SUPPLEMENTAL TRAFFIC IMPACT ANALYSIS

Riverwalk Residences at Las Olas

Fort Lauderdale, Florida

Prepared For:

Riverwalk Residences of Las Olas, LLC
1800 Las Olas Boulevard
Fort Lauderdale, FL 33301

Prepared By:

Langan Engineering & Environmental Services, Inc.
110 E. Broward Boulevard, Suite 1500
Fort Lauderdale, FL 33301
FL Certificate of Authorization No: 6601

JOHN P. KIM LICENSE No. 62400 STATE OF FLORIDA PROFESSIONAL ENGINEER

8/23/2017

John P. Kim, P.E., CFDE
P.E. License No. 62400

Eric Schwarz, P.E., LEED AP
Principal/Vice President

23 August 2017

LANGAN

330019401

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EXECUTIVE SUMMARY

Langan Engineering & Environmental Services, Inc. was retained by Riverwalk Residences of Las Olas, LLC to prepare this impact-analysis report for Riverwalk Residences at Las Olas, which will be built in Fort Lauderdale, Florida. The development is expected to be built by 2019 and will replace an office building at 333 North New River Drive. The development will comprise a 238-bed assisted-living facility, 192 senior-adult residential units and 1,619 square feet of retail space. We analyzed the two intersections that will be most impacted by the development and found that they will operate at Level of Service (LOS) A in 2019 with the proposed development's impacts. The two study intersections included:

- Las Olas Boulevard at SE 2nd Avenue
- Las Olas Boulevard at SE 5th Avenue (North New River Drive)

We estimated the number of trips generated by the proposed development using trip-generation equations from the Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition. We applied pass-by reductions for the retail use and internalization factors to account for interaction between the retail and residential land uses. The proposed development is expected to generate 946 daily, 40 morning peak-hour, and 66 afternoon net-new peak-hour trips after applying credit for the office building it will replace. The development's driveway intersections with North New River Drive are expected to operate at LOS A during the morning and afternoon peak hours for the 2019 build conditions.

INTRODUCTION

Langan Engineering & Environmental Services, Inc. was retained by Riverwalk Residences of Las Olas, LLC to prepare this impact-analysis report for Riverwalk Residences (development), which will be built in Fort Lauderdale, Florida. The development is expected to be built by 2019 and will replace an office building at 333 North New River Drive. The analysis shows that the analyzed intersections will operate at LOS A. This report presents the traffic-data and traffic-impact analysis for this proposed development.

Project Description

The development will comprise an assisted-living facility, senior-adult residential units and a small retail land use component constructed within one building. **Appendix A** contains the figures of this report. **Figure 1** illustrates the site location. **Appendix B** contains a copy of the site plan that shows the proposed design and location of the development's driveways. The development will construct two driveway intersections on North New River Drive.

Scope of Study

Langan undertook the following steps to prepare this study in accordance with the methodology accepted by City of Fort Lauderdale. **Appendix C** contains a copy of the methodology letter accepted by the city.

- Collected morning (7 to 9 AM) and afternoon (4 to 6 PM) peak-hour vehicle turning-movement volumes at the following study intersections:
    - Las Olas Boulevard at NE 2nd Avenue (unsignalized)
    - Las Olas Boulevard at NE 5th Avenue (unsignalized)
- Used adjustment factors from the Florida Department of Transportation (FDOT) to convert the traffic data into peak-season volumes.
- Prepared trip-generation estimates for the proposed development, based on accepted trip-generation rates developed by the Institute of Transportation Engineers (ITE)
- Calculated a growth rate for background traffic by using FDOT historical data from a traffic-count station in the vicinity of the project.
- Developed trip-distribution estimates for the project based on the FDOT historical data.
- Prepared morning and afternoon peak-hour capacity analyses for the following conditions at the study intersections: 2017 existing, 2019 future no-build, and 2019 future build.
- Calculated the morning and afternoon peak-hour LOS analysis of the development's driveways for the 2019 build conditions.

DESCRIPTION OF EXISTING CONDITIONS

Langan visited the study intersections to collect the lane-configuration and traffic-control data shown in **Figure 2**. Both intersections are two-way stop-sign controlled.

Las Olas Boulevard

Las Olas Boulevard is a four-lane, divided, east-west urban collector roadway with a 25 MPH posted speed limit.

North New River Drive

North New River Drive is a two-lane, undivided, local roadway maintained by the city and is directly accessed by the proposed development. North New River Drive is also designated as SE 5th Avenue where it intersects with Las Olas Boulevard east of the development.

SE 2nd Avenue

SE 2nd Avenue is a two-lane, undivided, north-south city-maintained local roadway.

Traffic Volumes

Traffic-volume data was collected on Tuesday, August 22, 2017, from 7 to 9 AM and 4 to 6 PM. We applied a 1.03 FDOT seasonal adjustment factor to the count data to develop peak season traffic volumes. We compared the data of each intersection and determined that the peak hours occurred between 8:00 and 9:00 AM and between 4:30 and 5:30 PM. **Figure 3** illustrates the existing weekday morning and afternoon peak-hour traffic volumes. **Appendix D** contains the traffic data and seasonal-adjustment factors.

Capacity Analysis (Level of Service)

We conducted 2017 existing-conditions capacity analyses for the study intersections using Synchro software and found they operate at LOS A during the morning and afternoon peak hours. Capacity analysis provides an indication of the adequacy of intersection and roadway facilities to serve traffic demand. The evaluation criteria used to analyze the study the intersections is based on the *2010 Highway Capacity Manual* published by the Transportation Research Board. **Table 1** summarizes the results of the existing-conditions analysis. **Appendix E** contains intersection-volume tables; **Appendix F** contains the capacity-analyses worksheets.

Table 1 - 2017 Existing Intersection Capacity Analysis Summary

Location	AM		PM	
	LOS	Delay (sec.)	LOS	Delay (sec.)
Las Olas Boulevard at SE 2 Avenue	A	3.3	A	4.5
Las Olas Boulevard at SE 5 Avenue	A	1.4	A	1.7

PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

There are no planned roadway improvements included in the county's transportation improvement program that impact the study intersections.

FUTURE CONDITIONS

This section of the report covers background traffic growth, site-generated trips, trip distribution, and future traffic volumes. The project should be completed by the end of 2019. We developed 2019 no-build traffic volumes by applying a compounded growth rate to the 2017 volumes. Site-generated trips were added to the 2019 no-build traffic volumes to develop 2019 build traffic volumes.

Background Traffic

We conducted capacity analyses for the study intersections and determined that they are expected to operate at LOS A during the morning and afternoon peak hours for the 2019 no-build conditions. We used a 0.50 percent annual growth-rate factor to develop future background volumes because the FDOT historical traffic volumes yielded a value less than 0.50 percent. The growth-rate factor was applied to the existing traffic volumes to develop 2019 no-build traffic volumes. **Figure 4** illustrates the 2019 no-build traffic volumes. **Table 2** summarizes the results of the 2019 no-build conditions capacity analysis. Appendix F contains the capacity-analyses worksheets.

Table 2 - 2019 No Build Intersection Capacity Analysis Summary

Location	AM		PM	
	LOS	Delay (sec.)	LOS	Delay (sec.)
Las Olas Boulevard at SE 2 Avenue	A	3.4	A	4.5
Las Olas Boulevard at SE 5 Avenue	A	1.4	A	1.7

Site-Generated Trips

The proposed development is expected to generate 946 daily, 40 morning peak-hour, and 66 afternoon net-new peak-hour trips after applying credit for the office building it will replace. We prepared daily, morning peak-hour and afternoon peak-hour trip estimates for the proposed development using equations from the 9th Edition of the ITE *Trip Generation Manual*. We applied ITE pass-by and internalization rates from the *Trip Generation Handbook* and a 10 percent multi-modal reduction factor to determine the number of net-new trips the proposed development will add to the roadway network. **Table 3** summarizes the trip-generation estimates for the proposed development. **Appendix G** contains the trip-generation data. The assisted-living facility will include eight suites that will operate like hotel suites but will only be available to residents' guests. These suites are ancillary to the assisted-living facility and are not expected to generate additional traffic.

Table 3 - Trip Generation Analysis

USE	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Existing Use								
General Office	16,199 SF	179	22	3	25	4	20	24
Proposed Uses								
Senior Adult Housing - Attached	192 DU's	586	13	25	38	22	21	43
Assisted Living Facility	238 Beds	626	21	12	33	19	28	47
Specialty Retail	1,619 SF	38	1	0	1	7	3	10
Total		1,125	31	34	65	43	47	90
Net New Trips		**946**	**9**	**31**	**40**	**39**	**27**	**66**

Trip Distribution

We used FDOT historical data on Las Olas Boulevard to develop the directional distribution of site-generated trips. **Figure 5** shows the proposed development's traffic distributions at the study intersections. **Figure 6** illustrates the morning and afternoon development-traffic assignments at the study intersections.

Build Traffic Volumes

We conducted capacity analyses for the study intersections and determined that they are expected to operate at LOS A during the morning and afternoon peak hours for the 2019 build conditions. The 2019 build traffic volumes were derived by adding the total site-generated trips to the 2019 no-build traffic volumes. **Figure 7** illustrates the 2019 build morning and afternoon peak-hour traffic volumes. **Table 4** summarizes the 2019 build LOS for the morning and afternoon peak hours. Appendix F contains the capacity-analyses worksheets.

Table 4 - 2019 Build Intersection Capacity Analysis Summary

Location	AM		PM	
	LOS	Delay (sec.)	LOS	Delay (sec.)
Las Olas Boulevard at SE 2 Avenue	A	4.1	A	5.0
Las Olas Boulevard at SE 5 Avenue	A	1.5	A	2.0

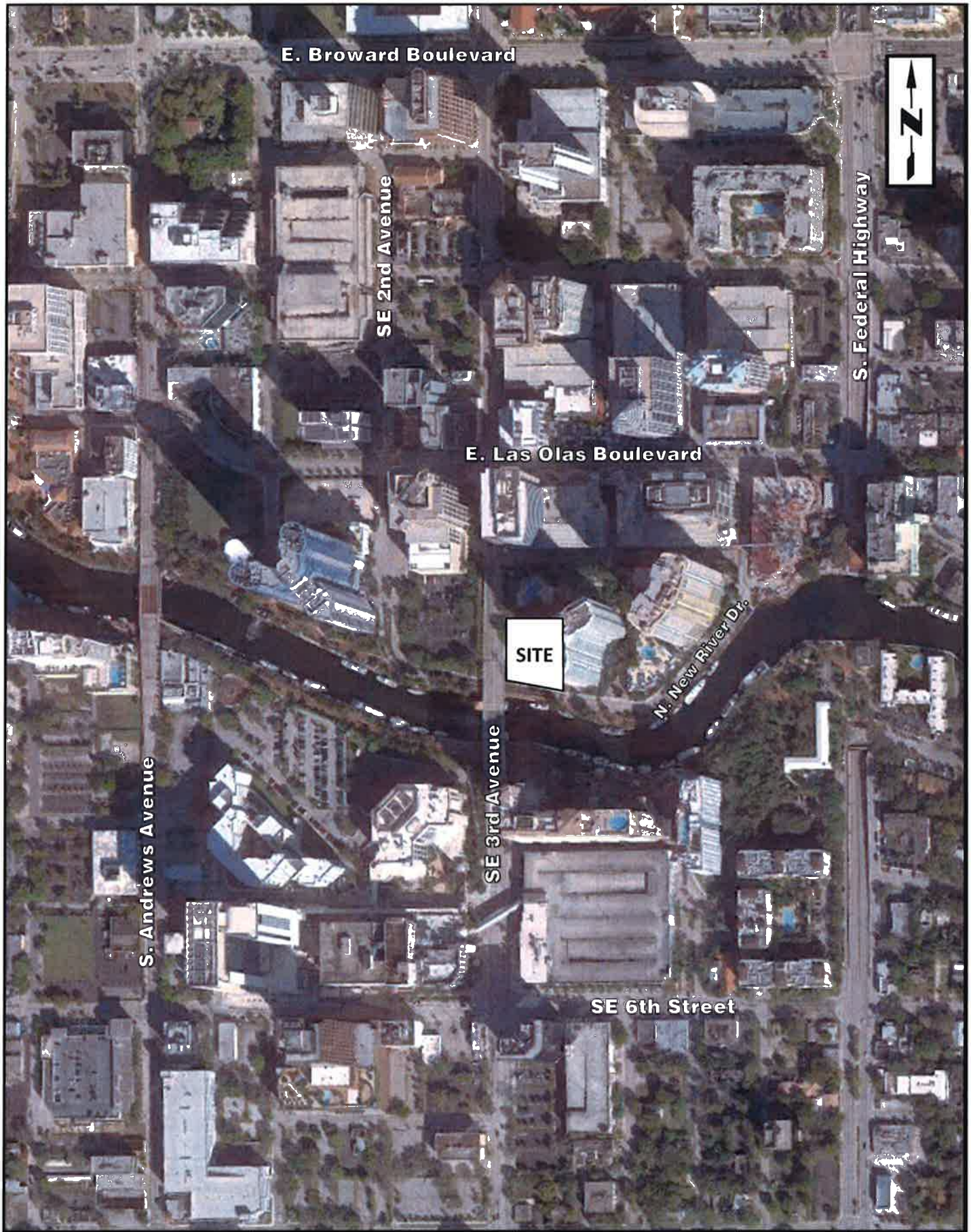
Driveway Volumes

We analyzed the development's two driveway intersections with North New River Drive and found that they are expected to operate at LOS A during the 2019 build conditions for the morning and afternoon peak hours. **Figure 8** shows the project's driveway volumes; Appendix F contains the capacity-analyses worksheets.

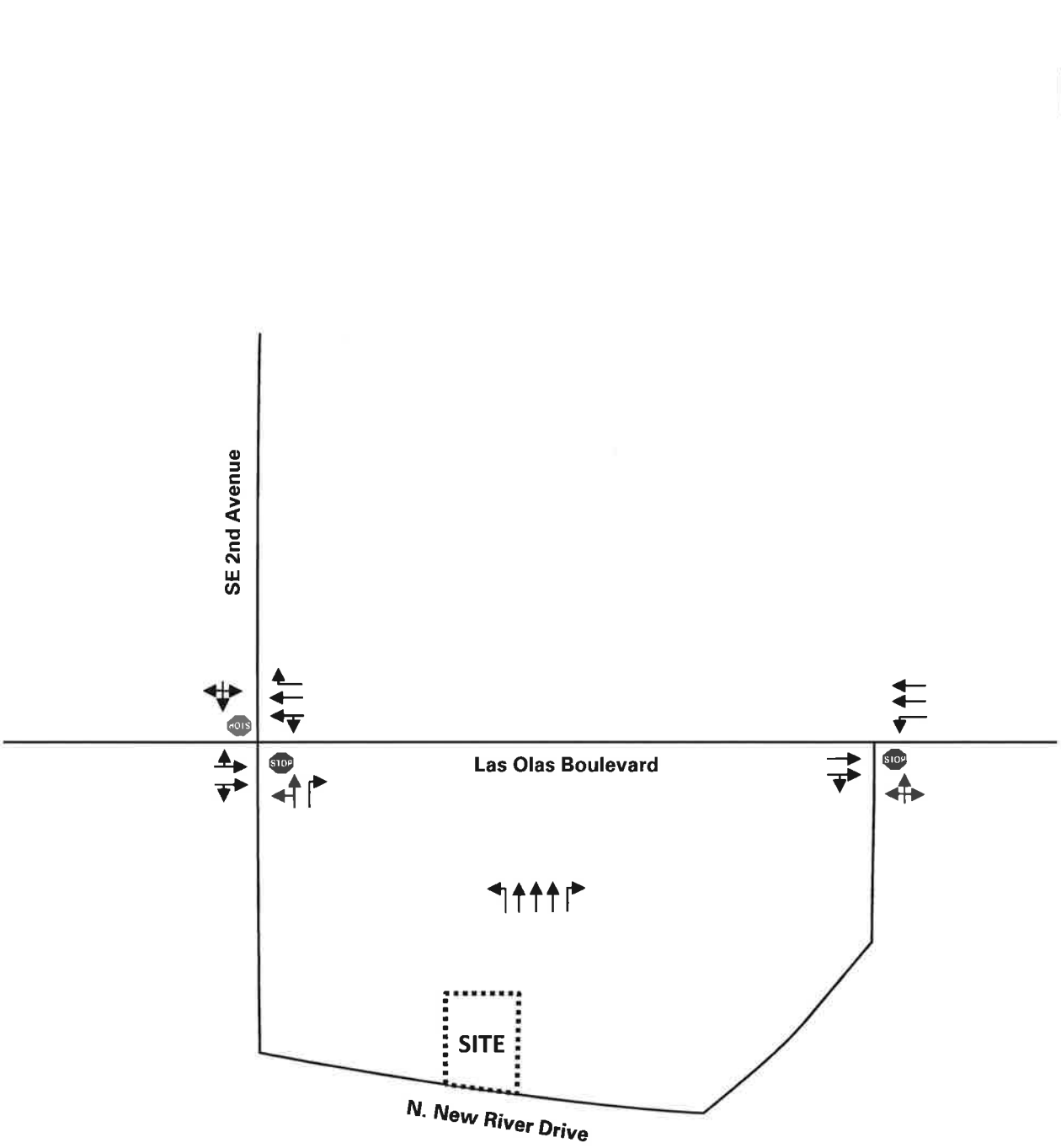
CONCLUSIONS

Langan performed a traffic-impact analysis for the Riverwalk Residences at Las Olas mixed-use development, which is expected to be completed by 2019. The analysis that the study intersections that will be most impacted by the proposed development are expected to operate at LOS A for the 2019 build conditions. We conclude, based on the analysis described above, that the road network can accommodate traffic from the proposed development.

APPENDIX A
FIGURES



LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project **RIVERWALK RESIDENCES AT LAS OLAS** FT. LAUDERDALE BROWARD COUNTY FLORIDA	Figure Title **SITE LOCATION MAP**	Project No. 330020601 Date 8/23/2017 Scale NTS	**FIGURE 1**



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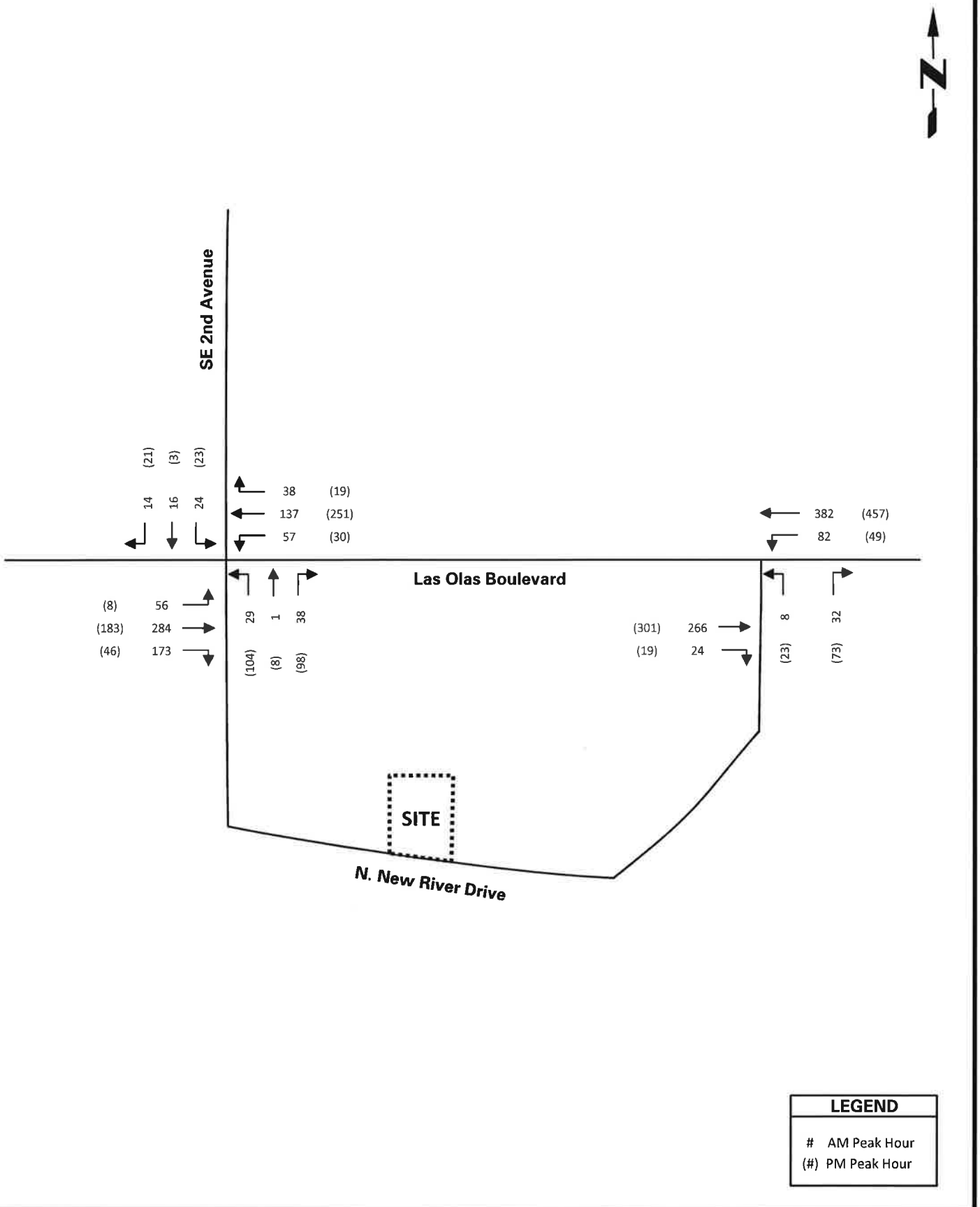
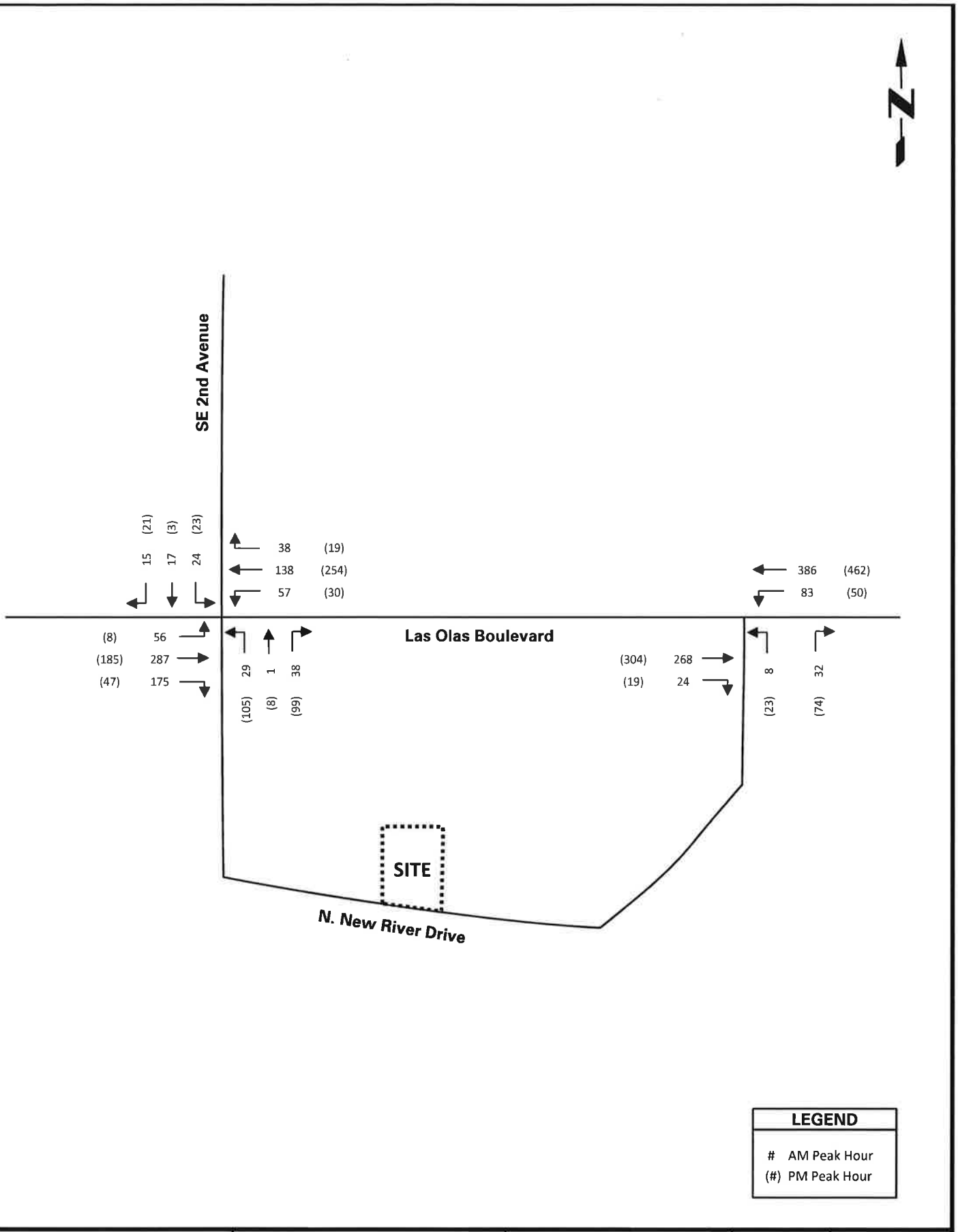


LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project RIVERWALK RESIDENCES AT LAS OLAS FT. LAUDERDALE BROWARD COUNTY FLORIDA	Figure Title 2017 EXISTING TRAFFIC VOLUMES	Project No. 330020601 Date 8/23/2017 Scale NTS	FIGURE 3



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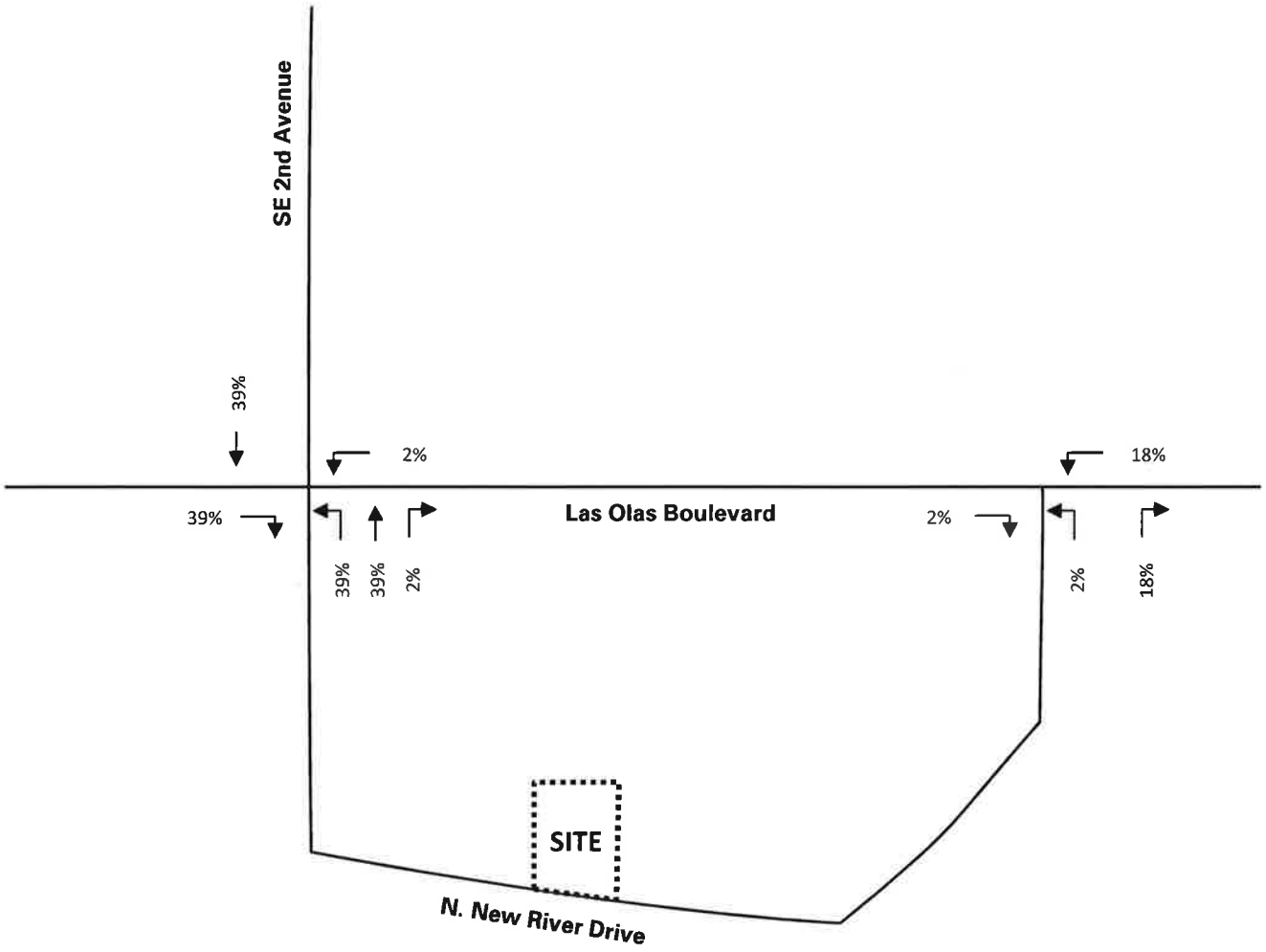

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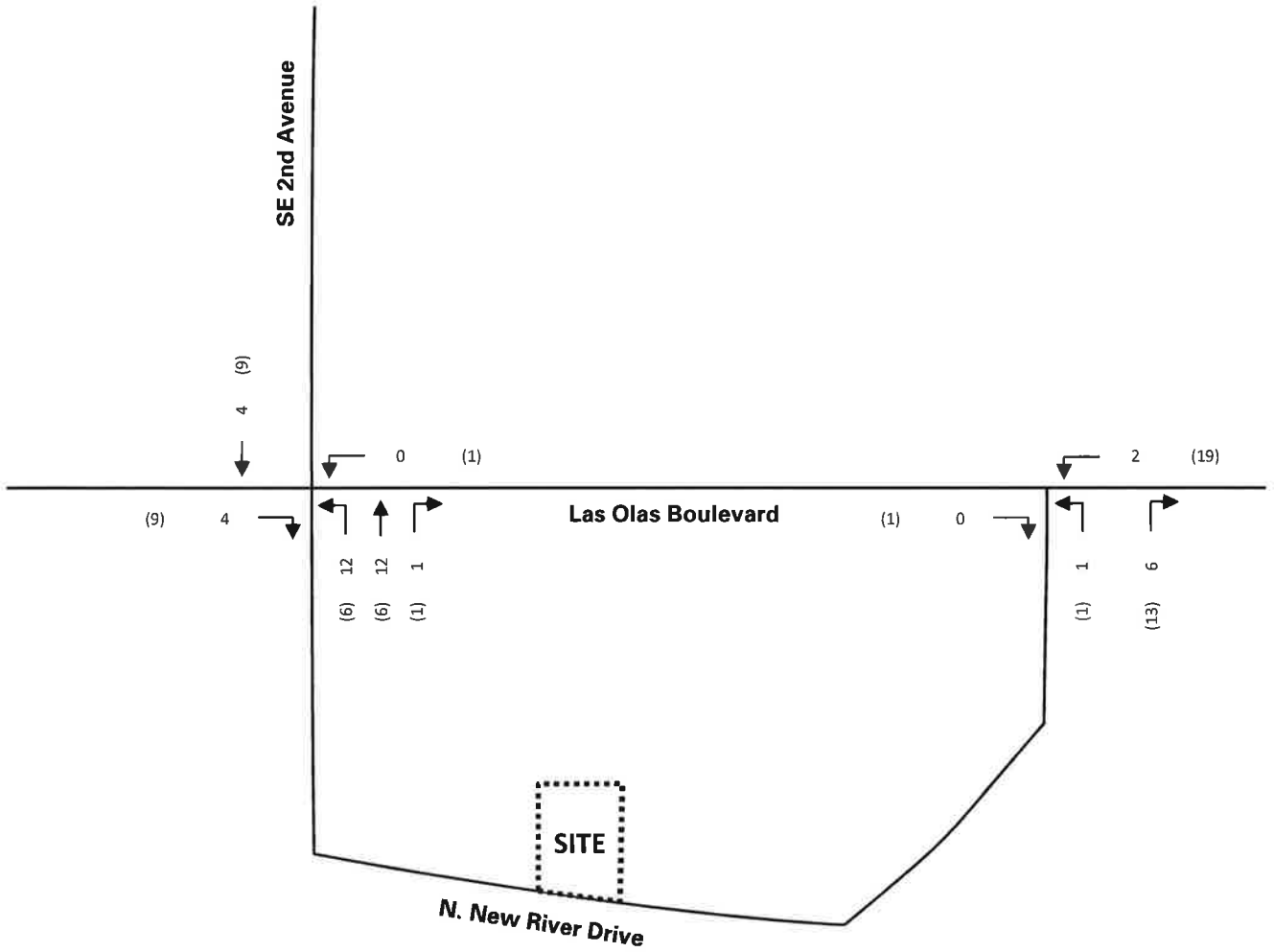
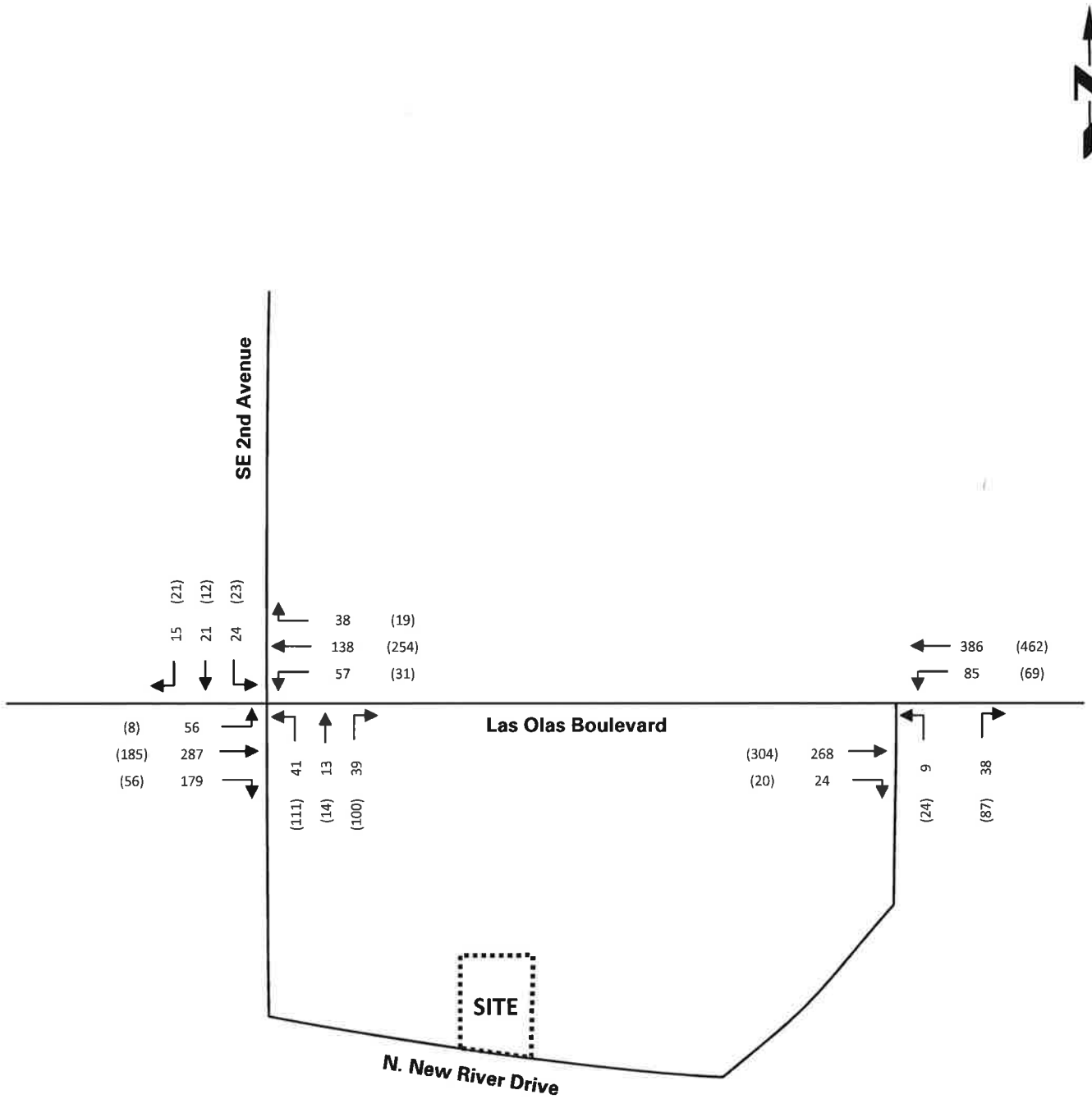


LEGEND
AM Peak Hour
(#) PM Peak Hour

LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project **RIVERWALK RESIDENCES AT LAS OLAS** FT. LAUDERDALE BROWARD COUNTY FLORIDA	Figure Title **PROJECT TRAFFIC**	Project No. 330020601 Date 8/23/2017 Scale NTS	**FIGURE 6**



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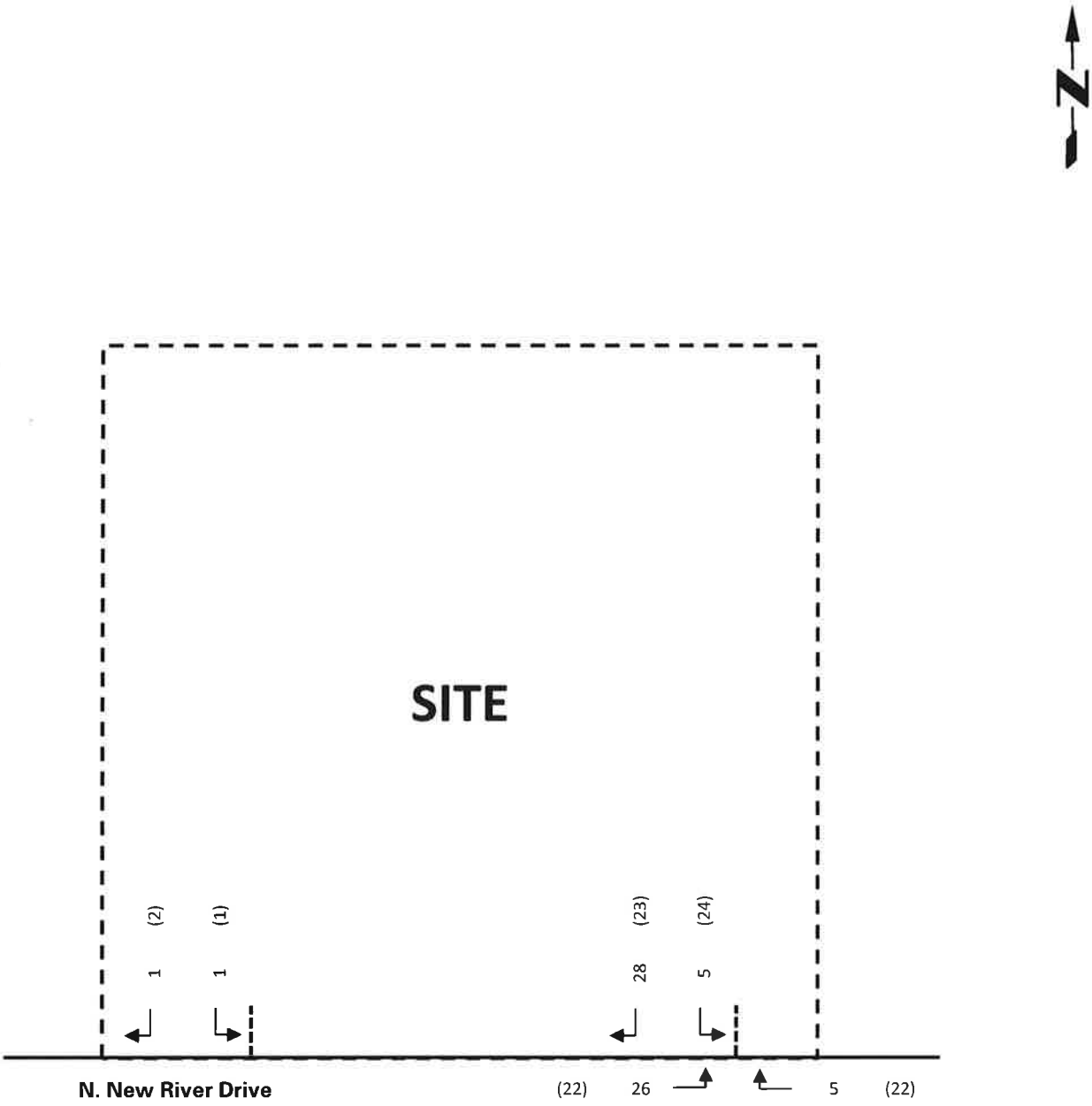
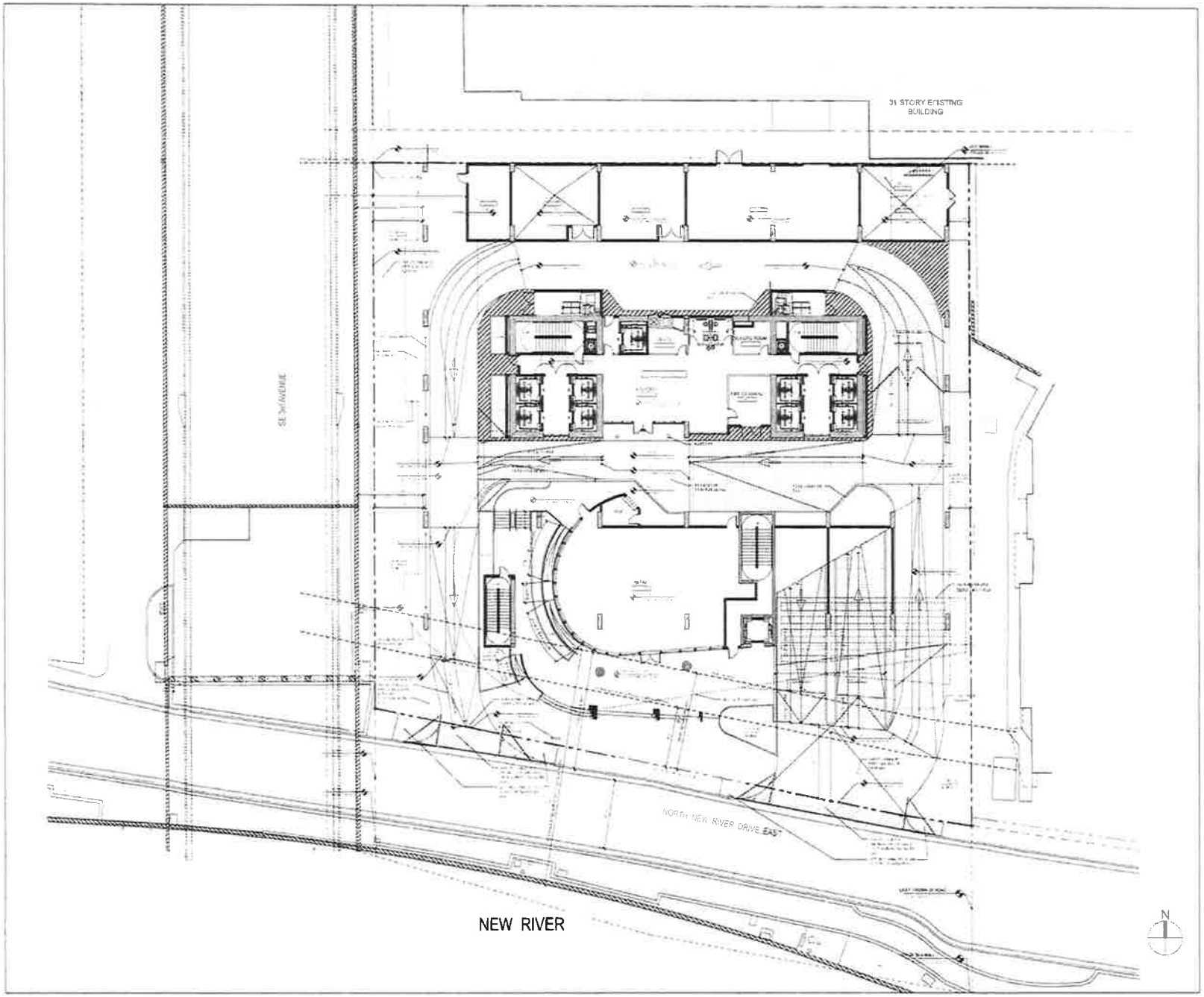


LEGEND
Driveway
AM Peak Hour
(#) PM Peak Hour

LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project RIVERWALK RESIDENCES AT LAS OLAS FT. LAUDERDALE BROWARD COUNTY FLORIDA	Figure Title DRIVEWAY VOLUMES	Project No. 330020601 Date 8/23/2017 Scale NTS	FIGURE 8

APPENDIX B
SITE PLAN



borges architects + associates

LANGAN

RIVERWALK RESIDENCES

333 N. NEW RIVER DRIVE
FT. LAUDERDALE, FL 33301

161050

SITE PLAN

A-101

APPENDIX C
METHODOLOGY LETTER

17 August 2017

Mr. Benjamin Restrepo
City of Fort Lauderdale
290 NE 3rd Avenue
Fort Lauderdale, Florida 33301

Re: Traffic Analysis Methodology
Riverwalk Residences at Las Olas
Fort Lauderdale, Florida
Langan Project No.: 330019401

Dear Mr. Restrepo:

Langan Engineering and Environmental Services, Inc. (Langan) has been retained to prepare a traffic impact study for the Riverwalk Residences at Las Olas development that will replace an office building at 333 North New River Drive, Fort Lauderdale, Florida. We understand that although the project is not expected to generate more than 1,000 daily trips, a condition of approval for the project requires the submittal of a traffic impact analysis. A copy of the site plan is provided in Attachment A. **Figure 1** below shows the site location. Please accept this letter as the proposed traffic impact analysis methodology for the proposed development.

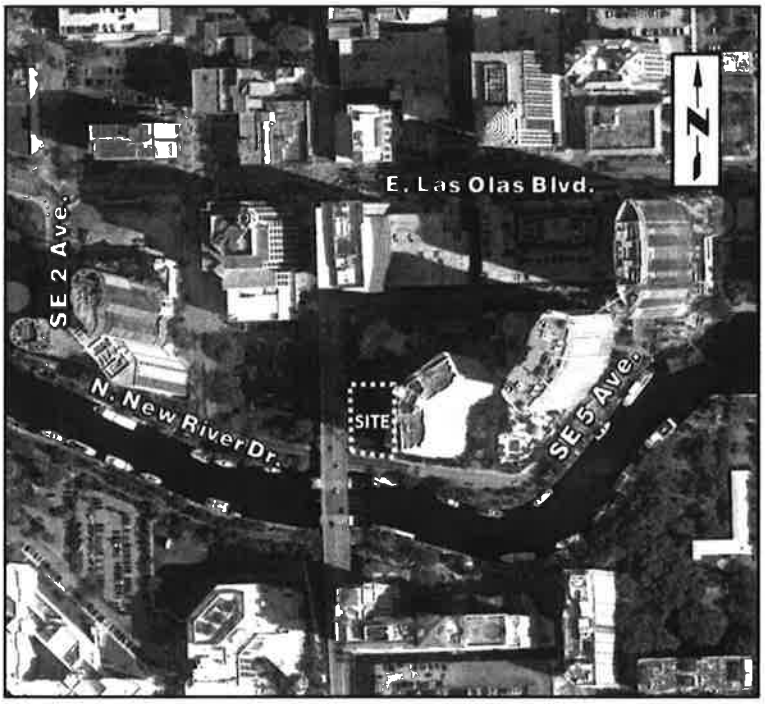


Figure 1 – Aerial Photograph

Trip Generation

Trip generation will be based on information contained in the Institute of Transportation Engineer's (ITE), Trip Generation Manual, 9th Edition. The proposed development will comprise an assisted living facility, senior-adult housing and retail uses and is expected to generate 1,071 daily, 47 AM peak-hour and 83 PM peak-hour net-new trips as summarized in **Table 1** below. The trip generation analysis tables are provided in Attachment B.

Table 1 - Trip Generation Analysis

USE	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Existing Use								
General Office	16,199 SF	179	22	3	25	4	20	24
Proposed Uses								
Senior Adult Housing - Attached	192 DU's	586	13	25	38	24	21	45
Assisted Living Facility	238 Beds	626	21	12	33	21	28	49
Specialty Retail	1,619 SF	38	1	0	1	6	7	13
Total		1,250	35	37	72	51	56	107
Net New Trips		**1,071**	**13**	**34**	**47**	**47**	**36**	**83**

Data Collection

Morning and afternoon peak hour turning movement data will be collected the week of August on a typical weekday at the following study intersections:

- E. Las Olas Boulevard at SE 2nd Avenue
- E. Las Olas Boulevard at SE 5th Avenue (N. New River Drive)

Data will be collected between 7:00 and 9:00 AM and between 4:00 and 6:00 PM and will be adjusted to reflect peak season peak hour traffic volumes by applying a peak season, conversion factor obtained from the *Florida Department of Transportation (FDOT) Peak Season Factor Category Report* available online.

Project Distribution

We used data from the nearest FDOT traffic station on Las Olas Boulevard and estimated the following distribution for project traffic:

- 80% eastbound; 20% westbound (AM peak hour)
- 50% eastbound; 50% westbound (PM peak hour)

Future Traffic

We will develop 2019 background traffic volumes based on FDOT historical data from a traffic count station on Las Olas Boulevard. A one-half percent annual growth rate will be used if a negative growth rate is determined.

Intersection Analysis
We will analyze the study intersections for morning and afternoon peak-hour conditions using the Synchro Software. The analysis scenarios will include the existing year (2017) and build out year (2019).

Roadway Capacity Analysis
We will use the intersection data to develop 2017 and 2019 traffic volumes and preform roadway capacity analysis for North New Rive Drive between SE 2nd Avenue and SE 5th Avenue. Level of service tables from the FDOT Quality/Level of Service Handbook will be used to determine the capacity of this roadway.

Report
The study methodology, analysis and findings will be summarized in a report that will be signed and sealed by a Florida registered professional engineer.

If you have any questions regarding the information contained herein, please do not hesitate to contact me at (786) 264-7226.

Sincerely,

Langan Engineering and Environmental Services, Inc.

John P. Kim, P.E., PTOE
Senior Project Manager

JPK:jpk

Attachments
Attachment A – Site Plan
Attachment B – Trip Generation Analysis

FL Certificate of Authorization No. 6601

APPENDIX D
TRAFFIC DATA

TRAFFIC SURVEY SPECIALISTS, INC.

LAS OLAS BOULEVARD & SE 2ND AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LASO2AVE
Page : 1

ALL VEHICLES

	SE 2ND AVENUE From North				LAS OLAS BOULEVARD From East				SE 2ND AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
07:00	0	1	4	2	0	5	19	2	0	7	1	5	0	4	21	22	93
07:15	0	1	0	4	1	5	17	7	0	5	2	7	0	7	33	13	102
07:30	0	2	2	3	0	0	21	12	0	11	1	6	0	11	50	25	144
07:45	0	7	0	5	0	5	24	12	0	2	1	5	0	10	75	22	168
Hr Total	0	11	6	14	1	15	81	33	0	25	5	23	0	32	179	82	507
08:00	0	4	2	4	1	9	33	9	0	11	0	8	0	9	62	34	186
08:15	0	4	4	3	1	9	31	8	0	2	0	8	0	13	56	31	170
08:30	0	6	4	6	0	13	40	9	0	6	0	11	1	12	85	50	243
08:45	0	9	6	1	0	22	29	11	0	9	1	10	0	19	73	53	243
Hr Total	0	23	16	14	2	53	133	37	0	28	1	37	1	53	276	168	842
* BREAK *																	
16:00	0	3	3	5	0	3	56	6	0	17	2	17	0	2	46	9	169
16:15	0	7	1	6	2	10	62	4	0	13	2	9	0	3	50	7	176
16:30	0	7	2	3	0	7	68	2	0	16	3	30	0	1	38	11	188
16:45	1	4	0	9	0	10	65	6	0	30	1	19	0	2	41	10	198
Hr Total	1	21	6	23	2	30	251	18	0	76	8	75	0	8	175	37	731
16:30-17:30	1	21	3	20	0	29	244	18	0	101	8	95	0	8	178	45	
17:00	0	10	0	2	0	7	44	7	0	36	4	28	0	1	47	7	193
17:15	0	0	1	6	0	5	67	3	0	19	0	18	0	4	52	17	192
17:30	0	4	0	3	0	10	46	8	0	23	4	21	1	4	50	14	188
17:45	0	3	1	5	0	10	36	10	0	24	2	21	0	10	47	15	184
Hr Total	0	17	2	16	0	32	193	28	0	102	10	88	1	19	196	53	757
TOTAL	1	72	30	67	5	130	658	116	0	231	24	223	2	112	826	340	2837

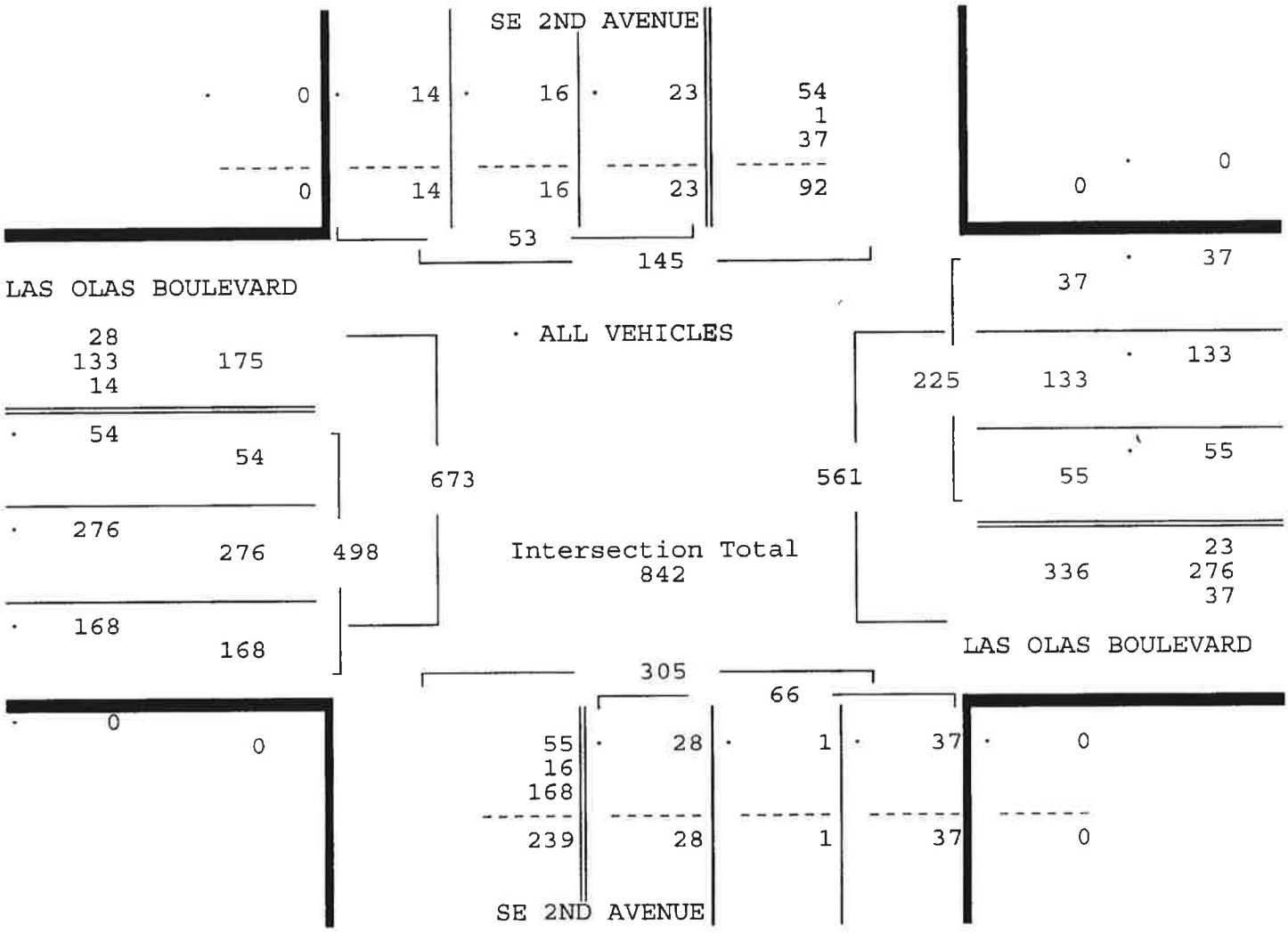
LAS OLAS BOULEVARD & SE 2ND AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LASO2AVE
Page : 2

ALL VEHICLES

	SE 2ND AVENUE From North				LAS OLAS BOULEVARD From East				SE 2ND AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 08/22/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	0	23	16	14	2	53	133	37	0	28	1	37	1	53	276	168	
Percent	0%	43%	30%	26%	1%	24%	59%	16%	0%	42%	2%	56%	0%	11%	55%	34%	
Pk total	53				225				66				498				
Highest	08:30				08:30				08:45				08:30				
Volume	0	6	4	6	0	13	40	9	0	9	1	10	1	12	85	50	
Hi total	16				62				20				148				
PHF	.83				.91				.82				.84				



TRAFFIC SURVEY SPECIALISTS, INC.

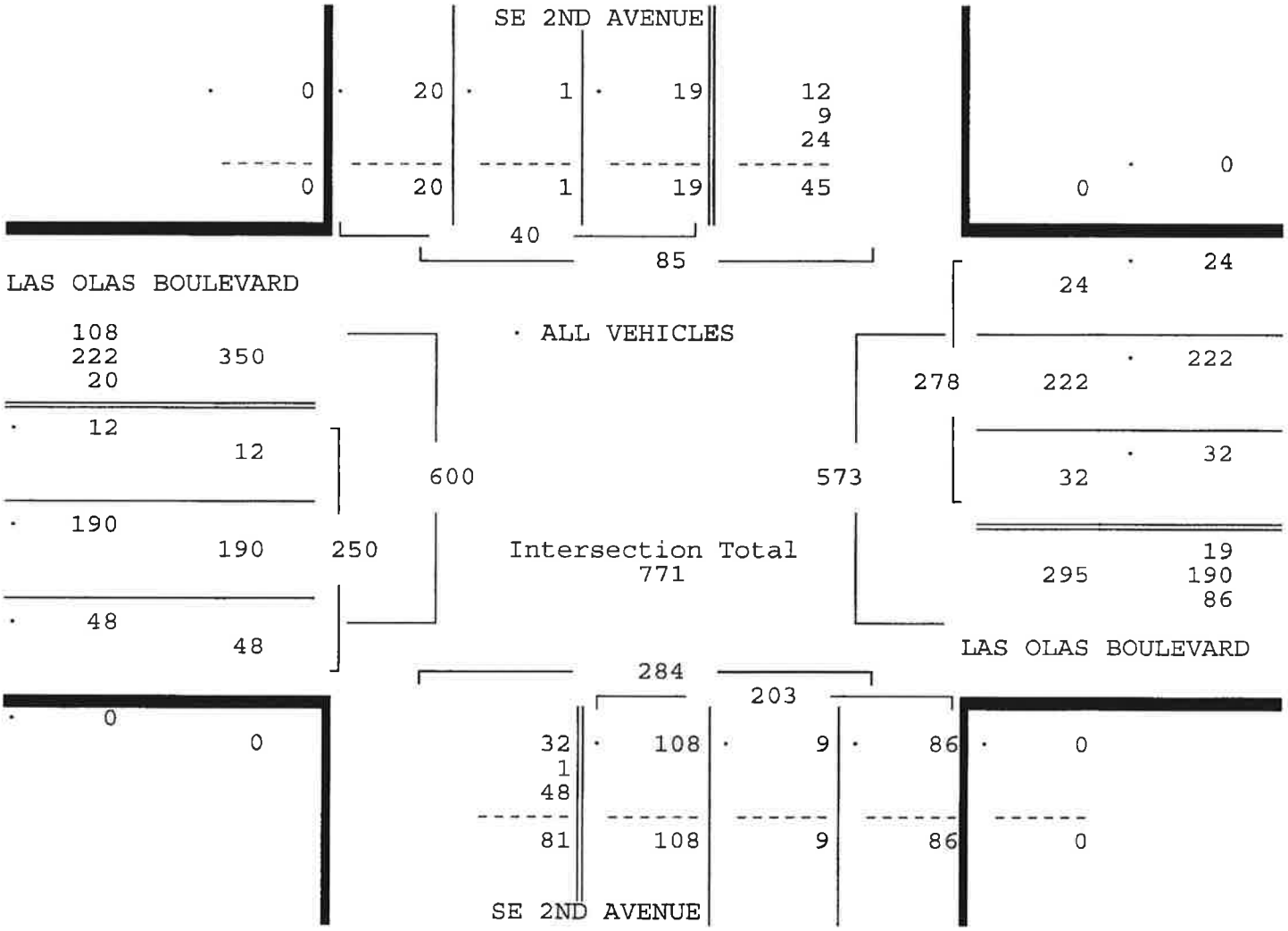
LAS OLAS BOULEVARD & SE 2ND AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LAS02AVE
Page : 3

ALL VEHICLES

	SE 2ND AVENUE From North				LAS OLAS BOULEVARD From East				SE 2ND AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 08/22/17																	
Peak start	16:45				16:45				16:45				16:45				
Volume	1	18	1	20	0	32	222	24	0	108	9	86	1	11	190	48	
Percent	2%	45%	2%	50%	0%	12%	80%	9%	0%	53%	4%	42%	0%	4%	76%	19%	
Pk total	40				278				203				250				
Highest	16:45				16:45				17:00				17:15				
Volume	1	4	0	9	0	10	65	6	0	36	4	28	0	4	52	17	
Hi total	14				81				68				73				
PHF	.71				.86				.75				.86				



LAS OLAS BOULEVARD & SE 2ND AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LAS02AVE
Page : 1

PEDESTRIANS & BIKES

	SE 2ND AVENUE From North				LAS OLAS BOULEVARD From East				SE 2ND AVENUE From South				LAS OLAS BOULEVARD From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/22/17																	
07:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15	0	1	0	2	0	0	0	1	0	1	0	0	0	0	0	0	5
07:30	0	1	0	2	0	0	0	2	0	2	0	0	0	0	0	0	7
07:45	0	1	0	3	0	1	0	0	0	1	0	0	0	0	0	0	6
Hr Total	0	3	0	9	0	1	0	3	0	4	0	0	0	0	0	0	20
08:00	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15	0	2	0	5	0	0	0	6	0	1	0	0	0	0	0	0	14
08:30	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
08:45	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	1	6
Hr Total	0	3	0	12	0	0	0	7	0	2	0	0	0	0	0	2	26
* BREAK *																	
16:00	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	1	6
16:15	0	2	0	7	0	0	0	3	0	0	0	0	0	0	0	0	12
16:30	0	1	0	10	0	0	0	6	0	0	0	0	0	0	0	1	18
16:45	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
Hr Total	0	3	0	28	0	0	0	12	0	0	0	0	0	0	0	2	45
17:00	0	0	0	4	0	0	0	2	0	0	0	2	0	0	0	0	8
17:15	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6
17:30	0	1	0	2	0	0	0	7	0	1	0	0	0	0	0	0	11
17:45	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3
Hr Total	0	1	0	9	0	2	0	11	0	1	0	2	0	0	0	2	28
TOTAL	0	10	0	58	0	3	0	33	0	7	0	2	0	0	0	6	119

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

LAS OLAS BOULEVARD & SE 5TH AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LASO5AVE
Page : 1

ALL VEHICLES

	From North				LAS OLAS BOULEVARD From East				SE 5TH AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
07:00	0	0	0	0	0	4	36	0	0	2	0	7	0	0	39	7	95
07:15	0	0	0	0	0	4	58	0	1	1	0	6	0	0	40	6	116
07:30	0	0	0	0	0	12	78	0	0	2	0	8	0	0	33	8	141
07:45	0	0	0	0	0	20	64	0	0	3	0	3	0	0	55	7	152
Hr Total	0	0	0	0	0	40	236	0	1	8	0	24	0	0	167	28	504
08:00	0	0	0	0	0	22	77	0	0	0	0	5	0	0	58	6	168
08:15	0	0	0	0	1	13	91	0	0	3	0	7	0	0	48	5	168
08:30	0	0	0	0	0	17	104	0	0	1	0	11	0	0	77	7	217
08:45	0	0	0	0	0	27	99	0	0	4	0	8	0	0	75	5	218
Hr Total	0	0	0	0	1	79	371	0	0	8	0	31	0	0	258	23	771
* BREAK *																	
16:00	0	0	0	0	1	5	110	0	0	3	0	9	0	0	55	6	189
16:15	0	0	0	0	0	7	125	0	1	2	0	14	2	0	60	9	220
16:30	0	0	0	0	0	9	128	0	0	2	0	9	0	0	66	6	220
16:45	0	0	0	0	0	10	103	0	0	5	0	17	0	0	83	3	221
Hr Total	0	0	0	0	1	31	466	0	1	12	0	49	2	0	264	24	850
17:00	0	0	0	0	0	11	92	0	0	7	0	22	0	0	62	4	198
17:15	0	0	0	0	1	17	121	0	1	7	0	23	1	0	81	5	257
17:30	0	0	0	0	1	7	84	0	0	6	0	17	2	0	74	8	199
17:45	0	0	0	0	4	14	109	0	1	3	0	26	0	0	64	10	231
Hr Total	0	0	0	0	6	49	406	0	2	23	0	88	3	0	281	27	885
TOTAL	0	0	0	0	8	199	1479	0	4	51	0	192	5	0	970	102	3010

TRAFFIC SURVEY SPECIALISTS, INC.

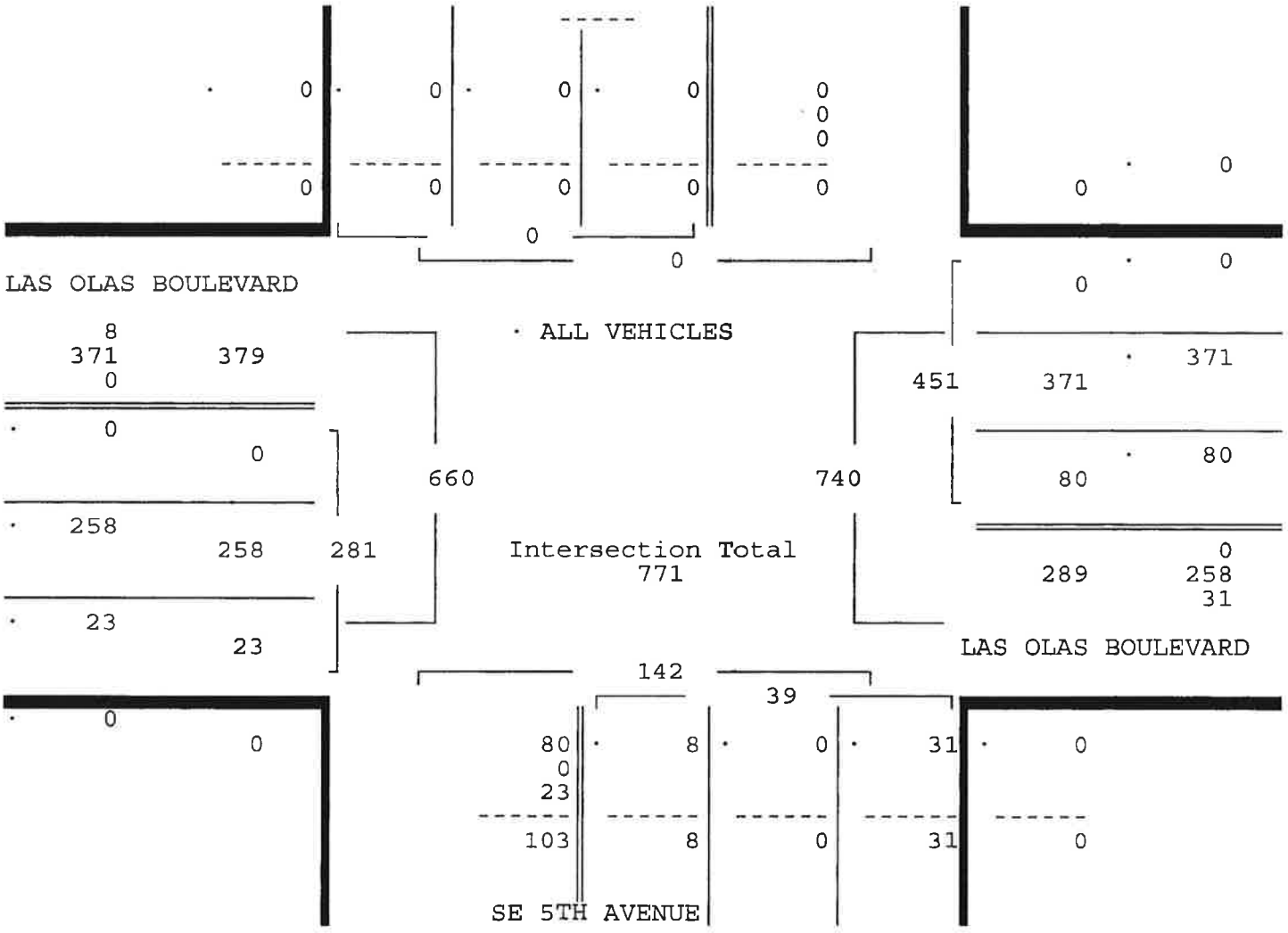
LAS OLAS BOULEVARD & SE 5TH AVENUE
FORT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LASO5AVE
Page : 2

ALL VEHICLES

	From North				LAS OLAS BOULEVARD From East				SE 5TH AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 08/22/17																	
Peak start 08:00					08:00				08:00				08:00				
Volume	0	0	0	0	1	79	371	0	0	8	0	31	0	0	258	23	
Percent	0%	0%	0%	0%	0%	18%	82%	0%	0%	21%	0%	79%	0%	0%	92%	8%	
Pk total	0				451				39				281				
Highest	07:00				08:45				08:30				08:30				
Volume	0	0	0	0	0	27	99	0	0	1	0	11	0	0	77	7	
Hi total	0				126				12				84				
PHF	.0				.89				.81				.84				



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LAS OLAS BOULEVARD & SE 5TH AVENUE
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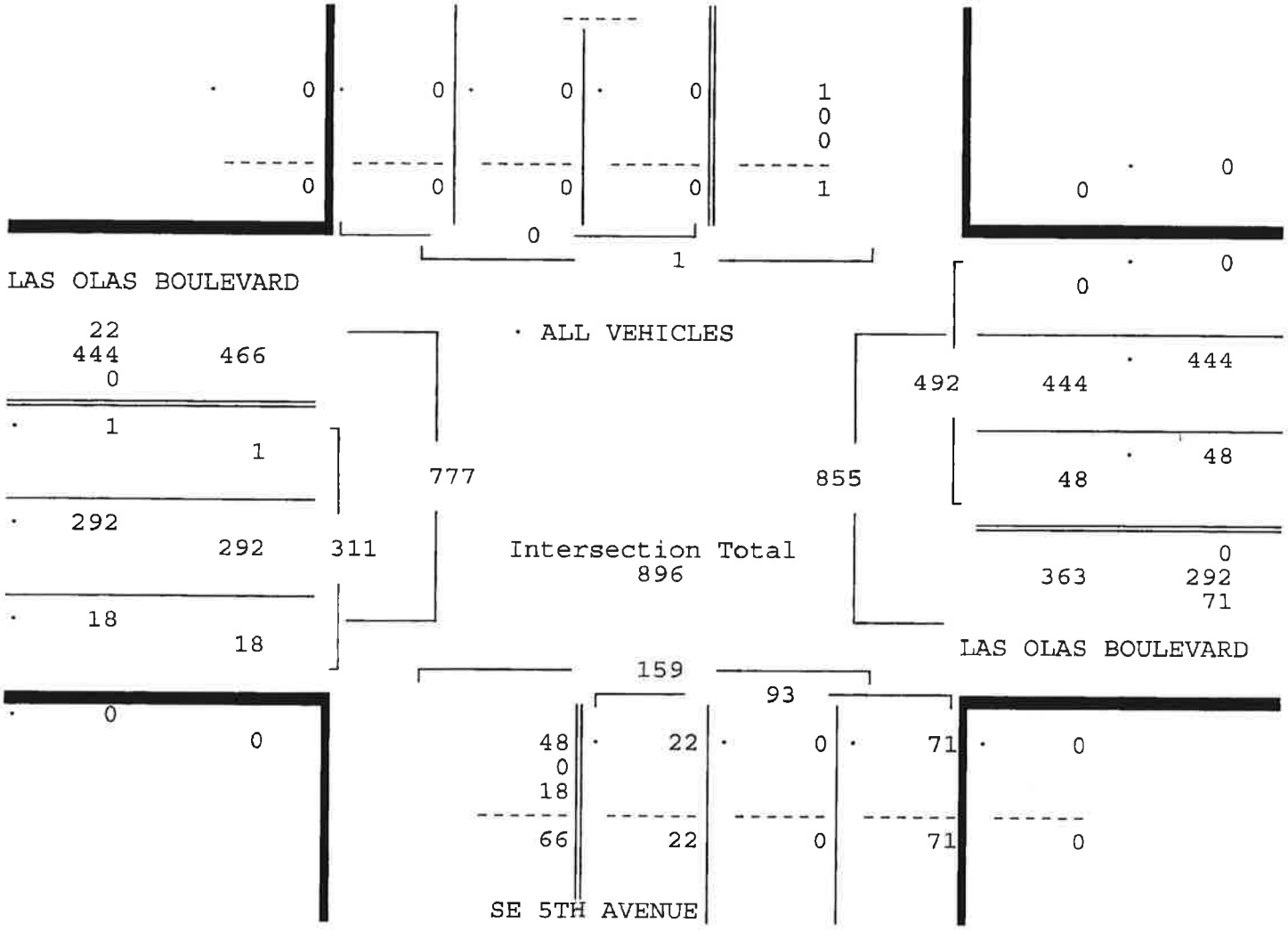
NOT SIGNALIZED

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LASO5AVE
Page : 3

ALL VEHICLES

	From North				LAS OLAS BOULEVARD From East				SE 5TH AVENUE From South				LAS OLAS BOULEVARD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 08/22/17																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 08/22/17																	
Peak start	16:30				16:30				16:30				16:30				
Volume	0	0	0	0	1	47	444	0	1	21	0	71	1	0	292	18	
Percent	0%	0%	0%	0%	0%	10%	90%	0%	1%	23%	0%	76%	0%	0%	94%	6%	
Pk total	0				492				93				311				
Highest	07:00				17:15				17:15				17:15				
Volume	0	0	0	0	1	17	121	0	1	7	0	23	1	0	81	5	
Hi total	0				139				31				87				
PHF	.0				.88				.75				.89				



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FORT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO
NOT SIGNALIZED

Site Code : 00170141
Start Date: 08/22/17
File I.D. : LAS05AVE
Page : 1

PEDESTRIANS & BIKES

	From North				LAS OLAS BOULEVARD From East				SE 5TH AVENUE From South				LAS OLAS BOULEVARD From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 08/22/17																	
07:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
07:15	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	2	5
07:30	0	0	0	0	0	0	0	1	0	4	0	4	0	0	0	0	9
07:45	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	0	8
Hr Total	0	0	0	0	0	0	0	1	0	8	0	15	0	0	0	2	26
08:00	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	1	5
08:15	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	2	10
08:30	0	0	0	0	0	0	0	0	0	1	0	15	0	0	0	1	17
08:45	0	0	0	0	0	0	0	0	0	2	0	7	0	0	0	0	9
Hr Total	0	0	0	0	0	0	0	0	0	4	0	33	0	0	0	4	41
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8
16:15	0	0	0	0	0	0	0	0	0	3	0	4	0	0	0	1	8
16:30	0	0	0	0	0	0	0	13	0	0	0	9	0	0	0	0	22
16:45	0	0	0	0	0	0	0	0	0	2	0	9	0	0	0	1	12
Hr Total	0	0	0	0	0	0	0	13	0	5	0	30	0	0	0	2	50
17:00	0	0	0	0	0	0	0	0	0	1	0	9	0	0	0	0	10
17:15	0	0	0	0	0	0	0	2	0	0	0	23	0	0	0	1	26
17:30	0	0	0	0	0	0	0	1	0	0	0	6	0	1	0	0	8
17:45	0	0	0	0	0	1	0	2	0	1	0	13	0	0	0	2	19
Hr Total	0	0	0	0	0	1	0	5	0	2	0	51	0	1	0	3	63
TOTAL	0	0	0	0	0	1	0	19	0	19	0	129	0	1	0	11	180

2016 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2016 - 01/02/2016	0.99	1.02
2	01/03/2016 - 01/09/2016	1.00	1.03
3	01/10/2016 - 01/16/2016	1.00	1.03
4	01/17/2016 - 01/23/2016	0.99	1.02
5	01/24/2016 - 01/30/2016	0.99	1.02
* 6	01/31/2016 - 02/06/2016	0.98	1.01
* 7	02/07/2016 - 02/13/2016	0.97	1.00
* 8	02/14/2016 - 02/20/2016	0.96	0.99
* 9	02/21/2016 - 02/27/2016	0.96	0.99
*10	02/28/2016 - 03/05/2016	0.96	0.99
*11	03/06/2016 - 03/12/2016	0.96	0.99
*12	03/13/2016 - 03/19/2016	0.97	1.00
*13	03/20/2016 - 03/26/2016	0.97	1.00
*14	03/27/2016 - 04/02/2016	0.97	1.00
*15	04/03/2016 - 04/09/2016	0.98	1.01
*16	04/10/2016 - 04/16/2016	0.98	1.01
*17	04/17/2016 - 04/23/2016	0.98	1.01
*18	04/24/2016 - 04/30/2016	0.99	1.02
19	05/01/2016 - 05/07/2016	0.99	1.02
20	05/08/2016 - 05/14/2016	1.00	1.03
21	05/15/2016 - 05/21/2016	1.00	1.03
22	05/22/2016 - 05/28/2016	1.01	1.04
23	05/29/2016 - 06/04/2016	1.01	1.04
24	06/05/2016 - 06/11/2016	1.02	1.05
25	06/12/2016 - 06/18/2016	1.02	1.05
26	06/19/2016 - 06/25/2016	1.03	1.06
27	06/26/2016 - 07/02/2016	1.03	1.06
28	07/03/2016 - 07/09/2016	1.03	1.06
29	07/10/2016 - 07/16/2016	1.03	1.06
30	07/17/2016 - 07/23/2016	1.03	1.06
31	07/24/2016 - 07/30/2016	1.03	1.06
32	07/31/2016 - 08/06/2016	1.03	1.06
33	08/07/2016 - 08/13/2016	1.03	1.06
34	08/14/2016 - 08/20/2016	1.03	1.06
35	08/21/2016 - 08/27/2016	1.03	1.06
36	08/28/2016 - 09/03/2016	1.04	1.07
37	09/04/2016 - 09/10/2016	1.04	1.07
38	09/11/2016 - 09/17/2016	1.04	1.07
39	09/18/2016 - 09/24/2016	1.03	1.06
40	09/25/2016 - 10/01/2016	1.03	1.06
41	10/02/2016 - 10/08/2016	1.02	1.05
42	10/09/2016 - 10/15/2016	1.02	1.05
43	10/16/2016 - 10/22/2016	1.02	1.05
44	10/23/2016 - 10/29/2016	1.01	1.04
45	10/30/2016 - 11/05/2016	1.01	1.04
46	11/06/2016 - 11/12/2016	1.01	1.04
47	11/13/2016 - 11/19/2016	1.01	1.04
48	11/20/2016 - 11/26/2016	1.01	1.04
49	11/27/2016 - 12/03/2016	1.00	1.03
50	12/04/2016 - 12/10/2016	1.00	1.03
51	12/11/2016 - 12/17/2016	0.99	1.02
52	12/18/2016 - 12/24/2016	1.00	1.03
53	12/25/2016 - 12/31/2016	1.00	1.03

* PEAK SEASON

21-FEB-2017 10:54:34 830UPD 4_8601_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7640 - LAS OLAS BLVD, E OF ANDREWS AVE

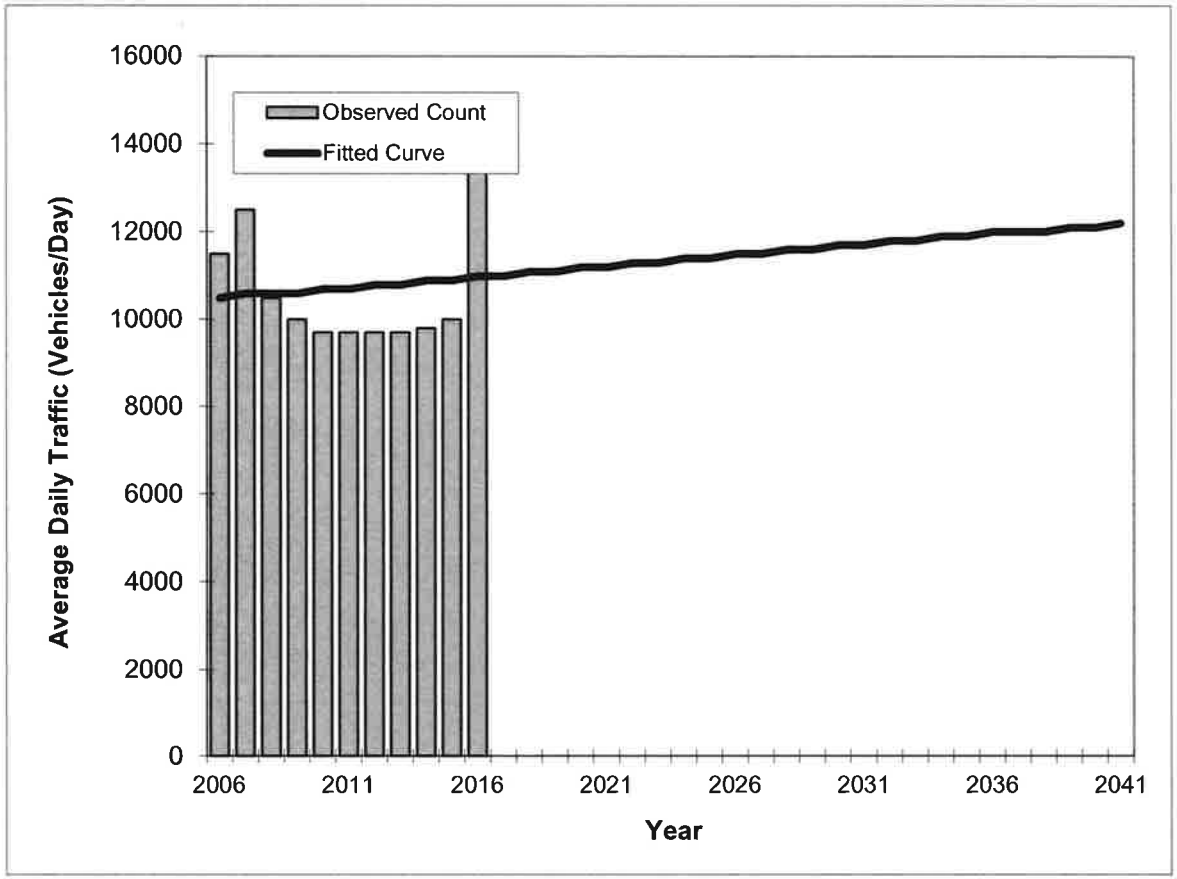
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	15100 C	E 8600	W 6500	9.00	54.10	2.90
2015	10000 V	0	0	9.00	54.00	3.40
2014	9800 R			9.00	54.20	7.40
2013	9700 T	0	0	9.00	53.60	7.60
2012	9700 S	0	0	9.00	52.20	5.90
2011	9700 F	0	0	9.00	52.50	6.30
2010	9700 C	E 0	W 0	8.35	52.69	9.30
2009	10000 F	0	0	8.53	53.89	5.30
2008	10500 C	E 0	W 0	8.81	54.16	6.50
2007	12500 C	E 0	W 0	8.63	55.75	4.80
2006	11500 C	E 0	W 0	8.40	55.34	2.90
2005	12000 C	E	W	8.20	51.70	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

Las Olas Boulevard -- East of Andrews Avenue

County:	Broward
Station #:	7640
Highway:	Las Olas Boulevard



Year	Traffic (ADT/AADT) Count*	Trend**
2006	11500	10500
2007	12500	10600
2008	10500	10600
2009	10000	10600
2010	9700	10700
2011	9700	10700
2012	9700	10800
2013	9700	10800
2014	9800	10900
2015	10000	10900
2016	15100	11000
2016 Opening Year Trend		
2016	N/A	11000
2016 Mid-Year Trend		
2016	N/A	11000
2019 Design Year Trend		
2019	N/A	11100
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	48
Trend R-squared:	0.88%
Trend Annual Historic Growth Rate:	0.38%
Trend Growth Rate (2011 to Design Year):	0.47%
Printed:	23-Aug-17
Straight Line Growth Option	

COUNTY: 86
STATION: 7640
DESCRIPTION: LAS OLAS BLVD, E OF ANDREWS AVE
START DATE: 09/06/2016
START TIME: 0000

	DIRECTION: E					DIRECTION: W					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	23	24	18	33	98	37	36	21	23	117	215
0100	18	16	8	11	53	21	15	14	16	66	119
0200	7	10	0	2	19	6	3	16	6	31	50
0300	4	3	3	5	15	4	3	4	0	11	26
0400	2	3	0	13	18	8	7	5	7	27	45
0500	0	7	18	18	43	0	7	9	9	25	68
0600	25	35	54	75	189	13	28	13	13	67	256
0700	103	72	152	177	504	30	45	40	35	150	654
0800	237	256	305	364	1162	52	70	72	39	233	1395
0900	344	225	139	168	876	74	93	99	49	315	1191
1000	102	145	129	111	487	51	82	107	121	361	848
1100	136	71	129	114	450	96	78	134	77	385	835
1200	114	150	117	173	554	108	204	106	122	540	1094
1300	152	175	122	121	570	126	83	117	124	450	1020
1400	117	102	120	121	460	105	92	93	131	421	881
1500	120	129	83	154	486	85	118	92	126	421	907
1600	120	111	100	113	444	133	114	154	171	572	1016
1700	96	124	139	143	502	151	175	149	136	611	1113
1800	127	91	95	88	401	122	101	102	69	394	795
1900	85	92	66	59	302	88	80	44	63	275	577
2000	52	96	62	55	265	80	52	76	68	276	541
2100	53	67	52	43	215	65	55	52	37	209	424
2200	33	48	45	55	181	47	40	51	49	187	368
2300	35	21	26	20	102	50	25	28	24	127	229
24-HOUR TOTALS:					8396					6271	14667

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	815	1269	845	305	815	1524
P.M.	1245	622	1630	651	1215	1150
DAILY	815	1269	1630	651	815	1524

GENERATED BY SPS 5.0.53P

APPENDIX E
INTERSECTION VOLUME TABLES

AM PEAK HOUR TRAFFIC VOLUME CALCULATIONS
RIVERWALK RESIDENCES AT LAS OLAS

Intersection	Scenario	Traffic Volumes											
		EBLT	EBT	EBRT	WBLT	WBT	WBRT	NBLT	NBT	NBRT	SBLT	SBT	SBRT
Las Olas Boulevard at SE 2 Avenue	Traffic Count	54	276	168	55	133	37	28	1	37	23	16	14
	Peak Season Conversion Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2017 Peak Season Traffic	**56**	**284**	**173**	**57**	**137**	**38**	**29**	**1**	**38**	**24**	**16**	**14**
	Compound Growth Rate	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
	Existing plus Background Growth	56	287	175	57	138	38	29	1	38	24	17	15
	2019 Background Traffic	**56**	**287**	**175**	**57**	**138**	**38**	**29**	**1**	**38**	**24**	**17**	**15**
	In/Out			In	In			Out	Out	Out		In	
	Project Assignment			39%	2%			39%	39%	2%		39%	
	Net New Project Trips	0	0	4	0	0	0	12	12	1	0	4	0
	2019 Total Traffic	**56**	**287**	**179**	**57**	**138**	**38**	**41**	**13**	**39**	**24**	**21**	**15**
Las Olas Boulevard at SE 5 Avenue	Traffic Count		258	23	80	371		8		31			
	Peak Season Conversion Factor		1.03	1.03	1.03	1.03		1.03		1.03			
	2017 Peak Season Traffic		**266**	**24**	**82**	**382**		**8**		**32**			
	Compound Growth Rate		0.50%	0.50%	0.50%	0.50%		0.50%		0.50%			
	Existing plus Background Growth		268	24	83	386		8		32			
	2019 Background Traffic		**268**	**24**	**83**	**386**		**8**		**32**			
	In/Out			In	In			Out		Out			
	Project Assignment			2%	18%			2%		18%			
	Net New Project Trips		0	0	2	0		1		6			
	2019 Total Traffic		**268**	**24**	**85**	**386**		**9**		**38**			

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PM PEAK HOUR TRAFFIC VOLUME CALCULATIONS
RIVERWALK RESIDENCES AT LAS OLAS

Intersection	Scenario	Traffic Volumes											
		EBLT	EBT	EBRT	WBLT	WBT	WBRT	NBLT	NBT	NBRT	SBLT	SBT	SBRT
Las Olas Boulevard at SE 2 Avenue	Traffic Count	8	178	45	29	244	18	101	8	95	22	3	20
	Peak Season Conversion Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2017 Peak Season Traffic	**8**	**183**	**46**	**30**	**251**	**19**	**104**	**8**	**98**	**23**	**3**	**21**
	Compound Growth Rate	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
	Existing plus Background Growth	8	185	47	30	254	19	105	8	99	23	3	21
	2019 Background Traffic	**8**	**185**	**47**	**30**	**254**	**19**	**105**	**8**	**99**	**23**	**3**	**21**
	In/Out			In	In			Out	Out	Out		In	
	Project Assignment			24%	2%			24%	24%	2%		24%	
	Net New Project Trips	0	0	9	1	0	0	6	6	1	0	9	0
	2019 Total Traffic	**8**	**185**	**56**	**31**	**254**	**19**	**111**	**14**	**100**	**23**	**12**	**21**
Las Olas Boulevard at SE 5 Avenue	Traffic Count		292	18	48	444		22		71			
	Peak Season Conversion Factor		1.03	1.03	1.03	1.03		1.03		1.03			
	2017 Peak Season Traffic		**301**	**19**	**49**	**457**		**23**		**73**			
	Compound Growth Rate		0.50%	0.50%	0.50%	0.50%		0.50%		0.50%			
	Existing plus Background Growth		304	19	50	462		23		74			
	2019 Background Traffic		**304**	**19**	**50**	**462**		**23**		**74**			
	In/Out			In	In			Out		Out			
	Project Assignment			2%	48%			2%		48%			
	Net New Project Trips		0	1	19	0		1		13			
	2019 Total Traffic		**304**	**20**	**69**	**462**		**24**		**87**			

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APPENDIX F
CAPACITY ANALYSIS REPORTS

EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	284	173	57	137	38	29	1	38	24	16	14
Future Vol, veh/h	56	284	173	57	137	38	29	1	38	24	16	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	309	188	62	149	41	32	1	41	26	17	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	149	0	0	497	0	0	731	797	248	550	891	74
Stage 1	-	-	-	-	-	-	524	524	-	273	273	-
Stage 2	-	-	-	-	-	-	207	273	-	277	618	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1430	-	-	1063	-	-	310	318	752	418	280	973
Stage 1	-	-	-	-	-	-	504	528	-	710	683	-
Stage 2	-	-	-	-	-	-	776	683	-	706	479	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1430	-	-	1063	-	-	262	279	752	357	246	973
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	279	-	357	246	-
Stage 1	-	-	-	-	-	-	473	496	-	667	638	-
Stage 2	-	-	-	-	-	-	694	638	-	625	450	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	2.2	14.7	16.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	263	752	1430	-	-	1063	-	-	368
HCM Lane V/C Ratio	0.124	0.055	0.043	-	-	0.058	-	-	0.159
HCM Control Delay (s)	20.6	10.1	7.6	0.2	-	8.6	0.1	-	16.6
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.2	0.1	-	-	0.2	-	-	0.6

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	183	46	30	251	19	104	8	98	23	3	21
Future Vol, veh/h	8	183	46	30	251	19	104	8	98	23	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	199	50	33	273	21	113	9	107	25	3	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	273	0	0	249	0	0	444	579	124	459	604	136
Stage 1	-	-	-	-	-	-	241	241	-	338	338	-
Stage 2	-	-	-	-	-	-	203	338	-	121	266	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1287	-	-	1314	-	-	497	425	904	485	411	888
Stage 1	-	-	-	-	-	-	741	705	-	650	639	-
Stage 2	-	-	-	-	-	-	780	639	-	870	687	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	1314	-	-	467	409	904	409	395	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	467	409	-	409	395	-
Stage 1	-	-	-	-	-	-	735	699	-	645	620	-
Stage 2	-	-	-	-	-	-	733	620	-	752	682	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	12.8	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	462	904	1287	-	-	1314	-	-	537
HCM Lane V/C Ratio	0.264	0.118	0.007	-	-	0.025	-	-	0.095
HCM Control Delay (s)	15.6	9.5	7.8	0	-	7.8	0.1	-	12.4
HCM Lane LOS	C	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.4	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	266	24	82	382	8	32
Future Vol, veh/h	266	24	82	382	8	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	289	26	89	415	9	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	315	0	688	158
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	386	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1242	-	380	859
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	353	859
Mov Cap-2 Maneuver	-	-	-	-	353	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	668	-	-	1242	-
HCM Lane V/C Ratio	0.065	-	-	0.072	-
HCM Control Delay (s)	10.8	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	301	19	49	457	23	73
Future Vol, veh/h	301	19	49	457	23	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	327	21	53	497	25	79

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	348	0	693	174
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1208	-	377	839
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1208	-	360	839
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	636	-	-	1208	-
HCM Lane V/C Ratio	0.164	-	-	0.044	-
HCM Control Delay (s)	11.8	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

FUTURE NO BUILD CONDITIONS

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	287	175	57	138	38	29	1	38	24	17	15
Future Vol, veh/h	56	287	175	57	138	38	29	1	38	24	17	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	312	190	62	150	41	32	1	41	26	18	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	150	0	0	502	0	0	737	803	251	552	898	75
Stage 1	-	-	-	-	-	-	529	529	-	274	274	-
Stage 2	-	-	-	-	-	-	208	274	-	278	624	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1429	-	-	1059	-	-	307	315	749	416	278	971
Stage 1	-	-	-	-	-	-	501	525	-	709	682	-
Stage 2	-	-	-	-	-	-	775	682	-	705	476	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1429	-	-	1059	-	-	258	276	749	355	244	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	276	-	355	244	-
Stage 1	-	-	-	-	-	-	470	493	-	666	637	-
Stage 2	-	-	-	-	-	-	691	637	-	624	447	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	2.2	14.9	16.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	259	749	1429	-	-	1059	-	-	367
HCM Lane V/C Ratio	0.126	0.055	0.043	-	-	0.059	-	-	0.166
HCM Control Delay (s)	20.9	10.1	7.6	0.2	-	8.6	0.1	-	16.8
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.2	0.1	-	-	0.2	-	-	0.6

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	185	47	30	254	19	105	8	99	23	3	21
Future Vol, veh/h	8	185	47	30	254	19	105	8	99	23	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	201	51	33	276	21	114	9	108	25	3	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	252	0	0	449	585	126	463	611	138
Stage 1	-	-	-	-	-	-	244	244	-	341	341	-
Stage 2	-	-	-	-	-	-	205	341	-	122	270	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1284	-	-	1310	-	-	493	421	901	482	407	885
Stage 1	-	-	-	-	-	-	738	703	-	647	637	-
Stage 2	-	-	-	-	-	-	778	637	-	869	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1310	-	-	463	405	901	405	392	885
Mov Cap-2 Maneuver	-	-	-	-	-	-	463	405	-	405	392	-
Stage 1	-	-	-	-	-	-	732	697	-	642	618	-
Stage 2	-	-	-	-	-	-	731	618	-	750	680	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	12.8	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	458	901	1284	-	-	1310	-	-	533
HCM Lane V/C Ratio	0.268	0.119	0.007	-	-	0.025	-	-	0.096
HCM Control Delay (s)	15.7	9.5	7.8	0	-	7.8	0.1	-	12.5
HCM Lane LOS	C	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0.4	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	268	24	83	386	8	32
Future Vol, veh/h	268	24	83	386	8	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	291	26	90	420	9	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	317	0	694	159
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1240	-	377	858
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1240	-	350	858
Mov Cap-2 Maneuver	-	-	-	-	350	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	665	-	-	1240	-
HCM Lane V/C Ratio	0.065	-	-	0.073	-
HCM Control Delay (s)	10.8	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	304	19	50	462	23	74
Future Vol, veh/h	304	19	50	462	23	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	330	21	54	502	25	80

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	351	0	701	176
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	360	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1204	-	373	837
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1204	-	356	837
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	634	-	-	1204	-
HCM Lane V/C Ratio	0.166	-	-	0.045	-
HCM Control Delay (s)	11.8	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

FUTURE BUILD CONDITIONS

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	287	179	57	138	38	41	13	39	24	21	15
Future Vol, veh/h	56	287	179	57	138	38	41	13	39	24	21	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	312	195	62	150	41	45	14	42	26	23	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	150	0	0	507	0	0	741	805	253	559	902	75
Stage 1	-	-	-	-	-	-	531	531	-	274	274	-
Stage 2	-	-	-	-	-	-	210	274	-	285	628	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1429	-	-	1054	-	-	305	315	746	412	276	971
Stage 1	-	-	-	-	-	-	500	524	-	709	682	-
Stage 2	-	-	-	-	-	-	773	682	-	698	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1429	-	-	1054	-	-	252	276	746	338	242	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	276	-	338	242	-
Stage 1	-	-	-	-	-	-	470	492	-	666	637	-
Stage 2	-	-	-	-	-	-	684	637	-	600	445	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	2.2	17.6	17.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	257	746	1429	-	-	1054	-	-	346
HCM Lane V/C Ratio	0.228	0.057	0.043	-	-	0.059	-	-	0.188
HCM Control Delay (s)	23.1	10.1	7.6	0.2	-	8.6	0.1	-	17.8
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.9	0.2	0.1	-	-	0.2	-	-	0.7

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	268	24	85	386	9	38
Future Vol, veh/h	268	24	85	386	9	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	291	26	92	420	10	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	317	0	699	159
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	395	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1240	-	374	858
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1240	-	346	858
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	669	-	-	1240	-
HCM Lane V/C Ratio	0.076	-	-	0.075	-
HCM Control Delay (s)	10.8	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	185	56	31	254	19	111	14	100	23	12	21
Future Vol, veh/h	8	185	56	31	254	19	111	14	100	23	12	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	25	-	-	170	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	201	61	34	276	21	121	15	109	25	13	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	262	0	0	461	592	131	469	622	138
Stage 1	-	-	-	-	-	-	249	249	-	343	343	-
Stage 2	-	-	-	-	-	-	212	343	-	126	279	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1284	-	-	1299	-	-	484	418	894	477	401	885
Stage 1	-	-	-	-	-	-	733	699	-	646	636	-
Stage 2	-	-	-	-	-	-	770	636	-	865	678	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1299	-	-	446	402	894	395	385	885
Mov Cap-2 Maneuver	-	-	-	-	-	-	446	402	-	395	385	-
Stage 1	-	-	-	-	-	-	727	693	-	641	616	-
Stage 2	-	-	-	-	-	-	711	616	-	737	673	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	13.6	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	441	894	1284	-	-	1299	-	-	495
HCM Lane V/C Ratio	0.308	0.122	0.007	-	-	0.026	-	-	0.123
HCM Control Delay (s)	16.8	9.6	7.8	0	-	7.8	0.1	-	13.3
HCM Lane LOS	C	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0.4	0	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	304	20	69	462	24	87
Future Vol, veh/h	304	20	69	462	24	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	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	330	22	75	502	26	95

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	742	176
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	401	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1203	-	351	837
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	645	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1203	-	329	837
Mov Cap-2 Maneuver	-	-	-	-	329	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	605	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	628	-	-	1203	-
HCM Lane V/C Ratio	0.192	-	-	0.062	-
HCM Control Delay (s)	12.1	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.2	-

DRIVEWAYS

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Traffic Vol, veh/h	0	283	130	0	1	1
Future Vol, veh/h	0	283	130	0	1	1
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	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	0	308	141	0	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	449	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	308	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	568	907
Stage 1	0	-	-	0	886	-
Stage 2	0	-	-	0	745	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	568	907
Mov Cap-2 Maneuver	-	-	-	-	568	-
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	745	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	568	907
HCM Lane V/C Ratio	-	-	0.002	0.001
HCM Control Delay (s)	-	-	11.4	9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	257	102	5	5	28
Future Vol, veh/h	26	257	102	5	5	28
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	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	28	279	111	5	5	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	116	0	-	0	450	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1473	-	-	-	567	939
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1473	-	-	-	554	939
Mov Cap-2 Maneuver	-	-	-	-	554	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	707	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1473	-	-	-	554	939
HCM Lane V/C Ratio	0.019	-	-	-	0.01	0.032
HCM Control Delay (s)	7.5	0	-	-	11.6	9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Traffic Vol, veh/h	0	102	70	0	1	2
Future Vol, veh/h	0	102	70	0	1	2
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	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	0	111	76	0	1	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	187	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	802	985
Stage 1	0	-	-	0	947	-
Stage 2	0	-	-	0	914	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	802	985
Mov Cap-2 Maneuver	-	-	-	-	802	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	914	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	802	985
HCM Lane V/C Ratio	-	-	0.001	0.002
HCM Control Delay (s)	-	-	9.5	8.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	↱
Traffic Vol, veh/h	22	80	47	22	24	23
Future Vol, veh/h	22	80	47	22	24	23
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	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	24	87	51	24	26	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	75	0	-	0	198	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1524	-	-	-	791	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1524	-	-	-	778	1002
Mov Cap-2 Maneuver	-	-	-	-	778	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1524	-	-	-	778	1002
HCM Lane V/C Ratio	0.016	-	-	-	0.034	0.025
HCM Control Delay (s)	7.4	0	-	-	9.8	8.7
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

APPENDIX G
TRIP GENERATION DATA

TRIP GENERATION ANALYSIS
RIVERWALK RESIDENCES AT LAS OLAS

DAILY

Land Use	ITE Code	Intensity	Trip Generation Rate	In	Out	Total Trips			Internal Trips				External Trips			Pass-by		Net New Trips		
						In	Out	Total	In	Out	Total	%	In	Out	Total	Trips	%	In	Out	Total
Existing Use																				
Office	710	16,199 SF	T = 11.03 (X)	50%	50%	90	89	179	0	0	0	0	90	89	179	0	0%	90	89	179
Proposed Uses																				
Senior Adult Housing - Attached	252	192 DU's	T = 2.98 (X) + 21.05	50%	50%	297	296	593	4	3	7	1.2%	293	293	586	0	0%	293	293	586
Assisted Living Facility	254	238 Beds	T = 2.66 (X)	50%	50%	317	316	633	4	3	7	1.1%	313	313	626	0	0%	313	313	626
Specialty Retail	826	1,619 SF	T = 44.32 (X)	50%	50%	36	36	72	6	8	14	19.4%	30	28	58	20	34%	20	18	38
					Sub-Total	650	648	1,298	14	14	28		636	634	1,270	20		626	624	1,250
					10% Multi-Modal Reduction Factor	65	65	130					64	63	127			63	62	125
					Total	**585**	**583**	**1,168**					**572**	**571**	**1,143**			**563**	**562**	**1,125**
					Difference	**495**	**494**	**989**					**482**	**482**	**964**			**473**	**473**	**946**

MORNING PEAK HOUR

Land Use	ITE Code	Intensity	Trip Generation Rate	In	Out	Total Trips			Internal Trips				External Trips			Pass-by		Net New Trips		
						In	Out	Total	In	Out	Total	%	In	Out	Total	Trips	%	In	Out	Total
Existing Use																				
Office	710	16,199 SF	T = 1.56 (X)	88%	12%	22	3	25	0	0	0	0	22	3	25	0	0%	22	3	25
Proposed Uses																				
Senior Adult Housing - Attached	252	192 DU's	T = 0.2 (X) - 0.13	34%	66%	13	25	38	0	0	0	0.0%	13	25	38	0	0%	13	25	38
Assisted Living Facility	254	238 Beds	T = 0.14 (X)	65%	35%	21	12	33	0	0	0	0.0%	21	12	33	0	0%	21	12	33
Specialty Retail*	826	1,619 SF	T = 0.96 (X)	62%	38%	1	1	2	0	0	0	0.0%	1	1	2	1	34%	1	0	1
					Sub-Total	35	38	73	0	0	0		35	38	73	1		35	37	72
					10% Multi-Modal Reduction Factor	4	3	7					4	3	7			4	3	7
					Total	**31**	**35**	**66**					**31**	**35**	**66**			**31**	**34**	**65**
					Difference	**9**	**32**	**41**					**9**	**32**	**41**			**9**	**31**	**40**

* Used shopping center rate for morning specialty retail

AFTERNOON PEAK HOUR

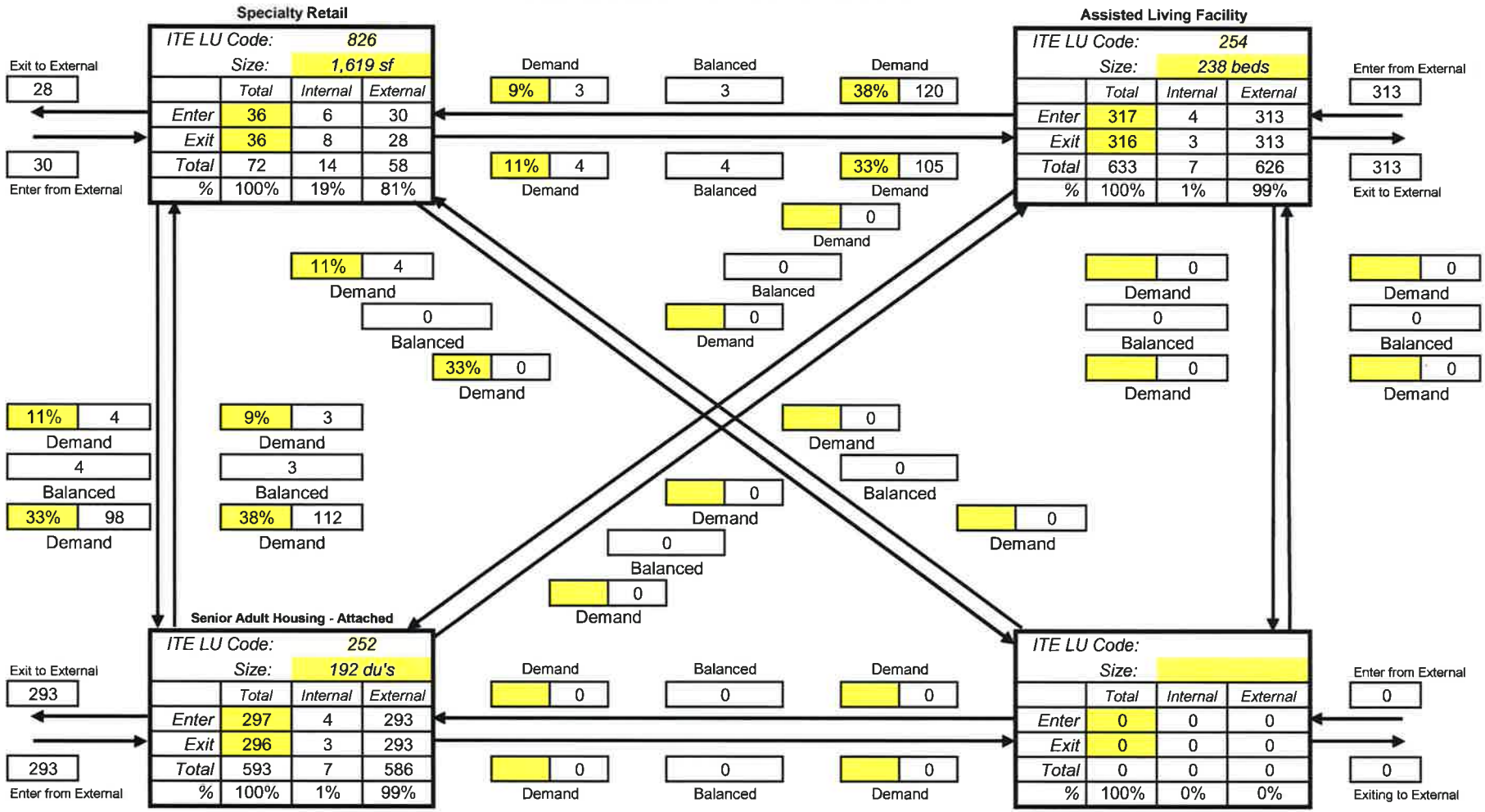
Land Use	ITE Code	Intensity	Trip Generation Rate	In	Out	Total Trips			Internal Trips				External Trips			Pass-by		Net New Trips		
						In	Out	Total	In	Out	Total	%	In	Out	Total	Trips	%	In	Out	Total
Existing Use																				
Office	710	16,199 SF	T = 1.49 (X)	17%	83%	4	20	24	0	0	0	0	4	20	24	0	0%	4	20	24
Proposed Uses																				
Senior Adult Housing - Attached	252	192 DU's	T = 0.24 (X) + 1.64	54%	46%	26	22	48	4	1	5	10.4%	22	21	43	0	0%	22	21	43
Assisted Living Facility	254	238 Beds	T = 0.22 (X)	44%	56%	23	29	52	4	1	5	9.6%	19	28	47	0	0%	19	28	47
Specialty Retail	826	1,619 SF	T = 2.4 (X) + 21.48	44%	56%	11	14	25	2	8	10	40.0%	9	6	15	5	34%	7	3	10
					Sub-Total	60	65	125	10	10	20		50	55	105	5		48	52	100
					10% Multi-Modal Reduction Factor	7	6	13					6	5	11			5	5	10
					Total	**53**	**59**	**112**					**44**	**50**	**94**			**43**	**47**	**90**
					Difference	**49**	**39**	**88**					**40**	**30**	**70**			**39**	**27**	**66**

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Analyst JPK
Data 8/23/2017

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt RIVERWALK RESIDENCES AT LAS OLAS
Time Period Daily



Net External Trips for Multi-Use Development

	Specialty Retail	Assisted Living Facility	Senior Adult Housing - Attache	0	TOTAL
Enter	30	313	293	0	636
Exit	28	313	293	0	634
Total	58	626	586	0	1270
Single-Use Trip Gen.Est	72	633	593	0	1298

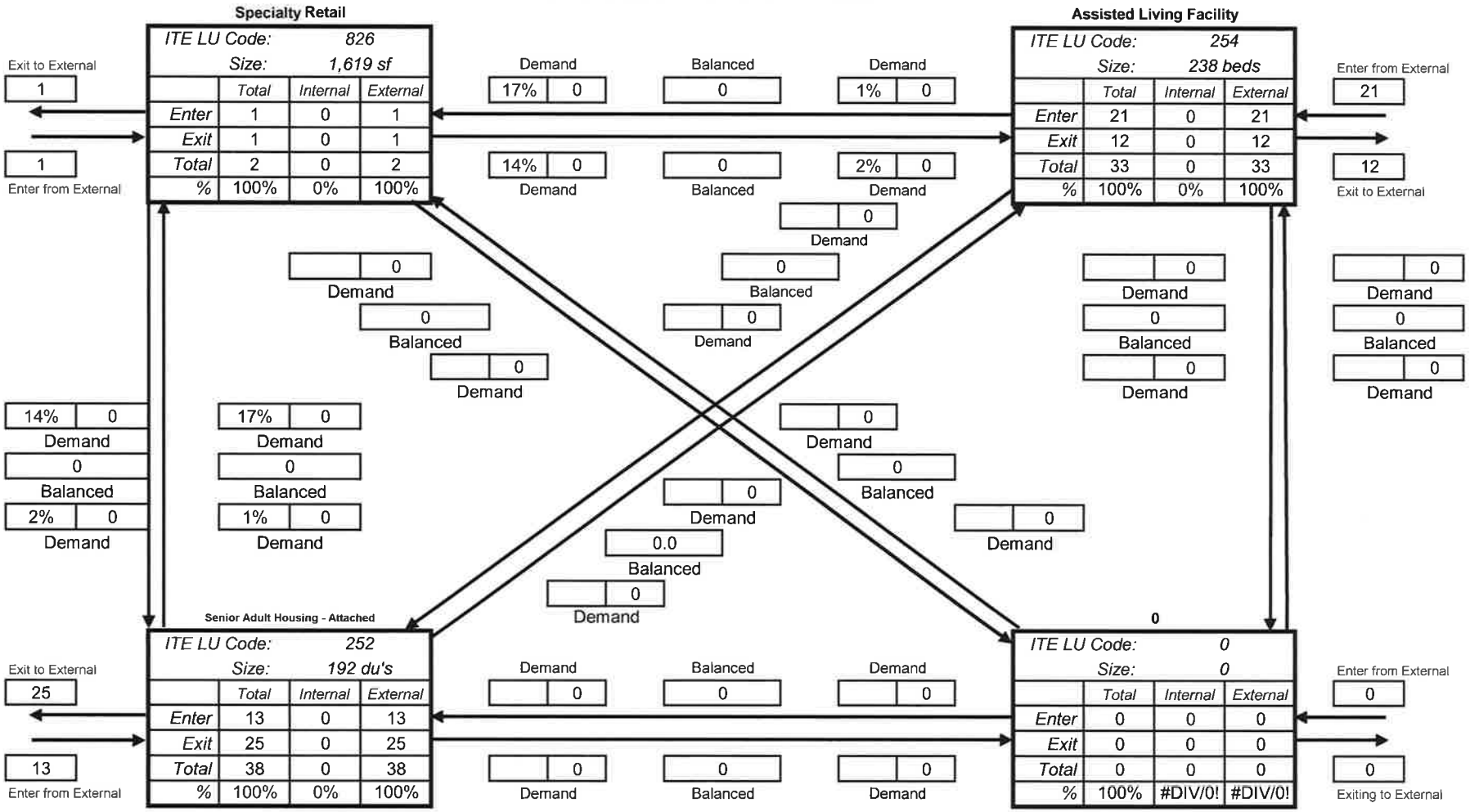
Source: Kaku Associates, Inc.

INTERNAL CAPTURE 2%

Analyst JPK
Data 8/23/2017

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt RIVERWALK RESIDENCES AT LAS OLAS
Time Period AM Peak Hour



Net External Trips for Multi-Use Development

	Specialty Retail	Assisted Living Facility	Senior Adult Housing - Attache		TOTAL
Enter	1	21	13	0	35
Exit	1	12	25	0	38
Total	2	33	38	0	73
Single-Use Trip Gen.Est	2	33	38	0	73

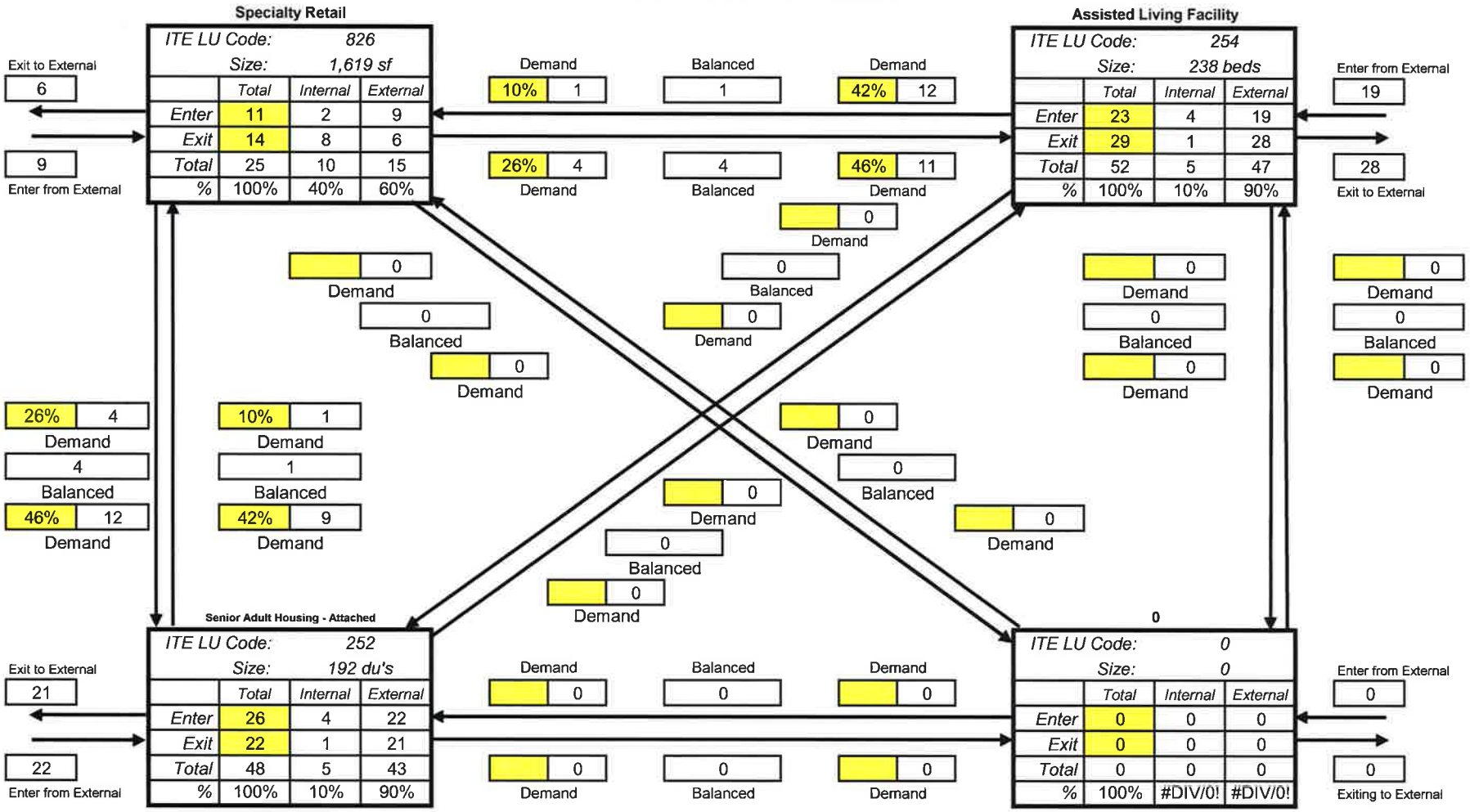
Source: Kaku Associates, Inc.

INTERNAL CAPTURE 0%

Analyst JPK
Data 8/23/2017

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY

Name of Dvlpt RIVERWALK RESIDENCES AT LAS OLAS
Time Period PM Peak Hour



Net External Trips for Multi-Use Development

	Specialty Retail	Assisted Living Facility	Senior Adult Housing - Attache		TOTAL
Enter	9	19	22	0	50
Exit	6	28	21	0	55
Total	15	47	43	0	105
Single-Use Trip Gen.Est	25	52	48	0	125

Source: Kaku Associates, Inc.

INTERNAL CAPTURE 16%

Specialty Retail Center
(826)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday

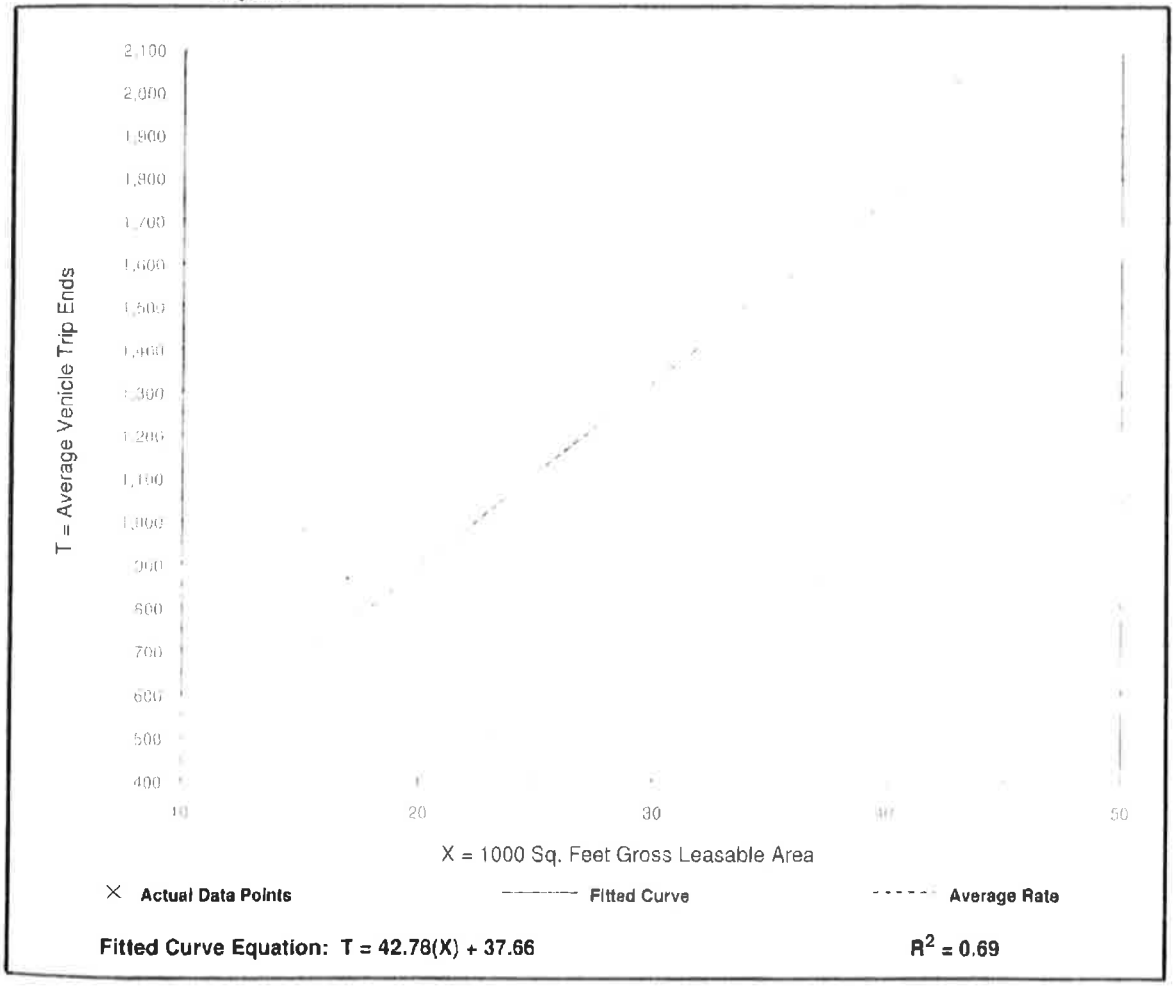
Number of Studies: 4
Average 1000 Sq. Feet GLA: 25
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
44.32	21.30 - 64.21	15.52

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: T = 42.78(X) + 37.66

R^2 = 0.69

Shopping Center
(820)

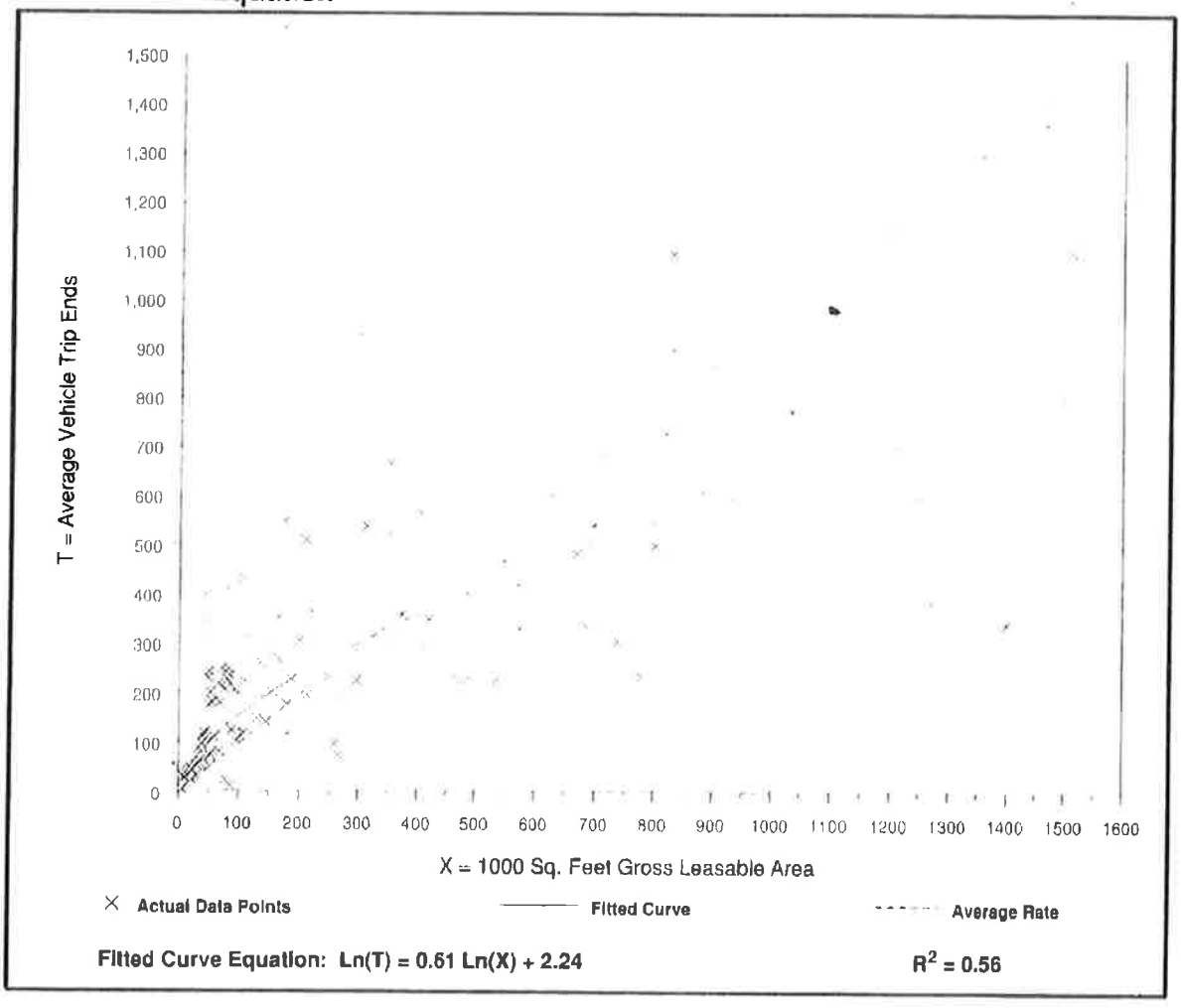
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Leasable Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 104
Average 1000 Sq. Feet GLA: 310
Directional Distribution: 62% entering, 38% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
0.96	0.10 - 9.05	1.31

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.61 Ln(X) + 2.24

R^2 = 0.56

Specialty Retail Center
(826)

Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Leasable Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

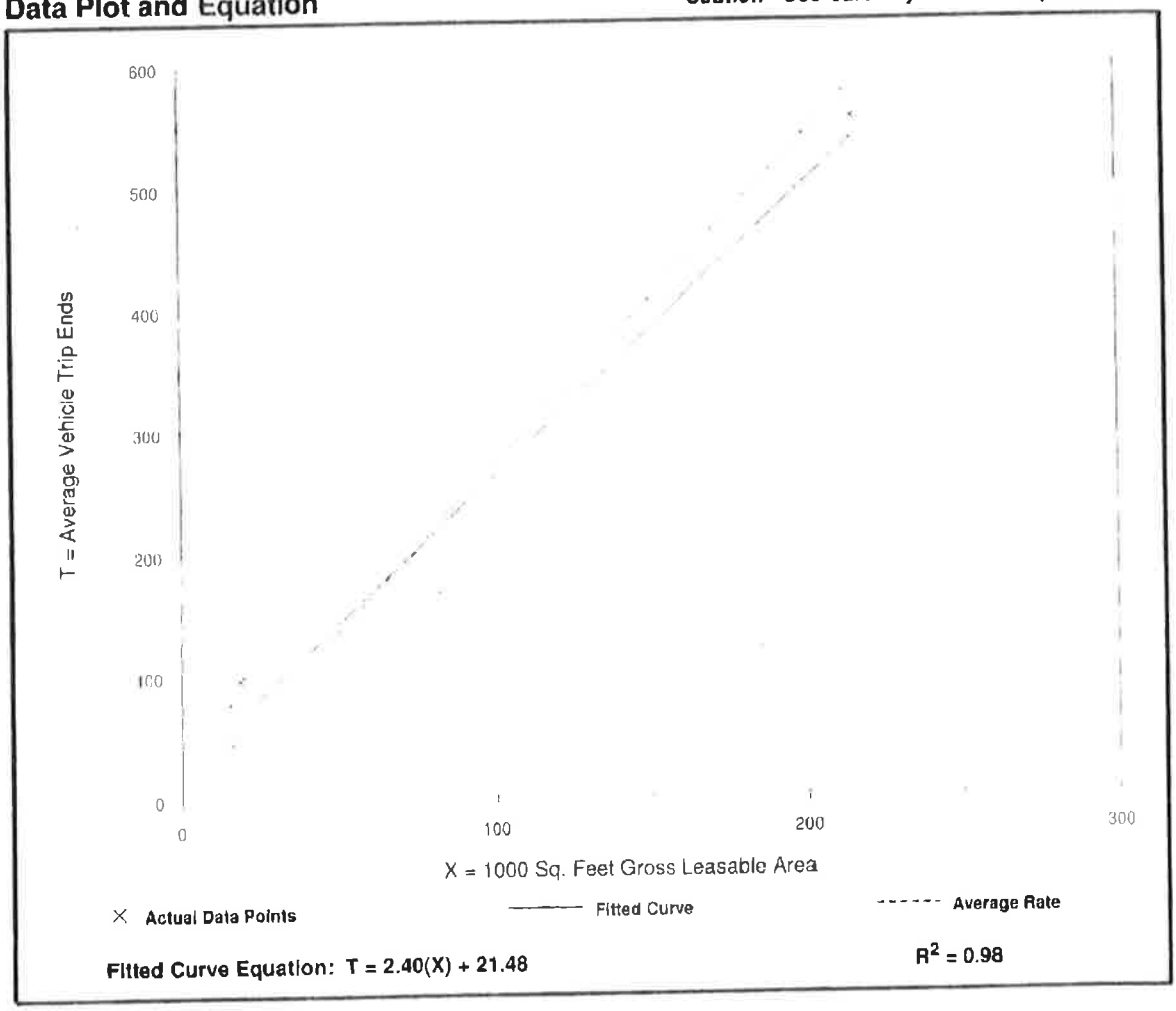
Number of Studies: 5
Average 1000 Sq. Feet GLA: 69
Directional Distribution: 44% entering, 56% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
2.71	2.03 - 5.16	1.83

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Fitted Curve Equation: T = 2.40(X) + 21.48

R^2 = 0.98

Assisted Living
(254)

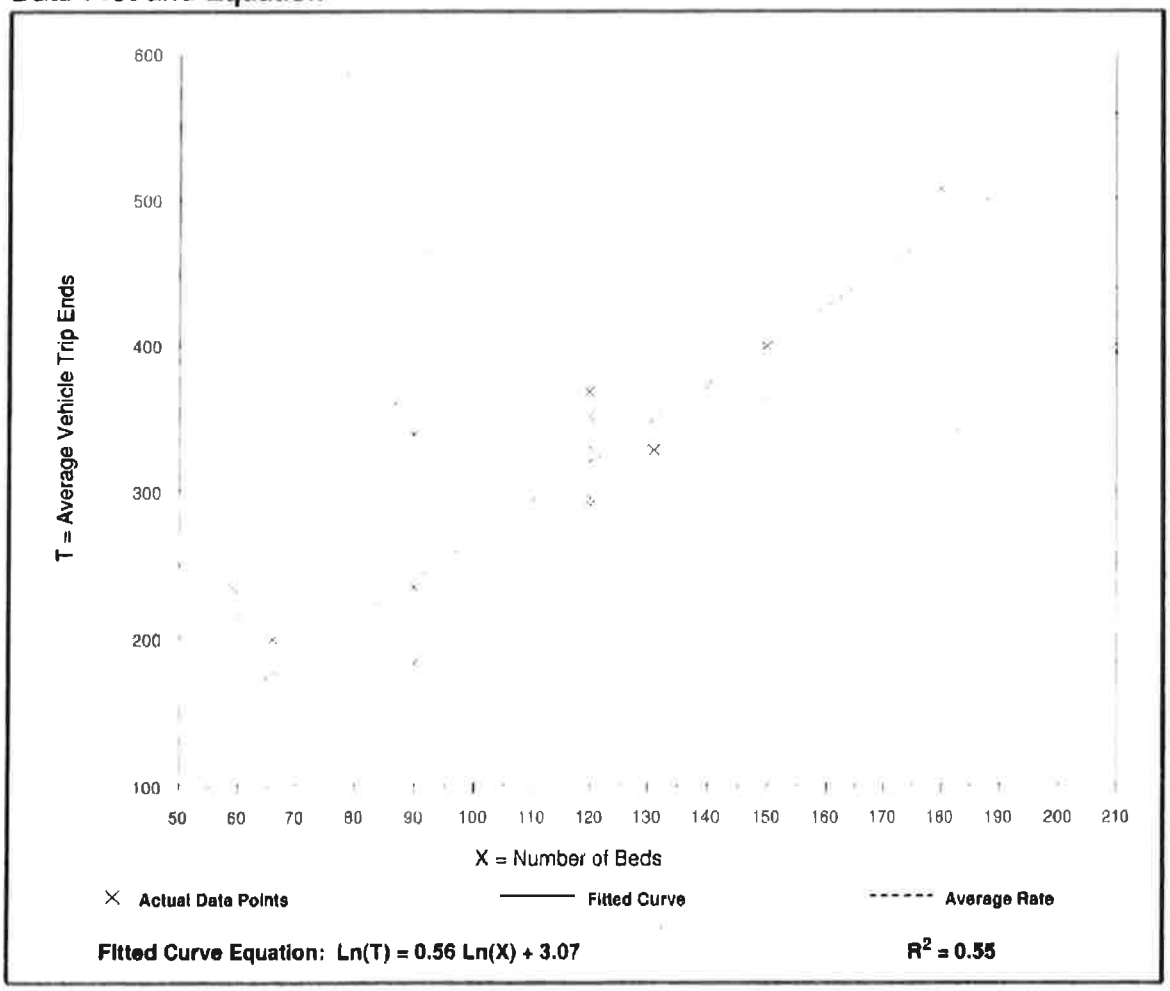
Average Vehicle Trip Ends vs: Beds
On a: Weekday

Number of Studies: 16
Average Number of Beds: 121
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
2.66	1.86 - 4.14	1.74

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.56 Ln(X) + 3.07 **R^2 = 0.55**

Assisted Living
(254)

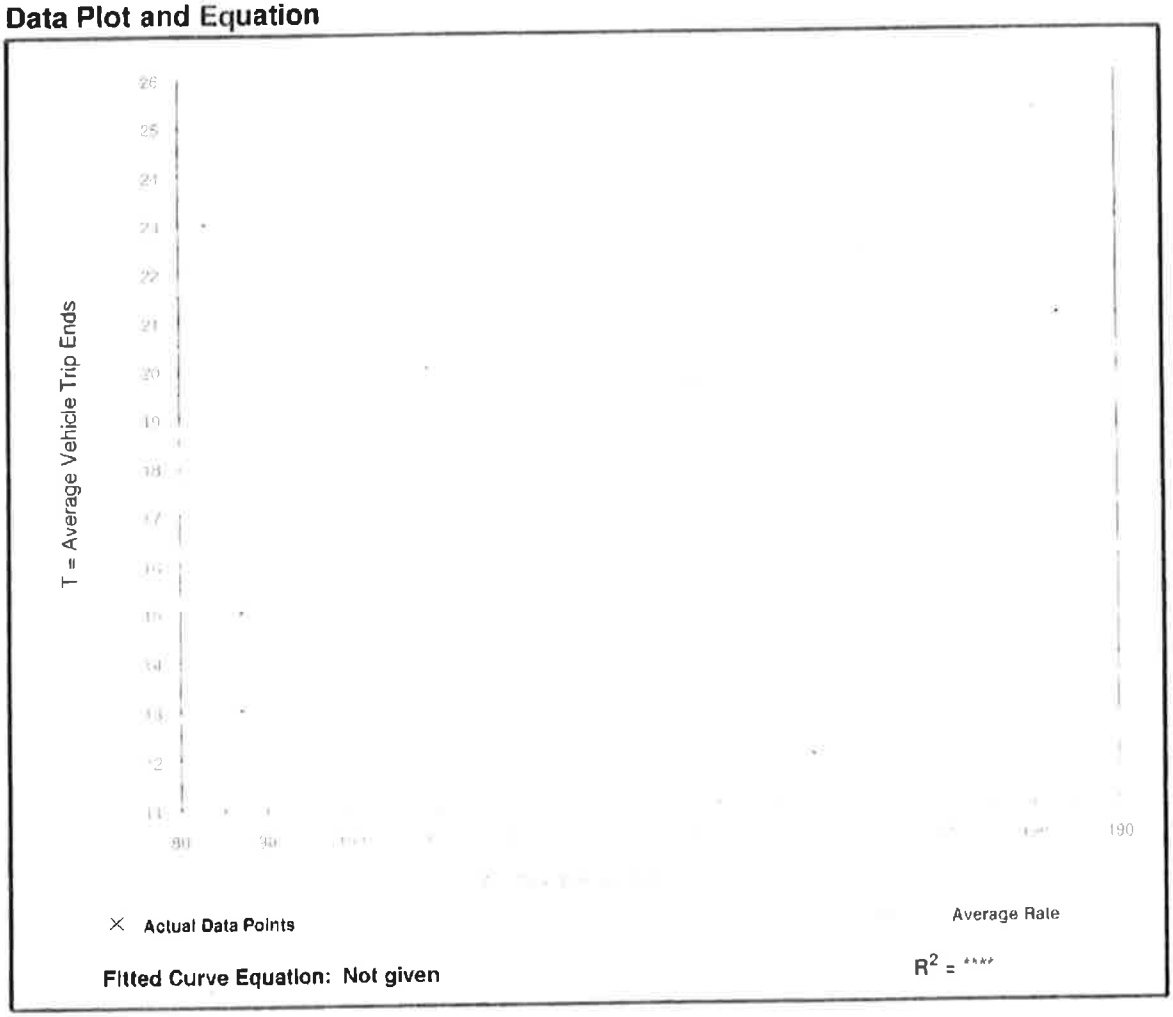
Average Vehicle Trip Ends vs: **Beds**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 7
Average Number of Beds: 121
Directional Distribution: 65% entering, 35% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.14	0.08 - 0.28	0.37

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Assisted Living
(254)

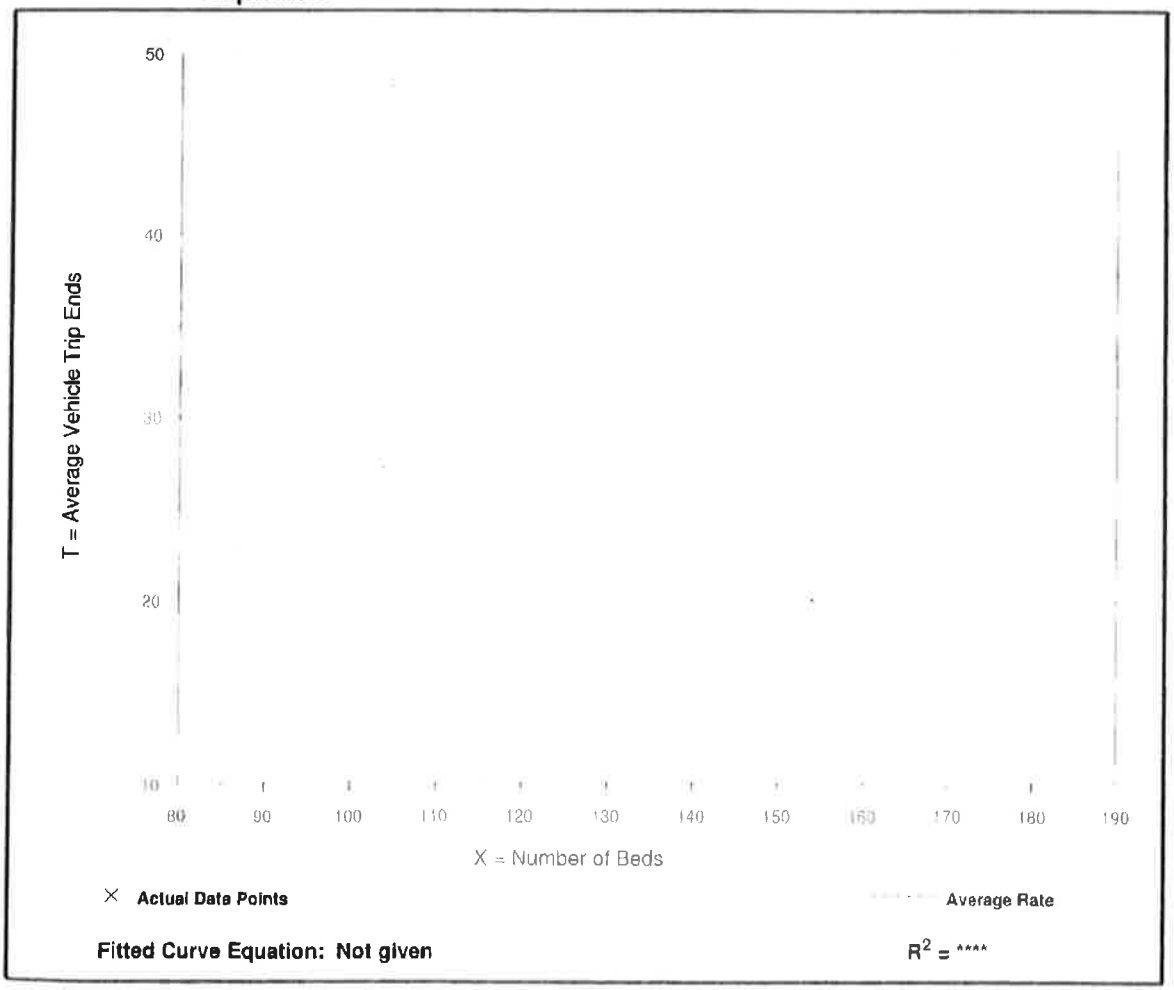
Average Vehicle Trip Ends vs: **Beds**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 7
Average Number of Beds: 121
Directional Distribution: 44% entering, 56% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.22	0.11 - 0.30	0.47

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

General Office Building
(710)

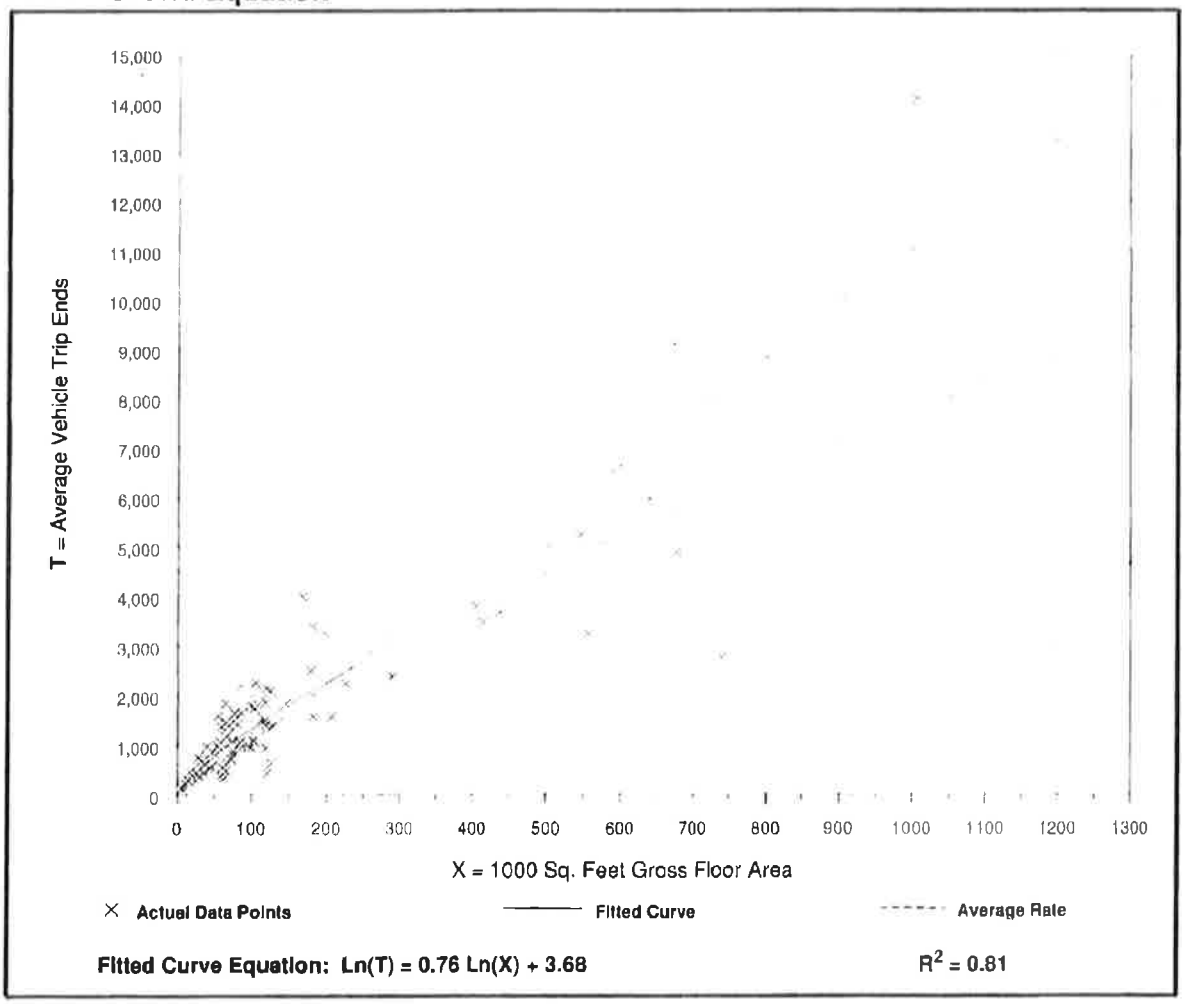
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday

Number of Studies: 79
Average 1000 Sq. Feet GFA: 197
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
11.03	3.58 - 28.80	6.15

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.76 Ln(X) + 3.68

$R^2 = 0.81$

General Office Building
(710)

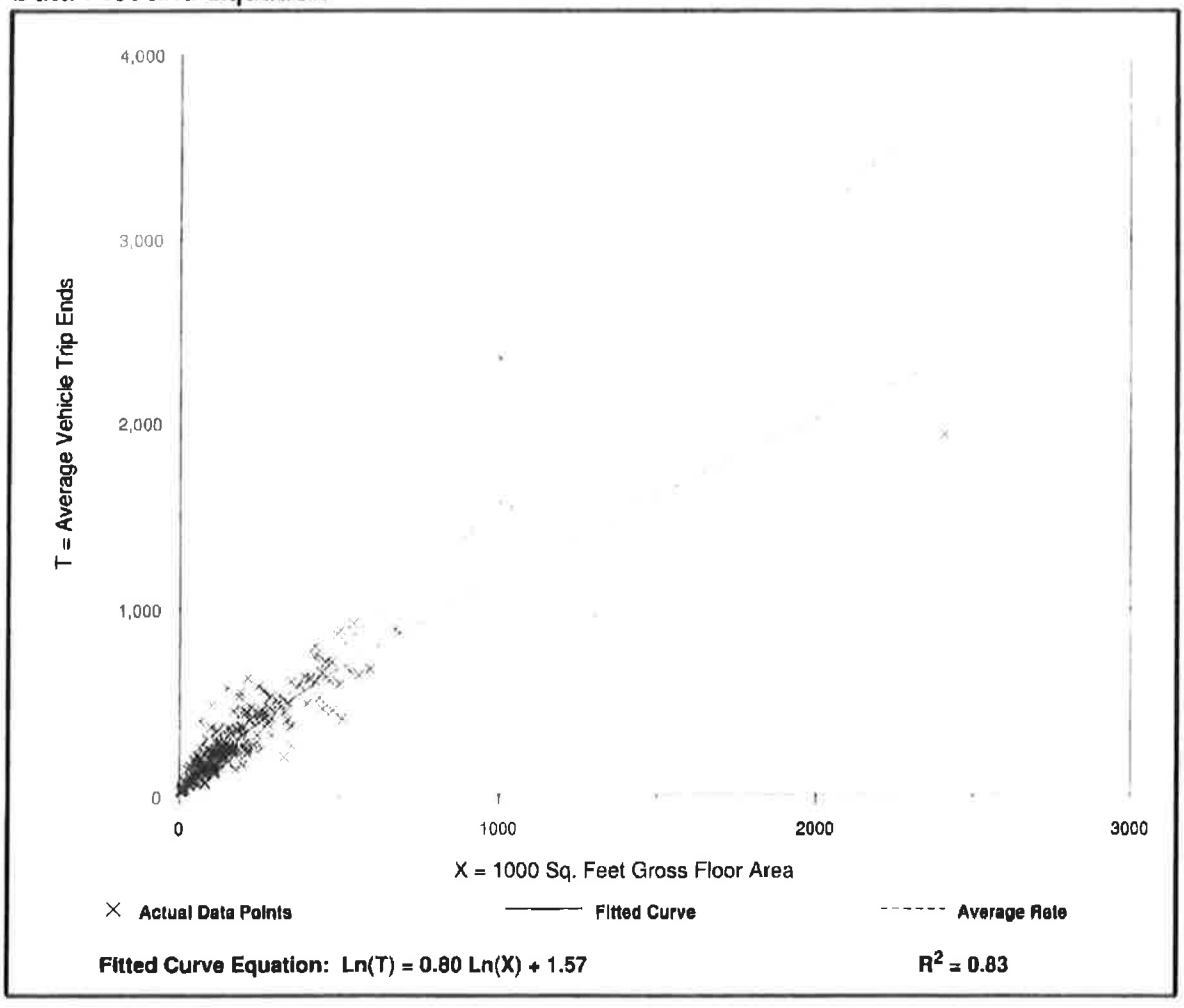
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour

Number of Studies: 218
Average 1000 Sq. Feet GFA: 222
Directional Distribution: 88% entering, 12% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.56	0.60 - 5.98	1.40

Data Plot and Equation



Fitted Curve Equation: $Ln(T) = 0.80\ Ln(X) + 1.57$ $R^2 = 0.83$

General Office Building
(710)

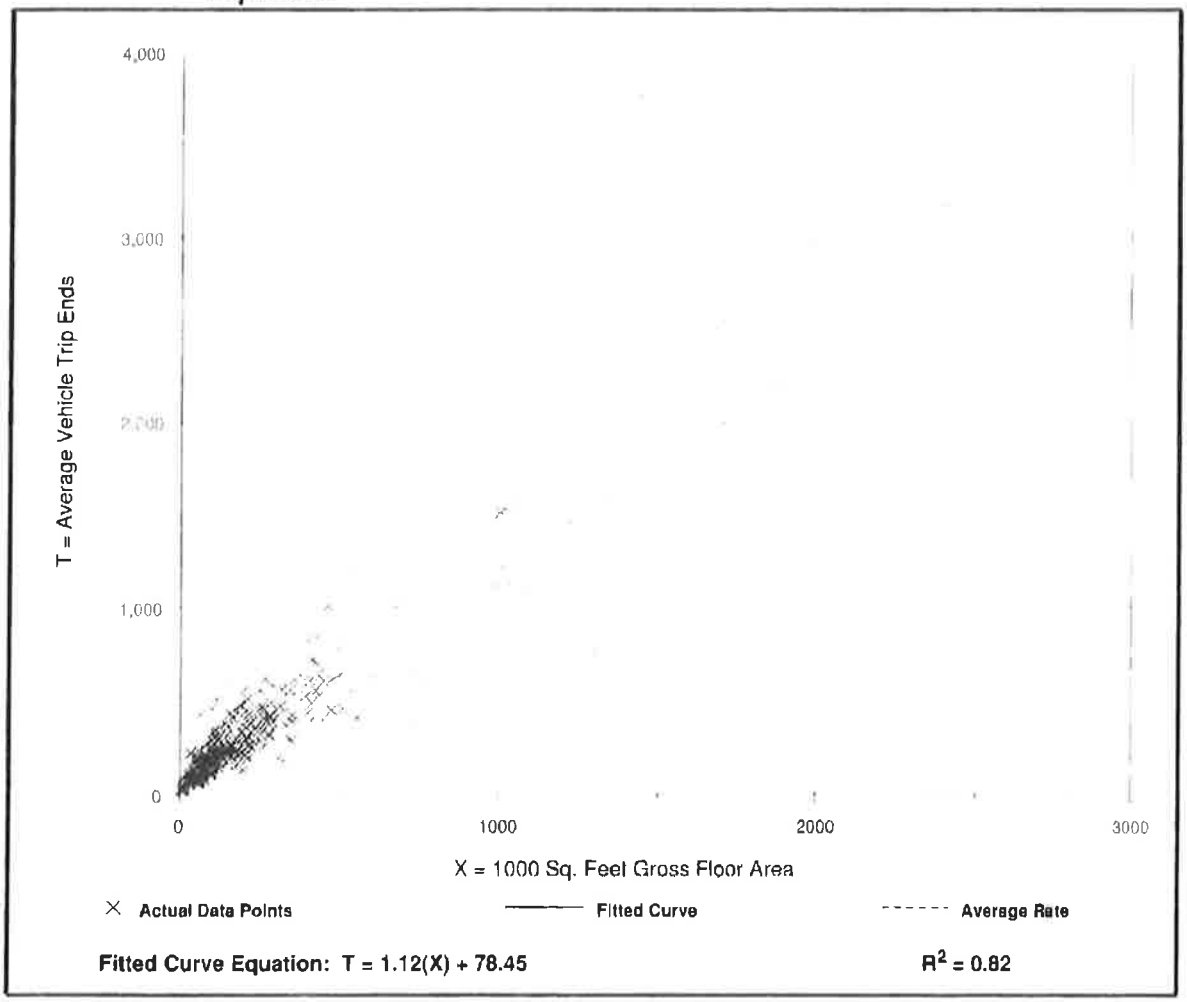
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour

Number of Studies: 236
Average 1000 Sq. Feet GFA: 215
Directional Distribution: 17% entering, 83% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

Data Plot and Equation



Fitted Curve Equation: T = 1.12(X) + 78.45 $R^2 = 0.82$

Table 5.6 (Cont'd)
Pass-By Trips and Diverted Linked Trips
Weekday, p.m. Peak Period

Land Use 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PRIMARY TRIP (%)	NON-PASS-BY TRIP (%)	DIVERTED LINKED TRIP (%)	PASS-BY TRIP (%)	ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
237	W. Windsor Twp, NJ	Winter 1988/89	n/a	4:00–6:00 p.m.	—	52	—	48	n/a	46,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	n/a	4:00–6:00 p.m.	—	63	—	37	n/a	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	n/a	4:00–6:00 p.m.	—	67	—	33	n/a	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	n/a	4:00–6:00 p.m.	—	56	—	44	n/a	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	n/a	4:00–6:00 p.m.	—	81	—	19	n/a	33,000	Wilbur Smith
150	Portland, OR	n/a	519	4:00–6:00 p.m.	6	—	26	68	n/a	25,000	Kittleson and Associates
150	Portland, OR	n/a	655	4:00–6:00 p.m.	7	—	28	65	n/a	30,000	Kittleson and Associates
760	Calgary, Alberta	Oct-Dec 1987	15,436	4:00–6:00 p.m.	39	—	41	20	n/a	n/a	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	—	65	—	35	n/a	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	Jul. 1990	176	3:30–6:15 p.m.	44	—	24	32	n/a	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	n/a	4:45–5:45 p.m.	26	—	41	33	n/a	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

Table 6.2 Unconstrained Internal Person Trip Capture Rates for Trip Destinations within a Mixed-Use Development

		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Retail	4%	31%
	From Restaurant	14%	30%
	From Cinema/Entertainment	0%	6%
	From Residential	3%	57%
	From Hotel	3%	0%
To RETAIL	From Office	32%	8%
	From Restaurant	8%	50%
	From Cinema/Entertainment	0%	4%
	From Residential	17%	10%
	From Hotel	4%	2%
To RESTAURANT	From Office	23%	2%
	From Retail	50%	29%
	From Cinema/Entertainment	0%	3%
	From Residential	20%	14%
	From Hotel	6%	5%
To CINEMA/ENTERTAINMENT	From Office	0%	1%
	From Retail	0%	26%
	From Restaurant	0%	32%
	From Residential	0%	0%
	From Hotel	0%	0%
To RESIDENTIAL	From Office	0%	4%
	From Retail	2%	46%
	From Restaurant	5%	16%
	From Cinema/Entertainment	0%	4%
	From Hotel	0%	0%
To HOTEL	From Office	0%	0%
	From Retail	0%	17%
	From Restaurant	4%	71%
	From Cinema/Entertainment	0%	1%
	From Residential	0%	12%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 101 and 102, 2011.

Table 6.1 Unconstrained Internal Person Trip Capture Rates for Trip Origins within a Mixed-Use Development

		WEEKDAY	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Retail	28%	20%
	To Restaurant	63%	4%
	To Cinema/Entertainment	0%	0%
	To Residential	1%	2%
	To Hotel	0%	0%
From RETAIL	To Office	29%	2%
	To Restaurant	13%	29%
	To Cinema/Entertainment	0%	4%
	To Residential	14%	26%
	To Hotel	0%	5%
From RESTAURANT	To Office	31%	3%
	To Retail	14%	41%
	To Cinema/Entertainment	0%	8%
	To Residential	4%	18%
	To Hotel	3%	7%
From CINEMA/ENTERTAINMENT	To Office	0%	2%
	To Retail	0%	21%
	To Restaurant	0%	31%
	To Residential	0%	8%
	To Hotel	0%	2%
From RESIDENTIAL	To Office	2%	4%
	To Retail	1%	42%
	To Restaurant	20%	21%
	To Cinema/Entertainment	0%	0%
	To Hotel	0%	3%
From HOTEL	To Office	75%	0%
	To Retail	14%	16%
	To Restaurant	9%	68%
	To Cinema/Entertainment	0%	0%
	To Residential	0%	2%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 99 and 100, 2011.

Table 7.1 Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	p.m. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
from OFFICE	to Office	2%	1%	2%
	to Retail	20%	23%	22%
	to Residential	0%	2%	2%
from RETAIL	to Office	3%	3%	3%
	to Retail	29%	20%	30%
	to Residential	7%	12%	11%
from RESIDENTIAL	to Office	N/A	N/A	N/A
	to Retail	34%	53%	38%
	to Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A—Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

Table 7.2 Unconstrained Internal Capture Rates for Trip Destinations Within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	p.m. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
to OFFICE	from Office	6%	6%	2%
	from Retail	38%	31%	15%
	from Residential	0%	0%	N/A
to RETAIL	from Office	4%	2%	4%
	from Retail	31%	20%	28%
	from Residential	5%	9%	9%
to RESIDENTIAL	from Office	0%	2%	3%
	from Retail	37%	31%	33%
	from Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A—Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.