Kimley»Horn

Memorandum

To: Firat Akcay
City of Miami Beach

From: Adrian K. Dabkowski, P.E., PTOE
Omar Kanaan, P.E.

Cc: Josiel Ferrer-Diaz, E.I.
City of Miami Beach

Date: August 2, 2017

Subject: Flamingo
Response to Comments

We received comments provided by the City of Miami Beach on July 28, 2017 regarding the Flamingo Redevelopment transportation engineering documents submitted on July 17, 2017. The documents included the Shared-Ride/Taxi Drop-off/Pick-up Accumulation Analysis, 1997 Site Plan Circulation Analysis, 2007 Site Plan Circulation Analysis, and Traffic Assessment. We offer the following responses:

Parking Comments:

1. With the opening of retail to the public, it would be beneficial to have convenient short-term parking for deliveries, bicycles and scooters. The concern is the impact to the street for temporary users that do not want to be inconvenienced by having to enter the designated parking/valet area. I also wonder if retail will have supplies delivered and need freight loading.

   Response: Short-term delivery vehicles and scooters are expected to utilize the provided north and south tower rideshare drop-off/pick-up areas. Short-term parking for bicycles is provided along Bay Road, adjacent to the proposed retail space, as shown in Attachment H of the revised Traffic Assessment. The revised Traffic Assessment is included in Attachment A.

   Freight loading for the north tower residential and retail uses is provided in 13 designated loading spaces located between the north tower and the north tower parking garage. Freight loading for the south tower residential uses is provided in six (6) designated loading spaces located adjacent to the south tower drop-off/pick-up. Loading areas are indicated in Attachment H the revised Traffic Assessment. The revised Traffic Assessment is included in Attachment A.

2. By not having multiple access points on Bay, we will diminish the desirability of parking on the street. Only concern is stated above.

   Response: Comment noted.

Transportation Comments:

3. Please provide pages on internal capture rate and assumptions. We generally require the methodology described in Trip Generation Manual, Chapter 7.

   Response: Internal capture calculations were calculated in accordance with the approved Traffic Assessment Methodology memorandum submitted on June 8, 2017. The approved methodology indicated that internal capture calculations will be based upon values contained in ITE's, Trip Generation Handbook, 3rd Edition, August 2014. Further detailed internal capture calculations were added to Attachment E of the revised Traffic Assessment. The revised Traffic Assessment is included in Attachment A.

4. In the 1997, 2007 and proposed circulation analysis, please provide estimated travel time for each circulation.

   Response: As valet parking is not defined for the 1997 and 2007 plans, estimated travel times which account for valet routes cannot be calculated. However, estimated route distances for vehicles entering and exiting the valet/rideshare porte-cocheres were prepared. The estimated route distances demonstrate that the current proposed plan provides the shortest valet drop-off, valet pick-up, and rideshare route distance when compared to the 1997 site plan and 2007 site plan. The results are summarized in Table 1 below.

Table 1: Estimated Drive Aisle Distance

Development Plan	Circulation	South Tower	North Tower
1997 Site Plan[3]	Rideshare[5]	910 feet	910 feet
	Valet Drop-Off[1]	1,450 feet	1,160 feet
	Valet Pick-Up[2][3]	1,350 feet	1,360 feet
	Average	**1,240 feet**	**1,145 feet**
2007 Site Plan[4]	Rideshare[5]	750 feet	500 feet
	Valet Drop-Off[1]	1,010 feet	750 feet
	Valet Pick-Up[2]	575 feet	330 feet
	Average	**780 feet**	**530 feet**
Proposed Redevelopment	Rideshare[5]	700 feet	340 feet
	Valet Drop-Off[1]	700 feet	370 feet
	Valet Pick-Up[2]	815 feet	440 feet
	Average	**740 feet**	**385 feet**

Notes:
[1] Drop-off distance includes distance from Bay Road to valet station and valet station to parking garage.
[2] Pick-up distance includes distance from parking garage to valet station and valet station to Bay Road.
[3] Due to limited access lane width, valet vehicles routes assumed to utilize external roadway network.
[4] As the south parking garage is constructed, valet routes may utilize external roadway network adding approximately 800 feet to their route. Distances shown are to/from north tower parking garage.
[5] Rideshare distances displayed include entering route distance and exiting route distance.

5. The auto turn calculation was made for a WB-30 type vehicle. This refers to a triple trailer truck. In your auto turn diagram, you indicate it's a SU-30. This is a delivery truck. In order to justify this, please show the loading zones within the facilities. Also, the auto turn has not

utilized the full extent of this driveway. Please provide images and measures of this driveway as from diagrams we can see a gap between the curb and the turning vehicle.

Response: The maneuverability analysis completed for the 1997 plan utilized P-design vehicles and SU-30 standard delivery vehicles. The WB-30 reference included in the 1997 Site Plan Circulation Analysis was a typographic error and has been revised. Furthermore, loading zone locations were added to the 1997 stacking analysis diagram included in Attachment B of the revised 1997 Site Plan Circulation Analysis. The revised 1997 Site Plan Circulation Analysis is included in Attachment A.

Please note that the AutoTURN maneuverability analysis utilized the full extent of the driveway. A zoomed-in callout demonstrating the drive aisle conflict was added to the SU-30 maneuverability figure contained in Attachment B of the revised 1997 Site Plan Circulation Analysis. Less than 10 inches of clearance are provided between the SU-30 vehicle and the inside curb of the drive aisle. Furthermore, less than five (5) inches of clearance are provided between the SU-30 vehicle and passenger vehicles in the south tower stacking lane. The revised 1997 Site Plan Circulation Analysis is included in Attachment A.

6. Please provide pedestrian conflict diagrams for 97 plan.

   Response: A diagram presenting the area in which pedestrians accessing vehicles in the stacking lane (valet or rideshare) may conflict with vehicles traveling in the by-pass lane (inside lane) was added to Attachment B of the revised 1997 Site Plan Circulation Analysis. Note that the drive aisle is 24 feet wide and does not provide sufficient width to accommodate turning vehicles and valet and rideshare drop-off/pick-up activities as less than five (5) inches of clearance are available when an SU-30 vehicle traverses the drive aisle. The revised 1997 Site Plan Circulation Analysis is included in Attachment A.

7. In 97 analysis, Pedestrian Connectivity section mentions that the driveway is not pedestrian friendly due to paved areas as well as limited number of crossings. Can you provide images of what the currents area is paved with as well available crosswalks?

   Response: As shown in Figure 4 contained in Attachment B of the updated 1997 Site Plan Circulation Analysis, the 1997 site plan provides limited pedestrian crosswalks east of the valet/rideshare drop-off/pick-up porte-cocheres. Pedestrians accessing vehicles queued in the stacking lane or accessing Bay Road are not provided sufficient sidewalks. Pedestrians walking to Bay Road are forced to walk in the drive aisle. Providing crosswalks similar to the four (4) existing crosswalks will create additional pedestrian conflicts and create congestion within the drive aisle. The proposed 2017 site plan minimizes these conflicts by relocating valet/rideshare drop-off/pick-up activities away from the central pedestrian area.

   Currently, the internal pedestrian area is paved with brick pavers as shown in Figure 1. Please note that the brick pavers are flush with adjacent landscaping and curb and gutter are not provided. Pedestrian sidewalks and associated crosswalks are provided between the north and south towers as well as between the towers and Bay Road as shown in Exhibit 1 contained in Attachment B of this document.

Figure 1: Existing Internal Pedestrian Area

8. We will provide further comments on the traffic assessment early next week, upon coordination with peer reviewer.

   Response: Comment noted.

9. The city utilizes 95% confidence interval on all valet studies. Can you please provide valet circulation diagram to analyze your work?

   Response: The valet analysis was revised in the Traffic Assessment to utilizes the 95% confidence interval. Please note that valet analysis results remain unchanged with up to three (3) valet attendants required at the south tower valet drop-off/pick-up area and up to ten (10) valet attendants required at the north tower valet drop-off/pick-up area. The revised Traffic Assessment is included in Attachment A.

We trust that these responses adequately address the comments provided. Please contact us if you have any questions.

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Attachment A

Revised Transportation Engineering Documents

Kimley»Horn

August 2, 2017

Mr. Josiel Ferrer-Diaz, E.I.
City of Miami Beach Transportation Department
1700 Convention Center Drive
Miami Beach, Florida 33139

Re: Flamingo Redevelopment
Miami Beach, Florida
Transportation Engineering Documents

Dear Mr. Ferrer-Diaz:

The following transportation engineering documents for the Flamingo Redevelopment are attached:

- Methodology memorandum and methodology correspondence
- Shared-Ride/Taxi Drop-off/Pick-up Accumulation Analysis
- 1997 Site Plan Circulation Analysis
- 2007 Site Plan Circulation Analysis
- Traffic Assessment

Table 1 summarizes the stacking capacity within dedicated drop-off/pick-up areas for rideshare, taxi, and valet operations at the south and north towers for the 1997 site plan, 2007 site plan, and proposed redevelopment site plan.

Table 1: Rideshare, Taxi, and Valet Dedicated Stacking Capacity Comparison

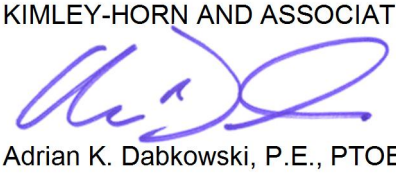
Development Plan	South Tower	North Tower	Total
1997 Site Plan	2 vehicles[(1)]	2 vehicles[(1)]	4 vehicles[(1)]
2007 Site Plan	3 vehicles[(2)]	8 vehicles[(2)]	11 vehicles[(2)]
Proposed Redevelopment	6 vehicles[(2)]	19 vehicles[(2)]	25 vehicles[(2)]

Notes: [(1)] Capacity indicated is within designated porte-cochere drop-off/pick-up areas. Total of 21 vehicles may be stacked linearly along the drive aisle.
[(2)] Capacity indicated is within designated rideshare, taxi, and valet drop-off/pick-up areas and does not include stacking in drive aisle.

If you have any questions regarding these analyses please feel free to contact me.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Adrian K. Dabkowski, P.E., PTOE
Associate

Attachments

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METHODOLOGY MEMORANDUM AND CORRESPONDENCE

Kanaan, Omar

From:	Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Sent:	Monday, June 19, 2017 10:49 AM
To:	Dabkowski, Adrian; Ferrer, Josiel
Cc:	Matthew Amster; Kanaan, Omar
Subject:	RE: Flamingo | Traffic Study Methodology
Attachments:	20925.fo.pdf; 20925.oct.pdf; DRB9191 FINAL ORDER.PDF; DRB9191.NOV.PDF; B9803540 FULL PLANS - Grand Flamingon SITEPLAN ONLY.PDF; DRB20925_ 02Oct2007.pdf

Hello Adrian,

As per the attached DRB order and based on direction received from the Planning Department, all calculations regarding the internal queueing shall include the drop-off lane approved by the board in 2007 and not current conditions (guard house and gate)
We also require the internal queuing to reflect the restaurant/retail valet services, as well as the locations for delivery vehicles and their queuing.
Thank you

MIAMIBEACH

Firat Akcay, *Transportation Analyst*
TRANSPORTATION DEPARTMENT
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000 X 6839 / www.miamibeachfl.gov

From: Dabkowski, Adrian [mailto:Adrian.Dabkowski@Kimley-horn.com]
Sent: Monday, June 05, 2017 7:33 PM
To: Ferrer, Josiel
Cc: Akcay, Firat; Matthew Amster; Kanaan, Omar
Subject: Flamingo | Traffic Study Methodology

Good evening Josiel:

Based on the discussions at our meeting last Friday for the Flamingo redevelopment, attached is our proposed methodology. Please let me know if the City has any comments.

Thank you
Adrian

Kanaan, Omar

From:	Dabkowski, Adrian
Sent:	Monday, July 10, 2017 1:06 PM
To:	'Ferrer, Josiel'; 'Matthew Amster'
Cc:	Akcay, Firat; Claudia Lamus (clamus@fteinc.net); Oliver Rodrigues (oliver@fteinc.net); Belush, Michael; Murphy, James
Subject:	RE: Flamingo | Traffic Study Methodology
Attachments:	Flamingo Updated Trip Generation_07 10 17.pdf

Good afternoon Josiel:

In order to provide a conservative analysis we will analyze the retail space (6,318 square-feet) as ITE Land Use Code (LUC) Shopping Center in order to provide the redevelopment flexibility to include a wider range of retail uses. We have updated the trip generation for the redevelopment to include the retail space. Please note that during the A.M. peak hour the redevelopment results in a 54 trip reduction and a 24 trip reduction during the P.M. peak hour when compared to the existing development program.

Thank you
Adrian

Adrian K. Dabkowski, P.E., PTOE
Kimley-Horn | 600 North Pine Island Road, Suite 450, Plantation, FL 33324
Direct: 954-535-5144 | Main: 954-535-5100

From: Ferrer, Josiel [mailto:JOSIELFERRER@miamibeachfl.gov]
Sent: Thursday, July 06, 2017 11:31 AM
To: Dabkowski, Adrian <Adrian.Dabkowski@Kimley-horn.com>; 'Matthew Amster' <MAmster@brzoninglaw.com>
Cc: Akcay, Firat <FiratAkcay@miamibeachfl.gov>; Claudia Lamus (clamus@fteinc.net) <clamus@fteinc.net>; Oliver Rodrigues (oliver@fteinc.net) <oliver@fteinc.net>; Belush, Michael <MichaelBelush@miamibeachfl.gov>; Murphy, James <JamesMurphy@miamibeachfl.gov>
Subject: RE: Flamingo | Traffic Study Methodology

Adrian,

We have been discussing internally whether the retail could be considered ancillary and it is our opinion that it can be considered ancillary depending on the use. If the proposed use is a neighborhood retail, daycare, dry-cleaners or a similar use, then the use can be considered ancillary; however, the commercial license approved by the City would also permit entertainment use which we could not consider to be ancillary even if there is limited parking. As you know, Quality Restaurant and Drinking Place patrons are relying heavily on ride sharing services which produces vehicular trips. To get over this hurdle, we can allow you to consider it ancillary for this study; however, there will be a condition on the development order requiring that a follow-up traffic memo be completed once the tenant is identified. In addition, there should be short term parking identified for this retail if it is a high turn over establishment.

We have no further comments on the methodology.

Respectfully,

Kimley»Horn

Memorandum

To: Josiel Ferrer-Diaz, E.I.
City of Miami Beach

From: Adrian K. Dabkowski, P.E., PTOE

Date: June 8, 2017

Subject: Flamingo
Traffic Assessment Methodology

The purpose of this correspondence is to summarize the traffic study methodology for the Flamingo redevelopment based on our discussions at our meeting on June 2, 2017. The proposed redevelopment is located on the west side of Bay Road and is generally bounded by 14th Street and 16th Street. A location map is provided in Attachment A.

Currently, the site contains of 426 residential condominiums and 1,261 apartments.

The existing apartments will be consolidated into larger units but fewer units as part of the redevelopment. The Flamingo redevelopment consists of 426 residential condominiums, 1,093 apartments, a 299-seat restaurant, and 6,318 square-feet of retail space. The 6,318 square-feet of retail is considered ancillary, is not expected to be a destination facility, and is expected to be primarily used by residents. The redevelopment has minimal self-parking for non-residents. Furthermore, the absence of visible designated on-site self-parking will deter the public from driving to the site to use the retail space. Therefore, it is anticipated that the small amount of general public that will use the facility will walk and not drive to the site.

The site proposed for redevelopment is currently accessed via three (3) driveways along Bay Road, including the following:

1. A resident-only access is provided to the south tower (condominiums) via a gated driveway at 14th Terrace.
2. The center driveway at 15th Street provides access to the valet for residents and guests. All guests currently valet their vehicles.
3. A second resident-only driveway for the north tower (apartments) is provided south of 16th Street.

The redevelopment will provide a rideshare and valet drop-off/pick-up area at the 14th Terrace driveway serving the south tower. The center driveway will be removed as part of the redevelopment. A rideshare and valet drop-off/pick-up area will be provided by the redevelopment for the north tower with an ingress driveway south of 15th Terrace and egress at the existing driveway south of 16th Street. The driveway south of 16th Street will continue to be used for resident-only ingress and egress. The existing site plan and detailed redevelopment conceptual site plan are provided in Attachment A.

The following sections summarize the proposed assessment methodology.

TRIP GENERATION ANALYSIS

Trip generation calculations for the existing and proposed redevelopment were performed using Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 9th Edition. ITE Land Use Code (LUC) 230 (Residential Condominium/Townhouse) was utilized for the proposed 426 condominium residential units, LUC 220 (Apartment) was utilized for the proposed 1,093 apartments, and LUC 931 (Quality Restaurant) was utilized for the 299-seat restaurant. The 6,318 square-foot retail area is considered ancillary to the residential component and was not included in trip generation calculations. LUC 220 (Apartment) and LUC 230 (Residential Condominium/Townhouse) were utilized for the existing land uses. Project trips were estimated for the A.M. and P.M. peak hours.

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tract containing the redevelopment. A multimodal factor of 19.6 percent (19.6%) was determined for the area based on the census data for this tract. However, based on City of Miami Beach input, a multimodal reduction factor of 10.0 percent (10.0%) was applied to the trip generation. It is expected that residents and guests will choose to walk or use public transit to and from the proposed redevelopment. Transit route information will be documented in the technical letter.

A portion of the trips generated by the development will be captured internally within the site based on the interaction between the residential and restaurant land uses. Internal capture rates were based upon values contained in ITE's, *Trip Generation Handbook*, August 2014. An internal capture rate of 0.3 percent (0.3%) was calculated during the A.M. peak hour and 2.7 percent (2.7%) during the P.M. peak hour.

The Flamingo redevelopment is expected to result in a net decrease of 68 A.M. peak hour trips and a net decrease of 34 P.M. peak hour trips. Detailed trip generation calculations are included in Attachment B.

VALET AND RIDESHARE ANALYSIS

The Flamingo redevelopment will be served by two (2) valet and rideshare drop-off/pick-up areas. A valet and rideshare drop-off/pick-up is located at the 14th Terrace driveway. This valet and rideshare drop-off/pick-up will serve the south tower. The second valet and rideshare drop-off/pick-up is provided with an ingress driveway south of 15th Terrace and egress at the existing driveway south of 16th Street. Valet vehicles will be driven by a valet attendant to the parking garages. Some residents and all guests are expected to valet vehicles with a portion of residents self-parking. Valet and self-park data from the existing facility will be collected to determine the ratio of valet to self-parked vehicles. This ratio will be used in the valet analysis. Valet and self-park data will be collected on a Friday between 4:00 P.M. to 8:00 P.M. A valet operations queuing analysis will be prepared for the vehicle drop-off/pick-up area so that queues are not expected to spill back into public right-of-way.

Trip generation estimates will be utilized to provide for the highest demand (peak hour of generator) scenario. The valet operations queuing analysis will be conducted consistent with procedures described in ITE's *Transportation and Land Development*, 1988. The queuing analysis will document analysis assumptions and results, including the required vehicle queuing area and the required number of valet attendants to service the facility under the highest demand will be prepared. A traffic circulation figure will be prepared to illustrate the valet routes to and from the vehicle drop-off/pick-up areas.

The Flamingo *Shared-Ride/Taxi Drop-off/Pick-up Accumulation Analysis* dated April 6, 2017 will also be included in the analysis. A traffic circulation figure will be prepared to illustrate the rideshare/taxi routes to and from the vehicle drop-off/pick-up areas.

PEDESTRIAN ASSESSMENT

Pedestrian features and infrastructure around the site will be evaluated. The evaluation will include examining sidewalks, crosswalks, and pedestrian amenities along Bay Road between 14th Terrace and the project driveway south of 16th Street.

Additionally, pedestrian count data will be collected at the intersection of 15th Street and Bay Road on a Friday between 4:00 P.M. and 8:00 P.M. All traffic counts will be adjusted to account for seasonality using the appropriate Florida Department of Transportation (FDOT) seasonal factors for Miami Beach. The count data will used to determine the placement of crosswalks at the intersection of 15th Street and Bay Road.

A pedestrian circulation figure illustrating ingress and egress to the site will also be prepared.

PARKING ASSESSMENT

The existing and proposed parking for vehicles, scooters and bicycles (short-term, long-term, and Citibike locations) will be documented. The City of Miami Beach's *Bicycle Parking Guidelines*, March 2011 will be used in determining on-site bicycle parking feasibility. The site plan will denote bicycle parking that can be accommodated on-site.

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) strategies will be developed to reduce the impact of project traffic on the surrounding roadway network and promote trip reduction. Typical measures promote bicycling and walking, encourage car/vanpooling and offer alternatives to the typical workday hours.

DOCUMENTATION OF FINDINGS

A technical letter documenting the trip generation analysis, valet and rideshare analysis, pedestrian assessment, and parking assessment will be provided. The letter will include supporting documents including data collection, calculations, and analysis findings. The letter will also include text and graphics necessary to summarize the assumptions and analysis.

A CD and electronic copy of the reports will be provided as part of the submittal package. The submittal package will also include the latest site plan.

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Attachment A

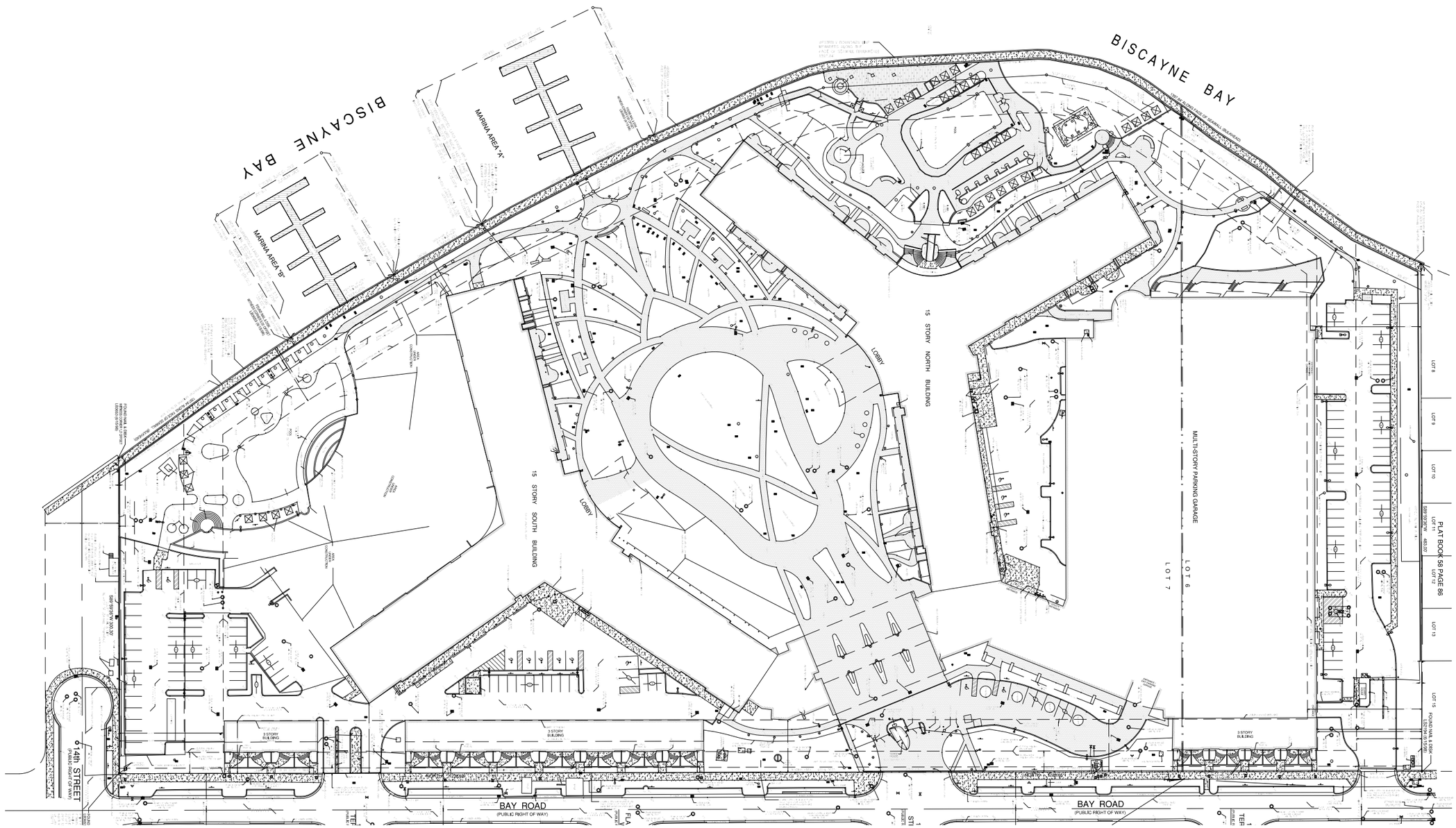
Kimley»Horn

Location Map
Flamingo Miami Beach
Miami Beach, Florida

BOUDARY SURVEY

FLAMINGO

1420 BAY ROAD, MIAMI BEACH



SITE SURVEY

SCALE: 1" = 50'-0"

Stantec Architecture Inc - AA26000733
Jonathan Cardello Lic. # AR93391

Stantec

Stantec Architecture Inc.
One Biscayne Tower Suite 1670
2 South Biscayne Boulevard
Miami, FL 33131-1804
Tel: (305) 482-8700 / Fax: (305) 482-8770

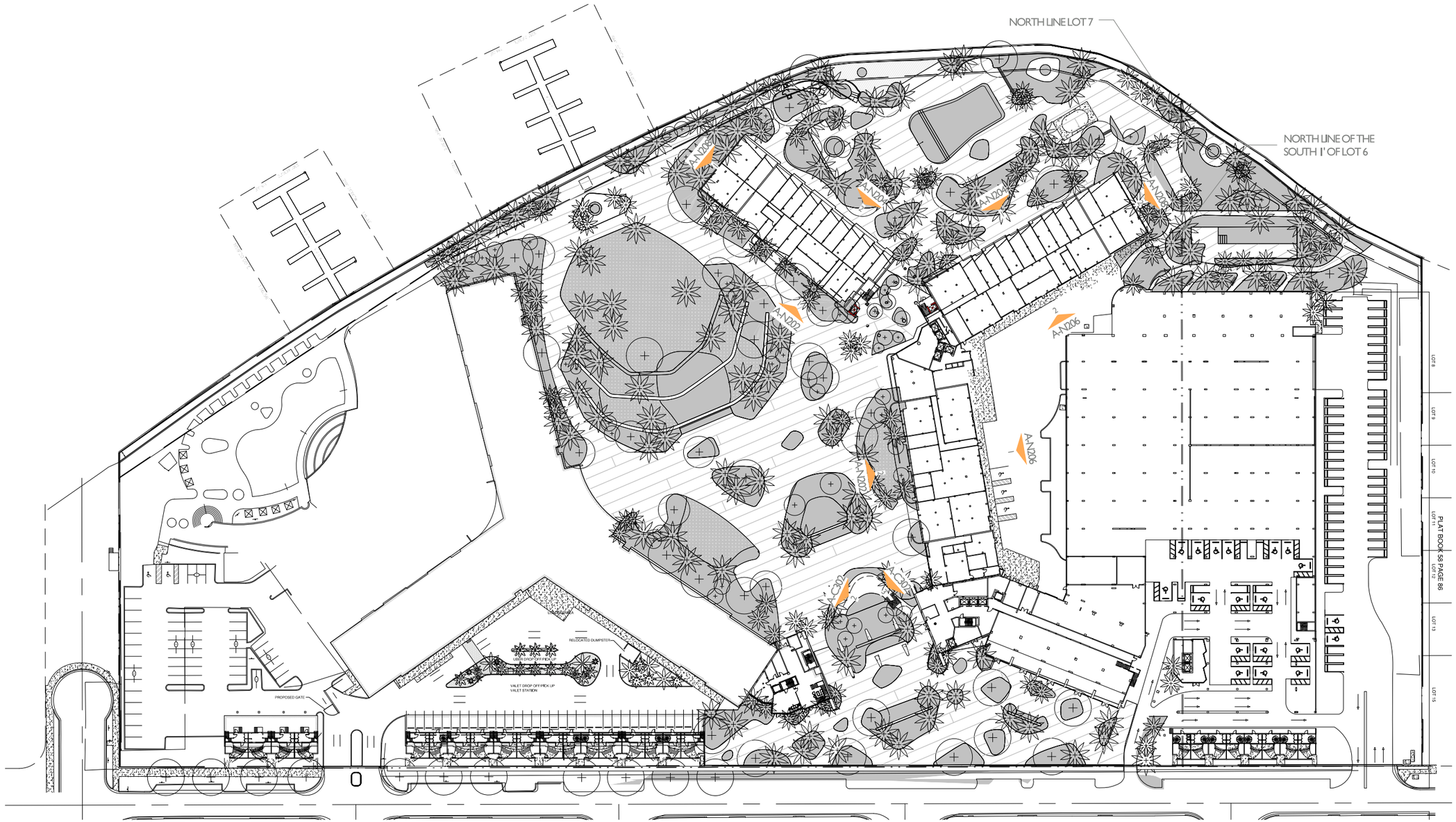
DRB SUBMITTAL

05.23.2017

G1

Scale: 1" = 50'-0"
Note: When printed on 11 x 17 paper scale is halfed

PROPOSED SITE PLAN



Site Plan (Proposed)

SCALE: 1" = 50'-0"

FLAMINGO

1420 BAY ROAD, MIAMI BEACH

Stantec Architecture Inc - AA26000733
Jonathan Cardello Lic. # AR93391

Stantec

Stantec Architecture Inc.
One Biscayne Tower Suite 1670
2 South Biscayne Boulevard
Miami, FL 33131-1804
Tel: (305) 482-8700 / Fax: (305) 482-8770

DRB SUBMITTAL

05.23.2017

G9

Scale: 1" = 50'-0"
Note: When printed on 11 x 17 paper scale is halfed

Attachment B

PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

		ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS		
		Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent In	Percent Out	In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total
GROUP 1	1	Residential Condominium/Townhouse	9	230	426	du	17%	83%	28	137	165	10.0%	17	25	123	148	0.0%	0	25	123	148	0.0%	0	25	123	148
	2	Apartment	9	220	1261	du	20%	80%	124	498	622	10.0%	62	112	448	560	0.0%	0	112	448	560	0.0%	0	112	448	560
	3																									
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	15																									
		ITE Land Use Code		Rate or Equation				**Total:**	152	635	787	10.0%	79	137	571	708	0.0%	0	137	571	708	0.0%	0	137	571	708
		230		LN(Y) = 0.8*LN(X)+0.26																						
		220		Y=0.49*(X)+3.73																						

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

		ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS		
		Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent In	Percent Out	In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total
GROUP 2	1	Residential Condominium/Townhouse	9	230	426	du	17%	83%	28	137	165	10.0%	16	25	124	149	0.2%	0	25	124	149	0.0%	0	25	124	149
	2	Apartment	9	220	1093	du	20%	80%	108	431	539	10.0%	54	97	388	485	0.2%	1	97	387	484	0.0%	0	97	387	484
	3	Quality Restaurant	9	931	299	seat	50%	50%	5	4	9	10.0%	1	4	4	8	12.5%	1	3	4	7	0.0%	0	3	4	7
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	14																									
	15																									
		ITE Land Use Code		Rate or Equation				**Total:**	141	572	713	10.0%	71	126	516	642	0.3%	2	125	515	640	0.0%	0	125	515	640
		230		LN(Y) = 0.8*LN(X)+0.26																						
		220		Y=0.49*(X)+3.73																						
		931		Y=0.03(X)																						

	IN	OUT	TOTAL
Net New Vehicle Trips	**-12**	**-56**	**-68**

PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

		ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS		
		Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent In	Percent Out	In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total
GROUP 1	1	Residential Condominium/Townhouse	9	230	426	du	67%	33%	132	65	197	10.0%	20	119	58	177	0.0%	0	119	58	177	0.0%	0	119	58	177
	2	Apartment	9	220	1261	du	65%	35%	462	249	711	10.0%	71	416	224	640	0.0%	0	416	224	640	0.0%	0	416	224	640
	3																									
	4																									
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	14																									
	15																									
		ITE Land Use Code		Rate or Equation				**Total:**	594	314	908	10.0%	91	535	282	817	0.0%	0	535	282	817	0.0%	0	535	282	817
		230		LN(Y) = 0.82*LN(X)+0.32																						
		220		Y=0.55*(X)+17.65																						

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

		ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION		EXTERNAL TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS		
		Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent In	Percent Out	In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total
GROUP 2	1	Residential Condominium/Townhouse	9	230	426	du	67%	33%	132	65	197	10.0%	19	119	59	178	1.5%	3	118	57	175	0.0%	0	118	57	175
	2	Apartment	9	220	1093	du	65%	35%	402	217	619	10.0%	62	362	195	557	1.5%	8	359	190	549	0.0%	0	359	190	549
	3	Quality Restaurant	9	931	299	seat	67%	33%	52	26	78	10.0%	8	47	23	70	15.7%	11	40	19	59	0.0%	0	40	19	59
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									
	11																									
	12																									
	13																									
	14																									
	15																									
		ITE Land Use Code		Rate or Equation				**Total:**	586	308	894	10.0%	89	528	277	805	2.7%	22	517	266	783	0.0%	0	517	266	783
		230		LN(Y) = 0.82*LN(X)+0.32																						
		220		Y=0.55*(X)+17.65																						
		931		Y=0.26(X)																						

	IN	OUT	TOTAL
Net New Vehicle Trips	**-18**	**-16**	**-34**

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook* , 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY (PROPOSED)

GROSS TRIP GENERATION

INPUT

Land Use	A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit
Office				
Retail				
Restaurant	4	4	47	23
Cinema/Entertainment				
Residential	122	512	481	254
Hotel				
	126	516	528	277

INTERNAL TRIPS

OUTPUT

Land Use	A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit
Office	0	0	0	0
Retail	0	0	0	0
Restaurant	1	0	7	4
Cinema/Entertainment	0	0	0	0
Residential	0	1	4	7
Hotel	0	0	0	0
	1	1	11	11

OUTPUT

Total % Reduction	***0.3%***	***2.7%***
Office		
Retail		
Restaurant	12.5%	15.7%
Cinema/Entertainment		
Residential	0.2%	1.5%
Hotel		

EXTERNAL TRIPS

OUTPUT

Land Use	A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit
Office	0	0	0	0
Retail	0	0	0	0
Restaurant	3	4	40	19
Cinema/Entertainment	0	0	0	0
Residential	122	511	477	247
Hotel	0	0	0	0
	125	515	517	266

Shared-Ride/Taxi Drop-off/Pick-up Accumulation Analysis

Kimley»Horn

Memorandum

To: Lee Hodges
Flamingo South Beach

From: Adrian K. Dabkowski, P.E., PTOE
Omar Kanaan, P.E.

Date: April 6, 2017

Subject: Flamingo Miami Beach
Shared-Ride/Taxi Drop-off/Pick-up Accumulation Analysis

The purpose of this memorandum is to summarize the shared-ride/taxi drop-off/pick-up accumulation analysis completed for the Flamingo Miami Beach residential development. Flamingo Miami Beach is located on the west side of Bay Road and is generally bounded by 14th Street and 16th Street. A location map is provided in Attachment A.

SITE OPERATIONS

Flamingo Miami Beach consists of three (3) residential towers (south, central, and north towers). The south tower contains condominium units while the central and north towers contain rental apartment units. Parking for residents and guests is provided via one (1) parking garage, located at the north end of the site, and several premium surface parking lots. The project site currently does not provide a shared-ride/taxi drop-off/pick-up area. However, three (3) on-street parking spaces along the west side of Bay Road between 15th Terrace and 15th Street are designated for shared-ride/taxi drop-off/pick-up operations.

Flamingo Miami Beach is served by three (3) driveways along Bay Road. The northernmost and southernmost driveways serve residential vehicular traffic accessing the site's internal parking garage and surface parking lots while the central driveway, which aligns with 15th Street, provides vehicular access, valet service, and access to pedestrians utilizing shared-ride/taxi drop-off/pick-up operations.

The south condominium tower is served by two (2) premium surface parking lots and a loading area. However, residents of the southern tower typically self-park or valet in the Flamingo Miami Beach's parking garage located in the north end of the site and walk to/from the south condominium tower. Residents that require assistance to load/unload their vehicles typically do so at the tower's loading area before parking in the site's parking garage.

Parking for the central and north apartment towers is provided in the site's parking garage located in the north end of the site.

DATA COLLECTION/FIELD OBSERVATIONS

Weekend peak period shared-ride/taxi drop-off/pick-up accumulation data was collected during a seven (7) hour period from Friday, March 24, 2017 at 6:00 P.M. to Saturday March 25, 2017 at 1:00 A.M. in one (1) minute intervals. All traffic counts were adjusted to account for seasonality using the appropriate Florida Department of Transportation (FDOT) seasonal adjustment factors specific for Miami Beach. The appropriate seasonal adjustment factor for the date on which the counts were collected is 1.00.

Vehicular accumulation data was collected in three (3) zones utilized for shared-ride/taxi drop-off/pick-up operations for the Flamingo Miami Beach. The data collection zones included segments along Bay Road from 14th Street to Lincoln Terrace, 15th Street, 15th Terrace, and 16th Street from Bay Road to West Avenue and are listed below. A graphic depicting the data collection zone boundaries, accumulation data, and FDOT seasonal factors are contained in Attachment B.

Table 1: Vehicular Accumulation Data Collection Zones	
Zone	**Boundary**
A	Bay Road between Lincoln Terrace and 15th Terrace, and 16th Street and 15th Terrace between Bay Road and West Avenue (contains north driveway)
B	Bay Road between 15th Terrace and 15th Street, and 15th Street between Bay Road and West Avenue (contains main driveway)
C	Bay Road between 15th Street and 15th Street (contains south driveway)

Field observations were conducted on March 17, 2017 (Friday) from 8:00 P.M. to 8:30 P.M. and from 11:00 P.M. to 11:30 P.M. throughout the study area. A photo log and qualitative information collected from the field review are included in Attachment C. The following observations are noted:

Bay Road

1. Shared-ride drop-off/pick-up operations occur along Bay Road generally between Flamingo Way and 15th Terrace and are more prevalent near 15th Street (Central Site Driveway).
2. Shared-ride drop-off/pick-up operations occur within both the northbound and southbound travel lanes along Bay Road.
3. Shared-ride drop-off/pick-up operations were observed to occur within the intersections of Bay Road at 15th Street and Bay Road at 15th Terrace.
4. Three (3) on-street parking spaces along the west side of Bay Road between 15th Terrace and 15th Street are designated for shared-ride/taxi drop-off/pick-up operations.

15th Terrace

1. Shared-ride drop-off/pick-up operations were observed to occur within the eastbound and westbound travel lanes along 15th Terrace near Bay Road.

15th Street

1. Shared-ride drop-off/pick-up operations were observed to occur within the eastbound and westbound travel lanes along 15th Street between Bay Road and West Avenue.
2. Shared-ride drop-off/pick-up operations were observed to occur within the intersection of Bay Road and 15th Street.

Central Site Driveway

1. Shared-ride drop-off/pick-up operations were observed to occur within the central site driveway.
2. Shared-ride drop-off/pick-up vehicles were observed using the newly installed pavement markings and flex-posts as a drop-off/pick-up porte-cochere/roundabout.
3. Shared-ride drop-off/pick-up vehicles were observed driving the wrong-way within the central site driveway.

Please note that shared-ride drop-off/pick-up operations disrupt vehicular and pedestrian crossing operations when completed within travel lanes and intersections.

SHARED-RIDE/TAXI DROP-OFF/PICK-UP

The accumulation data indicates that a maximum vehicle accumulation of nine (9) vehicles was observed at 7:20 P.M. comprised of 9 shared-ride vehicles and at 8:19 P.M. comprised of six (6) shared-ride vehicles and three (3) taxi vehicles. Please note that the maximum observed taxi accumulation was three (3) vehicles. The accumulation data also indicated that the average shared-ride/taxi vehicle accumulation (50th percentile) during the peak period was three (3) vehicles and the 95th percentile shared-ride/taxi vehicle accumulation was five (5) vehicles. A summary of the maximum observed, average (50th percentile), and 95th percentile vehicle accumulations is provided in Table 2.

Table 2: Vehicle Accumulation Data Summary

Zone	Accumulation	UBER/LYFT/Taxi
A, B, and C	Maximum	9
	50th Percentile	3
	95th Percentile	6
A	Maximum	3
	50th Percentile	0
	95th Percentile	2
B	Maximum	9
	50th Percentile	2
	95th Percentile	5
C	Maximum	2
	50th Percentile	0
	95th Percentile	1

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Attachment A

Kimley»Horn

Location Map
Flamingo Miami Beach
Miami Beach, Florida