



Aura Cypress Creek

400 Corporate Drive
Fort Lauderdale, Florida

prepared for

Trinsic Residential Group

traffic study



November 2022

November 9, 2022

Mr. Kevin Neal
Managing Director
Trinsic Residential Group
327 Plaza Real, Suite 219
Boca Raton, Florida 33432

Re: Aura Cypress Creek - Traffic Study

Dear Kevin:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic study associated with the proposed residential development with retail use planned to be located at 400 Corporate Drive in the City of Fort Lauderdale, Broward County, Florida.

It has been a pleasure working with you on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.


Joaquin E. Vargas, P.E.
Senior Transportation Engineer

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- APPENDIX D – Future Turning Movement Volumes and Committed Developments Information
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EXECUTIVE SUMMARY

Aura Cypress Creek Apartments is a proposed residential development with commercial space planned to be located at 400 Corporate Drive in the City of Fort Lauderdale in Broward County, Florida.

Aura Cypress Creek consists of 340 mid-rise apartment units and 5,000 square feet of retail use. NE 7th Avenue provides access to the site. The proposed development is anticipated to be built and occupied in 2026.

The proposed project is anticipated to generate approximately 1,816 daily trips, approximately 152 AM peak hour trips (41 inbound and 111 outbound) and approximately 163 PM peak hour trips (96 inbound and 67 outbound).

Results of the capacity analysis indicate that all study intersections are currently operating adequately and will continue to operate at a good level of service in the year 2026 with the proposed project in place, except for Dixie Highway and Cypress Creek Road during the PM Peak. This intersection is projected to fail with and without the proposed project in place. However, with the implementation of minor signal timing improvements, the delay and LOS are expected to improve.

Results of the capacity analysis also indicate that the intersection of NE 7th Avenue and Cypress Creek Road, which provides the main access to the site is expected to operate adequately.

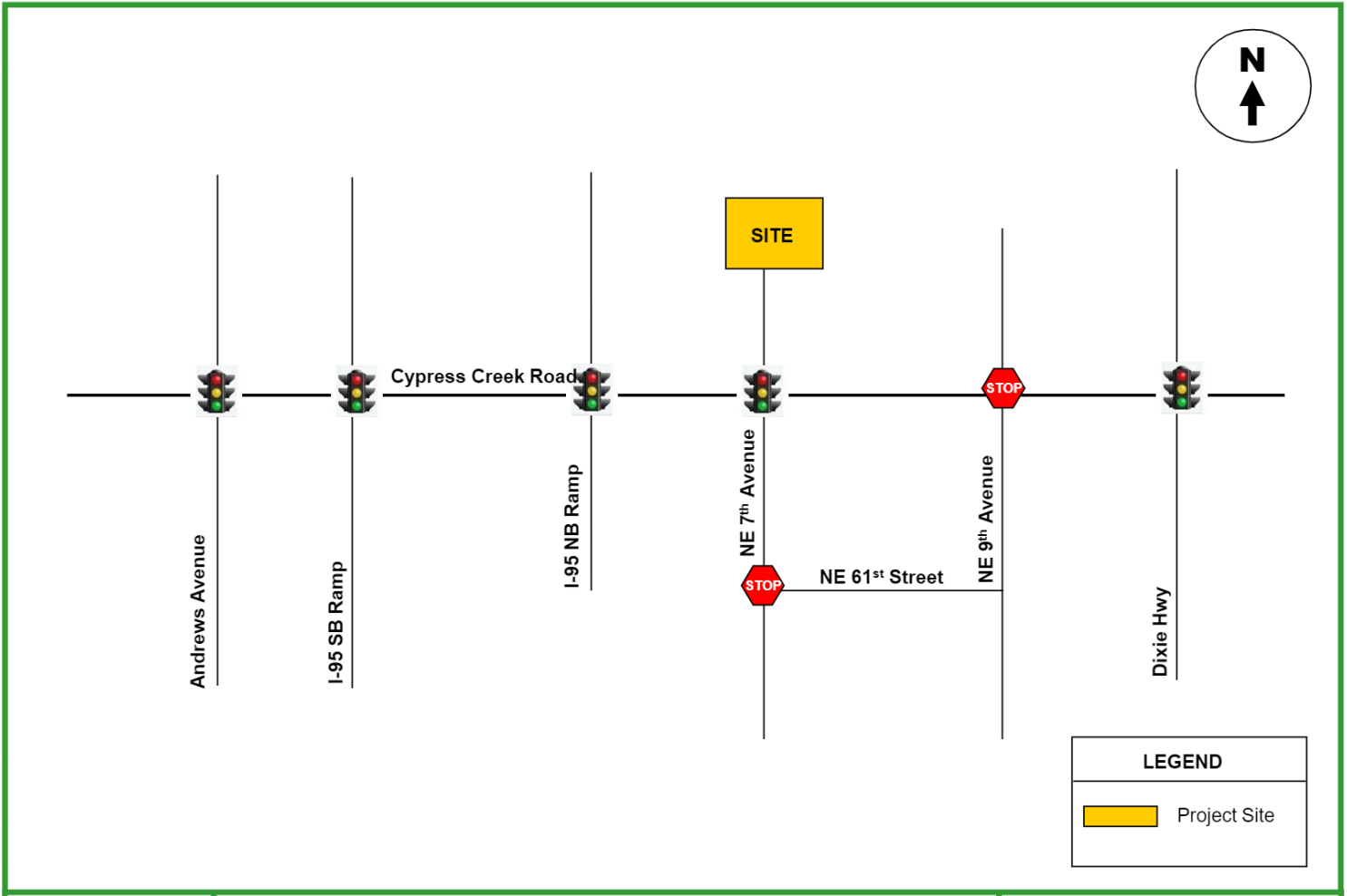
In the immediate vicinity of the Aura Cypress Creek site, there are several multimodal facilities such as safe pedestrian features (sidewalks and crosswalks at nearby signalized intersections), bicycle lanes and public transportation.

INTRODUCTION

Aura Cypress Creek Apartments is a proposed residential development with commercial space planned to be located at 400 Corporate Drive in the City of Fort Lauderdale in Broward County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained to conduct a traffic study in connection with the proposed development. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Impact Analysis
7. Conclusions and Recommendations



Site Location Map

FIGURE 1
 Aura Cypress Creek
 Fort Lauderdale, Florida

INVENTORY

Existing Land Use

The project site is currently occupied by a surface parking lot.

Proposed Land Uses and Access

Aura Cypress Creek consists of the following land uses and intensities:

- 340 mid-rise apartment units
- 5,000 square feet of retail use

NE 7th Avenue provides access to the site. The proposed development is anticipated to be built and occupied in 2026. Appendix A contains a copy of the proposed site plan for the project site.

EXISTING CONDITIONS

This section addresses the existing roadway system located in the vicinity of the project site and nearby intersections.

Roadway System

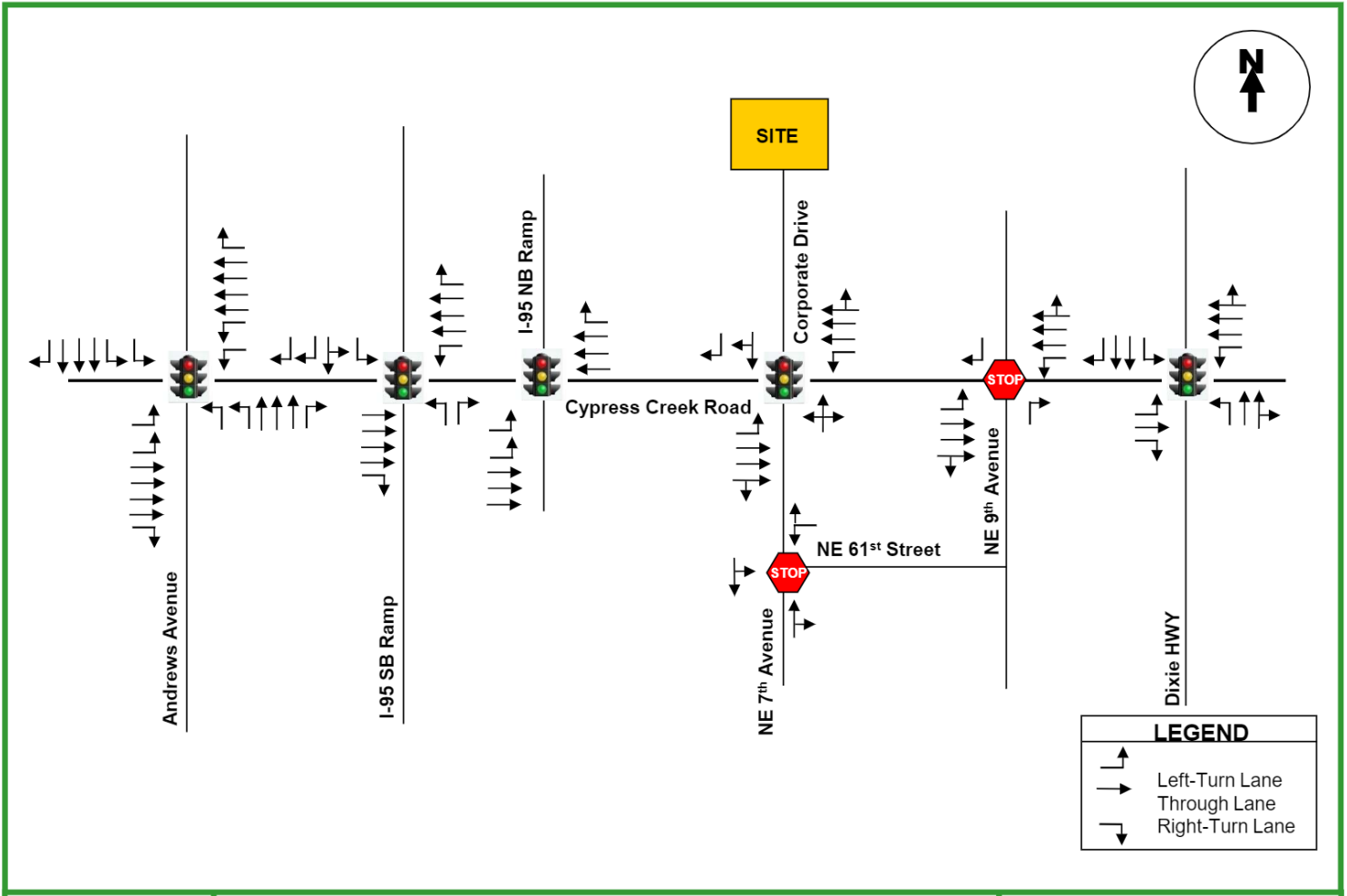
The roadway system located near the project site includes Cypress Creek Road, Andrews Avenue, Dixie Highway, and NE 61st Street.

Nearby Intersections

A total of seven intersections plus the project driveway were identified as the locations that will be impacted the most by the proposed project. These seven intersections include:

1. Cypress Creek Road and Andrews Avenue (signalized)
2. Cypress Creek Road and SB I-95 Ramps (signalized)
3. Cypress Creek Road and NB I-95 Ramps (signalized)
4. Cypress Creek Road and NE 7th Avenue (signalized)
5. Cypress Creek Road and NE 9th Avenue (stop controlled)
6. Cypress Creek Road and Dixie Highway/US 1 (signalized)

Figure 2 shows the existing lane geometry of the six intersections selected for analysis purposes. The number of lanes on the street system surrounding the project site is also depicted in the figure.



Existing Lane Geometry

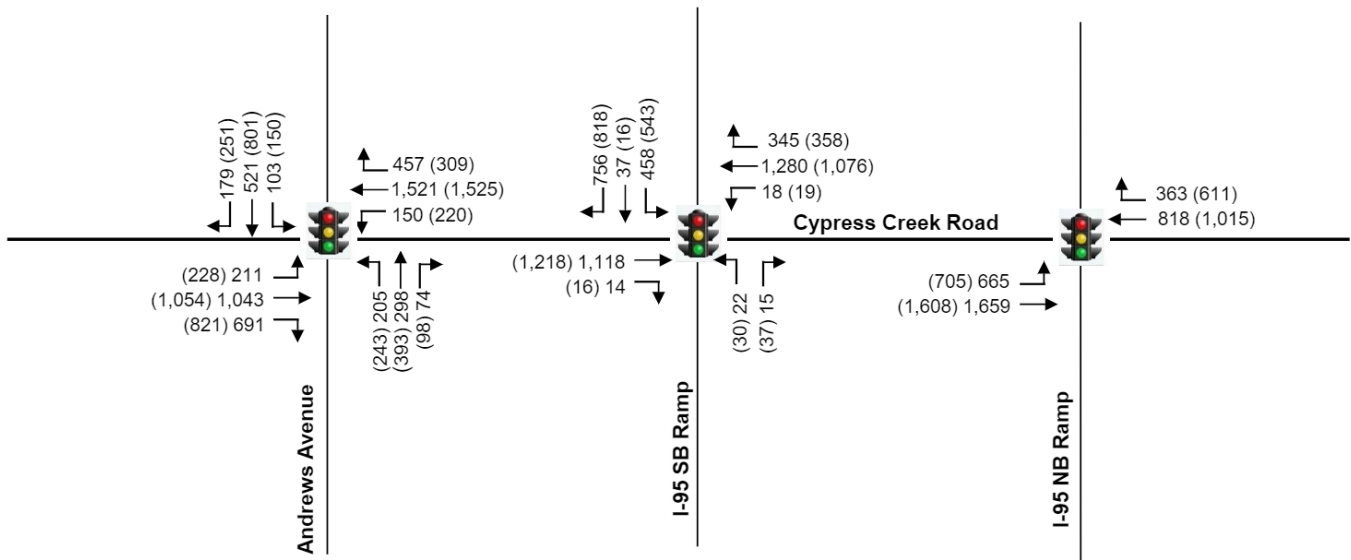
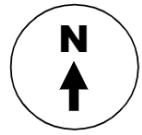
FIGURE 2
 Aura Cypress Creek
 Fort Lauderdale, Florida

TRAFFIC COUNTS

Traf Tech Engineering, Inc., in association with Traffic Survey Specialists, Inc and Video Data Solutions collected intersection turning movement counts at the six study intersections. The intersection turning movement counts were collected on Wednesday, July 20, 2022 from 7:00 AM and 9:00 AM and from 4:00 PM and 6:00 PM at the following intersections located near the project site:

1. Cypress Creek Road and Andrews Avenue
2. Cypress Creek Road and SB I-95 Ramps
3. Cypress Creek Road and NB I-95 Ramps
4. Cypress Creek Road and NE 7th Avenue
5. Cypress Creek Road and NE 9th Avenue
6. Cypress Creek Road and Dixie Highway/US 1

Appendix B contains the intersection turning movement counts, as collected in the field. The signal timing plans for the signalized intersections were obtained from Broward County Traffic Engineering Division and are included in Appendix C. The traffic counts were adjusted to account for peak season conditions. An adjustment factor of 1.03 was applied to counts collected in the field. The State-published adjustment factors are also contained in Appendix C. Figure 3 shows the 2022 peak season AM and PM peak hour traffic volumes.

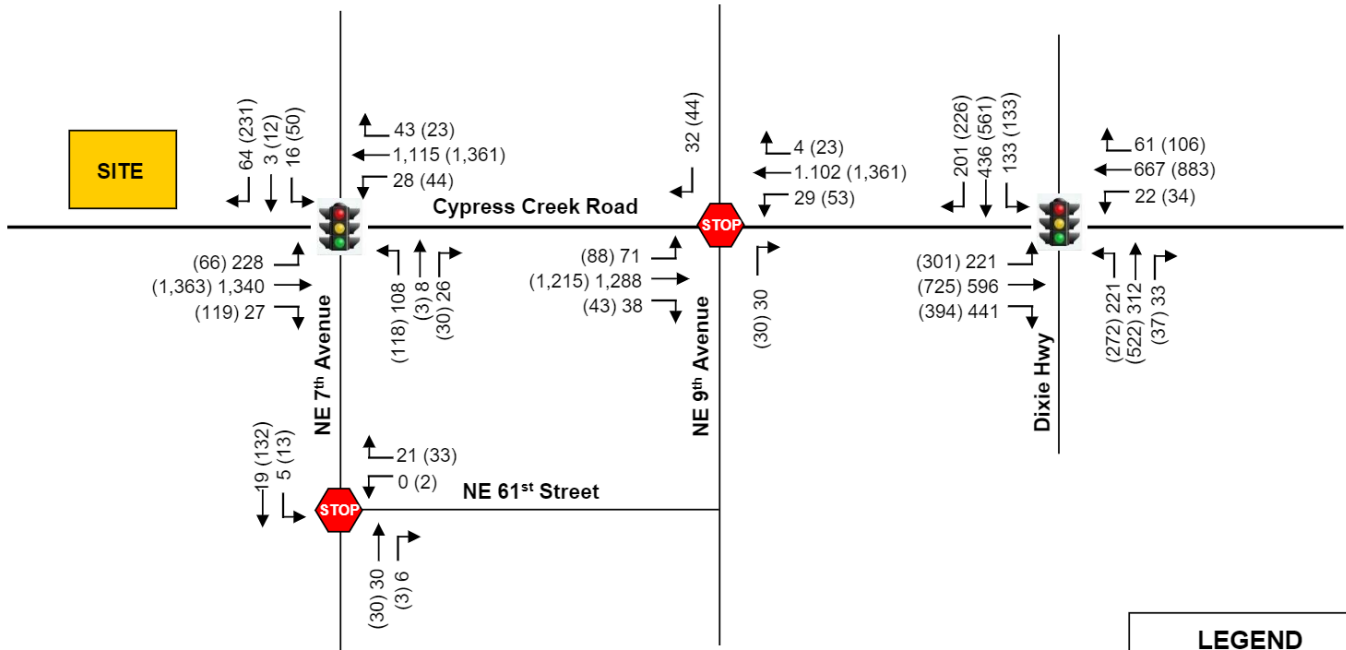


LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour



Traffic Counts (Year 2022 Peak Season)

FIGURE 3A
Aura Cypress Creek
Fort Lauderdale, Florida



LEGEND	
XX	AM Peak Hour
YY	PM Peak Hour



Traffic Counts (Year 2022 Peak Season)

FIGURE 3B
Aura Cypress Creek
Fort Lauderdale, Florida

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer’s (ITE) *Trip Generation Manual* (11th Edition). According to the subject ITE manual, the most appropriate “land use” categories for the proposed land uses includes ITE’s Land Use 822 – Shopping Center (<40K) and ITE’s Land Use 221 – Multifamily High-Rise. The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions.

Using the trip generation equations from the ITE document, a trip generation analysis was undertaken for the proposed project. The results of this effort are documented in Table 1.

The retail space is intended to primarily serve the future residents of the Aura Cypress Creek project and other nearby residential developments as walking trips.

TABLE 1 Trip Generation Summary (Proposed Uses) Aura Cypress Creek								
Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Retail (LUC 822)	5,000	441	18	11	7	48	24	24
Mid Rise (LUC 221)	340	1,575	138	32	106	133	81	52
Gross Trips		2,016	156	43	113	181	105	76
Internal (2%/10%)		-200	-4	-2	-2	-18	-9	-9
Driveway Trips		1,816	152	41	111	163	96	67

Source: ITE Trip Generation Manual (11th Edition)

ITE Equations were used for the calculations.

Note: The option of utilizing LUC 231 - Mid-Rise with Ground-Floor Retail was disregarded for the Trip Generation's calculations, since the rates/equations included in the LUC 231 report are based on only two (2) studies. Moreover, daily trips equations and directional distributions are not provided.

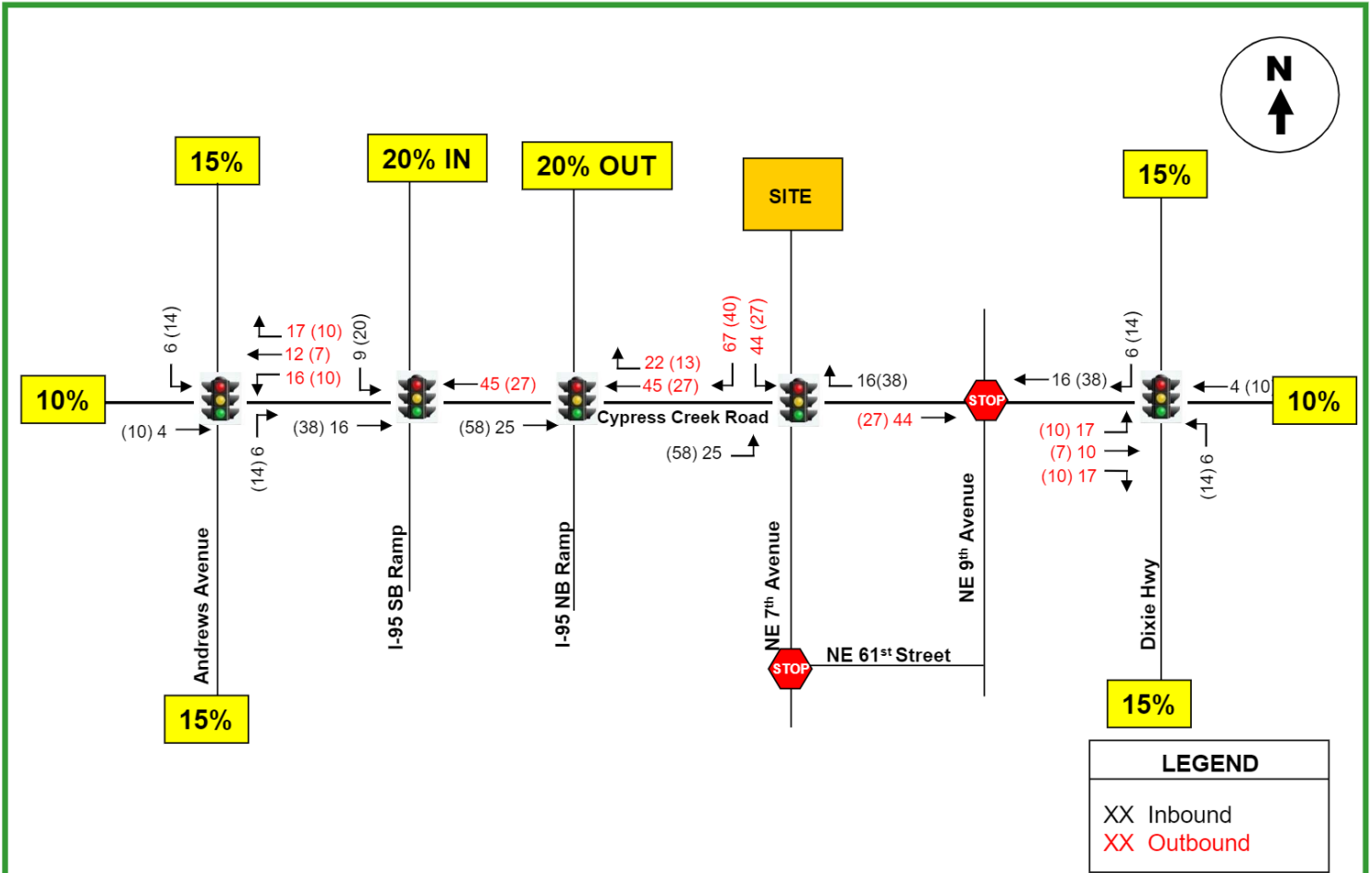
As indicated in Table 1, the proposed project is anticipated to generate approximately 1,816 daily trips, approximately 152 AM peak hour trips (41 inbound and 111 outbound) and approximately 163 PM peak hour trips (96 inbound and 67 outbound).

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The trip distribution was based on current traffic volumes in the vicinity of the project site. The highest peak hour trips (PM peak) were used to determine the trip distribution within the study area. The trip distribution assumed for the subject mixed-use development is summarized below:

- 15% to and from the north via Andrews Avenue
- 15% to and from the south via Andrews Avenue
- 15% to and from the north via Dixie Highway
- 15% to and from the south via Dixie Highway
- 10% to and from the east via Cypress Creek Road
- 10% to and from the west via Cypress Creek Road
- 20% inbound from the I-95 SB ramps
- 20% outbound to the I-95 NB ramps

The new peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The project traffic assignment is summarized in Figure 4.



Trips Distribution and Assignment

FIGURE 1
 Aura Cypress Creek
 Fort Lauderdale, Florida

TRAFFIC ANALYSIS

This section of the study is divided into two parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions.

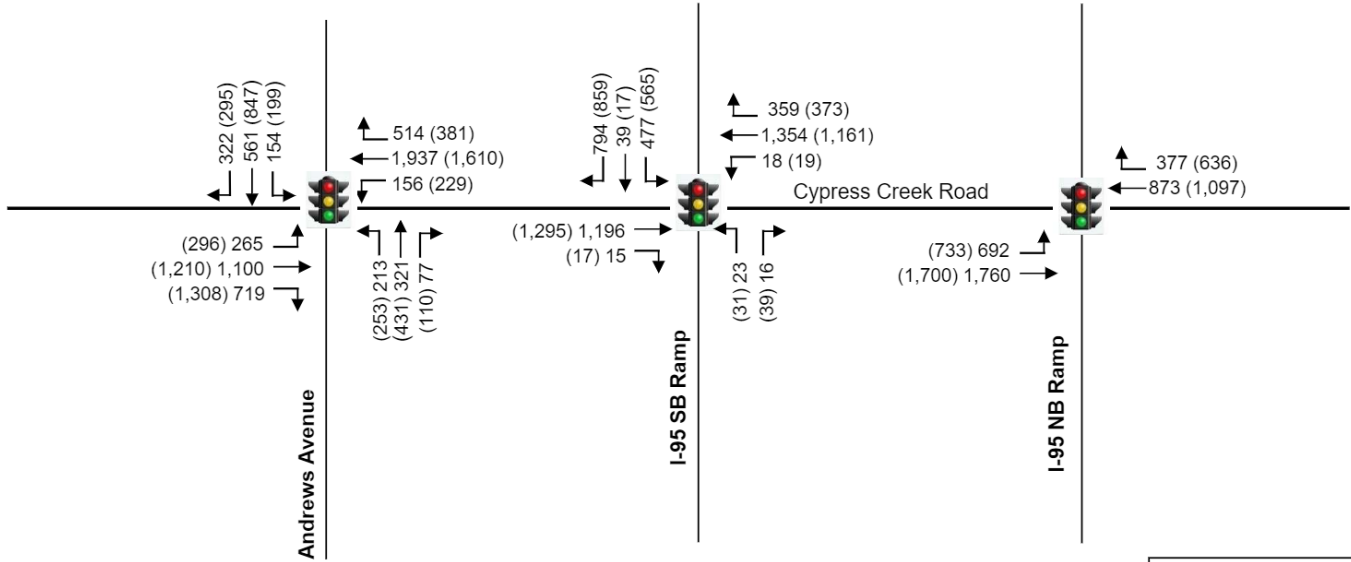
Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes project buildout conditions without the proposed project and the second set adds the new trips anticipated to be generated by the project.

In order to develop year 2026 traffic volumes (project anticipated to be built and occupied by the year 2026), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field to average peak season conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.03 is required to convert collected traffic counts to average peak season conditions (refer to Appendix C). The second analysis includes a growth factor to project 2022 peak season traffic volumes to the year 2026. Based on traffic growth data published by the FDOT for a nearby traffic count stations, traffic growth has occurred during the past years at a 1.0% growth rate. Please note that 2020 traffic volumes were not used in the analysis since traffic did not present regular traffic patterns due to the COVID-19 pandemic (refer to Appendix C). In addition, committed development trips associated with Fairfield at Cypress Creek, Fairfield Inn & Suites and Twin Peaks, Intermiami Lockhart Stadium, and Mayla Cypress Creek were included as committed developments.

The new trips generated by the proposed project (refer to Figure 4) were added to the 2026 background traffic in order to develop total traffic conditions. The future traffic projections for the study intersections are presented in tabular format in Appendix D. Figures 5 and 6 present the year 2026 future traffic volumes for the study area.

Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the project.

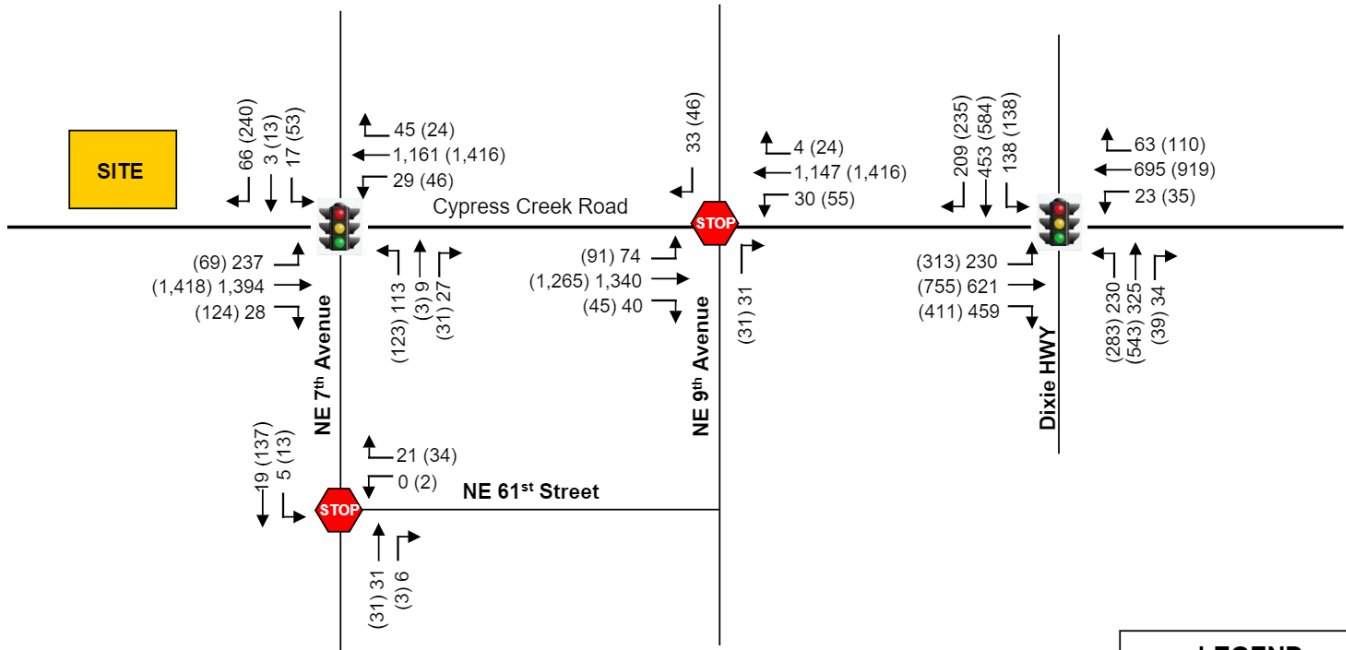
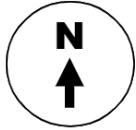


LEGEND	
XX	AM Peak Hour
YY	PM Peak Hour



Background Traffic Volumes without Project Trips (Year 2026 Peak Season)

FIGURE 5A
 Aura Cypress Creek
 Fort Lauderdale, Florida

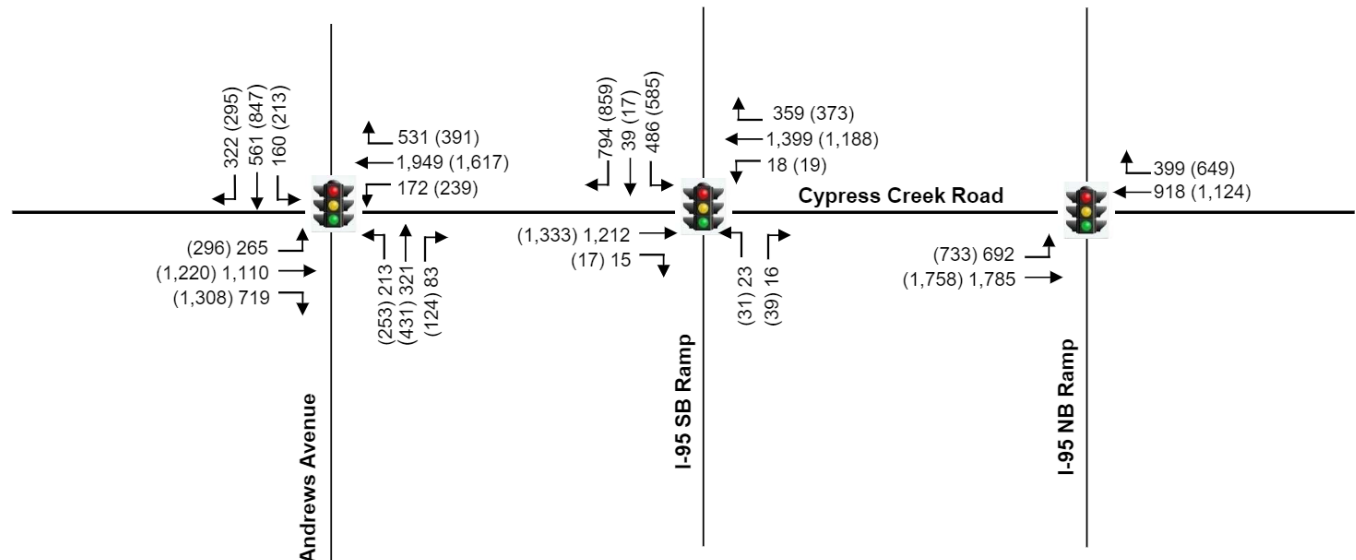


LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour



Background Traffic Volumes without Project Trips (Year 2026 Peak Season)

FIGURE 5B
 Aura Cypress Creek
 Fort Lauderdale, Florida

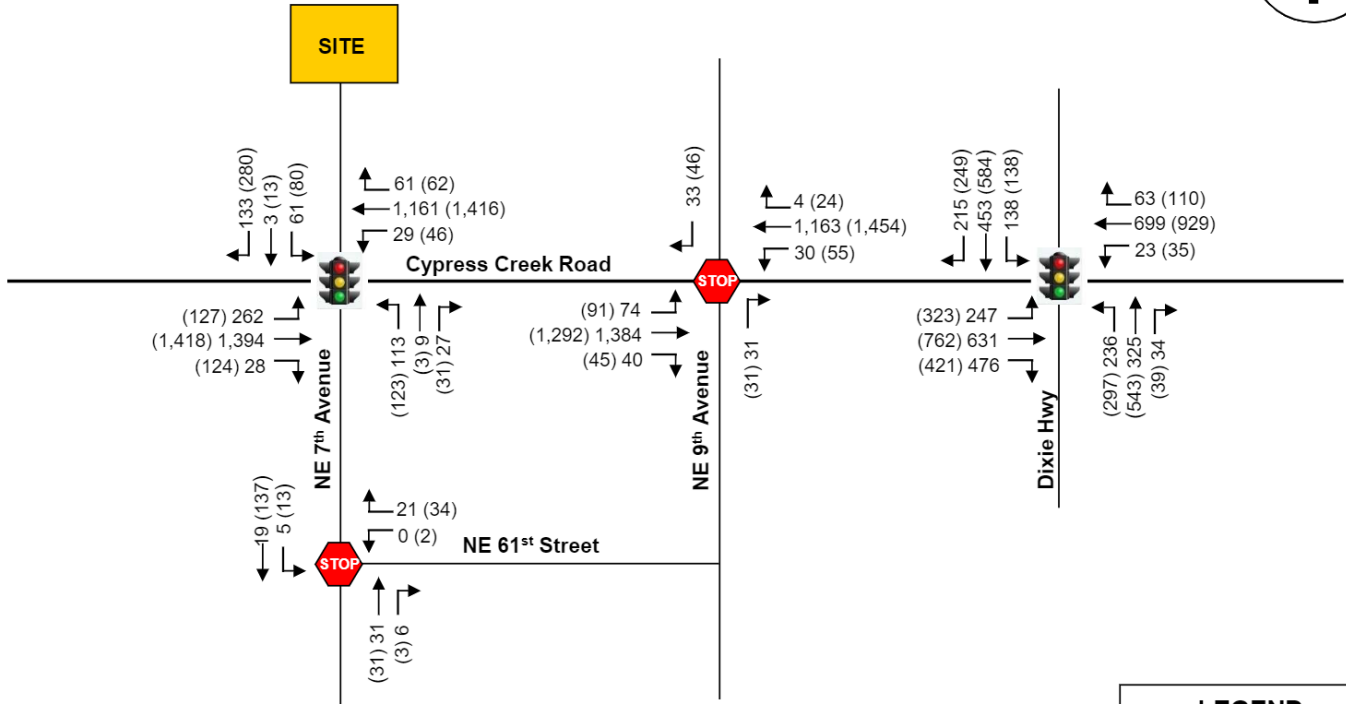
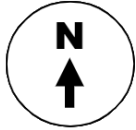


LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour



**Total Traffic with Project – Year 2026
AM (PM) Peak Hour Trips**

FIGURE 6A
Aura Cypress Creek
Fort Lauderdale, Florida



LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour



Total Traffic with Project – Year 2026 AM (PM) Peak Hour Trips

FIGURE 6A
Aura Cypress Creek
Fort Lauderdale, Florida

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the six 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 2A.

TABLE 2A			
Intersection Level of Service – Aura Cypress Creek			
Intersection	2022 Existing	Future Traffic Conditions	
		2026 w/o Project	2026 With Project
101: Andrews Avenue & Cypress Creek Road	D (D) 39.4 (48.5)	D (D) 47.1 (52.3)	D (D) 47.4 (52.6)
102: Cypress Creek Road & I-95 SB Ramp	C (C) 32.6 (32.6)	C (C) 33.5 (33.0)	C (C) 34.5 (34.6)
103: Cypress Creek Road & I-95 NB Ramps	B (B) 17.4 (16.1)	B (B) 17.3 (15.8)	B (B) 16.8 (15.6)
104: NE 7th Avenue/Corporate Drive & Cypress Creek Road	B (C) 18.1 (24.0)	B (C) 18.6 (24.9)	C (C) 22.1 (29.1)
105: NE 9th Avenue & Cypress Creek Road			
NB	C (C) 17 (16.1)	C (C) 17.6 (16.7)	C (C) 18.1 (16.9)
SB	C (C) 15 (18.1)	C (C) 15.4 (18.9)	C (C) 15.5 (19.3)
106: Dixie Highway & Cypress Creek Road	D (E) 44.7 (77.8)	D (F) 45.3 (86.4)	D (F) [F] 46.2 (90.2) [86.6]
107: NE 61st Street & NE 7th Avenue			
WB	A (A) 8.5 (8.7)	A (A) 8.5 (8.7)	A (A) 8.5 (8.7)

Notes: AM(PM)/[Future + Improvements PM]

As indicated in Table 2A, all study intersections are currently operating adequately and will continue to operate at a good level of service in the year 2026 with the proposed project in place, except for Dixie Highway and Cypress Creek Road during the PM Peak. This intersection is projected to fail with and without the proposed project in place.

However, with the implementation of minor signal timing improvements, the delay and LOS are expected to improve.

Table 2B summarizes the v/c ratios greater than 1.0. As described above, signal timing improvements were identified to reduce v/c ratios to less than 1.0 for the future condition's scenario.

TABLE 2B V/C Ratio Summary					
106: Dixie Highway & Cypress Creek Road	Movement	EBL	EBT	NBL	
	Background	PM	1.44	1.15	1.34
	Future	PM	1.49	1.16	1.40
	Future+ Imp	PM	1.02	1.16	1.31

Table 2C summarizes the 95th percentile queue for the turn lanes at the key signalized intersections. The computer printouts of the intersection capacity analyses are contained in Appendix E.

TABLE 2C 95th Percentile Queue (ft)													
Intersection	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NET	NBR	SBL	SBT	SBR
		101: N Andrews Avenue & NE/NW 6th Street/NE 6th Street	Storage (ft)				275						105
AM					m140						0	102	
PM					m176						51	138	
Background					m145						0	141	
AM					m181						69	174	
PM					m157						0	145	
Future					m190						89	184	
Is 95th Queue Ok?					Yes						Yes	Yes	
Mitigation													
103: Cypress Creek Road & I-95 NB Ramp	Storage (ft)											200	
	AM										0		
	PM										297		
	Background										0		
	AM										357		
	PM										0		
	Future										619		
	Is 95th Queue Ok?										No		
	Mitigation										(1)		
	104: NE 7th Avenue/Corporate Drive & Cypress Creek Road	Storage (ft)	190										
AM		210											
PM		166											
Background		124											
AM		48											
PM		180											
Future		101											
Is 95th Queue Ok?		Yes											
Mitigation													
106: Dixie Highway & Cypress Creek Road		Storage (ft)	270	270					260				
	AM	186	175					216					66
	PM	#525	235					#463					111
	Background	193	197					235					67
	AM	#572	258					#511					122
	PM	209	212					241					69
	Future	PM	#500	268				#547					141
	Future+ Imp	PM	#480	251				#532					127
	Is 95th Queue Ok?	No	Yes					No					Yes
	Mitigation	(2)						(3)					

Notes:
 # 95th percentile volume exceeds capacity, queue may be longer.
 (1) Turn lanes affected by project trips
 (2) Future background queues without the project trips are expected to extend beyond the storage bay. This turning bay cannot be extended
 (3) Future background queues without the project trips are expected to extend beyond the storage bay. This turning bay cannot be extended due to the presence of a back to back turning bay
 (4) Future background queues without the project trips are expected to extend beyond the storage bay. However, this turning bay could be extended up to 600 feet.

As shown in Table 2B, turn lanes affected by the proposed development are highlighted. Where the 95th percentile vehicle queue extends beyond the length of the exiting storage bay, it was evaluated the feasibility of extending the storage bay.

MULTIMODAL TRANSPORTATION AMENITIES

In the immediate vicinity of Aura Cypress Creek Site, there are several multimodal facilities such as safe pedestrian features (sidewalks and crosswalks at nearby signalized intersections), and public transportation.

Pedestrian Sidewalks and Signalized Crosswalks

Sidewalks are provided on both sides of Cypress Creek Road, Corporate Drive and NE 7th Avenue. The surrounding sidewalks will connect with the internal pedestrian circulation features of the project. Safe pedestrian crosswalks to cross Corporate Drive or Cypress Creek Road are provided at the signalized intersection of Cypress Creek Road and Corporate Drive. At this intersection, there are pedestrian ramps, crosswalks on the north, south and east legs of the intersection as well as pedestrian signals with push buttons.

Public Transportation

Broward County Transit Routes 62 travels east and west along Cypress Creek Road. Bus stops are provided on the north and south sides of Cypress Creek Road, east of Corporate Drive (for eastbound traffic) and west of Corporate Drive for westbound traffic.

CONCLUSIONS AND RECOMMENDATIONS

Aura Cypress Creek Apartments is a proposed residential development with commercial space planned to be located at 400 Corporate Drive in the City of Fort Lauderdale in Broward County, Florida. The site will be developed with the following land use and intensity:

- 340 mid-rise apartment units
- 5000 square feet of retail use

NE 7th Avenue provides access to the site. The proposed development is anticipated to be built and occupied in 2026.

The conclusions and recommendations of the traffic study are presented below:

- The proposed project is anticipated to generate approximately 1,816 daily trips, approximately 152 AM peak hour trips (41 inbound and 111 outbound) and approximately 163 PM peak hour trips (96 inbound and 67 outbound).
- all study intersections are currently operating adequately and will continue to operate at a good level of service in the year 2026 with the proposed project in place, except for Dixie Highway and Cypress Creek Road during the PM Peak. This intersection is projected to fail with and without the proposed project in place. However, with the implementation of minor signal timing improvements, the delay and LOS are expected to improve.
- Results of the capacity analysis also indicate that the intersection of NE 7th Avenue and Cypress Creek Road, which provides the main access to the site is expected to operate adequately.