

# EXECUTIVE SUMMARY



## **The Benjamin**

777 SE 3<sup>rd</sup> Avenue  
Fort Lauderdale, Florida 33316

prepared for

**FSMY Architects + Planners**

traffic study

**TRAFTECH**  
ENGINEERING, INC.

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## EXECUTIVE SUMMARY

The Benjamin project is proposed with 542 residential units and 13,764 square feet of retail use planned to be located at 777 SE 3rd Avenue in the City of Fort Lauderdale in Broward County, Florida. The location of the project site is illustrated in Figure 1. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network.

### Roadway System

The roadway system located near the project site includes Las Olas Boulevard, SE 6th Street, SE 7th Street, Davie Boulevard, SW 4th Avenue, Andrews Avenue, NE 3rd Avenue, and US1/Federal Highway.

Table 1 provides more detailed information about the roadway system in the vicinity of the project.

TABLE 1 Roadway System Details The Benjamin								
Segment	# of Lanes	Speed limit	Sidewalks	Street lighting	Bicycle lanes	On-street parking	Transit	Maintenance agency
Las Olas Blvd from NE 3rd Avenue to Federal Highway	4 Lanes	25 mph	Both sides	North side	No	Yes	BCT # 11	Broward County
SE 6th Street from NE 3rd Avenue to Federal Highway	2 Lanes (One-way)	25 mph	Both sides	South Side	No	Yes	No	City of Fort Lauderdale
SE 7th Street from SW 4th Avenue to Federal Highway	2 Lanes	25 mph	Both sides	North side	No	Yes	No	City of Fort Lauderdale
Davie Boulevard from NE 3rd Avenue to Federal Highway	4 Lanes	35 mph	Both sides	Both sides	No	No	No	FDOT
SW 4 Avenue from SE 6th Street to Davie Boulevard	2 lanes	35 mph	Both sides	Both sides	Yes	No	BCT # 6	City of Fort Lauderdale
Andrews Avenue from SE 6 Street to Davie Boulevard	4 lanes	35 mph	Both sides	West side	No	No	BCT # 30,40	Broward County
NE 3 Avenue from Las Olas Boulevard to Davie Boulevard	4 lanes	25 mph	Both sides	East side	No	No	BCT # 1	FDOT
US 1/Federal Highway from SE 6 Street to Davie Boulevard	6 lanes	40 mph	Both sides	West side	No	No	No	FDOT

## Trip Generation

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (11<sup>th</sup> Edition). The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. The results of this effort are documented in Table 2 below.

TABLE 2 Trip Generation Summary (Proposed Uses) The Benjamin								
Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Retail (LUC 822)	13,764	811	36	22	14	98	49	49
HR Residential (LUC 222)	542	2,415	138	47	91	164	92	72
<b>Subtotal</b>		<b>3,226</b>	<b>174</b>	<b>69</b>	<b>105</b>	<b>262</b>	<b>141</b>	<b>121</b>
Internal (2%/14%)		-258	-4	-2	-2	-36	-18	-18
<b>Driveway Volumes</b>		<b>2,968</b>	<b>170</b>	<b>67</b>	<b>103</b>	<b>226</b>	<b>123</b>	<b>103</b>
Pass-by (Retail-34%)		-273	0	0	0	-33	-18	-15
<b>External Trips</b>		<b>2,695</b>	<b>170</b>	<b>67</b>	<b>103</b>	<b>193</b>	<b>105</b>	<b>88</b>

Source: ITE Trip Generation Manual (11th Edition)

### ITE Land Use Code 222 - Multifamily High Rise

Daily Trips:  $T = 3.76 (X) + 377.04$ ,  $X = \text{units}$

AM Peak:  $T = 0.22 (X) + 18.85$  (34% inbound and 66% outbound),  $X = \text{units}$

PM Peak:  $T = 0.26 (X) + 23.12$  (56% inbound and 44% outbound),  $X = \text{units}$

### ITE Land Use Code 822 - Shopping Center (<40k)

Daily Trips:  $T = 42.20 (X) + 229.68$ ,  $X = 1,000 \text{ square feet}$

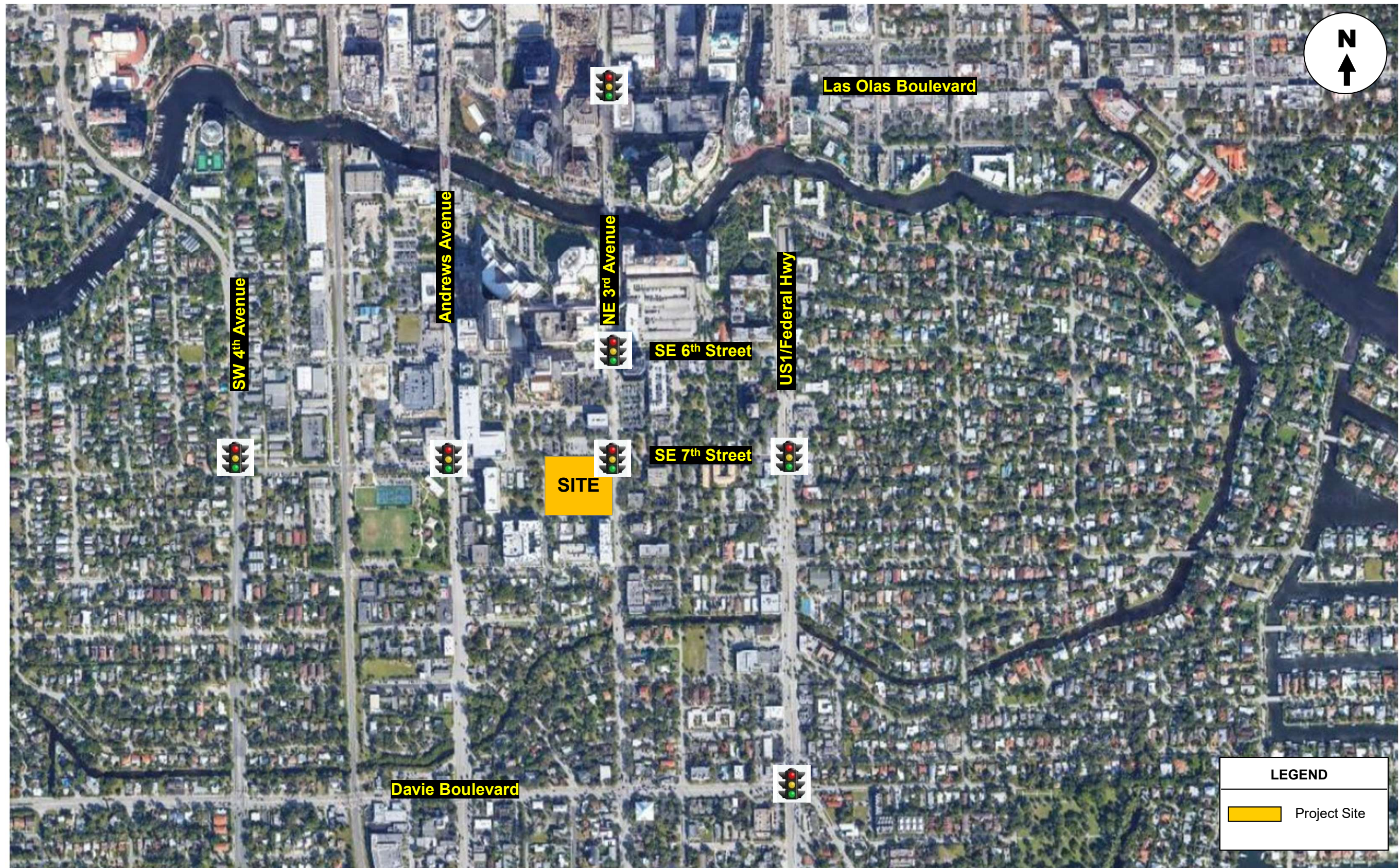
AM Peak:  $\text{Ln}(T) = 0.66 \text{Ln}(X) + 1.84$  (60% inbound and 40% outbound),  $X = 1,000 \text{ square feet}$

PM Peak:  $\text{Ln}(T) = 0.71 \text{Ln}(X) + 2.72$  (50% inbound and 50% outbound),  $X = 1,000 \text{ square feet}$

NOTE: Pass-by reduction is associated with driveway trips (gross minus internal) for the retail land use (retail driveway is 80 total trips; 44 ins and 36 out, based on internal capture calculations for Land Use B). Daily pass-by based on daily-to-peak ratio for retail use.

As indicated in Table 2, the proposed project is anticipated to generate approximately 2,695 daily trips, approximately 170 AM peak hour trips (67 inbound and 103 outbound) and approximately 193 PM peak hour trips (105 inbound and 88 outbound).







## Traffic Impacts

Intersection capacity/level of service analyses were conducted for the seven study intersections including the project driveways. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCM) 6th Edition using the SYNCHRO software. The results of the capacity analyses are summarized in Table 3.

<b>TABLE 3</b> <b>Intersection Level of Service</b> <b>The Benjamin</b>						
Intersection	2022 Existing		2026 Background without Project		2026 Future with Project	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
101: SE 3 Ave & Las Olas Boulevard	C/D	30.5/39.3	C/D	31.2/41.5	C/D	31.6/43.9
102: SE 3 Avenue/SE 3 Ave & SE 6 Street	B/D	11.8/52.6	B/E	12.8/58.1	B/E [D]	12.9/57.9 [48.3]
103: SW 4 Avenue & SW 7th Street	B/B	10.9/16.0	B/B	11.2/16.7	B/B	11.4/16.9
104: Andrews Avenue & SE 7 Street	B/B	13.0/18.8	B/C	12.9/20.3	B/C	13.2/20.5
105: SE 3 Avenue & SE 7 Street *	C/D	25.6/38.8	C/D	27.6/42.8	C/D	31.7/48.0
106: US-1 & SE 7 Street	B/C	15.0/21.7	B/C	15.4/22.3	B/C	16.7/22.9
107: Davie Blvd & SE 3 Avenue	C/D	32.1/37.2	C/D	34.3/38.1	C/D	37.1/38.8
201: Driveway & SE 7 Street - NB - WBL Queue					A/A	9.0/9.0 2 Ft/2 Ft
202: SE 8 Street & Driveway - SB - EBL Queue					A/A	9.6/9.5 0 Ft/0 Ft

Notes: AM/PM (with Imp PM); \*HCM 2000

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As indicated in Table 3, most of the intersections are expected to operate adequately in the year 2026 with the proposed project in place, except for one intersection. The intersection of SE 3rd Avenue and SE 6th Street is projected to fail during the afternoon peak period. This intersection is expected to fail under background conditions without the project in place. However, with signal optimization improvements, this intersection is expected to operate adequately. The project driveways are also expected to operate adequately.

### Need for Turn Lanes

The proposed development proposes to have one main access driveway. The need for turning lanes is summarized in the table below.

<b>Table 4</b> <b>The Benjamin</b> <b>Need for Turning Lanes</b>							
Location	Jurisdiction	RT Volume Requirement (vph)	RT Volume (vph)*	RT Lane Required ?	LT Volume Requirement (vph)	LT Volume (vph)	LT Lane Required ?
SE 7th Street	City of Fort Lauderdale	80	9/15	No	25 vph	25/47	Yes
SE 8th Street	City of Fort Lauderdale	80	27/51	No	25 vph	6/10	No

\* Volumes extracted from Figure 4

As shown in Table 4, the implementation of a westbound left-turn lane is recommended, if feasible. Moreover, the results of the capacity analysis indicate that the proposed driveway is expected to operate adequately without the left-turn lane.

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## Recommendations

It is recommended that the development team contact Broward County Traffic Engineering Division to request that the signal timing of the intersection of SE 3<sup>rd</sup> Avenue and SE 6<sup>th</sup> Street be optimized, if necessary, by Broward County Traffic Engineering Division after the project is built and occupied.