38	734	0	28	206	178	1299
9am	155	0	12	30	0	38	930	0	28	206	178	1577
10am	176	0	13	36	0	42	979	0	28	206	178	1658
11am	197	0	13	36	0	42	979	0	28	206	178	1679
12pm	207	0	13	36	0	42	881	0	28	206	178	1591
1pm	207	0	13	36	0	42	881	0	28	206	178	1591
2pm	207	0	13	36	0	42	979	0	28	206	178	1689
3pm	207	0	10	30	0	42	979	0	28	206	178	1680
4pm	207	0	10	30	0	38	881	0	28	206	178	1578
5pm	197	0	12	40	0	29	490	0	28	206	178	1180
6pm	197	0	12	40	0	17	245	0	28	206	178	923
7pm	197	0	12	40	0	8	98	0	28	206	178	767
8pm	186	0	12	40	0	8	69	0	28	206	178	728
9pm	155	0	10	40	0	8	29	0	28	206	178	655
10pm	83	0	8	40	0	8	10	0	28	206	178	561
11pm	31	0	8	34	0	4	0	0	28	206	178	490
12am	0	0	5	14	0	2	0	0	28	206	178	433

Weekday Combined

	Retail	Cinema	Restaurant (Family)	Restaurant (Fine/Casual)	Daycare	Hotel	Office	Gym	Townhouse	2 BR	3 BR	TOTAL
6am	29	0	25	0	0	160	29	0	28	206	178	656
7am	74	0	47	8	0	162	294	0	28	208	180	1001
8am	211	0	57	20	0	171	750	0	29	210	181	1628
9am	454	0	68	30	0	154	977	0	29	210	181	2103
10am	731	0	77	69	0	142	1057	0	29	210	181	2495
11am	923	0	81	125	0	142	1014	0	29	210	181	2703
12pm	1018	0	88	203	0	133	893	0	29	210	181	2755
1pm	1061	0	81	203	0	133	916	0	29	210	181	2813
2pm	1018	0	51	180	0	142	1057	0	29	210	181	2867
3pm	976	0	44	119	0	142	1014	0	29	210	181	2713
4pm	976	0	44	141	0	146	893	0	29	210	181	2618
5pm	1008	0	69	207	0	146	497	0	29	214	184	2353
6pm	1008	0	72	251	0	141	249	0	30	217	188	2156
7pm	1008	0	72	262	0	133	99	0	31	225	194	2025
8pm	870	0	72	262	0	141	69	0	31	225	194	1864
9pm	582	0	55	262	0	150	29	0	31	225	194	1529
10pm	339	0	50	251	0	166	10	0	31	225	194	1265
11pm	116	0	46	201	0	170	0	0	30	221	191	976
12am	0	0	23	70	0	168	0	0	30	216	186	692

8. Peak Parking Demand

Commercial and Hotel Uses				Commercial and Hotel Uses				Trip Reduction
	Visitor	Empl./Res.	Total		Visitor	Empl./Res.	Total	
Retail	811	207	1018	Retail	779	190	969	Y
Cinema	0	0	0	Cinema	0	0	0	Y
Restaurant (Family)	38	13	51	Restaurant (Family)	36	12	48	Y
Restaurant (Fine/Casual)	144	36	180	Restaurant (Fine/Casual)	139	33	172	Y
Daycare	0	0	0	Daycare	0	0	0	Y
Hotel	100	42	142	Hotel	96	39	134	Y
Office	78	979	1057	Office	75	901	976	Y
Gym	0	0	0	Gym	0	0	0	Y
Residential Uses				Residential Uses				
Townhouse	1	28	29	Townhouse	1	28	29	N
2 BR	4	206	210	2 BR	4	190	193	Y
3 BR	3	178	181	3 BR	3	164	167	Y

SHARED PEAK PARKING DEMAND				SHARED PEAK PARKING DEMAND W/ TRIP REDUCTIONS			
	Visitor	Empl./Res.	Total		Visitor	Empl./Res.	Total
	1,178	1,689	2,867		1,131	1,556	2,687
			8%				14%
			reduction				reduction

City of Coral Gables	Visitor	Empl./Res.	Total
Single Use Demand	1,433	1,693	3,126

Appendix C

2009 – 2013 American Community Survey 5-Year Estimates Miami-Dade County, Florida



S0801 COMMUTING CHARACTERISTICS BY SEX

2009-2013 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Miami-Dade County, Florida					
	Total		Male		Female	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Workers 16 years and over	1,122,339	+/-5,216	590,881	+/-3,082	531,458	+/-4,203
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van						
Drove alone	86.2%	+/-0.3	85.8%	+/-0.4	86.5%	+/-0.4
Carpooled	76.7%	+/-0.3	77.2%	+/-0.5	76.2%	+/-0.5
In 2-person carpool	9.4%	+/-0.3	8.7%	+/-0.3	10.3%	+/-0.3
In 3-person carpool	7.3%	+/-0.2	6.6%	+/-0.3	8.1%	+/-0.3
In 4-or-more person carpool	1.3%	+/-0.1	1.2%	+/-0.2	1.5%	+/-0.2
Workers per car, truck, or van	0.8%	+/-0.1	0.8%	+/-0.2	0.7%	+/-0.1
Public transportation (excluding taxicab)	1.06	+/-0.01	1.06	+/-0.01	1.07	+/-0.01
Walked	5.4%	+/-0.2	4.5%	+/-0.3	6.4%	+/-0.3
Bicycle	2.3%	+/-0.2	2.5%	+/-0.2	2.2%	+/-0.2
Taxicab, motorcycle, or other means	0.6%	+/-0.1	0.9%	+/-0.1	0.3%	+/-0.1
Worked at home	1.4%	+/-0.1	1.7%	+/-0.1	1.0%	+/-0.1
Worked at home	4.1%	+/-0.2	4.7%	+/-0.2	3.6%	+/-0.2
PLACE OF WORK						
Worked in state of residence	99.4%	+/-0.1	99.3%	+/-0.1	99.6%	+/-0.1
Worked in county of residence	92.4%	+/-0.2	91.6%	+/-0.3	93.2%	+/-0.3
Worked outside county of residence	7.1%	+/-0.2	7.7%	+/-0.3	6.4%	+/-0.3
Worked outside state of residence	0.6%	+/-0.1	0.7%	+/-0.1	0.4%	+/-0.1

Subject	Miami-Dade County, Florida					
	Total		Male		Female	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Living in a place	92.2%	+/-0.2	92.1%	+/-0.3	92.2%	+/-0.3
Worked in place of residence	22.7%	+/-0.4	22.9%	+/-0.4	22.5%	+/-0.5
Worked outside place of residence	69.5%	+/-0.4	69.2%	+/-0.4	69.8%	+/-0.6
Not living in a place	7.8%	+/-0.2	7.9%	+/-0.3	7.8%	+/-0.3
Living in 12 selected states	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.1
Worked in minor civil division of residence	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.1
Worked outside minor civil division of residence	0.0%	+/-0.1	0.0%	+/-0.1	0.0%	+/-0.1
Not living in 12 selected states	100.0%	+/-0.1	100.0%	+/-0.1	100.0%	+/-0.1
Workers 16 years and over who did not work at home	1,075,795	+/-5,457	563,384	+/-3,302	512,411	+/-4,294
TIME LEAVING HOME TO GO TO WORK						
12:00 a.m. to 4:59 a.m.	3.1%	+/-0.2	3.9%	+/-0.2	2.2%	+/-0.2
5:00 a.m. to 5:29 a.m.	2.7%	+/-0.1	3.5%	+/-0.2	1.8%	+/-0.2
5:30 a.m. to 5:59 a.m.	2.7%	+/-0.1	3.3%	+/-0.2	2.0%	+/-0.2
6:00 a.m. to 6:29 a.m.	7.9%	+/-0.2	9.6%	+/-0.3	6.0%	+/-0.3
6:30 a.m. to 6:59 a.m.	7.7%	+/-0.2	8.0%	+/-0.3	7.4%	+/-0.3
7:00 a.m. to 7:29 a.m.	16.1%	+/-0.3	16.0%	+/-0.5	16.2%	+/-0.5
7:30 a.m. to 7:59 a.m.	9.8%	+/-0.3	8.3%	+/-0.3	11.4%	+/-0.4
8:00 a.m. to 8:29 a.m.	16.6%	+/-0.3	15.3%	+/-0.4	18.2%	+/-0.5
8:30 a.m. to 8:59 a.m.	6.1%	+/-0.2	5.3%	+/-0.2	6.9%	+/-0.3
9:00 a.m. to 11:59 p.m.	27.3%	+/-0.4	26.7%	+/-0.5	27.8%	+/-0.5
TRAVEL TIME TO WORK						
Less than 10 minutes	5.8%	+/-0.2	5.5%	+/-0.3	6.2%	+/-0.3
10 to 14 minutes	10.2%	+/-0.2	9.6%	+/-0.4	10.9%	+/-0.3
15 to 19 minutes	12.2%	+/-0.3	11.8%	+/-0.4	12.6%	+/-0.4
20 to 24 minutes	16.9%	+/-0.3	16.9%	+/-0.4	16.9%	+/-0.4
25 to 29 minutes	6.3%	+/-0.2	6.1%	+/-0.3	6.4%	+/-0.3
30 to 34 minutes	20.1%	+/-0.4	20.8%	+/-0.5	19.4%	+/-0.5
35 to 44 minutes	9.3%	+/-0.3	9.5%	+/-0.4	9.1%	+/-0.4
45 to 59 minutes	10.0%	+/-0.2	10.4%	+/-0.3	9.6%	+/-0.3
60 or more minutes	9.2%	+/-0.2	9.4%	+/-0.4	9.0%	+/-0.3
Mean travel time to work (minutes)	29.0	+/-0.2	29.5	+/-0.2	28.5	+/-0.2
VEHICLES AVAILABLE						
Workers 16 years and over in households	1,117,384	+/-5,163	588,135	+/-3,026	529,249	+/-4,188
No vehicle available	4.6%	+/-0.3	4.9%	+/-0.4	4.3%	+/-0.3
1 vehicle available	26.4%	+/-0.5	25.1%	+/-0.6	28.0%	+/-0.6
2 vehicles available	41.8%	+/-0.6	42.5%	+/-0.6	41.0%	+/-0.7
3 or more vehicles available	27.2%	+/-0.5	27.6%	+/-0.5	26.7%	+/-0.6
PERCENT IMPUTED						

Subject	Miami-Dade County, Florida					
	Total		Male		Female	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Means of transportation to work	6.4%	(X)	(X)	(X)	(X)	(X)
Private vehicle occupancy	7.6%	(X)	(X)	(X)	(X)	(X)
Place of work	8.0%	(X)	(X)	(X)	(X)	(X)
Time leaving home to go to work	11.3%	(X)	(X)	(X)	(X)	(X)
Travel time to work	10.0%	(X)	(X)	(X)	(X)	(X)
Vehicles available	0.8%	(X)	(X)	(X)	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2009-2013 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '!' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.