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PZ24-12000027

07/02/2025

1600 S. Federal Highway (Mixed-Use)

1600 S. Federal Highway
Pompano Beach, Florida

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PZ24-12000027

07/02/2025

TRAFFIC STATEMENT

prepared for:
1600 Federal LLC

KBP CONSULTING, INC.

January 2025
Updated May 2025

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Traffic Statement

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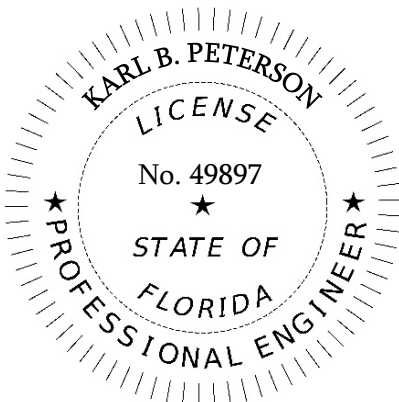
Prepared by:

KBP Consulting, Inc.

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INTRODUCTION

1600 S. Federal Highway is a proposed mixed-use development to be located on the east side of S. Federal Highway (US 1 / State Road 5) between NE 65th Street / Port Royale Boulevard and McNab Road / SE 15th Street in Pompano Beach, Broward County, Florida. More specifically, the subject site is located at 1600 S. Federal Highway and the Broward County Parcel ID number is 4942 12 00 0070. The location of this project site is illustrated in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by 1600 Federal LLC to prepare a traffic statement in connection with the existing and proposed development on this site. This study addresses the existing and anticipated trip generation characteristics of the subject mixed-use development, the projected turning movement volumes at the project driveways on S. Federal Highway and the operational characteristics of the project driveways and the intersection at S. Federal Highway and McNab Road.

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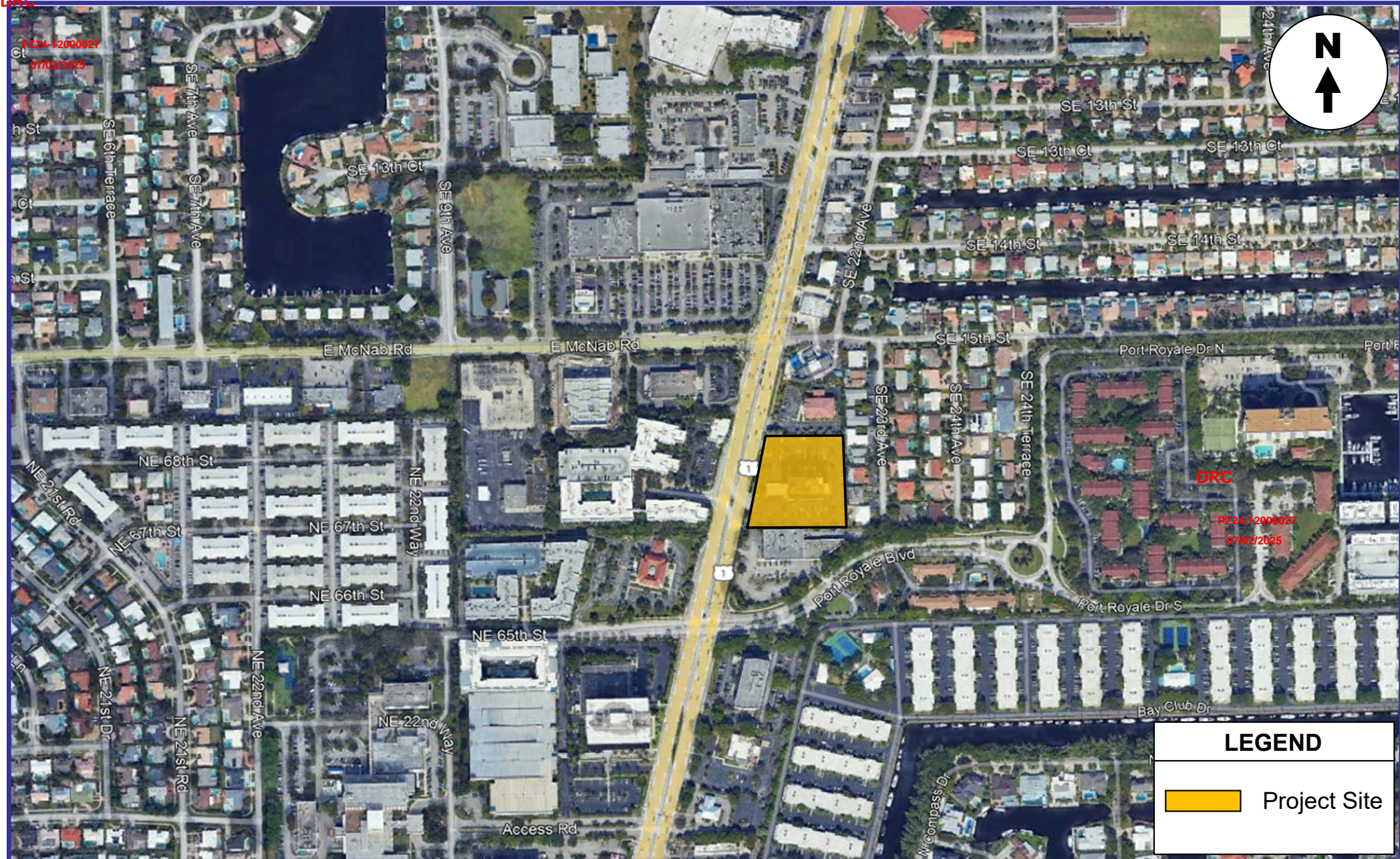
This traffic study is divided into seven (7) sections, as listed below:

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1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Analyses
7. Summary & Conclusions

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INVENTORY

Existing Land Uses and Access

The subject site has a land area of approximately 2.35 acres (+/- 102,393 square feet) and is currently developed with an 11-story office building that includes a drive-in bank (BrightStar Credit Union) on the first floor. The area of the bank / credit union is approximately 3,250 square feet and the area of the office space is approximately 75,484 square feet. The site is served by two (2) driveways on S. Federal Highway. One (1) driveway is located near the southern boundary of the site and is limited to left-turns in, right-turns in and right-turns out. The other driveway is located near the northern boundary of the site and is limited to right-turns in and right-turns out. A site survey is presented in Appendix A.

Proposed Land Uses and Access

The proposed development on this site includes 132 dwelling units in a 10-story building and 3,650 square feet of commercial / retail space on the ground floor adjacent to S. Federal Highway. The existing commercial uses (i.e. office and drive-in bank) have a total floor area of 78,734 square feet. With the additional proposed retail space (3,650 square feet) the total commercial area is 82,384 square feet. Since the plat application indicates a total of 85,000 square feet of commercial space, this analysis considers an additional 2,616 square feet of retail use. Therefore, for the purpose of this analysis, the amount of additional commercial / retail space is 6,266 square feet.

Vehicular access to the site and the existing office building (with drive-in bank / credit union) will be modified. The existing southern driveway will remain in its current location; however, it will be converted to a left-turn in / right-turn in only driveway. The northern driveway will be relocated approximately 80 feet to the south of its current location and will be converted to a right-turn out only driveway. Appendix B contains the preliminary site plan for this mixed-use development and the buildout year is projected to be 2027.

EXISTING CONDITIONS

This section of the report addresses the transportation system located in the immediate vicinity of the 1600 S. Federal Highway (Mixed-Use) site.

Roadway System

S. Federal Highway (US 1 / State Road 5) is located along the western boundary of the site. In this area S. Federal Highway is a six-lane divided state-maintained principal arterial roadway with three (3) through lanes in the northbound direction and three (3) through lanes in the southbound direction. The posted speed limit along this section of S. Federal Highway is 45 miles per hour (mph) and the Florida Department of Transportation (FDOT) access classification is “5 – Restrictive”.

Study Intersections

One (1) nearby intersection and the project driveways were identified as the locations to be evaluated as part of this analysis. The study intersection is the first signalized intersection to the north at S. Federal Highway and McNab Road / SE 15th Street. Figure 2 on the following page depicts the existing lane geometry of the study intersections identified for analysis purposes.

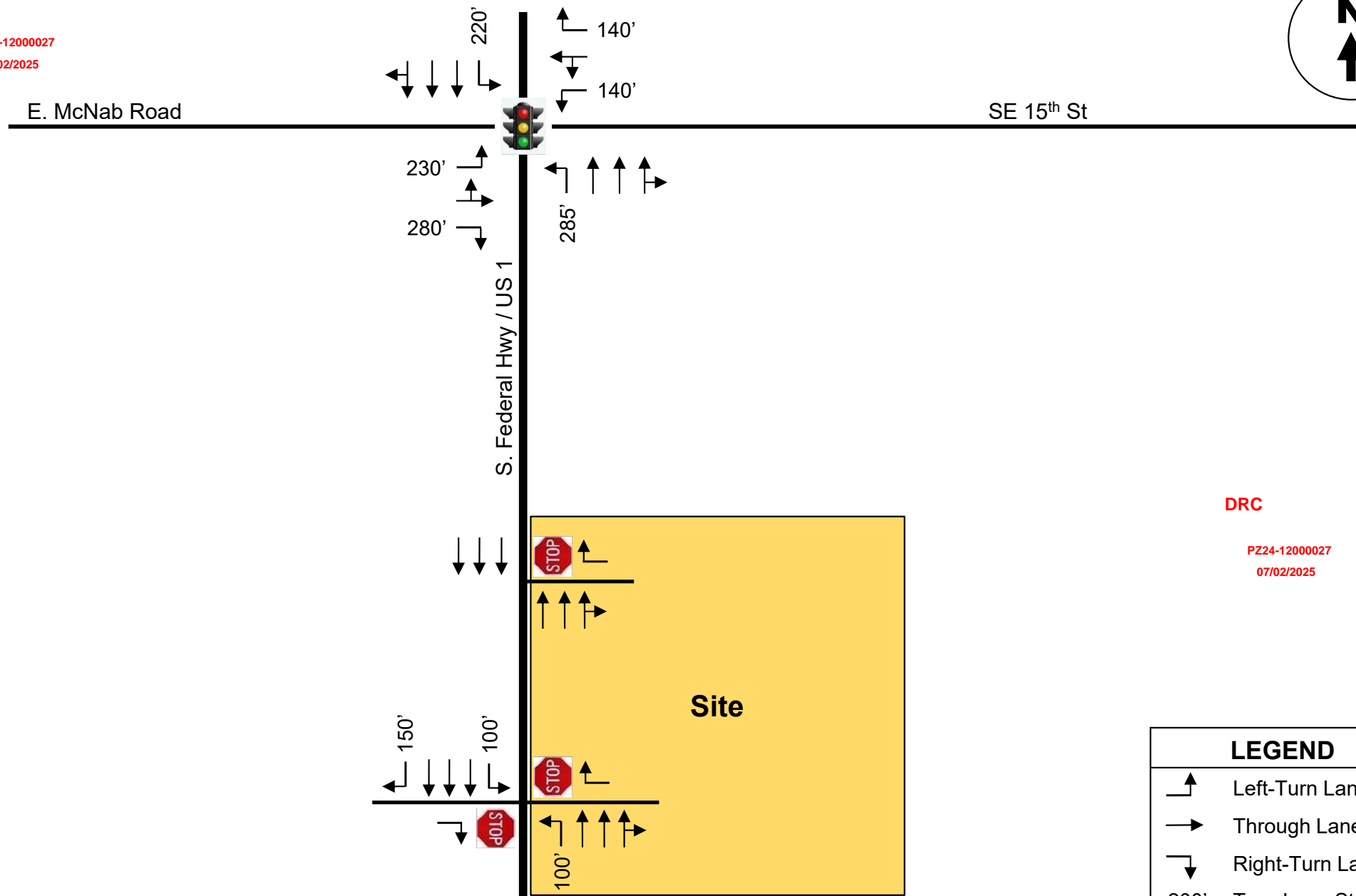
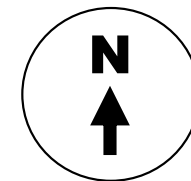
Transit Service

Broward County Transit (BCT) provides bus service in the S. Federal Highway corridor. In this area, Route 10 and Route 62 provide transit service with bus stops immediately to the north and south of the subject site.

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LEGEND	
	Left-Turn Lane
	Through Lane
	Right-Turn Lane
200'	Turn-Lane Storage

TRAFFIC COUNTS

KBP Consulting, Inc., in association with Video Data Solutions, Inc., collected traffic data at the following locations:

- **Intersections**

- S. Federal Highway and McNab Road / SE 15th Street
- S. Federal Highway and Site Driveway (North)
- S. Federal Highway and Site Driveway (South)

The intersection turning movement counts were collected on Tuesday, September 24, 2024, during the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM). Figures 3 and 4 summarize the results of this traffic data collection effort. Appendix C contains the traffic data collected in the field. Given that these counts were collected during late-September, a peak season conversion factor of 1.01 has been applied. (Please see Appendix D for the latest peak season factor category report published by the Florida Department of Transportation (FDOT) for this area of Broward County.)

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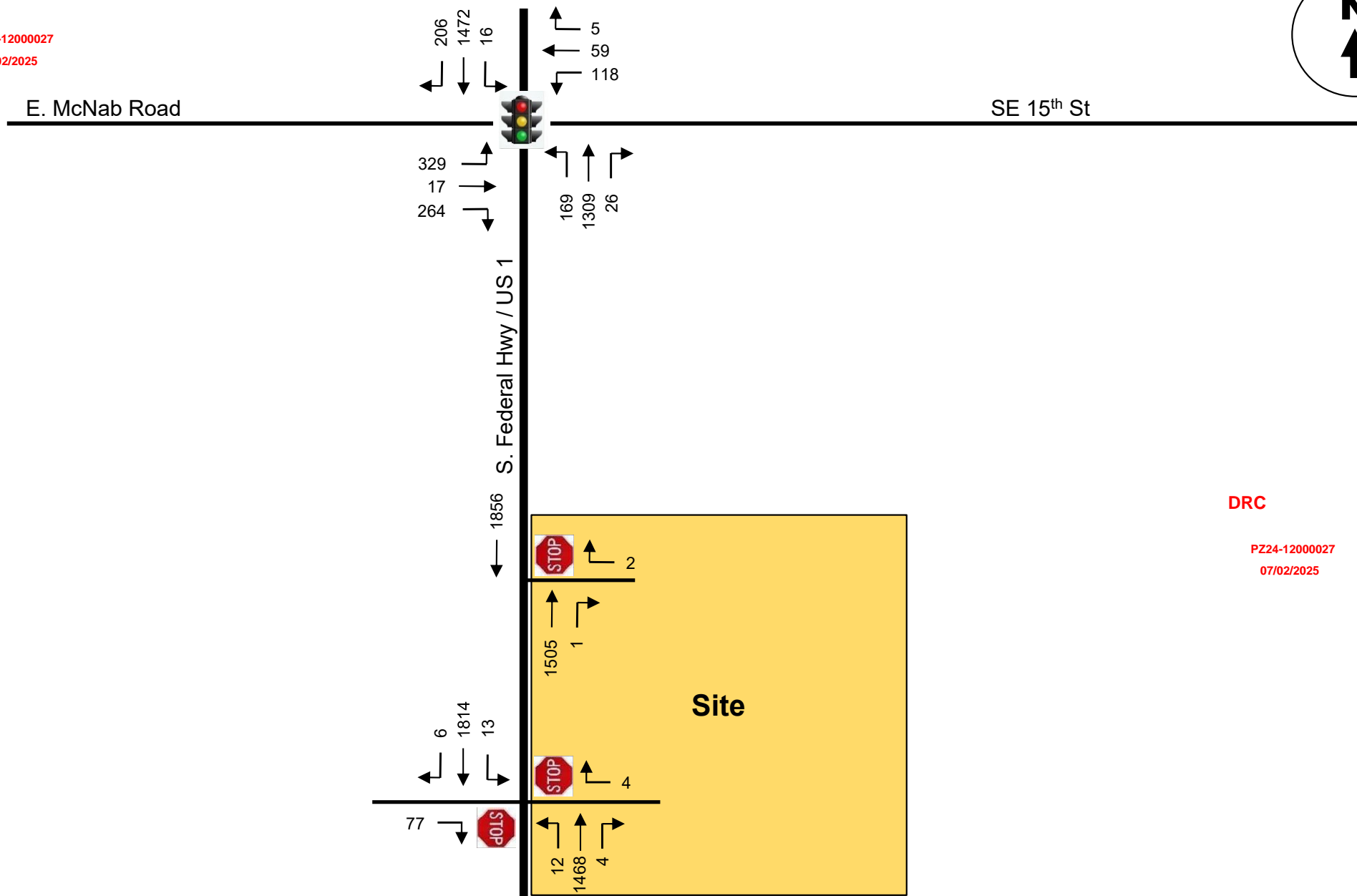
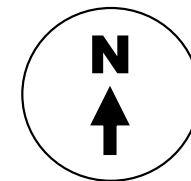
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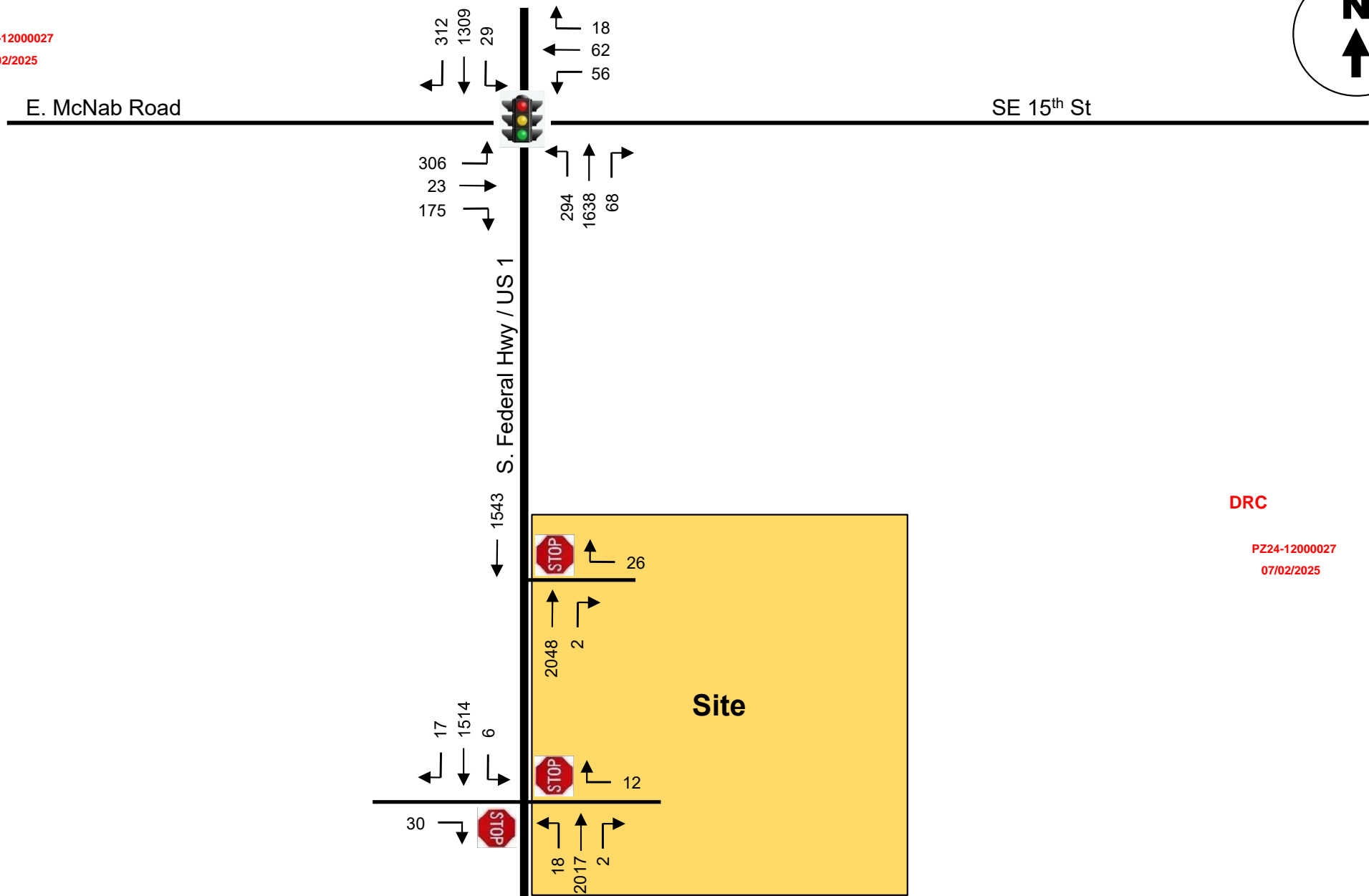
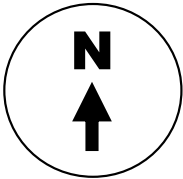
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Existing (2024) AM Peak Hour Traffic Counts

Source: Video Data Solutions, Inc.
Adjusted for Average Peak Season Conditions

FIGURE 3

1600 S. Federal Highway
Pompano Beach, Florida



TRIP GENERATION

A trip generation analysis has been conducted for the subject mixed-use development. The analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. According to the referenced ITE manual, the most appropriate land use categories and corresponding trip generation rate for the existing and proposed development are as follows:

ITE Land Use #221 – Multifamily Housing (Mid-Rise)

- Weekday: $T = 4.77 (X) - 46.46$
where T = number of trips and X = number of dwelling units
- AM Peak Hour: $T = 0.44 (X) - 11.61$ (23% in / 77% out)
- PM Peak Hour: $T = 0.39 (X) + 0.34$ (61% in / 39% out)

ITE Land Use #710 – General Office Building

- Weekday: $\ln(T) = 0.87 \ln(X) + 3.05$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: $\ln(T) = 0.86 \ln(X) + 1.16$ (88% in / 12% out)
- PM Peak Hour: $\ln(T) = 0.83 \ln(X) + 1.29$ (17% in / 83% out)

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ITE Land Use #822 – Strip Retail Plaza (<40k)

- Weekday: $T = 42.20 (X) + 229.68$
where T = number of trips and X = 1,000 square feet of gross leasable area
- AM Peak Hour: $T = 2.36 (X)$ (60% in / 40% out)
- PM Peak Hour: $T = 6.59 (X)$ (50% in / 50% out)

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ITE Land Use #912 – Drive-In Bank

- Weekday: $T = 100.35 (X)$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: $T = 9.95 (X)$ (58% in / 42% out)
- PM Peak Hour: $T = 21.01 (X)$ (50% in / 50% out)

Relevant excerpts from the referenced ITE manual are presented in Appendix E of this report. Utilizing the above-listed trip generation rates and equations from the referenced ITE document, a trip generation analysis was undertaken for the proposed mixed-use development. The results of this effort are documented in Table 1 below.

Table 1 1600 S. Federal Highway Trip Generation Summary Pompano Beach, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing								
General Office Building	75,484 SF	909	115	16	131	22	109	131
Drive-In Bank	3,250 SF	326	19	13	32	34	34	68
Total:		1,235	134	29	163	56	143	199
Proposed								
General Office Building	75,484 SF	909	115	16	131	22	109	131
Drive-In Bank	3,250 SF	326	19	13	32	34	34	68
Multifamily Housing (Mid-Rise)	132 DU	583	11	35	46	32	20	52
Strip Retail Plaza (<40k)	6,266 SF	494	9	6	15	21	20	41
Total:		2,312	154	70	224	109	183	292
Difference (Proposed - Existing)		1,077	20	41	61	53	40	93

Source: KBP Consulting, Inc., May 2025.

Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).

As indicated in Table 1 above, the proposed residential and commercial / retail development on the 1600 S. Federal Highway site is anticipated to generate 1,077 net new daily vehicle trips, 61 net new AM peak hour vehicle trips (20 inbound and 41 outbound) and 93 net new PM peak hour vehicle trips (53 inbound and 40 outbound).

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

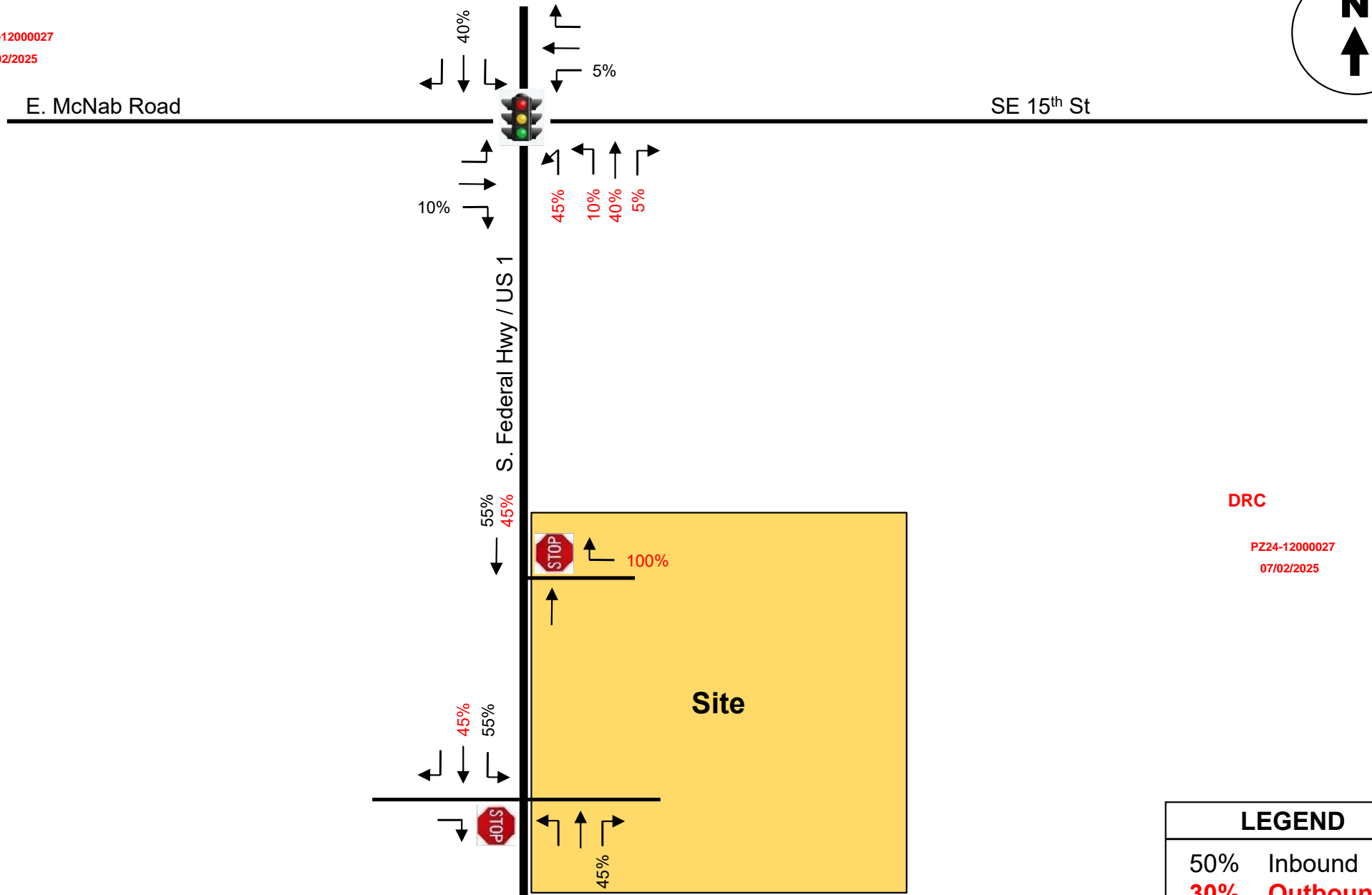
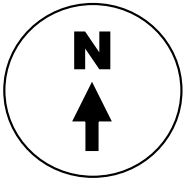
The trip distribution and traffic assignment for the 1600 S. Federal Highway mixed-use project was developed based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes / patterns, and existing land use patterns. The resulting trip distribution for the project trips is presented in Figure 5. The anticipated AM and PM peak hour trip assignment for the project is based upon the estimated trip distribution patterns and presented in Figures 6 and 7.

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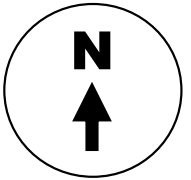
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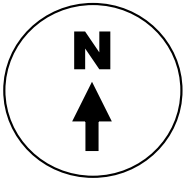
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TRAFFIC IMPACT ANALYSES

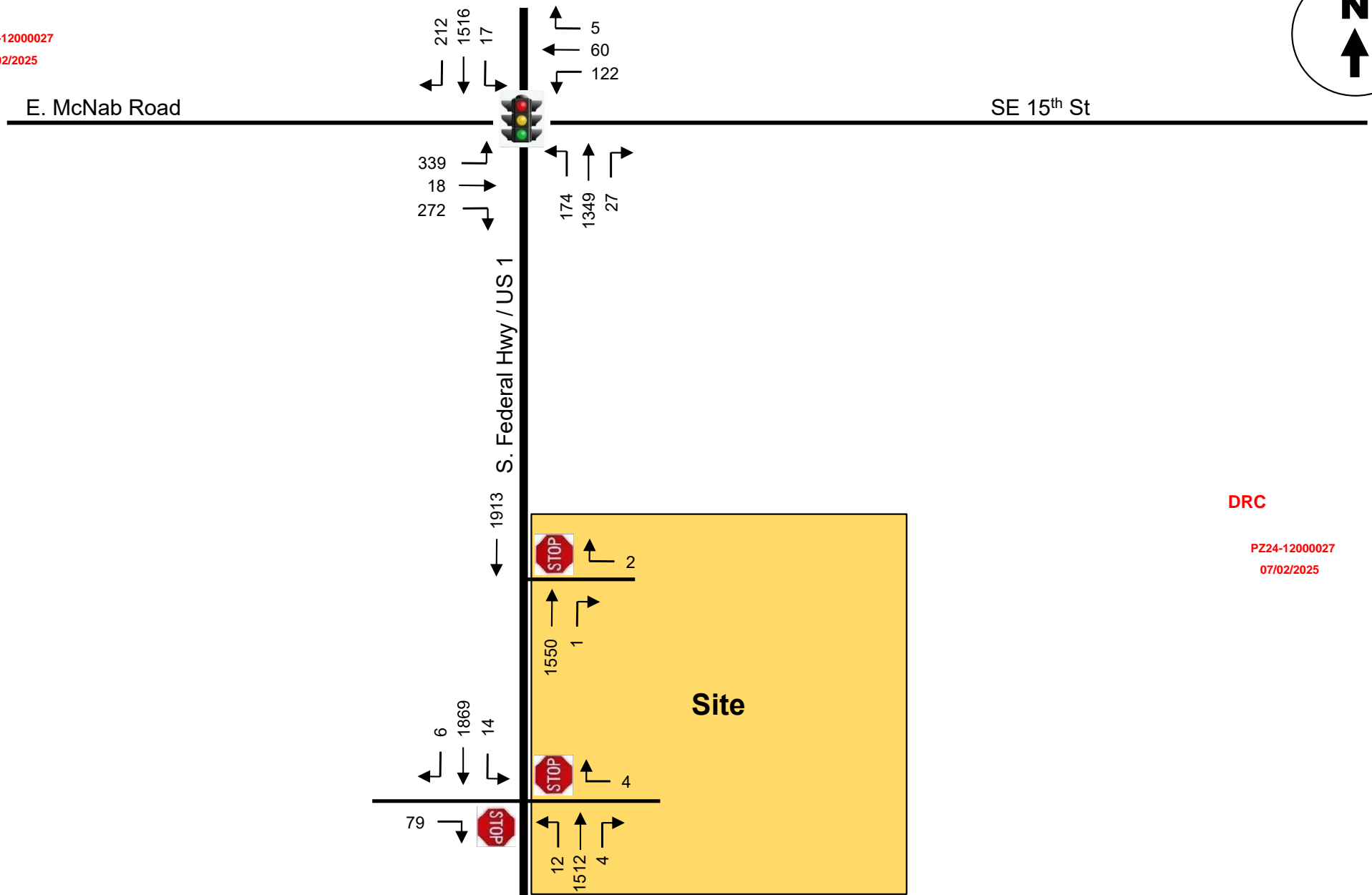
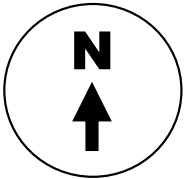
This section of the study is divided into two (2) primary parts. The first part of this section involves the development of the future build-out year (2027) traffic volumes for the study area. The second part of this section includes level-of-service analyses for existing and future conditions and turn lane analyses.

Future Conditions Traffic Volumes

Future, build-out year (2027) traffic volumes were developed for the project study area in the following manner:

- **Average Peak Season Conversion Factor:** Traffic data collected on Tuesday, September 24, 2024, was reviewed with respect to average peak season conditions. Based on FDOT's Peak Season Factor Category report (see Appendix D), the adjustment factor for data collected during this time period is 1.01.
- **Historic Traffic Growth:** Research relative to the background traffic growth in the area was conducted. Historic traffic count data (i.e. the past 10 years) was obtained from the FDOT for a count station located on S. Federal Highway immediately adjacent to the site. This data is presented in Appendix F of this report. The referenced data indicates that the study area has exhibited a slight decrease (-0.23%) in traffic volumes for the 10-year period between 2015 and 2024. For the purposes of this analysis, a +1.00% annual growth rate has been applied.

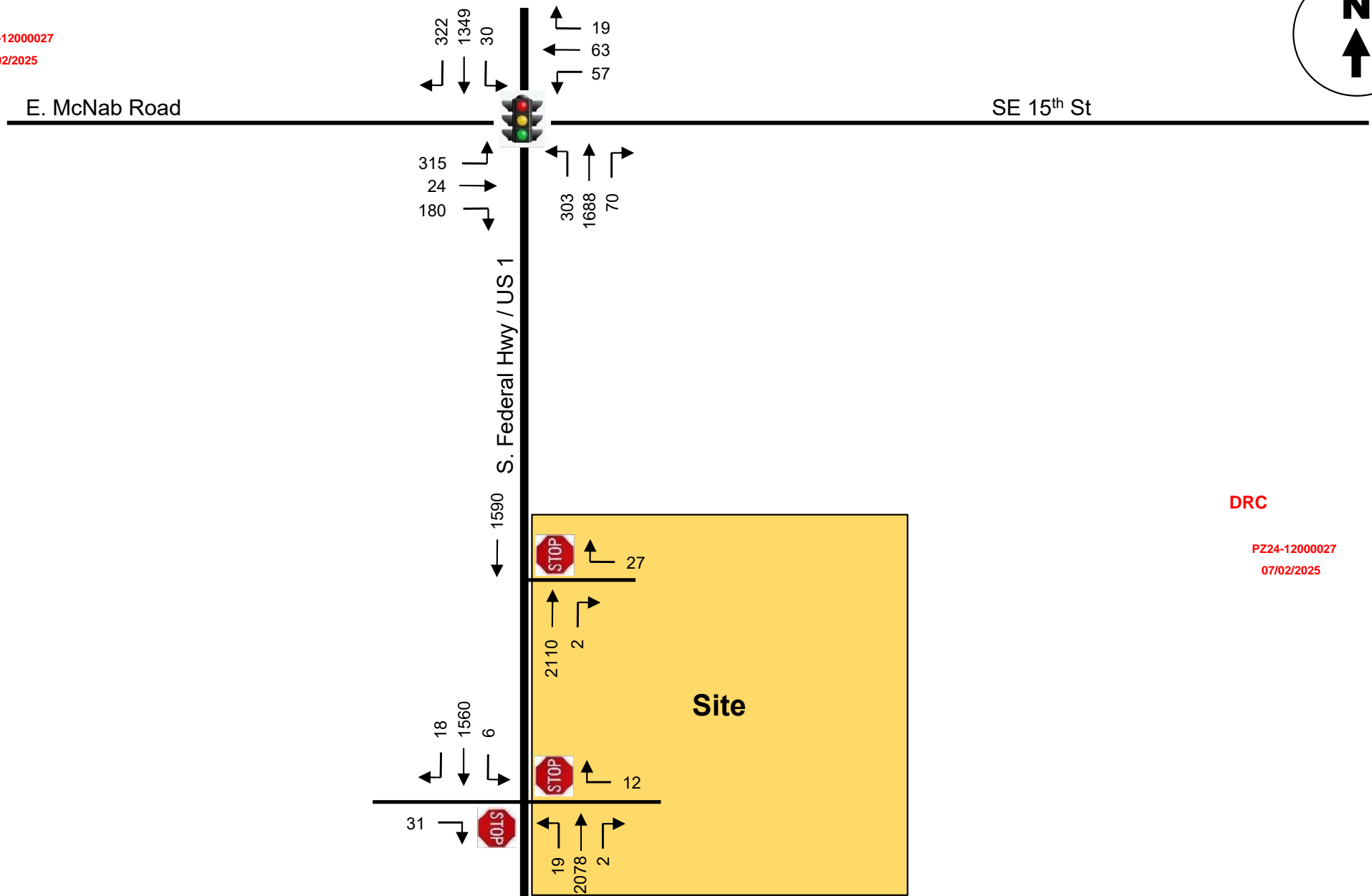
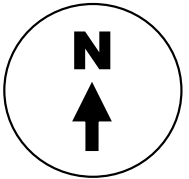
The future traffic calculations (peak season adjustments, background traffic growth, and the traffic associated with the 1600 S. Federal Highway mixed-use development) for the study intersections and project driveways are contained in Appendix G in tabular format. Figures 8 through 11 present the future traffic volumes for the study area. Figures 8 and 9 include future background traffic only (without the proposed development) and Figures 10 and 11 include the additional traffic anticipated to be generated by the 1600 S. Federal Highway development.



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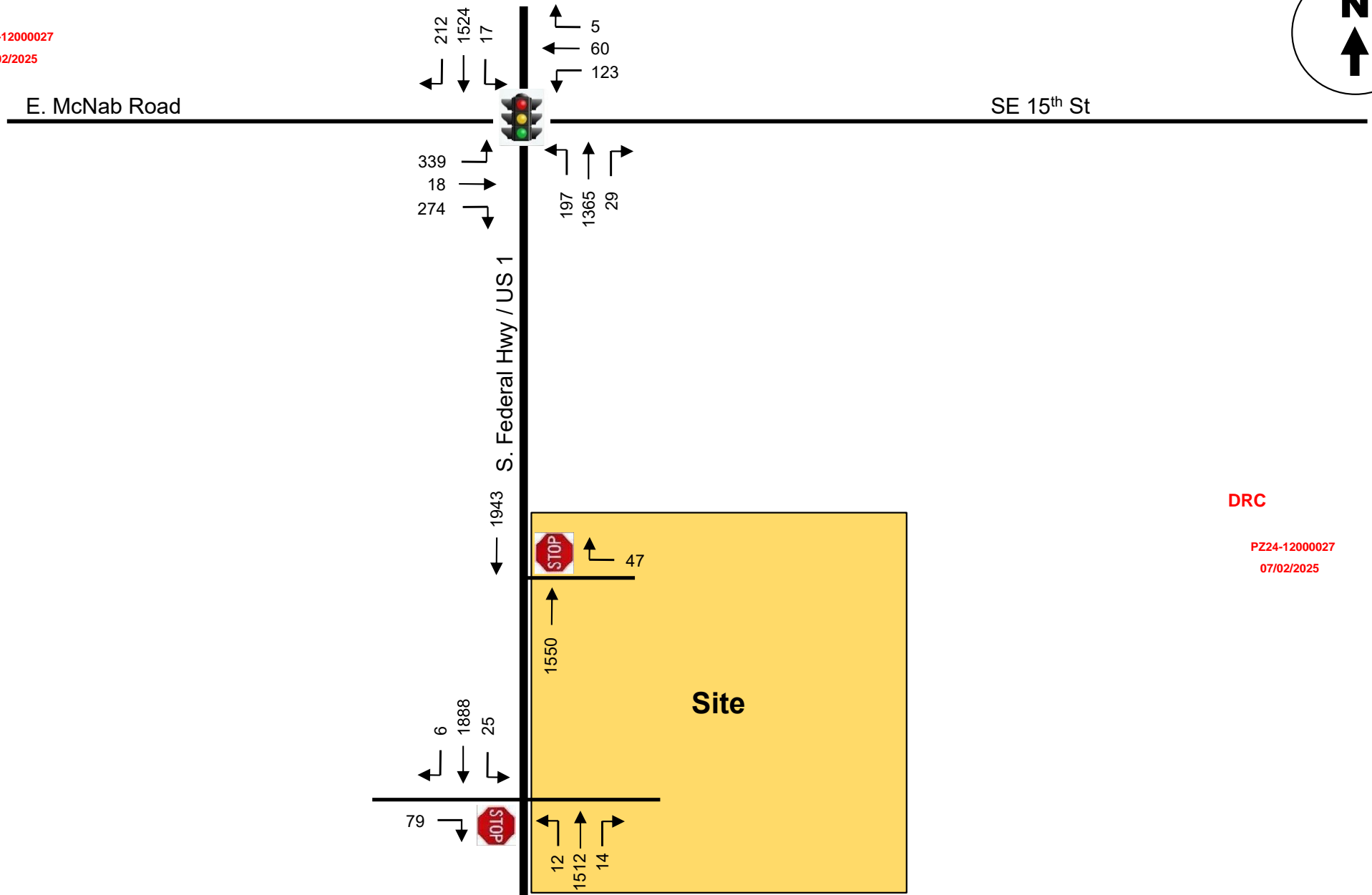
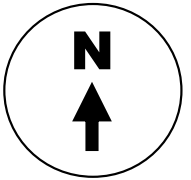
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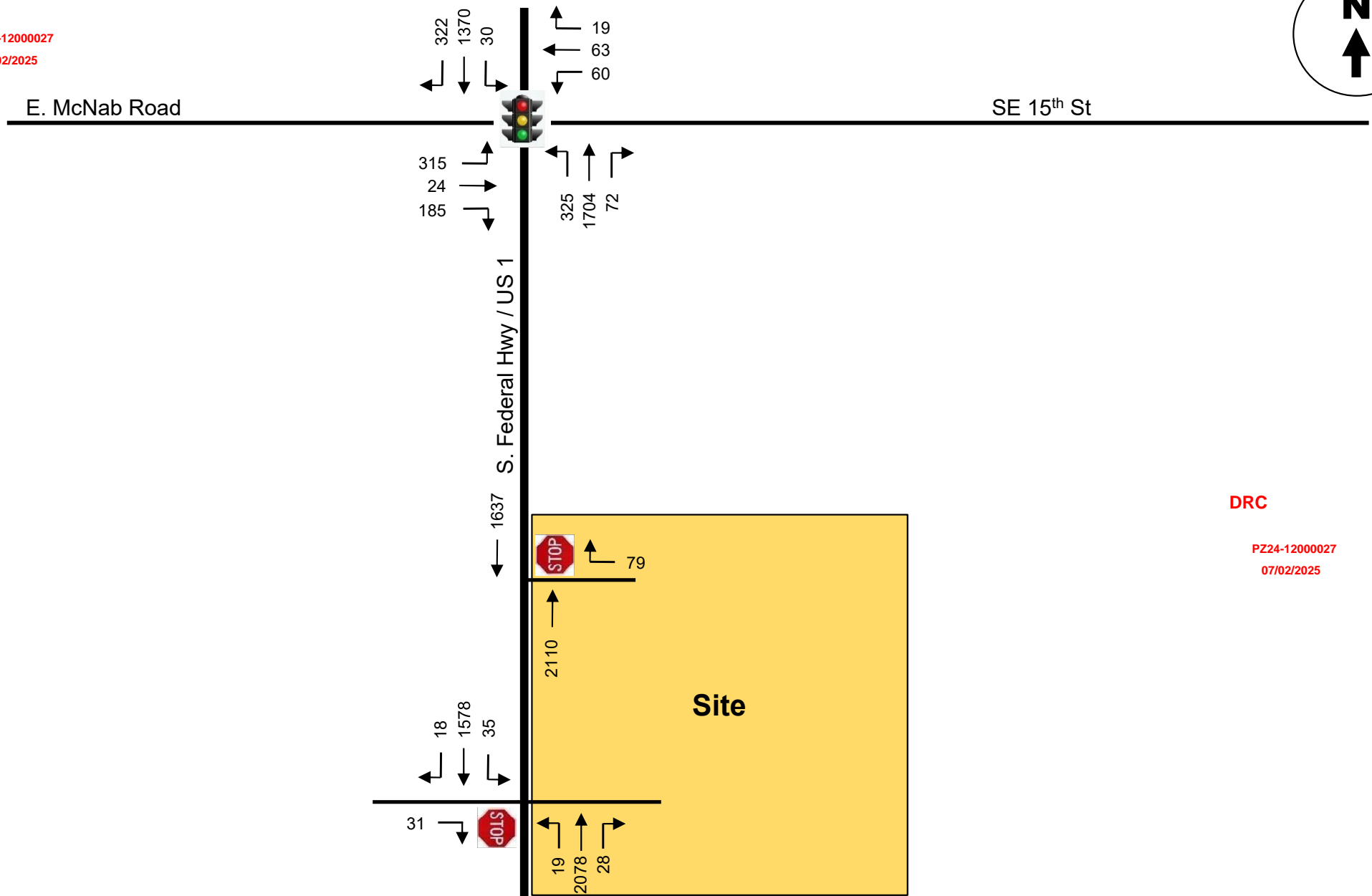
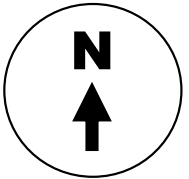
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Level of Service (LOS) Analyses

Intersection capacity/level of service (LOS) analyses were conducted for the study intersection and two (2) project driveways. These analyses were undertaken following the capacity / level of service procedures outlined in the 6th Edition of the Highway Capacity Manual (HCM) using the Synchro software for the signalized and unsignalized intersections. The results of these capacity analyses are summarized in Table 2 below.

Table 2 1600 S. Federal Highway Intersection Levels of Service Pompano Beach, Florida						
Intersection / Movement	Existing (2024) Conditions		Future (2027) Conditions Without Project Traffic		Future (2027) Conditions With Project Traffic	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Signalized Intersection						
S. Federal Hwy / McNab Road	D (39.3)	D (41.6)	D (40.9)	D (43.5)	D (42.2)	D (47.1)
<i>Optimized</i>	--	--	--	--	<i>D (42.0)</i>	<i>D (46.8)</i>
Unsignalized Intersections						
S. Federal Hwy / North Driveway						
- Westbound Right-Turn	B (10.6)	B (12.1)	B (10.7)	B (12.3)	B (11.1)	B (13.2)
S. Federal Hwy / South Driveway						
- Southbound Left-Turn	C (15.7)	C (21.0)	C (16.2)	C (21.9)	C (16.7)	D (25.3)

Source: Highway Capacity Manual and SYNCHRO.

Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)

As indicated in Table 2, the study intersection and project driveways are currently operating adequately during the weekday AM and PM peak hours and will continue to do so in the year 2027 with the proposed 1600 S. Federal Highway mixed-use project. The signal timings were optimized for the future build out conditions; however, only minor improvements to the intersection of S. Federal Highway and McNab Road can be achieved as indicated in Table 2 above. It is noted that minor increases in delay are attributed to the proposed development (i.e. +1.3 sec/veh in the AM peak hour and +3.6 sec/veh in the PM peak hour). As such, the project impacts can be described as “de minimis”. The signal timing data from the Broward County Traffic Engineering Division is presented in Appendix H and the Synchro printouts of the intersection capacity analyses are contained in Appendix I.

Turn Lane Storage Analysis

A summary of the estimated 95th percentile queues (for the directly impacted movements) at the intersection of S. Federal Highway and McNab Road and at the southern driveway (southbound left-turn) on S. Federal Highway are presented in Table 3 below.

Table 3 1600 S. Federal Highway Turn Lane Storage Analysis Pompano Beach, Florida							
Intersection / Movement		Existing (2024) Conditions		Future (2027) Conditions Without Project Traffic		Future (2027) Conditions With Project Traffic (Opt.)	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	Capacity *	95th Percentile Queues					
S. Federal Hwy / McNab Road							
- Northbound Left-Turn	285'	229'	423'	254'	438'	271'	461'
- Eastbound Right-Turn	280'	161'	74'	179'	77'	187'	76'
- Westbound Left-Turn	140'	169'	117'	171'	121'	172'	126'
S. Federal Hwy / South Driveway							
- Southbound Left-Turn	100'	25'	25'	25'	25'	25' DRC	25'

Source: Highway Capacity Manual and SYNCHRO.

* Capacity = Amount of full width storage capacity of the turn lane in feet.

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As noted in Table 3 above, the 95th percentile queues for the northbound left-turn lane (in the PM peak hour) and for the westbound left-turn lane (in the AM peak hour) are estimated to exceed the available storage capacity of these turn lanes under existing conditions. This condition will continue in the build out year of 2027 without the subject project. When including the project traffic associated with the 1600 S. Federal Highway development, there is a negligible impact to the 95th percentile queue of the westbound left-turn lane in the AM peak hour. And the project impact to the 95th percentile queue of the northbound left-turn lane is an increase of 17 feet in the AM peak hour and 23 feet (less than one car length) in the PM peak hour. As such, the project impacts to these movements are considered to be minimal. It is also noted that the northbound left-turn queues may be overestimated as some motorists may elect to continue north on Federal Highway (approximately 650 feet) to the next median opening at the Nissan car dealership driveway where a U-turn maneuver can be made to travel south.

Right-Turn Lane Analyses

Right-turn lane analyses have been performed for the southern project driveway. The generally accepted threshold for the consideration of a right-turn lane is 80 right-turning vehicles in the peak hour. In this case the peak right-turn volume is well below the 80-vehicle threshold. As such, a right-turn lane is not required at the southern project driveway.

Left-Turn Lane Analyses

Since Synchro is known to provide unreliable results for left-turn lane queues at unsignalized intersections, a supplemental left-turn lane analysis has been conducted for the southbound left-turn lane at the project's south driveway on S. Federal Highway. The adequacy of the available storage length (i.e. 100 feet) has been evaluated in accordance with NCHRP Report 745 – Left-Turn Accommodations at Unsignalized Intersections. Excerpts of this report are presented in Appendix J. This report presents several different methods for determining the adequacy of a left-turn lane storage length. The results of these methods are summarized below **DRC**

- According to the *Green Book*, the required storage length of a left-turn lane at an unsignalized intersection may be estimated by the number of turning vehicles arriving in a two-minute period. In this case, a peak of 35 left-turning vehicles in the PM peak hour yields approximately one (1) vehicle per each two-minute period, on average. As such, a storage length of 25 feet should be sufficient.
- The equation in the TRB *Access Management Manual* is as follows:

$$L = V / Nc (ks)$$

where L = storage length, V = turning volumes, Nc = number of cycles per hour,
k = queue factor (2.0 for arterials) and s = average length per vehicle (25 feet)

In this case, the storage length is calculated to be 58 feet, which can be accommodated within the currently available storage length.

- Lastly, Table 8 in the attached excerpts (Appendix J) from the referenced NCHRP report takes into consideration opposing volumes. At the subject location the opposing (northbound) volume is reported to be 2,078 in the weekday PM peak hour. Although the opposing volume exceeds the maximum volume in the referenced table, the storage length for 35 left-turning vehicles is reported to be 50 feet for the range of 200 to 1,000 opposing vehicles. As such, a storage capacity of 100 feet can be reasonably extrapolated to be adequate.

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SUMMARY & CONCLUSIONS

1600 S. Federal Highway is a proposed mixed-use development to be located on the east side of S. Federal Highway (US 1 / State Road 5) between NE 65th Street / Port Royale Boulevard and McNab Road / SE 15th Street in Pompano Beach, Broward County, Florida. The subject site has a land area of approximately 2.35 acres (+/- 102,393 square feet) and is currently developed with an 11-story office building that includes a drive-in bank (BrightStar Credit Union) on the first floor. The site is served by two (2) driveways on S. Federal Highway. One (1) driveway is located near the southern boundary of the site and is limited to left-turns in, right-turns in and right-turns out. The other driveway is located near the northern boundary of the site and is limited to right-turns in and right-turns out.

The proposed development on this site includes 132 dwelling units in a 10-story building and 3,650 square feet of commercial / retail space on the ground floor adjacent to S. Federal Highway. *(For the purpose of this analysis for the plat application, the amount of additional commercial / retail space is 6,266 square feet.)* Vehicular access to the site ~~DRC~~ be modified. The existing southern driveway will remain in its current location; however, it will be converted to a left-turn in / right-turn in only driveway. The northern driveway will be relocated approximately 80 feet to the south and will be converted to a right-turn out only driveway. PZ24-12000027
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The proposed residential and retail development on the 1600 S. Federal Highway site is anticipated to generate 1,077 daily vehicle trips, 61 AM peak hour vehicle trips (20 inbound and 41 outbound) and 93 PM peak hour vehicle trips (53 inbound and 40 outbound).

The study intersection and project driveways are currently operating adequately during the weekday AM and PM peak hours and will continue to do so in the year 2027 with the proposed 1600 S. Federal Highway mixed-use project. The signal timings were optimized for the future build out conditions; however, only minor improvements to the intersection of S. Federal Highway and McNab Road can be achieved. It is noted that minor increases in delay are attributed to the proposed development (i.e. +1.3 sec/veh in the AM peak hour and +3.6 sec/veh in the PM peak hour). As such, the project impacts can be described as “de minimis”.

The 95th percentile queues for the northbound left-turn lane (in the PM peak hour) and for the westbound left-turn lane (in the AM peak hour) at the intersection of Federal Highway and McNab Road are estimated to exceed the available storage capacity of these turn lanes under existing conditions. This condition will continue in the build out year of 2027 without the subject project. When including the project traffic associated with the 1600 S. Federal Highway development, there is no project impact to the 95th percentile queue of the westbound left-turn lane in the AM peak hour. And the project impact to the 95th percentile queue of the northbound left-turn lane is an increase of 17 feet in the AM peak hour and 23 feet (less than one car length) in the PM peak hour. As such, the project impacts to these movements are considered to be minimal.

Based upon the projected driveway volumes, exclusive right-turn lanes are not warranted and the existing southbound left-turn lane at the southern driveway has adequate storage capacity to accommodate the projected left-turn volume.

DRC**PZ24-12000027****07/02/2025**

DRC

PZ24-12000027

07/02/2025

APPENDIX A

1600 S. Federal Highway – Pompano Beach, FL

Survey

DRC

PZ24-12000027

07/02/2025

DRC

PZ24-12000027

07/02/2025

APPENDIX B

1600 S. Federal Highway – Pompano Beach, FL

Preliminary Site Plan

DRC

PZ24-12000027

07/02/2025

DRC

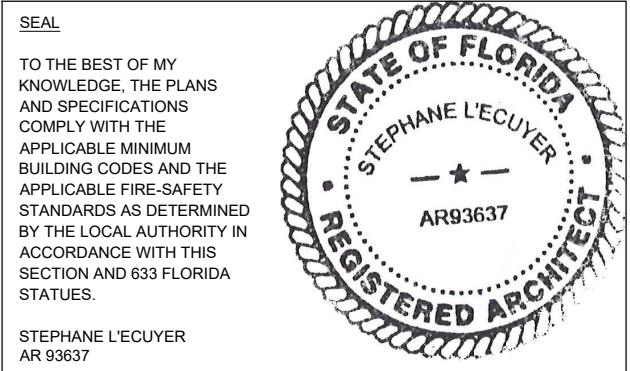
PZ24-12000027

07/02/2025

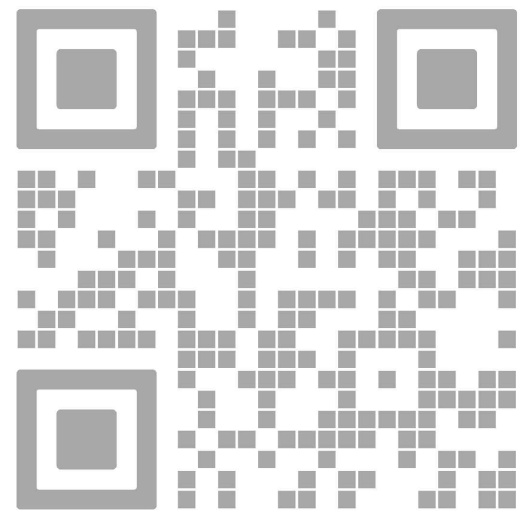


absolute-idea.com

CANAL PARK
3323 NE 163rd Street, Suite 200 North Miami Beach, FL 33160
(T) 305.792.0015 (F) 305.931.0279 @info@absolute-idea.com



ISSUE FOR:
DRC SUBMITTAL



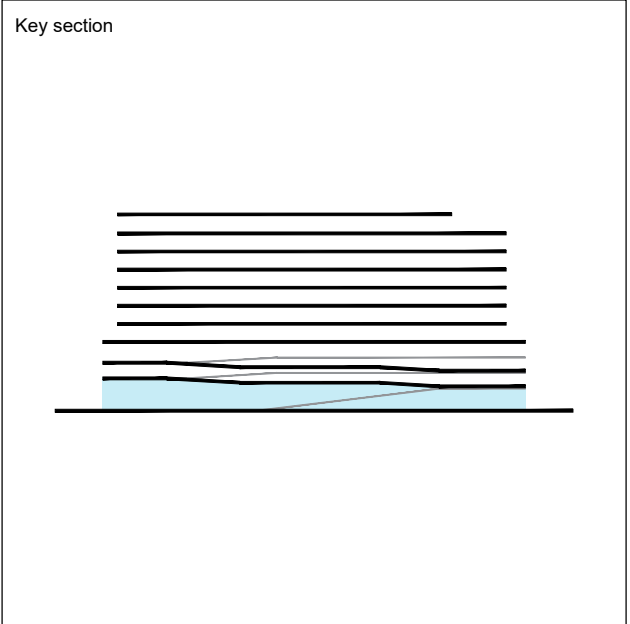
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01	01-29-2025	D.R.C. SUBMITTAL

DRC

PZ24-12000027

07/02/2025

ALL MEASUREMENTS MUST BE VERIFIED BEFORE BEGINNING THE WORK. NO MEASUREMENTS ARE TO BE SCALED DIRECTLY FROM THIS DRAWING.



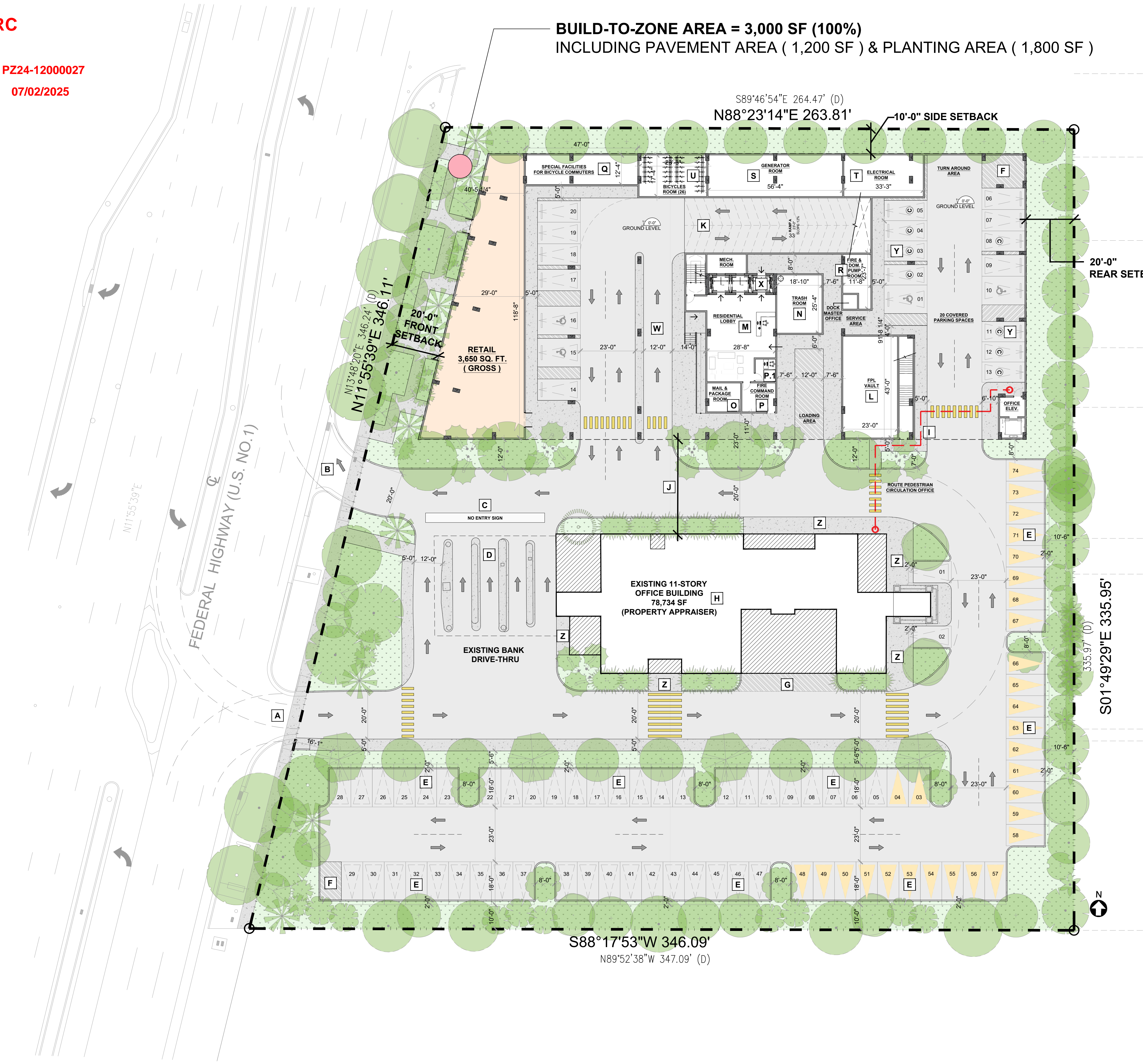
Client
VERA FUND
NICK POLYUSHKIN
& YURI KHARITONENKOV
TEL: 305.833.3303

Project
**1600 S FEDERAL HIGHWAY
(MIXED-USE PROJECT)**
1600 SOUTH FEDERAL HIGHWAY,
POMPAÑO BEACH, FL 33062

Title
SITE PLAN

Drawn
J. WU
Verified
N. TREMBLAY
Approved
S. L'ECUYER

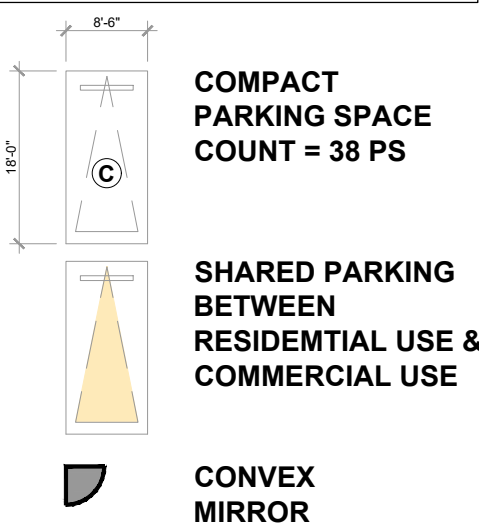
Field
ARCHITECTURE
Scale
as shown
Date
02-28-2025
Project Manager
J. WU
Project
24-838
Dwg. no.
A-080



SITE PLAN KEYNOTES & LEGEND	
A	SITE ENTRANCE (ONE-WAY ONLY) FROM FEDERAL HIGHWAY
B	SITE EXIT (ONE-WAY ONLY) TO FEDERAL HIGHWAY
C	NO ENTRY SIGN, DRIVE-THRU EXIT FOR EXISTING BANK
D	EXISTING BANK DRIVE-THRU TO REMAIN
E	TYPICAL 9' X 18' PARKING STALL WITH 2 FEET OVERHANG
F	VEHICULAR TURN AROUND AREA FOR DEAD END
G	EXISTING LOADING AREA FOR OFFICE BUILDING USE ONLY
H	EXISTING 11-STORY OFFICE BUILDING (78,734 SF)
I	PEDESTRIAN CIRCULATION ROUTE FOR EXISTING OFFICE BUILDING
J	40 FEET BUILDING SEPARATION FROM EXISTING BUILDING
K	SPEED RAMP (12% SLOPE) ACCESS TO UPPER PARKING LEVEL
L	FPL VAULT TO BE COORDINATED WITH CIVIL ENGINEER
M	RESIDENTIAL LOBBY WITH SERVICE ELEVATOR IN THE BACK
N	SHARED TRASH ROOM (18'-10" X 25'-4")
O	MAIL & PACKAGE ROOM (13'-10" X 22'-10")
P	FIRE COMMAND ROOM (11'-2" X 13'-10")
P.1	LEASING OFFICE (8'-4" X 9'-4")
Q	SPECIAL FACILITIES FOR BICYCLE COMMUTERS (TBD)
R	FIRE & DOMESTIC PUMP ROOM (11'-8" X 22'-11")
S	GENERATOR ROOM (17'-4" X 56'-4")
T	ELECTRICAL ROOM (17'-4" X 33'-3")
U	BICYCLES ROOM (17'-4" X 28'-3")
V	PROPOSED LOADING AREA (12'-0" X 36'-0")
W	PROPOSED RESIDENTIAL DROP-OFF AREA
X	SERVICE ELEVATOR FOR RESIDENTIAL USE
Y	8'-6" X 18'-0" COMPACT PARKING STALL
Z	EXISTING SIDEWALK TO REMAIN
GROUND RETAIL AREA GROSS FLOOR AREA: 3,650 SF	

PARKING COUNT PER LEVEL	
LEVEL	COUNT
LEVEL 3	18 PS
LEVEL 2	77 PS
LEVEL 1.5	60 PS
LEVEL 1	20 PS
SURFACE	74 PS
TOTAL	249 PS

DENSITY COUNT	
DENSITY ALLOWED	46 DU / AC = 46 X 2.351 AC = 108 UNITS
BONUS DENSITY	UP TO 50% = 0.5 X 46 = 23 DU / AC
DENSITY WITH BONUS	69 DU / AC = 69 X 2.351 AC = 162 UNITS
TOTAL PROVIDED	132 UNITS



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PZ24-12000027
07/02/2025

APPENDIX C

Traffic Counts

DRC

PZ24-12000027
07/02/2025

Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

File Name : 1-Federal Hwy & McNab Rd

Site Code : 00000000

Start Date : 9/24/2024

Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Federal Hwy From North					SE 15th Street From East					Federal Hwy From South					McNab Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
07:00	44	276	2	0	322	2	5	10	0	17	5	144	16	0	165	20	1	32	0	53	557
07:15	49	367	0	1	417	2	10	14	0	26	3	253	38	0	294	42	0	50	0	92	829
07:30	79	406	0	3	488	1	22	53	0	76	5	350	40	2	397	69	6	93	0	168	1129
07:45	54	412	2	5	473	2	20	37	0	59	9	343	52	1	405	75	7	106	0	188	1125
Total	226	1461	4	9	1700	7	57	114	0	178	22	1090	146	3	1261	206	14	281	0	501	3640
08:00	22	272	3	2	299	0	6	13	0	19	9	350	34	0	393	75	4	77	0	156	867
08:15	33	325	9	3	370	4	6	13	0	23	5	211	39	4	259	86	2	61	0	149	801
08:30	44	398	4	6	452	2	7	13	0	22	6	342	30	1	379	68	1	50	0	119	972
08:45	31	340	2	4	377	7	13	10	0	30	6	260	38	3	307	82	3	71	0	156	870
Total	130	1335	18	15	1498	13	32	49	0	94	26	1163	141	8	1338	311	10	259	0	580	3510
*** BREAK ***																					
16:00	81	290	4	2	377	10	10	10	0	30	3	341	58	2	404	46	5	96	0	147	958
16:15	74	288	1	5	368	4	13	15	0	32	6	369	69	1	445	33	3	76	0	112	957
16:30	96	325	4	4	429	3	18	15	0	36	18	377	63	8	466	37	9	74	0	120	1051
16:45	69	305	4	4	382	6	14	13	0	33	12	356	60	1	429	38	3	82	0	123	967
Total	320	1208	13	15	1556	23	55	53	0	131	39	1443	250	12	1744	154	20	328	0	502	3933
17:00	71	316	3	2	392	5	18	15	0	38	21	453	77	1	552	47	DRC	66	0	117	1099
17:15	73	350	3	5	431	4	11	12	0	27	16	436	74	7	533	51	7	81	0	139	1130
17:30	77	303	3	3	386	2	11	20	0	33	10	413	65	2	490	47	7	68	1	123	1032
17:45	67	288	2	3	360	3	10	16	0	29	8	349	57	2	416	46	5	73	0	124	929
Total	288	1257	11	13	1569	14	50	63	0	127	55	1651	273	12	1991	191	23	PZ24-12000027 07/02/2025 288	1	503	4190
Grand Total	964	5261	46	52	6323	57	194	279	0	530	142	5347	810	35	6334	862	67	1156	1	2086	15273
Apprch %	15.2	83.2	0.7	0.8		10.8	36.6	52.6	0		2.2	84.4	12.8	0.6		41.3	3.2	55.4	0		
Total %	6.3	34.4	0.3	0.3	41.4	0.4	1.3	1.8	0	3.5	0.9	35	5.3	0.2	41.5	5.6	0.4	7.6	0	13.7	
Autos	951	5206	46	50	6253	56	193	276	0	525	141	5290	796	35	6262	854	67	1146	1	2068	15108
% Autos	98.7	99	100	96.2	98.9	98.2	99.5	98.9	0	99.1	99.3	98.9	98.3	100	98.9	99.1	100	99.1	100	99.1	98.9
Heavy Vehicles																					
% Heavy Vehicles	1.3	1	0	3.8	1.1	1.8	0.5	1.1	0	0.9	0.7	1.1	1.7	0	1.1	0.9	0	0.9	0	0.9	1.1

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PZ24-12000027

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PZ24-12000027

07/02/2025

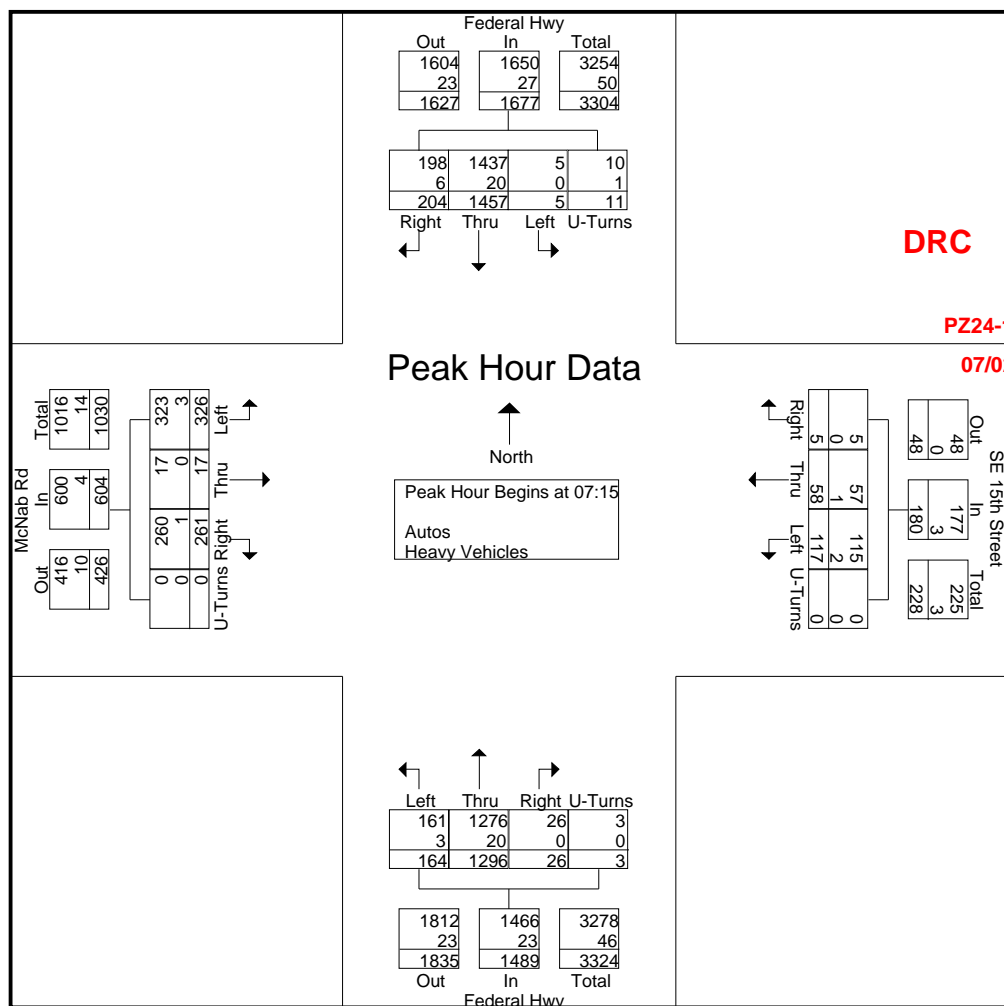
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Site Code : 00000000

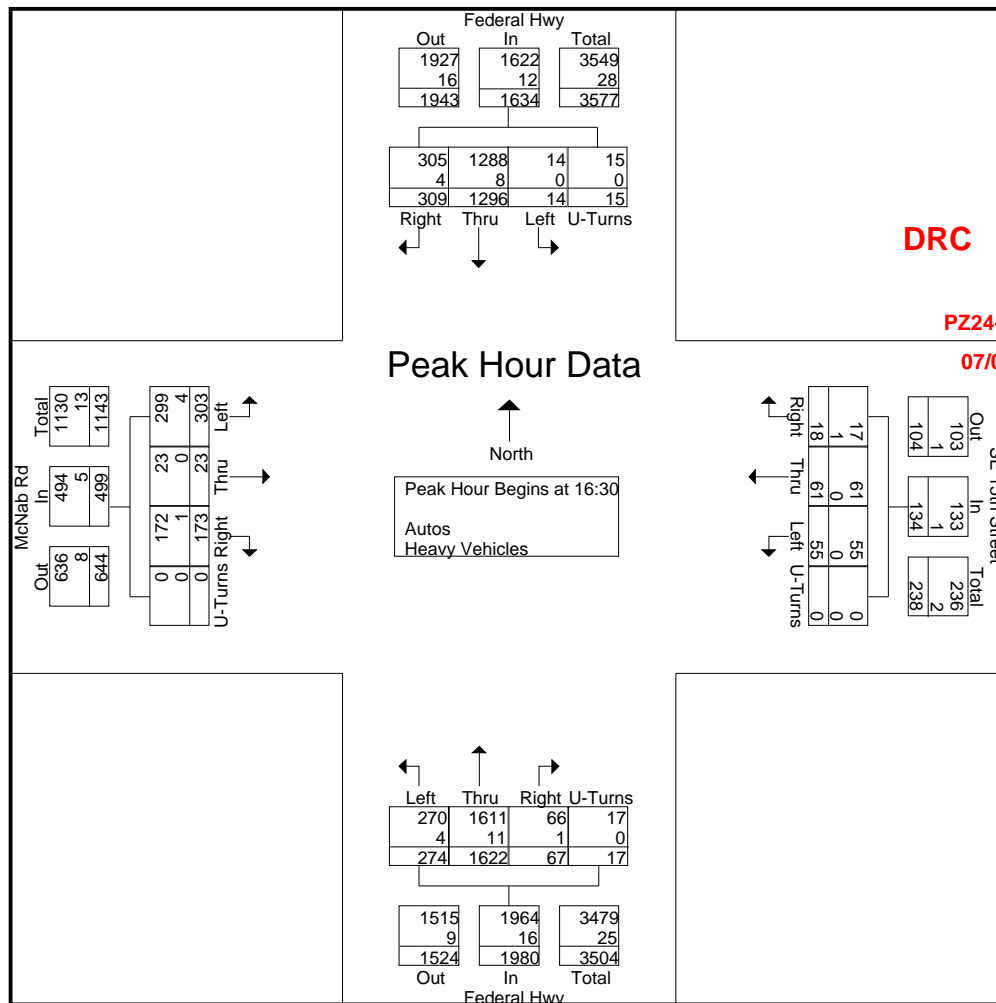
Start Date : 9/24/2024

Page No : 4

	Federal Hwy From North					SE 15th Street From East					Federal Hwy From South					McNab Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	49	367	0	1	417	2	10	14	0	26	3	253	38	0	294	42	0	50	0	92	829
07:30	79	406	0	3	488	1	22	53	0	76	5	350	40	2	397	69	6	93	0	168	1129
07:45	54	412	2	5	473	2	20	37	0	59	9	343	52	1	405	75	7	106	0	188	1125
08:00	22	272	3	2	299	0	6	13	0	19	9	350	34	0	393	75	4	77	0	156	867
Total Volume	204	1457	5	11	1677	5	58	117	0	180	26	1296	164	3	1489	261	17	326	0	604	3950
% App. Total	12.2	86.9	0.3	0.7		2.8	32.2	65	0		1.7	87	11	0.2		43.2	2.8	54	0		
PHF	.646	.884	.417	.550	.859	.625	.659	.552	.000	.592	.722	.926	.788	.375	.919	.870	.607	.769	.000	.803	.875
Autos	198	1437	5	10	1650	5	57	115	0	177	26	1276	161	3	1466	260	17	323	0	600	3893
% Autos	97.1	98.6	100	90.9	98.4	100	98.3	98.3	0	98.3	100	98.5	98.2	100	98.5	99.6	100	99.1	0	99.3	98.6
Heavy Vehicles	6	20	0	1	27	0	1	2	0	3	0	20	3	0	23	1	0	3	0	4	57
% Heavy Vehicles	2.9	1.4	0	9.1	1.6	0	1.7	1.7	0	1.7	0	1.5	1.8	0	1.5	0.4	0	0.9	0	0.7	1.4



	Federal Hwy From North					SE 15th Street From East					Federal Hwy From South					McNab Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	96	325	4	4	429	3	18	15	0	36	18	377	63	8	466	37	9	74	0	120	1051
16:45	69	305	4	4	382	6	14	13	0	33	12	356	60	1	429	38	3	82	0	123	967
17:00	71	316	3	2	392	5	18	15	0	38	21	453	77	1	552	47	4	66	0	117	1099
17:15	73	350	3	5	431	4	11	12	0	27	16	436	74	7	533	51	7	81	0	139	1130
Total Volume	309	1296	14	15	1634	18	61	55	0	134	67	1622	274	17	1980	173	23	303	0	499	4247
% App. Total	18.9	79.3	0.9	0.9		13.4	45.5	41	0		3.4	81.9	13.8	0.9		34.7	4.6	60.7	0		
PHF	.805	.926	.875	.750	.948	.750	.847	.917	.000	.882	.798	.895	.890	.531	.897	.848	.639	.924	.000	.897	.940
Autos	305	1288	14	15	1622	17	61	55	0	133	66	1611	270	17	1964	172	23	299	0	494	4213
% Autos	98.7	99.4	100	100	99.3	94.4	100	100	0	99.3	98.5	99.3	98.5	100	99.2	99.4	100	98.7	0	99.0	99.2
Heavy Vehicles	4	8	0	0	12	1	0	0	0	1	1	11	4	0	16	1	0	4	0	5	34
% Heavy Vehicles	1.3	0.6	0	0	0.7	5.6	0	0	0	0.7	1.5	0.7	1.5	0	0.8	0.6	0	1.3	0	1.0	0.8



Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

File Name : 2-Federal Hwy at Site N Driveway

Site Code : 00000000

Start Date : 9/24/2024

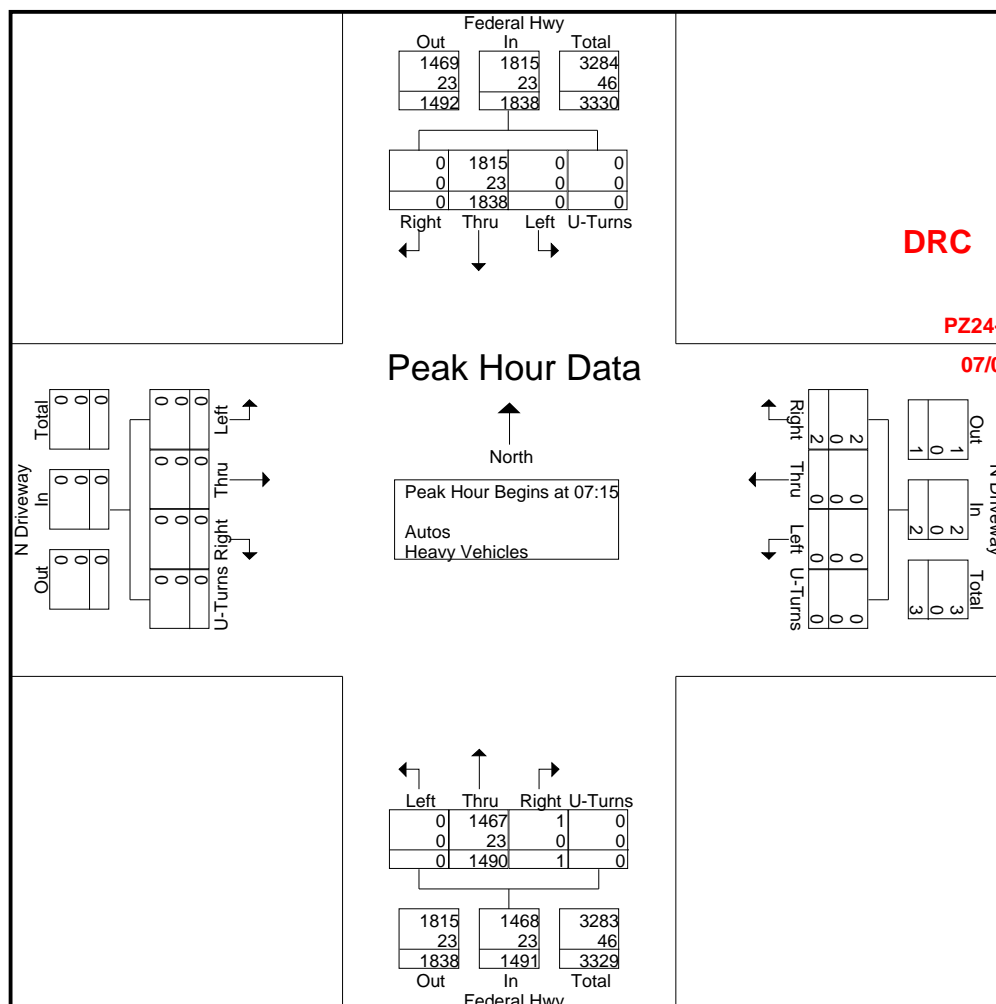
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Groups Printed- Autos - Heavy Vehicles

	Federal Hwy From North					N Driveway From East					Federal Hwy From South					N Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
07:00	0	306	0	0	306	0	0	0	0	0	1	164	0	0	165	0	0	0	0	0	471
07:15	0	423	0	0	423	0	0	0	0	0	0	294	0	0	294	0	0	0	0	0	717
07:30	0	530	0	0	530	0	0	0	0	0	0	397	0	0	397	0	0	0	0	0	927
07:45	0	525	0	0	525	1	0	0	0	1	1	405	0	0	406	0	0	0	0	0	932
Total	0	1784	0	0	1784	1	0	0	0	1	2	1260	0	0	1262	0	0	0	0	0	3047
08:00	0	360	0	0	360	1	0	0	0	1	0	394	0	0	394	0	0	0	0	0	755
08:15	0	428	0	0	428	0	0	0	0	0	1	258	0	0	259	0	0	0	0	0	687
08:30	0	480	0	0	480	1	0	0	0	1	0	380	0	0	380	0	0	0	0	0	861
08:45	0	435	0	0	435	2	0	0	0	2	2	307	0	0	309	0	0	0	0	0	746
Total	0	1703	0	0	1703	4	0	0	0	4	3	1339	0	0	1342	0	0	0	0	0	3049
*** BREAK ***																					
16:00	0	348	0	0	348	4	0	0	0	4	0	408	0	0	408	0	0	0	0	0	760
16:15	0	337	0	0	337	2	0	0	0	2	0	447	0	0	447	0	0	0	0	0	786
16:30	0	385	0	0	385	7	0	0	0	7	0	473	0	0	473	0	0	0	0	0	865
16:45	0	357	0	0	357	4	0	0	0	4	2	431	0	0	433	0	0	0	0	0	794
Total	0	1427	0	0	1427	17	0	0	0	17	2	1759	0	0	1761	0	0	0	0	0	3205
17:00	0	379	0	0	379	10	0	0	0	10	0	562	0	0	562	0	DRC	0	0	0	951
17:15	0	420	0	0	420	3	0	0	0	3	0	536	0	0	536	0	0	0	0	0	959
17:30	0	372	0	0	372	9	0	0	0	9	0	499	0	0	499	0	0	0	0	0	880
17:45	0	352	0	0	352	9	0	0	0	9	0	425	0	0	425	0	0	0	0	0	786
Total	0	1523	0	0	1523	31	0	0	0	31	0	2022	0	0	2022	0	0	0	0	0	3576
Grand Total	0	6437	0	0	6437	53	0	0	0	53	7	6380	0	0	6387	0	0	0	0	0	12877
Apprch %	0	100	0	0		100	0	0	0		0.1	99.9	0	0		0	0	0	0		
Total %	0	50	0	0	50	0.4	0	0	0	0.4	0.1	49.5	0	0	49.6	0	0	0	0	0	
Autos	0	6371	0	0	6371	52	0	0	0	52	6	6308	0	0	6314	0	0	0	0	0	12737
% Autos	0	99	0	0	99	98.1	0	0	0	98.1	85.7	98.9	0	0	98.9	0	0	0	0	0	98.9
Heavy Vehicles																					
% Heavy Vehicles	0	1	0	0	1	1.9	0	0	0	1.9	14.3	1.1	0	0	1.1	0	0	0	0	0	1.1

PZ24-12000027
07/02/2025

	Federal Hwy From North					N Driveway From East					Federal Hwy From South					N Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	423	0	0	423	0	0	0	0	0	0	294	0	0	294	0	0	0	0	0	717
07:30	0	530	0	0	530	0	0	0	0	0	0	397	0	0	397	0	0	0	0	0	927
07:45	0	525	0	0	525	1	0	0	0	1	1	405	0	0	406	0	0	0	0	0	932
08:00	0	360	0	0	360	1	0	0	0	1	0	394	0	0	394	0	0	0	0	0	755
Total Volume	0	1838	0	0	1838	2	0	0	0	2	1	1490	0	0	1491	0	0	0	0	0	3331
% App. Total	0	100	0	0		100	0	0	0		0.1	99.9	0	0		0	0	0	0		
PHF	.000	.867	.000	.000	.867	.500	.000	.000	.000	.500	.250	.920	.000	.000	.918	.000	.000	.000	.000	.000	.894
Autos	0	1815	0	0	1815	2	0	0	0	2	1	1467	0	0	1468	0	0	0	0	0	3285
% Autos	0	98.7	0	0	98.7	100	0	0	0	100	100	98.5	0	0	98.5	0	0	0	0	0	98.6
Heavy Vehicles	0	23	0	0	23	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	46
% Heavy Vehicles	0	1.3	0	0	1.3	0	0	0	0	0	0	1.5	0	0	1.5	0	0	0	0	0	1.4



Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

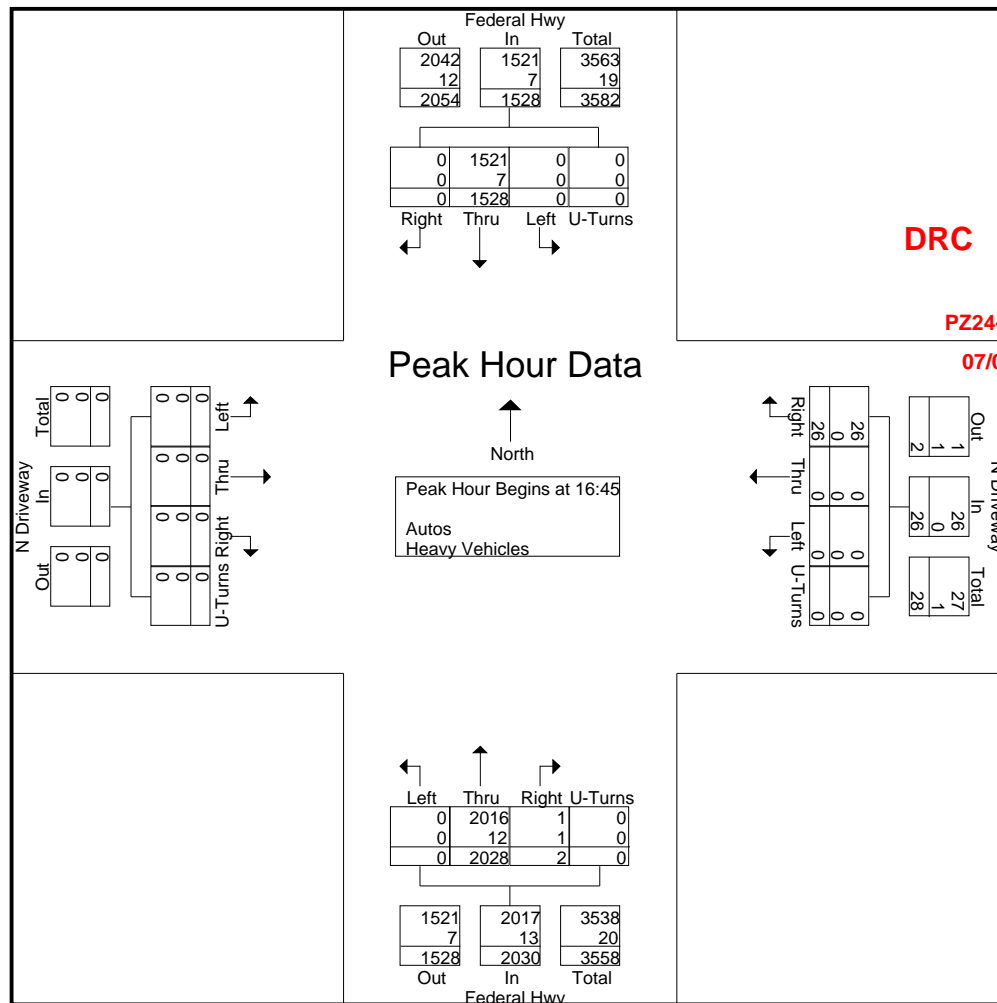
File Name : 2-Federal Hwy at Site N Driveway

Site Code : 00000000

Start Date : 9/24/2024

Page No : 5

	Federal Hwy From North					N Driveway From East					Federal Hwy From South					N Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	357	0	0	357	4	0	0	0	4	2	431	0	0	433	0	0	0	0	0	794
17:00	0	379	0	0	379	10	0	0	0	10	0	562	0	0	562	0	0	0	0	0	951
17:15	0	420	0	0	420	3	0	0	0	3	0	536	0	0	536	0	0	0	0	0	959
17:30	0	372	0	0	372	9	0	0	0	9	0	499	0	0	499	0	0	0	0	0	880
Total Volume	0	1528	0	0	1528	26	0	0	0	26	2	2028	0	0	2030	0	0	0	0	0	3584
% App. Total	0	100	0	0	0	100	0	0	0	0	0.1	99.9	0	0	0	0	0	0	0	0	0
PHF	.000	.910	.000	.000	.910	.650	.000	.000	.000	.650	.250	.902	.000	.000	.903	.000	.000	.000	.000	.000	.934
Autos	0	1521	0	0	1521	26	0	0	0	26	1	2016	0	0	2017	0	0	0	0	0	3564
% Autos	0	99.5	0	0	99.5	100	0	0	0	100	50.0	99.4	0	0	99.4	0	0	0	0	0	99.4
Heavy Vehicles	0	7	0	0	7	0	0	0	0	0	1	12	0	0	13	0	0	0	0	0	20
% Heavy Vehicles	0	0.5	0	0	0.5	0	0	0	0	0	50.0	0.6	0	0	0.6	0	0	0	0	0	0.6



Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

File Name : 3-Federal Hwy at Sive S Driveway

Site Code : 00000000

Start Date : 9/24/2024

Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Federal Hwy From North					S Driveway From East					Federal Hwy From South					S Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
07:00	1	301	0	1	303	0	0	0	0	0	0	151	3	4	158	6	0	0	0	6	467
07:15	0	415	0	0	415	0	0	0	0	0	0	286	3	1	290	14	0	0	0	14	719
07:30	3	517	3	3	526	0	0	0	0	0	3	387	1	2	393	23	0	0	0	23	942
07:45	3	513	2	4	522	3	0	0	0	3	1	394	3	1	399	17	0	1	0	18	942
Total	7	1746	5	8	1766	3	0	0	0	3	4	1218	10	8	1240	60	0	1	0	61	3070
08:00	0	351	1	0	352	1	0	0	0	1	0	386	0	1	387	21	0	0	0	21	761
08:15	4	409	5	3	421	2	0	0	0	2	3	249	3	0	255	18	0	1	0	19	697
08:30	6	461	1	1	469	1	0	0	0	1	3	370	1	0	374	10	0	0	0	10	854
08:45	2	412	17	2	433	1	0	0	0	1	4	295	2	1	302	9	0	0	0	9	745
Total	12	1633	24	6	1675	5	0	0	0	5	10	1300	6	2	1318	58	0	1	0	59	3057
*** BREAK ***																					
16:00	4	337	1	0	342	1	0	0	0	1	4	394	4	1	403	7	0	0	0	7	753
16:15	3	327	5	0	335	8	0	0	0	8	2	436	5	2	445	7	0	0	0	7	795
16:30	0	375	5	2	382	14	0	0	0	14	1	463	4	0	468	7	0	0	0	7	871
16:45	0	353	1	2	356	4	0	1	0	5	0	423	3	1	427	6	0	0	0	6	794
Total	7	1392	12	4	1415	27	0	1	0	28	7	1716	16	4	1743	27	0	0	0	27	3213
17:00	5	369	1	1	376	5	0	0	0	5	1	551	6	2	560	9	DRC	1	0	10	951
17:15	6	413	1	0	420	2	0	0	0	2	1	525	4	2	532	5	0	0	0	5	959
17:30	6	364	0	0	370	0	0	0	0	0	0	498	0	0	498	8	0	1	0	9	877
17:45	10	339	2	1	352	0	0	0	0	0	0	423	0	0	423	12	0	1	0	13	788
Total	27	1485	4	2	1518	7	0	0	0	7	2	1997	10	4	2013	34	0	3	0	37	3575
Grand Total	53	6256	45	20	6374	42	0	1	0	43	23	6231	42	18	6314	179	0	5	0	184	12915
Apprch %	0.8	98.1	0.7	0.3		97.7	0	2.3	0		0.4	98.7	0.7	0.3		97.3	0	2.7	0		
Total %	0.4	48.4	0.3	0.2	49.4	0.3	0	0	0	0.3	0.2	48.2	0.3	0.1	48.9	1.4	0	0	0	1.4	
Autos	53	6256	43	19	6371	41	0	1	0	42	22	6231	42	18	6313	179	0	5	0	184	12910
% Autos	100	100	95.6	95	100	97.6	0	100	0	97.7	95.7	100	100	100	100	100	0	100	0	100	100
Heavy Vehicles																					
% Heavy Vehicles	0	0	4.4	5	0	2.4	0	0	0	2.3	4.3	0	0	0	0	0	0	0	0	0	0

PZ24-12000027

07/02/2025

Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

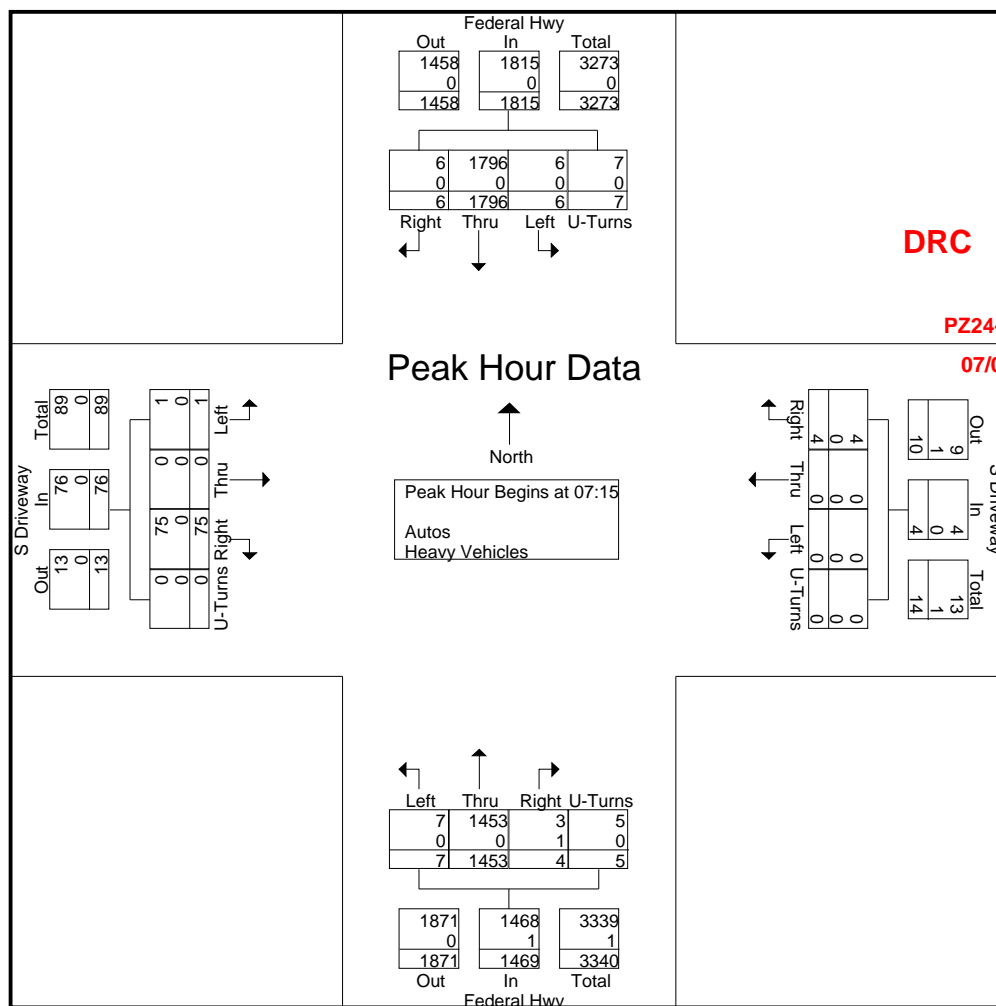
File Name : 3-Federal Hwy at Sive S Driveway

Site Code : 00000000

Start Date : 9/24/2024

Page No : 4

	Federal Hwy From North					S Driveway From East					Federal Hwy From South					S Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	415	0	0	415	0	0	0	0	0	0	286	3	1	290	14	0	0	0	14	719
07:30	3	517	3	3	526	0	0	0	0	0	3	387	1	2	393	23	0	0	0	23	942
07:45	3	513	2	4	522	3	0	0	0	3	1	394	3	1	399	17	0	1	0	18	942
08:00	0	351	1	0	352	1	0	0	0	1	0	386	0	1	387	21	0	0	0	21	761
Total Volume	6	1796	6	7	1815	4	0	0	0	4	4	1453	7	5	1469	75	0	1	0	76	3364
% App. Total	0.3	99	0.3	0.4		100	0	0	0		0.3	98.9	0.5	0.3		98.7	0	1.3	0		
PHF	.500	.868	.500	.438	.863	.333	.000	.000	.000	.333	.333	.922	.583	.625	.920	.815	.000	.250	.000	.826	.893
Autos	6	1796	6	7	1815	4	0	0	0	4	3	1453	7	5	1468	75	0	1	0	76	3363
% Autos	100	100	100	100	100	100	0	0	0	100	75.0	100	100	100	99.9	100	0	100	0	100	100.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	25.0	0	0	0	0.1	0	0	0	0	0	0.0



Traff Tech Engineering Inc.

PZ24-12000027

07/02/2025

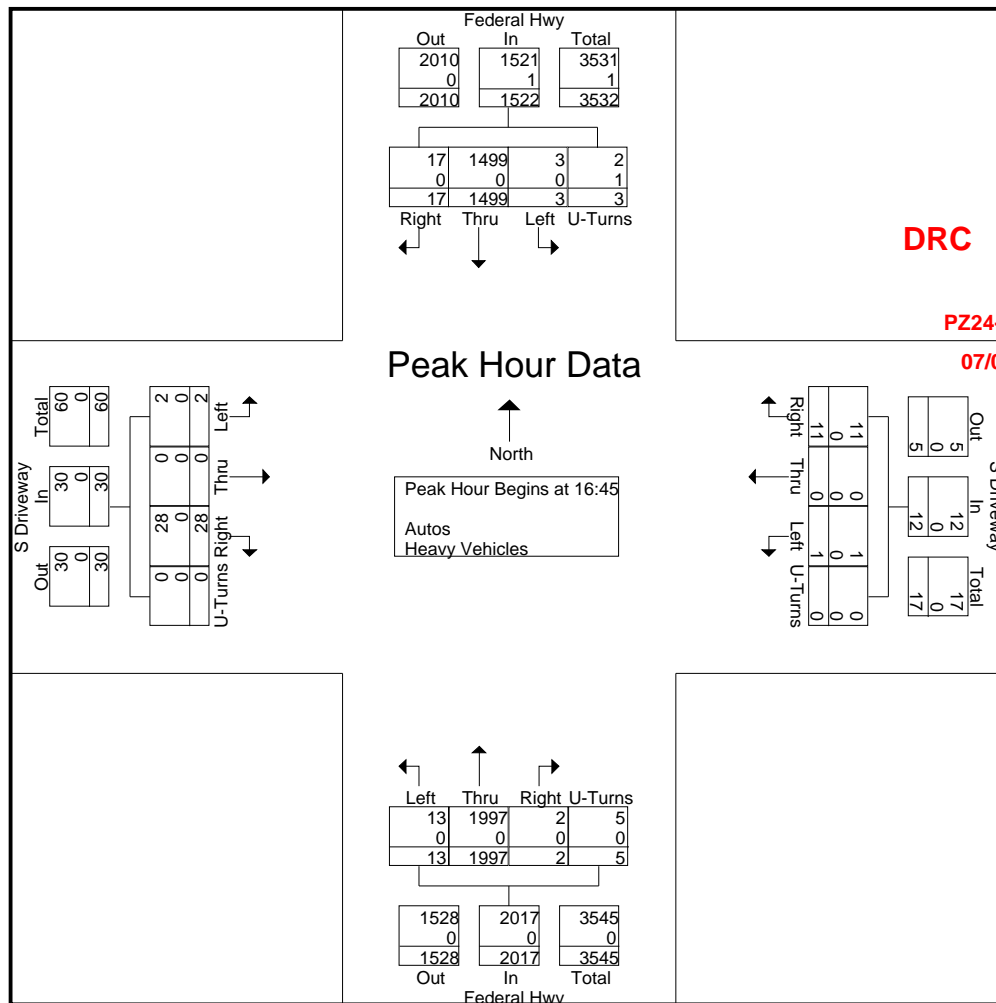
File Name : 3-Federal Hwy at Sive S Driveway

Site Code : 00000000

Start Date : 9/24/2024

Page No : 5

	Federal Hwy From North					S Driveway From East					Federal Hwy From South					S Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	353	1	2	356	4	0	1	0	5	0	423	3	1	427	6	0	0	0	6	794
17:00	5	369	1	1	376	5	0	0	0	5	1	551	6	2	560	9	0	1	0	10	951
17:15	6	413	1	0	420	2	0	0	0	2	1	525	4	2	532	5	0	0	0	5	959
17:30	6	364	0	0	370	0	0	0	0	0	0	498	0	0	498	8	0	1	0	9	877
Total Volume	17	1499	3	3	1522	11	0	1	0	12	2	1997	13	5	2017	28	0	2	0	30	3581
% App. Total	1.1	98.5	0.2	0.2		91.7	0	8.3	0		0.1	99	0.6	0.2		93.3	0	6.7	0		
PHF	.708	.907	.750	.375	.906	.550	.000	.250	.000	.600	.500	.906	.542	.625	.900	.778	.000	.500	.000	.750	.934
Autos	17	1499	3	2	1521	11	0	1	0	12	2	1997	13	5	2017	28	0	2	0	30	3580
% Autos	100	100	100	66.7	99.9	100	0	100	0	100	100	100	100	100	100	100	0	100	0	100	100.0
Heavy Vehicles	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	0	0	0	33.3	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0



DRC

PZ24-12000027

07/02/2025

APPENDIX D

FDOT Peak Season Conversion Factor Report

DRC

PZ24-12000027

07/02/2025

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8601 CEN.-W OF US1 TO SR7

WEEK	DATES	SF	MOCF: 0.99 PSCF
PZ24-12000027			
1	01/01/2024 - 01/06/2024	0.99	1.00
07/02/2025	01/07/2024 - 01/13/2024	1.01	1.02
3	01/14/2024 - 01/20/2024	1.04	1.05
4	01/21/2024 - 01/27/2024	1.03	1.04
5	01/28/2024 - 02/03/2024	1.02	1.03
6	02/04/2024 - 02/10/2024	1.01	1.02
7	02/11/2024 - 02/17/2024	1.00	1.01
8	02/18/2024 - 02/24/2024	1.00	1.01
9	02/25/2024 - 03/02/2024	1.00	1.01
10	03/03/2024 - 03/09/2024	0.99	1.00
11	03/10/2024 - 03/16/2024	0.99	1.00
12	03/17/2024 - 03/23/2024	0.99	1.00
13	03/24/2024 - 03/30/2024	0.99	1.00
14	03/31/2024 - 04/06/2024	0.99	1.00
15	04/07/2024 - 04/13/2024	0.99	1.00
16	04/14/2024 - 04/20/2024	0.99	1.00
17	04/21/2024 - 04/27/2024	0.99	1.00
18	04/28/2024 - 05/04/2024	1.00	1.01
19	05/05/2024 - 05/11/2024	1.00	1.01
20	05/12/2024 - 05/18/2024	1.00	1.01
21	05/19/2024 - 05/25/2024	1.01	1.02
22	05/26/2024 - 06/01/2024	1.02	1.03
23	06/02/2024 - 06/08/2024	1.03	1.04
24	06/09/2024 - 06/15/2024	1.04	1.05
25	06/16/2024 - 06/22/2024	1.04	1.05
26	06/23/2024 - 06/29/2024	1.04	1.05
27	06/30/2024 - 07/06/2024	1.04	1.05
28	07/07/2024 - 07/13/2024	1.04	1.05
29	07/14/2024 - 07/20/2024	1.04	1.05
30	07/21/2024 - 07/27/2024	1.02	1.03
31	07/28/2024 - 08/03/2024	1.01	1.02
32	08/04/2024 - 08/10/2024	1.00	1.01
33	08/11/2024 - 08/17/2024	0.99	1.00
34	08/18/2024 - 08/24/2024	0.99	1.00
35	08/25/2024 - 08/31/2024	0.99	1.00
36	09/01/2024 - 09/07/2024	1.00	1.01
37	09/08/2024 - 09/14/2024	1.00	1.01
38	09/15/2024 - 09/21/2024	1.00	1.01
*39	09/22/2024 - 09/28/2024	1.00	1.01
*40	09/29/2024 - 10/05/2024	1.00	1.01
*41	10/06/2024 - 10/12/2024	1.00	1.01
*42	10/13/2024 - 10/19/2024	1.00	1.01
*43	10/20/2024 - 10/26/2024	1.00	1.01
*44	10/27/2024 - 11/02/2024	0.99	1.00
*45	11/03/2024 - 11/09/2024	0.99	1.00
*46	11/10/2024 - 11/16/2024	0.99	1.00
*47	11/17/2024 - 11/23/2024	0.99	1.00
*48	11/24/2024 - 11/30/2024	0.99	1.00
*49	12/01/2024 - 12/07/2024	0.99	1.00
*50	12/08/2024 - 12/14/2024	0.99	1.00
*51	12/15/2024 - 12/21/2024	0.99	1.00
52	12/22/2024 - 12/28/2024	1.01	1.02
53	12/29/2024 - 12/31/2024	1.04	1.05

* PEAK SEASON

04-MAR-2025 16:32:53

830UPD

4_8601_PKSEASON.TXT

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07/02/2025

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PZ24-12000027

07/02/2025

APPENDIX E

ITE Trip Generation Manual (11th Edition)

Relevant Excerpts

DRC

PZ24-12000027

07/02/2025

Land Use: 221

Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 11

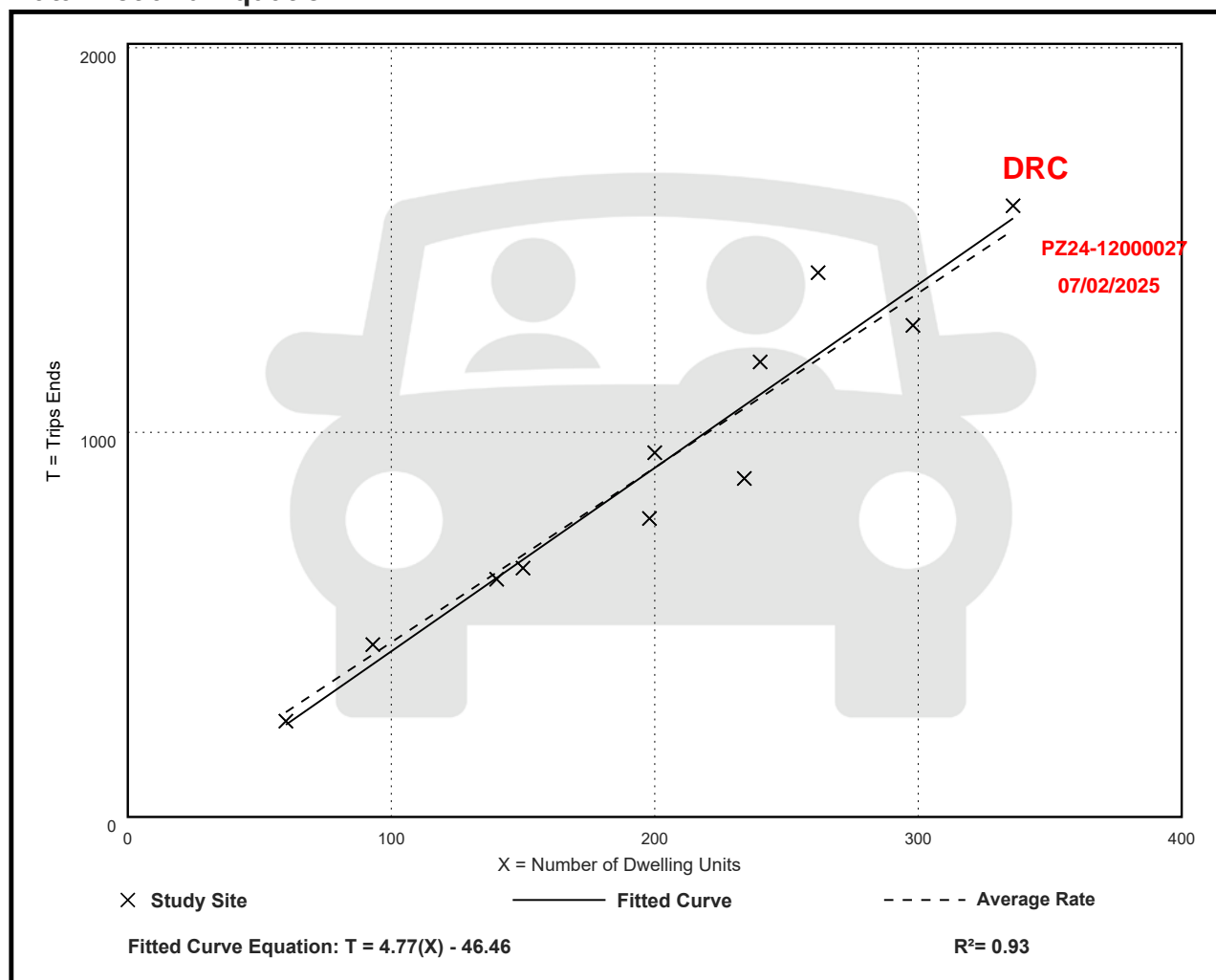
Avg. Num. of Dwelling Units: 201

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 30

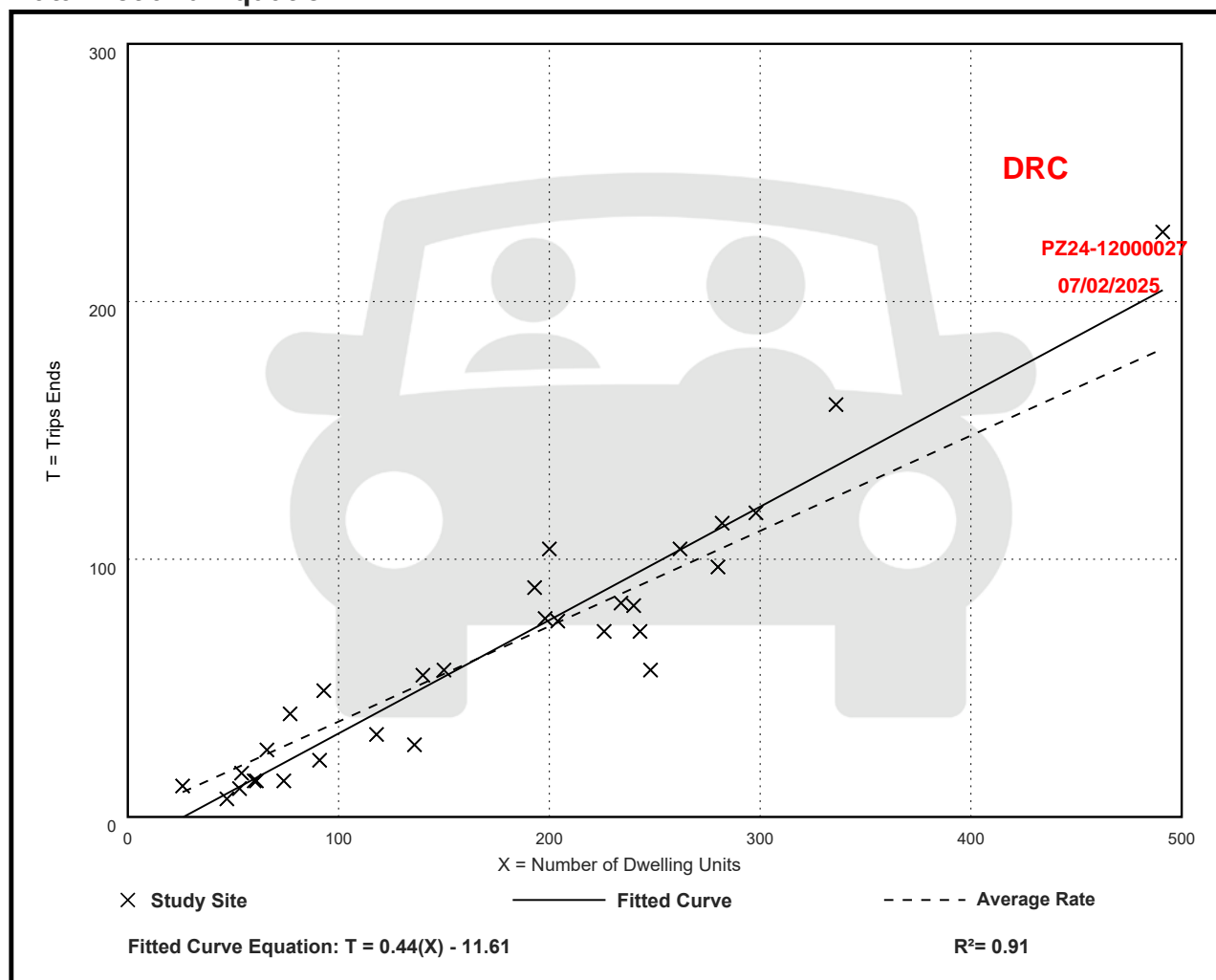
Avg. Num. of Dwelling Units: 173

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 31

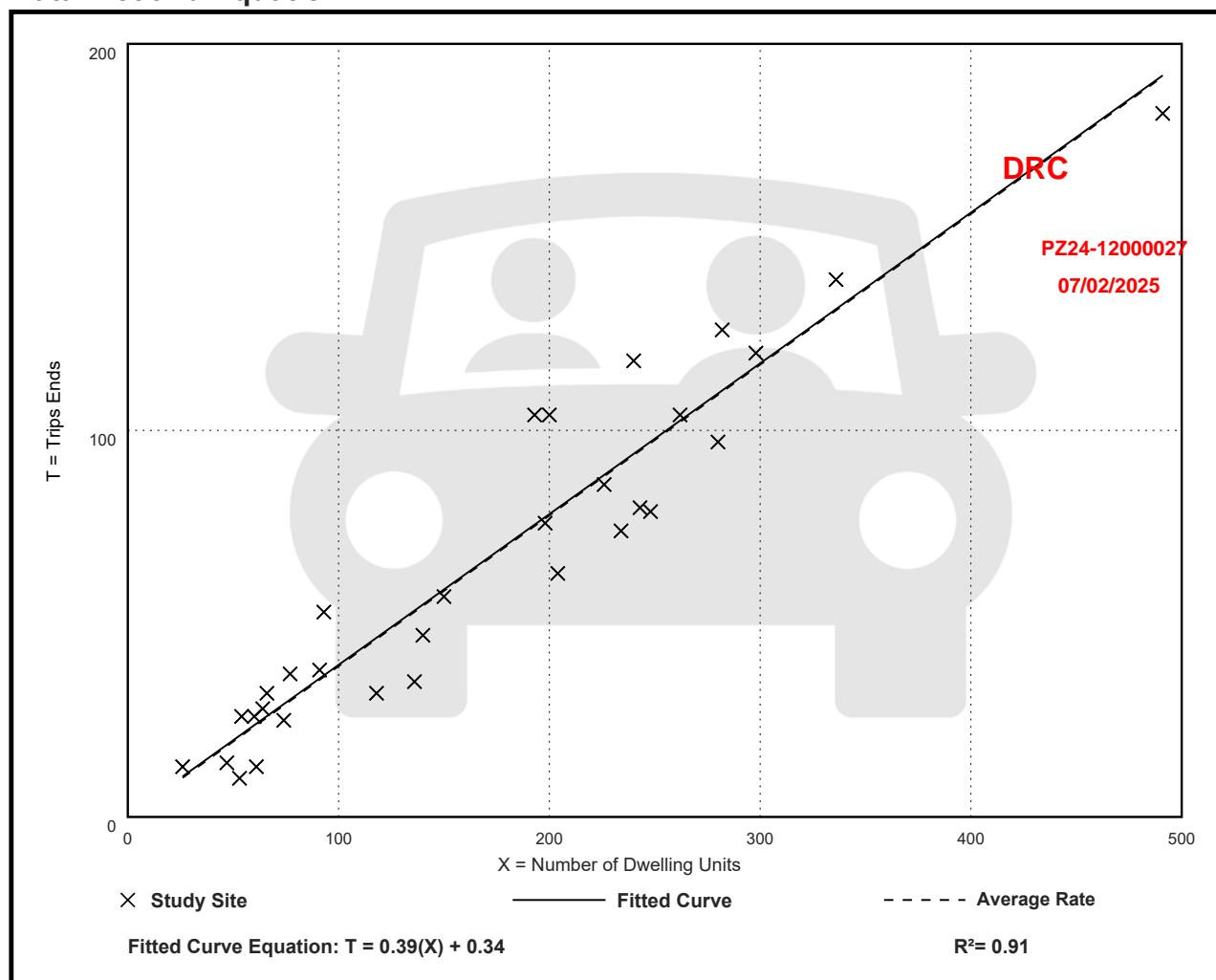
Avg. Num. of Dwelling Units: 169

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Land Use: 710

General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

DRC

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

PZ24-12000027 The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at
07/02/2025 which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN), Pennsylvania, Texas, Utah, Virginia, and Washington.

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PZ24-12000027

07/02/2025

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 59

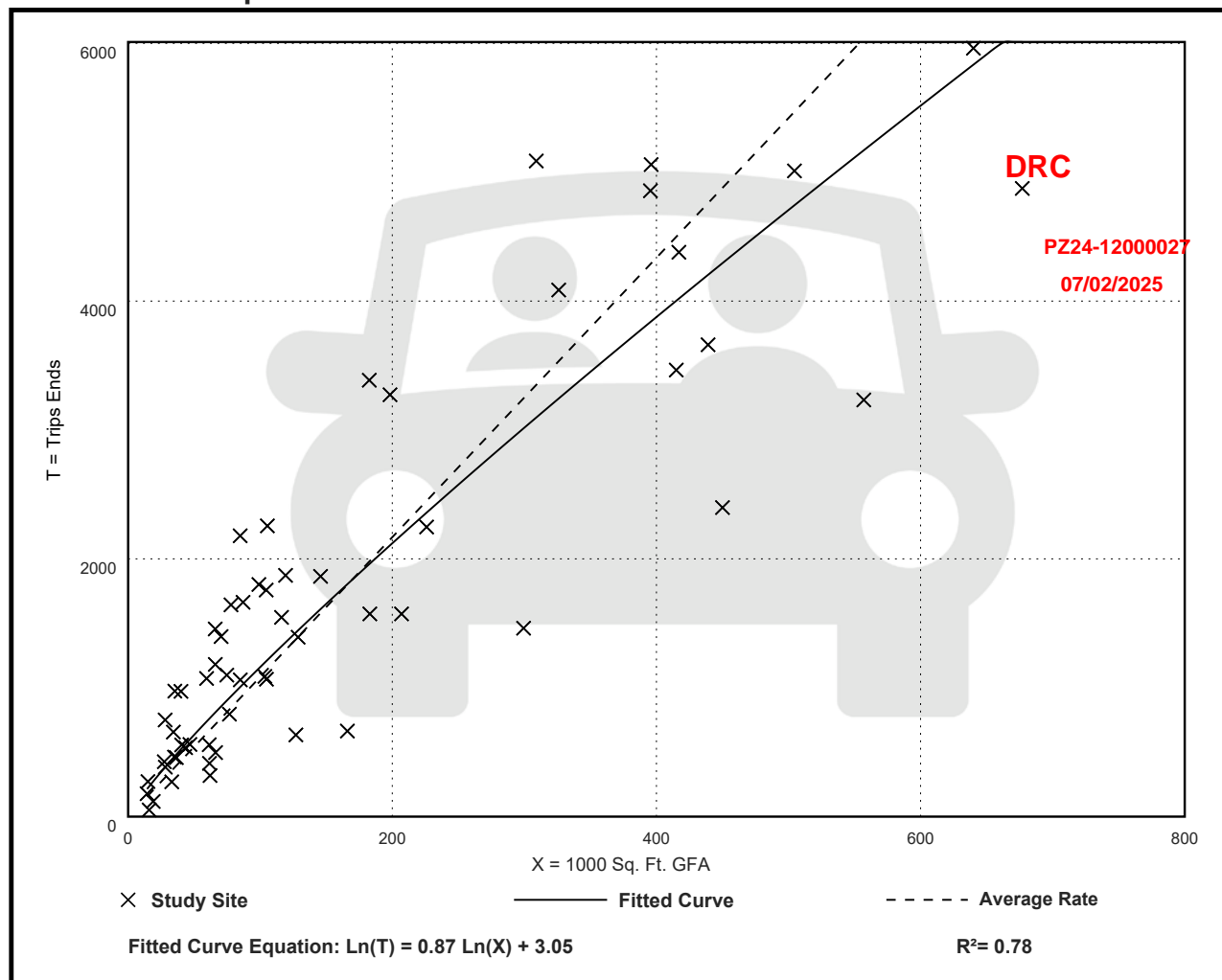
Avg. 1000 Sq. Ft. GFA: 163

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 221

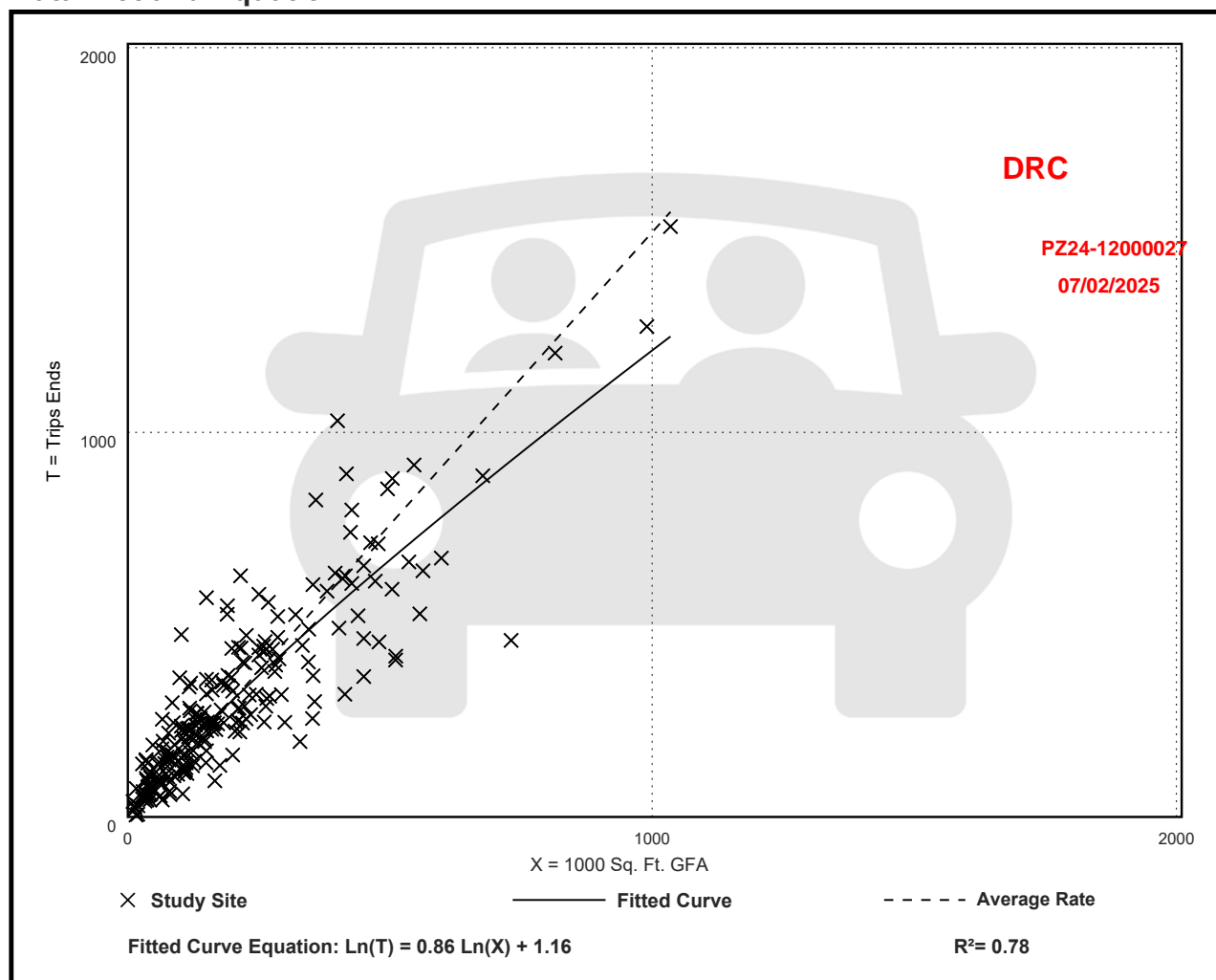
Avg. 1000 Sq. Ft. GFA: 201

Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 232

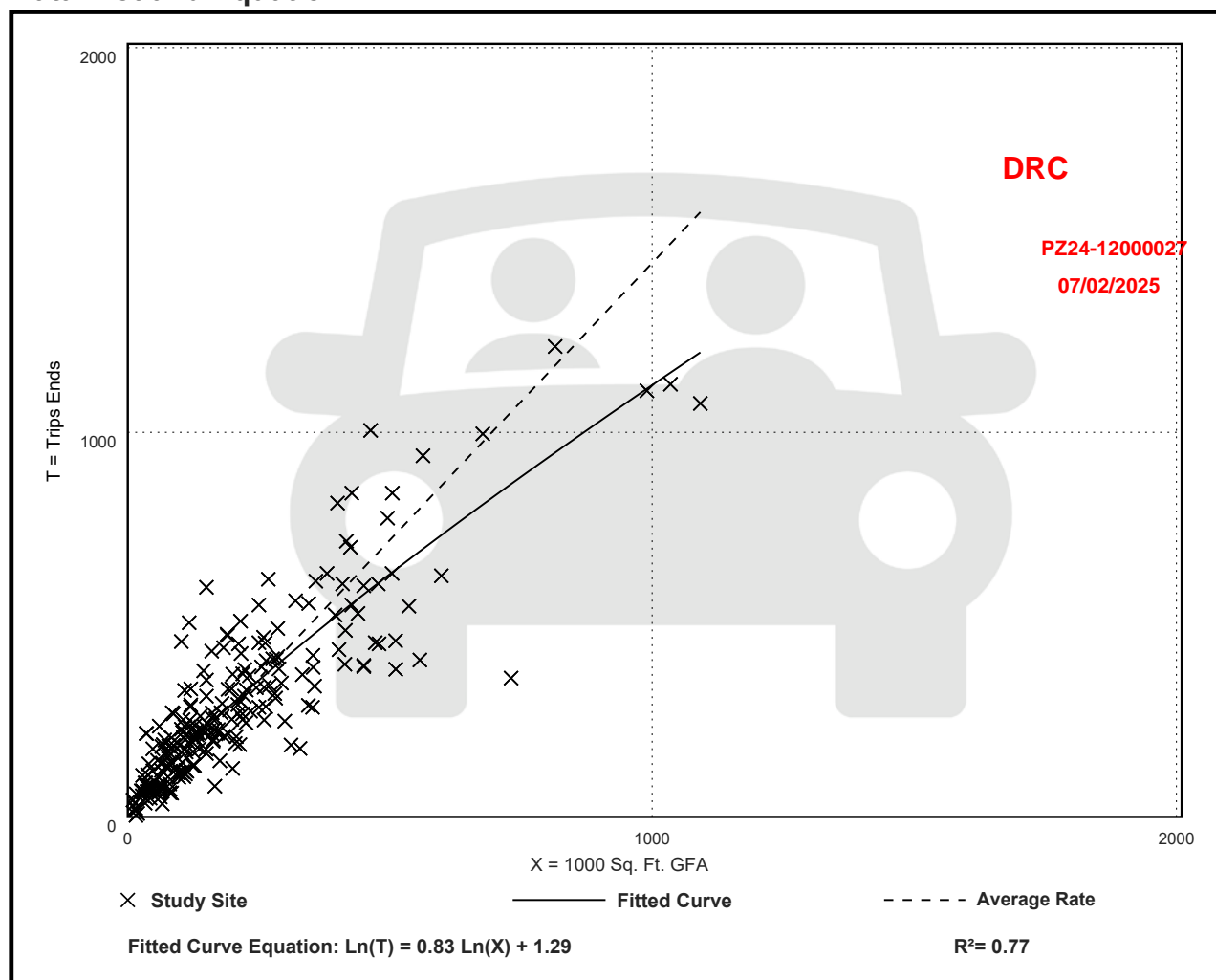
Avg. 1000 Sq. Ft. GFA: 199

Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Land Use: 822

Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

Source Numbers

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

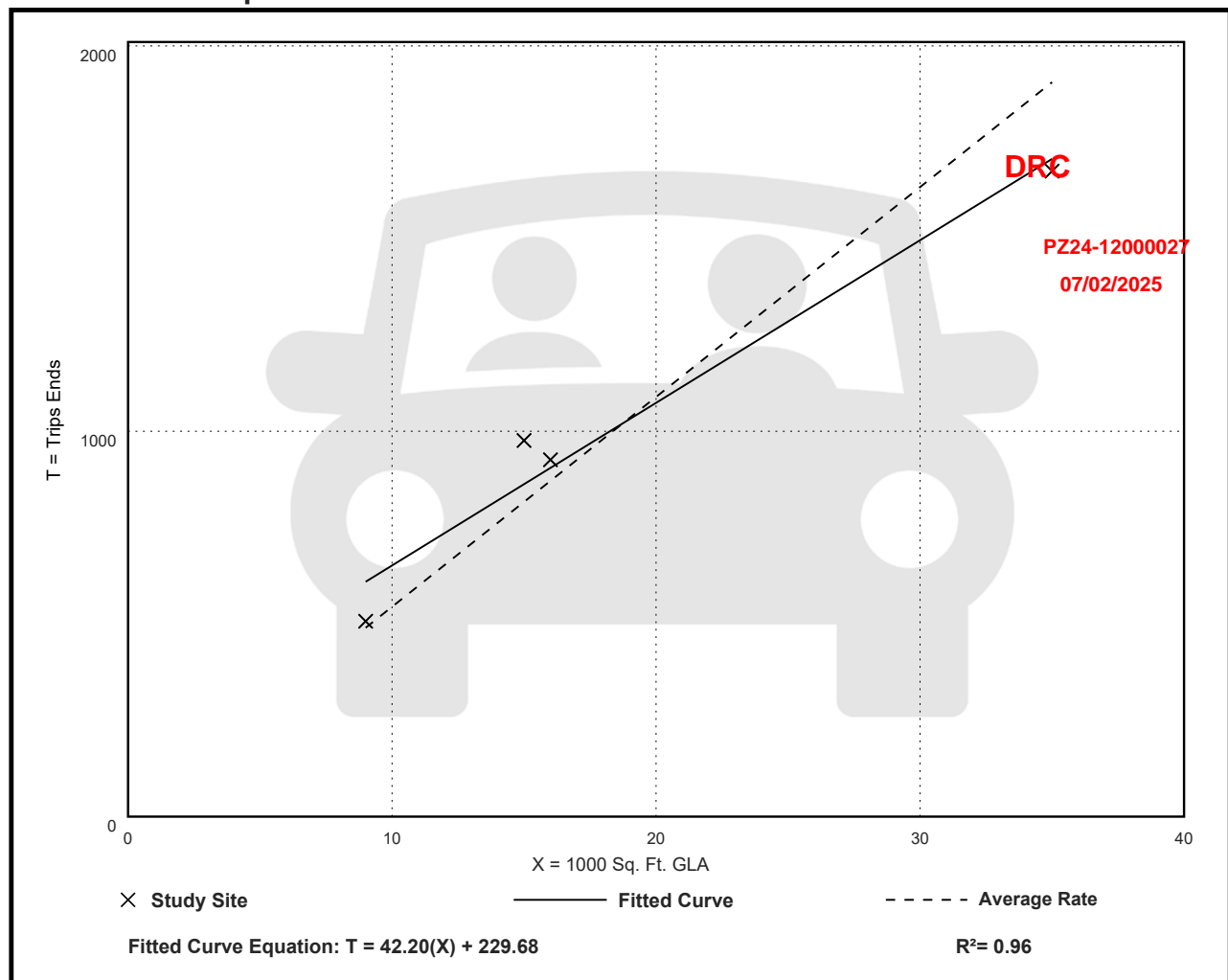
Avg. 1000 Sq. Ft. GLA: 19

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

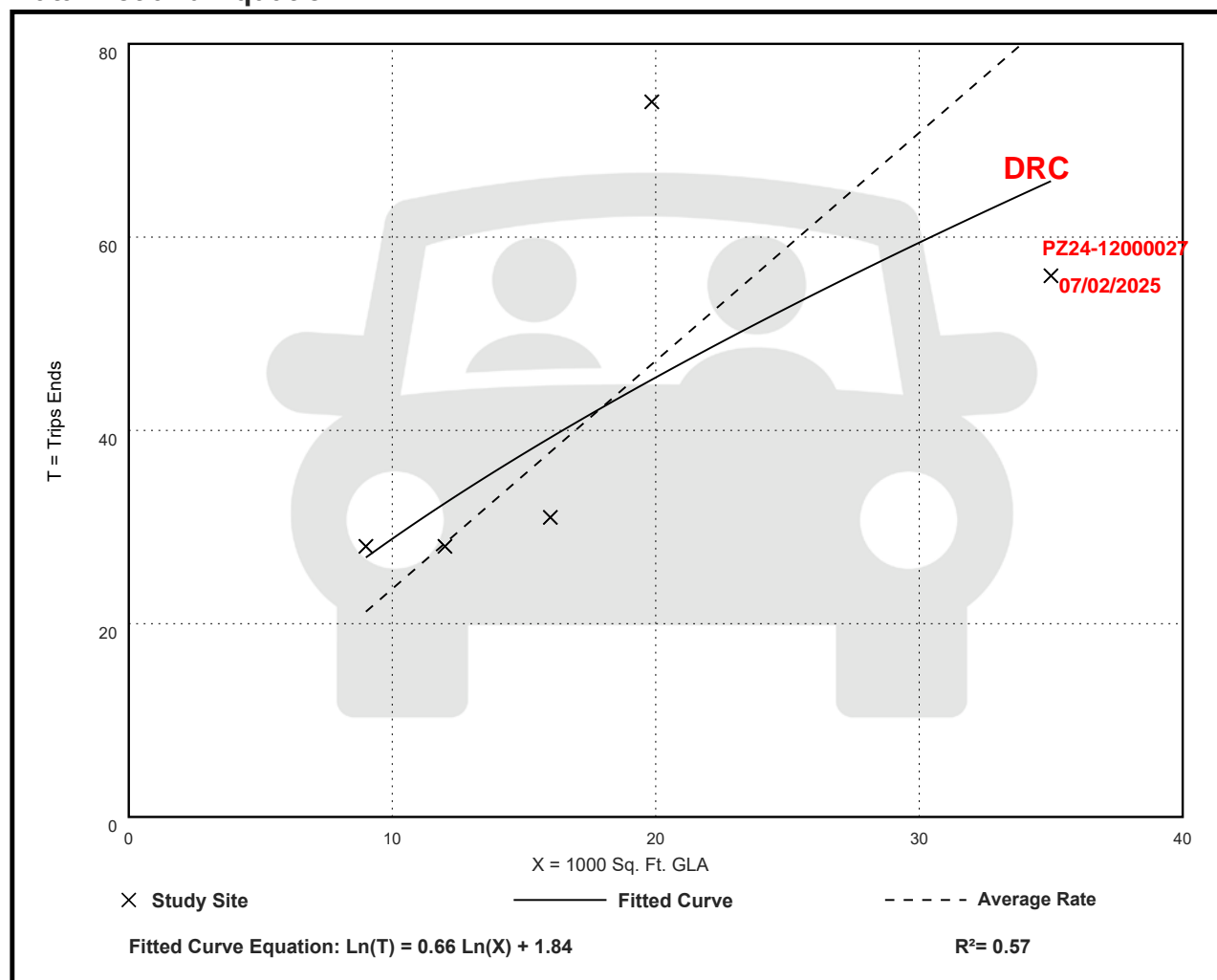
Avg. 1000 Sq. Ft. GLA: 18

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 25

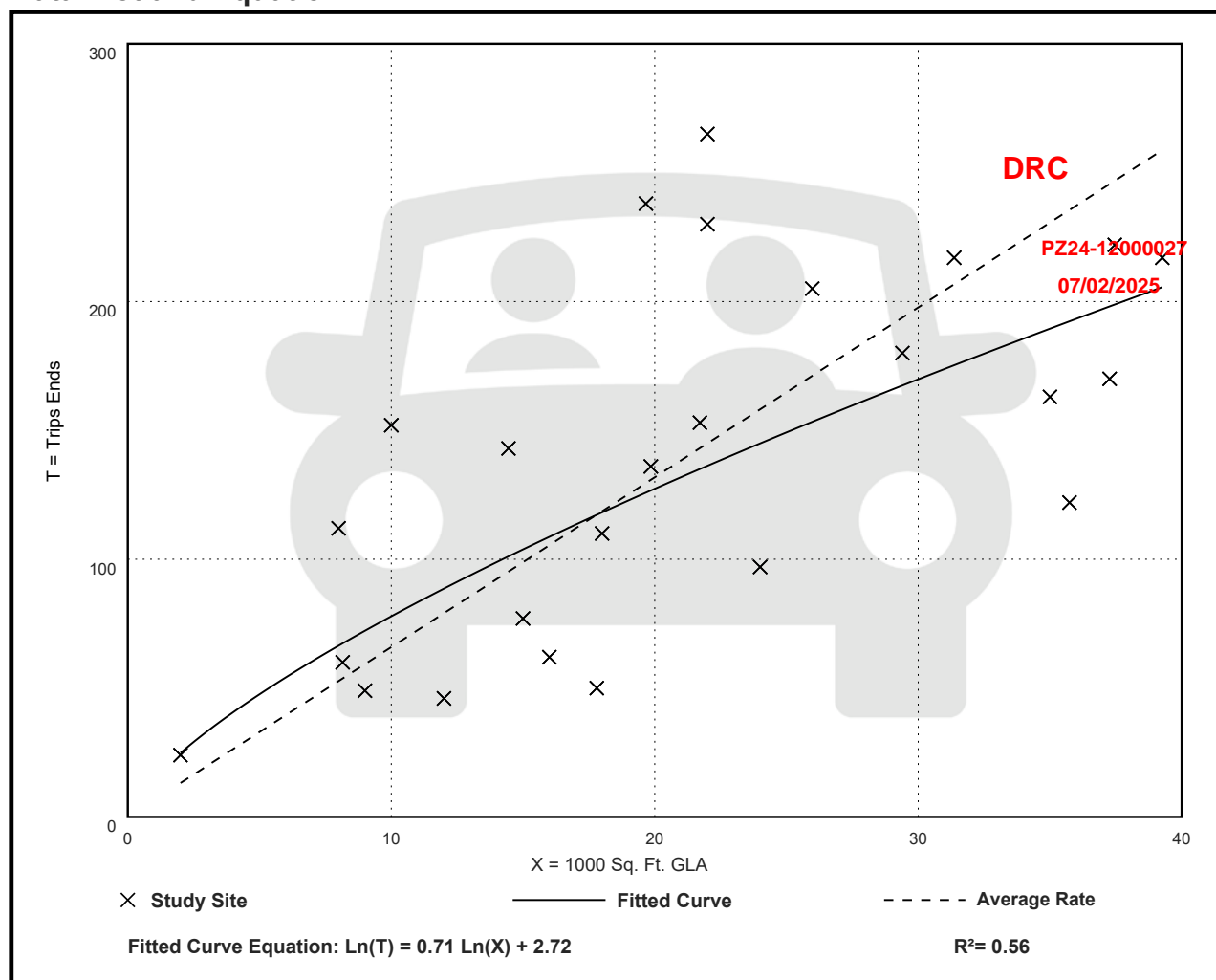
Avg. 1000 Sq. Ft. GLA: 21

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Land Use: 912

Drive-in Bank

Description

A bank is a financial institution that can offer a wide variety of financial services. A drive-in bank provides banking services for a motorist through a teller station. A drive-in bank may also serve patrons who walk into the building. The drive-in lanes may or may not provide an automatic teller machine (ATM). Walk-in bank (Land Use 911) is a related use.

Additional Data

The independent variable—drive-in lanes—refers to all lanes at a banking facility used for financial transactions, including ATM-only lanes.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 2000s and the 2010s in Colorado, Kentucky, Minnesota, Nebraska, New Jersey, New York, Oregon, Pennsylvania, Texas, Vermont, Virginia, Washington, and Wisconsin.

To assist in the future analysis of this land use, it is important that Friday data be collected and reported separately from weekday data. It is also important to specify the date and month of the data collection period and the number of drive-through lanes that are open at the time of the study.

Source Numbers

535, 539, 553, 555, 573, 577, 600, 624, 626, 629, 630, 637, 656, 657, 710, 724, 728, 866, 869, 883, 884, 927, 935, 961, 1047

Drive-in Bank (912)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 19

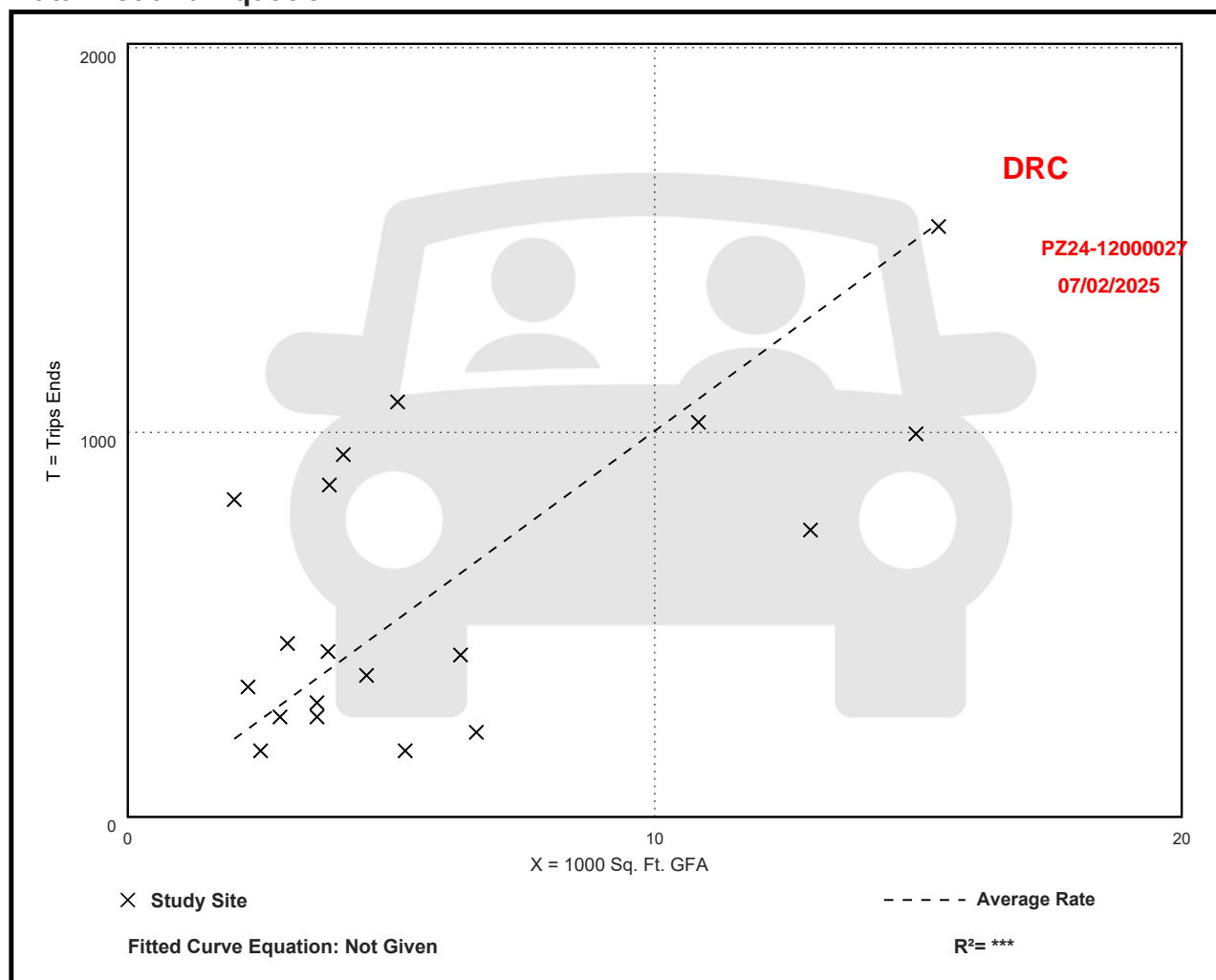
Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
100.35	32.67 - 408.42	68.62

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 44

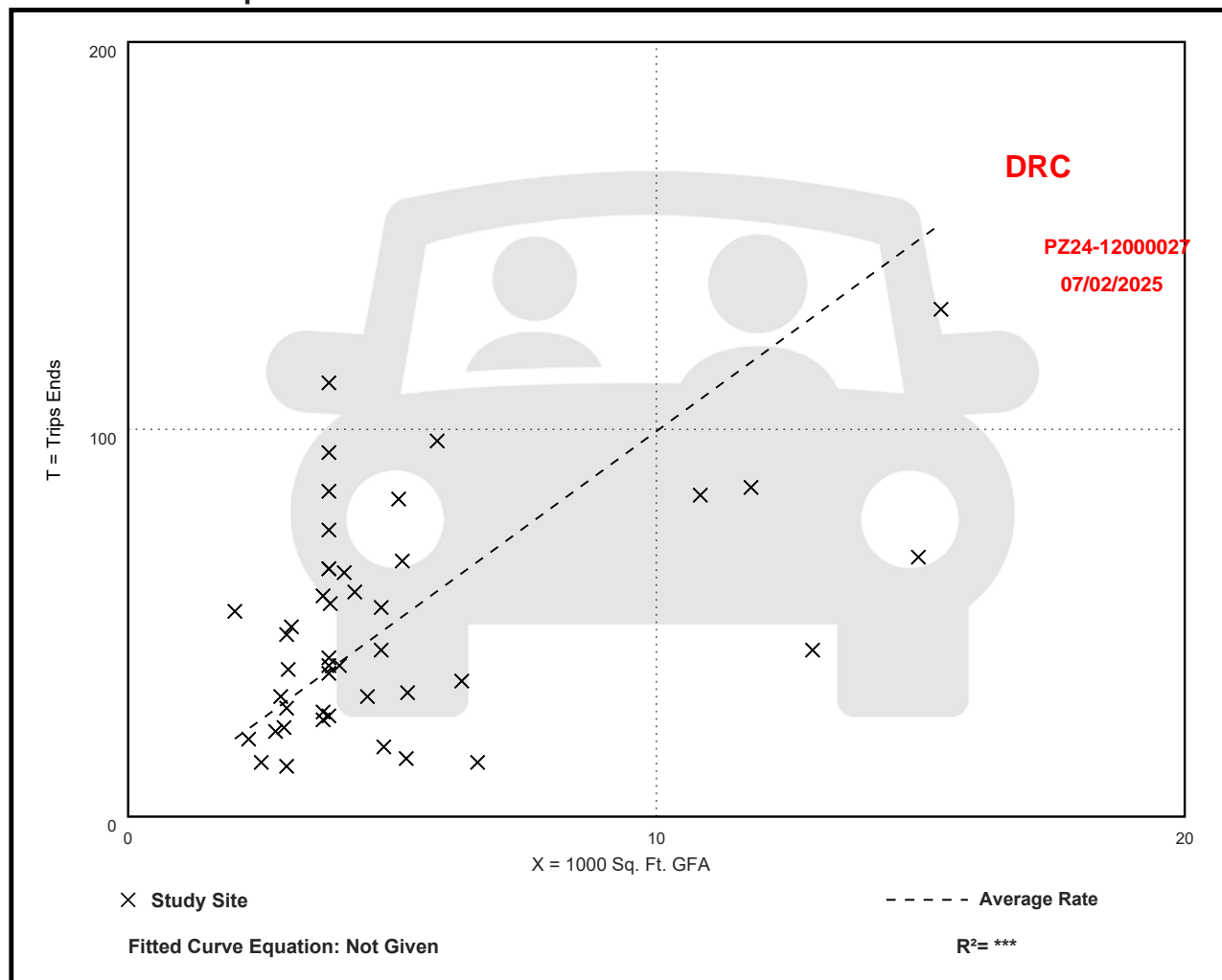
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.95	2.12 - 29.47	6.00

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 114

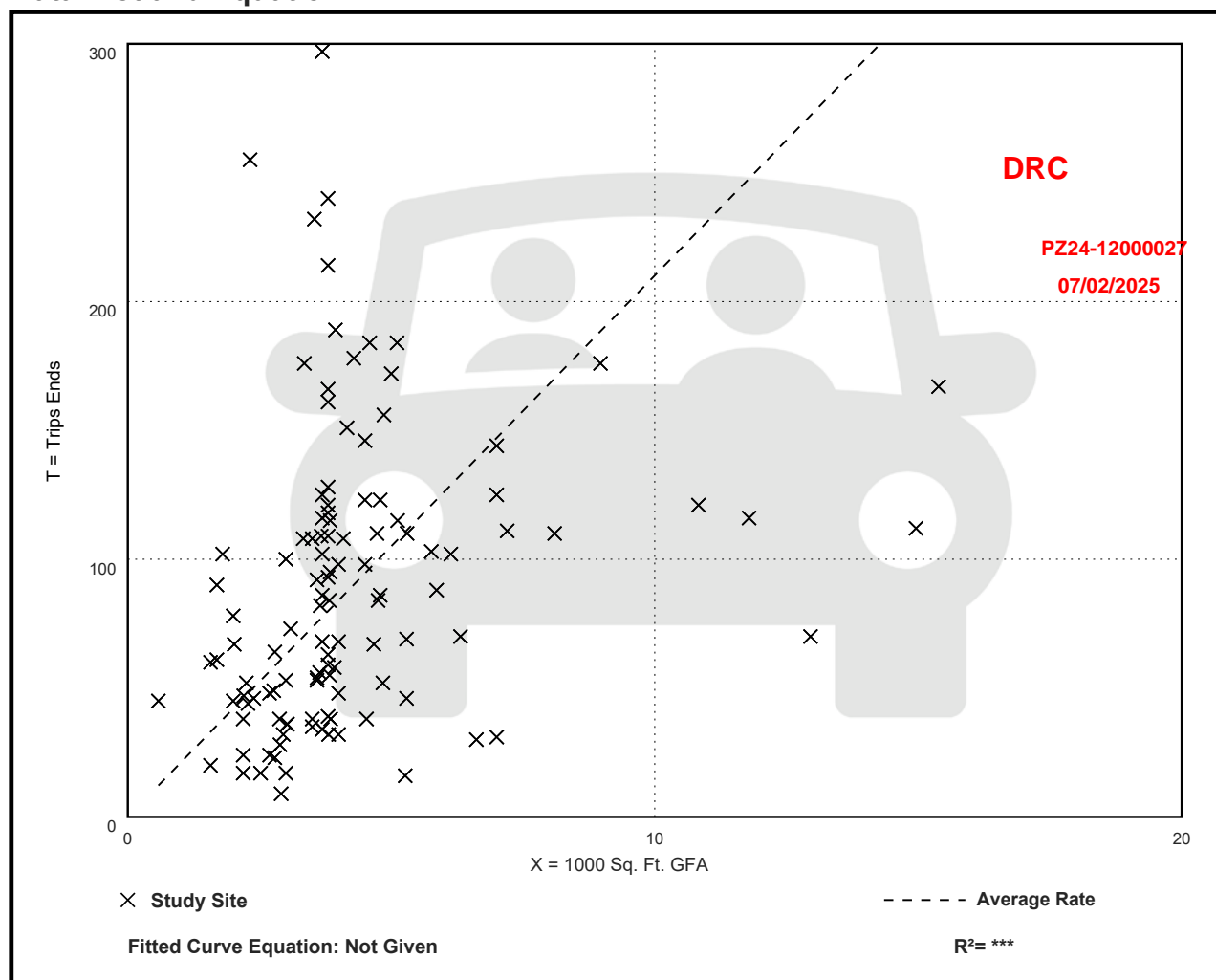
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
21.01	3.04 - 109.91	15.13

Data Plot and Equation



DRC

PZ24-12000027

07/02/2025

APPENDIX F

Historic Traffic Counts And Growth Rate Analysis

DRC

PZ24-12000027

07/02/2025

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FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2024 HISTORICAL AADT REPORT

PZ24-12000027

07/02/2025

COUNTY: 86 - BROWARD

SITE: 0386 - SR 5 / US 1 - N OF CYPRESS CREEK RD,POMPANO

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2024	42500	C	N	21000	S	21500	9.00	55.80	2.30
2023	49000	F	N	24500	S	24500	9.00	54.20	2.30
2022	46000	C	N	23000	S	23000	9.00	53.50	2.30
2021	45500	C	N	22500	S	23000	9.00	54.50	3.10
2020	41000	F	N	20000	S	21000	9.00	53.50	3.10
2019	43000	C	N	21000	S	22000	9.00	54.70	3.10
2018	42500	C	N	21500	S	21000	9.00	54.10	2.10
2017	40000	C	N	20000	S	20000	9.00	53.80	2.10
2016	47000	C	N	24000	S	23000	9.00	55.20	2.10
2015	43000	C	N	21000	S	22000	9.00	54.90	4.30
2014	45000	C	N	23500	S	21500	9.00	54.50	4.50
2013	43000	C	N	21000	S	22000	9.00	54.60	4.40
2012	43000	C	N	22000	S	21000	9.00	55.00	3.50
2011	40500	C	N	20000	S	20500	9.00	54.50	3.50
2010	45500	C	N	23000	S	22500	9.37	54.06	3.50
2009	41000	C	N	20500	S	20500	9.31	53.74	4.80

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PZ24-12000027

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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

DRC

PZ24-12000027
07/02/2025

1600 S. Federal Highway

Pompano Beach, FL

Growth Rate Analysis

Site #860386 - SR 5 / US 1 - North of Cypress Creek Road, Pompano

Year	Volume	Growth Rate
2015	43,000	
2024	42,500	-0.23%

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PZ24-12000027
07/02/2025

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PZ24-12000027

07/02/2025

APPENDIX G

Future Traffic Volumes Spreadsheets

DRC

PZ24-12000027

07/02/2025

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

S. Federal Highway and McNab Road
AM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			McNab Road Eastbound			McNab Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	167	1,296	26	16	1,457	204	326	17	261	117	58	5
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	169	1,309	26	16	1,472	206	329	17	264	118	59	5
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	174	1,349	27	17	1,516	212	339	18	272	122	60	5
1600 S. Federal Highway	23	16	2		8				2	1		
											PZ24-12000027 07/02/2025	
2027 Total Traffic	197	1,365	29	17	1,524	212	339	18	274	123	60	5

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

S. Federal Highway and McNab Road
PM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			McNab Road Eastbound			McNab Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	291	1,622	67	29	1,296	309	303	23	173	55	61	18
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	294	1,638	68	29	1,309	312	306	23	175	56	62	18
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	303	1,688	70	30	1,349	322	315	24	180	57	63	19
1600 S. Federal Highway	22	16	2		21				5	3		
2027 Total Traffic	325	1,704	72	30	1,370	322	315	24	185	60	63	19

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

S. Federal Highway and North Project Driveway
AM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			Eastbound			North Project DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	0	1,490	1	0	1,838	0	0	0	0	0	0	2
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	0	1,505	1	0	1,856	0	0	0	0	0	0	2
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	0	1,550	1	0	1,913	0	0	0	0	0	0	2
1600 S. Federal Highway					30							41
												PZ24-12000027 07/02/2025
2027 Total Traffic	0	1,550	0	0	1,943	0	0	0	0	0	0	47

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

S. Federal Highway and North Project Driveway
PM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			Eastbound			North Project DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	0	2,028	2	0	1,528	0	0	0	0	0	0	26
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	0	2,048	2	0	1,543	0	0	0	0	0	0	26
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	0	2,110	2	0	1,590	0	0	0	0	0	0	27
1600 S. Federal Highway					47							40
												PZ24-12000027 07/02/2025
2027 Total Traffic	0	2,110	0	0	1,637	0	0	0	0	0	0	79

S. Federal Highway and South Project Driveway
AM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			Avana DW Eastbound			South Project DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	12	1,453	4	13	1,796	6	0	0	76	0	0	4
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	12	1,468	4	13	1,814	6	0	0	77	0	0	4
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	12	1,512	4	14	1,869	6	0	0	79	0	0	4
1600 S. Federal Highway			9	11	19							
2027 Total Traffic	12	1,512	14	25	1,888	6	0	0	79	0	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

S. Federal Highway and South Project Driveway
PM Peak Hour

Description	S. Federal Highway Northbound			S. Federal Highway Southbound			Avana DW Eastbound			South Project DW Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/24/2024)	18	1,997	2	6	1,499	17	0	0	30	0	0	12
Season Adjustment Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2024 Peak Season Traffic	18	2,017	2	6	1,514	17	0	0	30	0	0	12
Annual Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2027 Background Traffic	19	2,078	2	6	1,560	18	0	0	31	0	0	12
1600 S. Federal Highway			24	29	18							
2027 Total Traffic	19	2,078	28	35	1,578	18	0	0	31	0	0	0

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PZ24-12000027

07/02/2025

APPENDIX H

Signal Timing Data

DRC

PZ24-12000027

07/02/2025



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1261	Initial Operation Date	3/20/84
Controller Type	2070 LN	System Number	1261
Modification Number	9	Modification Date	03/24/2015
Drawing/Project No	PBSJ 228092-1-52-01	FPL Grid Number	87886676200
Intersection	FEDERAL HWY. (US 1/SR 5) and McNAB ROAD/ SE 15 STREET		
Municipality	POMPANO BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	4,7	3,8	5	6		
Direction	SBL	NB	EB	WB	NBL	SB		
Initial Green(MIN)	4	12	6	6	4	12		
Vehicle Ext.(GAP)	1.5	3.0	2.0	2.0	1.5	3.0		
Maximum Green I	15	60	25	25	15	60		
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0		
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay							DRC	
Walk		7	7	7		7		
Pedestrian Clearance		21	31	31		21	PZ24-12000027	
Permissive	5 SECT				5 SECT		07/02/2025	
Flash Operation		YELLOW	RED	RED		YELLOW		

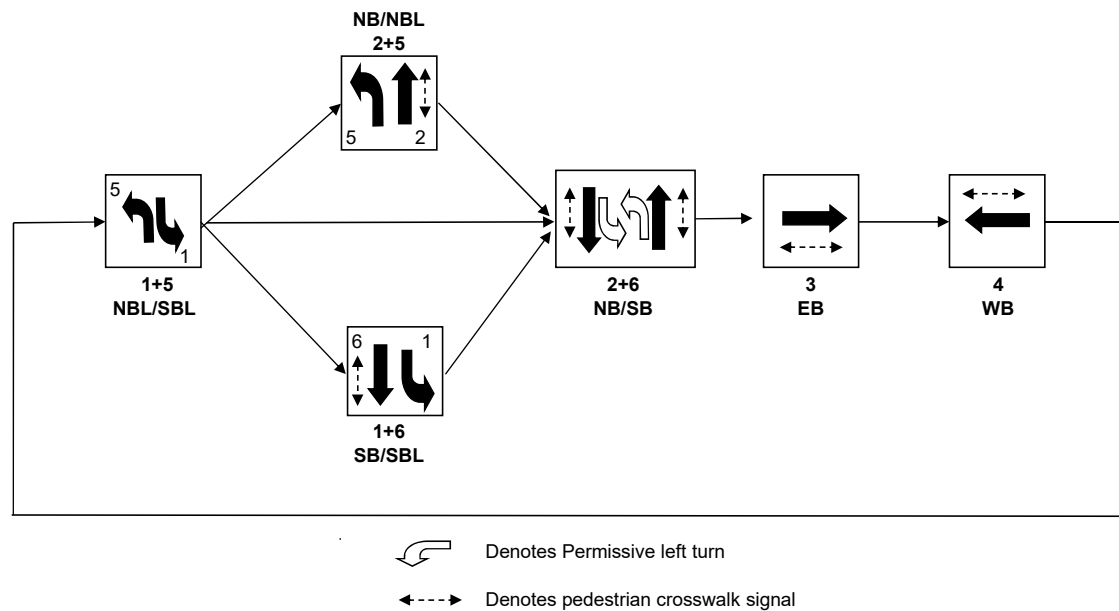
Attachment

NOTES:

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. MOD. 9 UPDATES NS/NSL YELLOW CLEARANCE VALUES PER FDOT STANDARDS.

Submitted By _____

Approved By _____

Sequence of Operation for (1261) Federal Hwy (US 1/SR 5) and McNab Road/SE 15 Street**Pompano Beach**

DRC

PZ24-12000027

07/02/2025

DRC

PZ24-12000027

07/02/2025

Broward County

Timing Sheet

10/24/2024 9:01:09 AM

Station : 1261 - US 1 & McNab Rd/SE 15 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (ET)	4 (WT)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7	7		7										
Ped Clearance		21	31	31		21										
Min Green	4	12	6	6	4	12										
Gap Ext	1.5	3	2	2	1.5	3										
Max1	15	60	25	25	15	60										
Max2																
Yellow Clr	5	5	4	4	5	5			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall				ON												
Max Recall		ON				ON										
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

DRC

PZ24-12000027

07/02/2025

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell	ON	ON	ON	ON	ON	ON
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

PZ24-12000027
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Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 10/24/2024 9:01:09 AM

Station : 1261 - US 1 & McNab Rd/SE 15 St (Standard File)

Coordination

[illegible]

PZ24-12000027
07/02/2025

[illegible]

10/24/2024 9:01:09 AM

[illegible][illegible]

DRC

PZ24-12000027
07/02/2025

[illegible]

User Comments:

DRC

PZ24-12000027
07/02/2025

DRC

PZ24-12000027

07/02/2025

APPENDIX I

SYNCHRO Output

DRC

PZ24-12000027

07/02/2025

DRC

PZ24-12000027

07/02/2025

Existing (2024) SYNCHRO Output

DRC

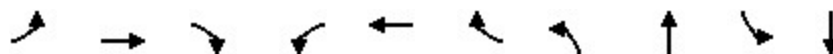
PZ24-12000027

07/02/2025

101: S. Federal Hwy/US 1 & E. McNab Road

PZ24-12000027

07/02/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	329	17	264	118	59	5	169	1309	16	1472
Future Volume (vph)	329	17	264	118	59	5	169	1309	16	1472
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	35.0	11.0	35.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	25.0	79.0	25.0	79.0
Total Split (%)	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	15.6%	49.4%	15.6%	49.4%
Maximum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	18.0	72.0	18.0	72.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 160

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Actuated Cycle Length: 160

07/02/2025

Offset: 55 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

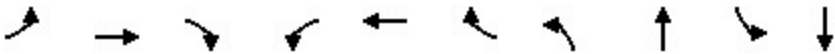
Natural Cycle: 125

Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road

	Ø1		Ø2 (R)		Ø3		Ø4
25 s		79 s		28 s		28 s	
	Ø5		Ø6 (R)				
25 s		79 s					

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	194	199	300	99	102	6	192	1518	18	1907
v/c Ratio	0.88	0.90	0.73	0.68	0.68	0.03	0.86	0.48	0.10	0.73
Control Delay (s/veh)	103.9	106.8	26.0	93.4	92.1	0.2	75.1	18.6	13.3	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	103.9	106.8	26.0	93.4	92.1	0.2	75.1	18.6	13.3	32.8
Queue Length 50th (ft)	211	217	57	107	111	0	143	332	6	561
Queue Length 95th (ft)	#345	#354	161	169	171	0	229	398	17	676
Internal Link Dist (ft)	990				992		1534		468	
Turn Bay Length (ft)	230		280		140		140		285	
Base Capacity (vph)	231	232	419	231	239	313	258	3137	336	2614
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.86	0.72	0.43	0.43	0.02	0.74	0.48	0.05	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

DRC

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




















HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/27/2025

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07/02/2025

00027												
025												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	17	264	118	59	5	169	1309	26	16	1472	206
Future Volume (vph)	329	17	264	118	59	5	169	1309	26	16	1472	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.96	1.00	0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1693	1549	1681	1740	1555	1770	5067		1770	4977	
Flt Permitted	0.95	0.96	1.00	0.95	0.98	1.00	0.05	1.00		0.14	1.00	
Satd. Flow (perm)	1681	1693	1549	1681	1740	1555	91	5067		264	4977	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	374	19	300	134	67	6	192	1488	30	18	1673	234
RTOR Reduction (vph)	0	0	209	0	0	5	0	1	0	0	10	0
Lane Group Flow (vph)	194	199	92	99	102	1	192	1517	0	18	1897	0
Confl. Peds. (#/hr)	5		8	8		5	1			2		1
Confl. Bikes (#/hr)									8			2
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	21.0	21.0	21.0	13.8	13.8	13.8	106.2	96.2		86.7	83.7	
Effective Green, g (s)	21.0	21.0	21.0	13.8	13.8	13.8	106.2	96.2		86.7	83.7	
Actuated g/C Ratio	0.13	0.13	0.13	0.09	0.09	0.09	0.66	0.60		0.54	0.52	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	220	222	203	144	150	134	223	3046		171	2603	
v/s Ratio Prot	0.12	c0.12		c0.06	0.06		c0.08	0.30		0.00	0.38	
v/s Ratio Perm			0.06			0.00	c0.49			0.05		
v/c Ratio	0.88	0.90	0.45	0.69	0.68	0.00	0.86	0.50		0.11	0.73	
Uniform Delay, d1	68.3	68.4	64.2	71.0	71.0	66.8	49.0	18.2		17.2	29.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	30.4	33.0	0.6	10.3	9.7	0.0	26.3	0.6		0.1	1.8	
Delay (s)	98.7	101.4	64.8	81.4	80.6	66.8	75.3	18.7		17.3	31.2	
Level of Service	F	F	E	F	F	E	E	B		B	C	
Approach Delay (s/veh)		84.8			80.6			25.1			31.1	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM 2000 Control Delay (s/veh)	39.3			HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio	0.87											
Actuated Cycle Length (s)	160.0			Sum of lost time (s)					26.0			
Intersection Capacity Utilization	78.9%			ICU Level of Service					D			
Analysis Period (min)	15											
c Critical Lane Group												

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HCM 7th Edition methodology expects strict NEMA phasing.

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Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	2	1505	1	0	1856
Future Vol, veh/h	0	2	1505	1	0	1856
Conflicting Peds, #/hr	0	0	0	7	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	1691	1	0	2085

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	853	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	4	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-
Pot Cap-1 Maneuver	0	650	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	645	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

DRC

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Approach	WB	NB	SB
HCM Control Delay, s/v	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	645
HCM Lane V/C Ratio	-	-	0.003
HCM Control Delay (s/veh)	-	-	10.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

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Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↖ ↗ ↘			↖ ↗ ↘		↗
Traffic Vol, veh/h	0	0	77	0	0	4	12	1468	4	13	1814	6
Future Vol, veh/h	0	0	77	0	0	4	12	1468	4	13	1814	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	87	0	0	4	13	1649	4	15	2038	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1019	-	-	830	2045	0	0	1657	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	4	-	-	4	4	-	-	4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3	3	-	-	3	-	-
Pot Cap-1 Maneuver	0	0	490	0	0	661	258	-	-	351	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	-	490	-	-	659	258	-	-	350	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

DRC

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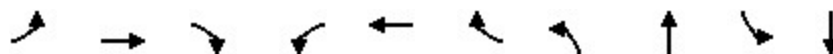
Approach	EB	WB	NB	SB
HCM Control Delay, s/v13.92		10.5	0.16	0.11
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	258	-	-	490	659	350	-
HCM Lane V/C Ratio	0.052	-	-	0.177	0.007	0.042	-
HCM Control Delay (s/veh)	19.7	-	-	13.9	10.5	15.7	-
HCM Lane LOS	C	-	-	B	B	C	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0	0.1	-

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	306	23	175	56	62	18	294	1638	29	1309
Future Volume (vph)	306	23	175	56	62	18	294	1638	29	1309
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	11.0	35.0	11.0	35.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	31.0	67.0	25.0	61.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	17.2%	37.2%	13.9%	33.9%
Maximum Green (s)	38.0	38.0	38.0	38.0	38.0	38.0	24.0	60.0	18.0	54.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 180

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Actuated Cycle Length: 180

07/02/2025

Offset: 39 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

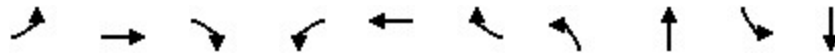
Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road

Ø1	Ø2 (R)	Ø3	Ø4
25 s	67 s	44 s	44 s
Ø5	Ø6 (R)		
31 s	61 s		

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	176	174	186	54	72	19	313	1815	31	1725
v/c Ratio	0.80	0.78	0.51	0.50	0.63	0.10	0.75	0.56	0.21	0.78
Control Delay (s/veh)	100.4	98.3	12.7	95.2	104.2	1.0	62.9	20.5	19.3	45.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.4	98.3	12.7	95.2	104.2	1.0	62.9	20.5	19.3	45.2
Queue Length 50th (ft)	216	213	0	66	89	0	296	431	11	601
Queue Length 95th (ft)	300	295	74	117	149	0	423	591	29	#794
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	285		220	
Base Capacity (vph)	354	358	475	354	372	406	419	3247	273	2212
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.49	0.39	0.15	0.19	0.05	0.75	0.56	0.11	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

DRC

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HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/27/2025

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07/02/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	306	23	175	56	62	18	294	1638	68	29	1309	312
Future Volume (vph)	306	23	175	56	62	18	294	1638	68	29	1309	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1696	1557	1681	1762	1542	1770	5049		1770	4910	
Flt Permitted	0.95	0.96	1.00	0.95	1.00	1.00	0.05	1.00		0.12	1.00	
Satd. Flow (perm)	1681	1696	1557	1681	1762	1542	91	5049		216	4910	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	326	24	186	60	66	19	313	1743	72	31	1393	332
RTOR Reduction (vph)	0	0	162	0	0	18	0	1	0	0	18	0
Lane Group Flow (vph)	176	174	24	54	72	1	313	1814	0	31	1707	0
Confl. Peds. (#/hr)	10		1	1		10	3		2	2		3
Confl. Bikes (#/hr)			2						4			1
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	23.6	23.6	23.6	11.8	11.8	11.8	125.6	114.3		84.8	80.5	
Effective Green, g (s)	23.6	23.6	23.6	11.8	11.8	11.8	125.6	114.3		84.8	80.5	
Actuated g/C Ratio	0.13	0.13	0.13	0.07	0.07	0.07	0.70	0.64		0.47	0.45	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	220	222	204	110	115	101	418	3206		138	2195	
v/s Ratio Prot	c0.10	0.10		0.03	c0.04		c0.16	0.36		0.01	c0.35	
v/s Ratio Perm			0.02			0.00	0.36			0.10		
v/c Ratio	0.80	0.78	0.12	0.49	0.63	0.01	0.75	0.57		0.22	0.78	
Uniform Delay, d1	75.9	75.7	69.0	81.2	82.0	78.7	53.9	18.7		25.6	42.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.5	15.2	0.1	1.3	7.4	0.0	6.3	0.7		0.3	2.8	
Delay (s)	93.4	91.0	69.1	82.5	89.4	78.7	60.2	19.4		25.9	45.0	
Level of Service	F	F	E	F	F	E	E	B		C	D	
Approach Delay (s/veh)		84.2			85.4			25.4			44.6	
Approach LOS		F			F			C			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

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HCM 7th Edition methodology expects strict NEMA phasing.

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Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	26	2048	2	0	1543
Future Vol, veh/h	0	26	2048	2	0	1543
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	2202	2	0	1659

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	1108	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	4	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-
Pot Cap-1 Maneuver	0	537	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	534	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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Approach	WB	NB	SB
HCM Control Delay, s/v12.12		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	534
HCM Lane V/C Ratio	-	-	0.052
HCM Control Delay (s/veh)	-	-	12.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

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Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗ ↑↑↑			↗ ↑↑↑		↗
Traffic Vol, veh/h	0	0	30	0	0	12	18	2017	2	6	1514	17
Future Vol, veh/h	0	0	30	0	0	12	18	2017	2	6	1514	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	92	93	92	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	32	0	0	13	20	2169	2	6	1628	18

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	814	-	-	1089	1646	0	0	2175	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	4	-	-	4	4	-	-	4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3	3	-	-	3	-	-
Pot Cap-1 Maneuver	0	0	560	0	0	544	354	-	-	232	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	-	560	-	-	542	354	-	-	231	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

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Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.81		11.8	0.14	0.08
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	354	-	-	560	542	231	-
HCM Lane V/C Ratio	0.055	-	-	0.058	0.024	0.028	-
HCM Control Delay (s/veh)	15.8	-	-	11.8	11.8	21	-
HCM Lane LOS	C	-	-	B	B	C	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.1	0.1	-

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Future (2027) Background SYNCHRO Output

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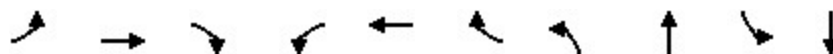
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101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	339	18	272	122	60	5	174	1349	17	1516
Future Volume (vph)	339	18	272	122	60	5	174	1349	17	1516
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	35.0	11.0	35.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	25.0	79.0	25.0	79.0
Total Split (%)	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	15.6%	49.4%	15.6%	49.4%
Maximum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	18.0	72.0	18.0	72.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 160

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Actuated Cycle Length: 160

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Offset: 55 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 125

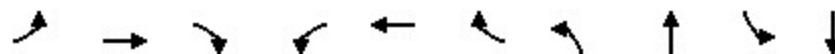
Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road

Ø1	Ø2 (R)	Ø3	Ø4
25 s	79 s	28 s	28 s
Ø5	Ø6 (R)		
25 s	79 s		

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	200	205	309	101	106	6	198	1564	19	1964
v/c Ratio	0.90	0.92	0.76	0.68	0.69	0.02	0.88	0.50	0.11	0.76
Control Delay (s/veh)	106.9	109.9	29.3	92.5	92.7	0.2	81.0	19.1	13.6	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	106.9	109.9	29.3	92.5	92.7	0.2	81.0	19.1	13.6	34.4
Queue Length 50th (ft)	218	225	71	109	115	0	154	348	7	598
Queue Length 95th (ft)	#358	#370	179	171	177	0	#254	418	18	709
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	285		220	
Base Capacity (vph)	231	232	416	231	238	313	254	3121	326	2583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.88	0.74	0.44	0.45	0.02	0.78	0.50	0.06	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (vph)	339	18	272	122	60	5	174	1349	27	17	1516	212
Future Volume (vph)	339	18	272	122	60	5	174	1349	27	17	1516	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.96	1.00	0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1693	1549	1681	1738	1555	1770	5067		1770	4977	
Flt Permitted	0.95	0.96	1.00	0.95	0.98	1.00	0.04	1.00		0.13	1.00	
Satd. Flow (perm)	1681	1693	1549	1681	1738	1555	83	5067		248	4977	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	385	20	309	139	68	6	198	1533	31	19	1723	241
RTOR Reduction (vph)	0	0	205	0	0	5	0	1	0	0	10	0
Lane Group Flow (vph)	200	205	104	101	106	1	198	1563	0	19	1954	0
Confl. Peds. (#/hr)	5		8	8		5	1		2	2		1
Confl. Bikes (#/hr)									8			2
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	21.1	21.1	21.1	14.1	14.1	14.1	105.8	95.8		85.7	82.7	
Effective Green, g (s)	21.1	21.1	21.1	14.1	14.1	14.1	105.8	95.8		85.7	82.7	
Actuated g/C Ratio	0.13	0.13	0.13	0.09	0.09	0.09	0.66	0.60		0.54	0.52	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	221	223	204	148	153	137	224	3033		161	2572	
v/s Ratio Prot	0.12	c0.12		0.06	c0.06		c0.09	0.31		0.00	0.39	
v/s Ratio Perm			0.07			0.00	c0.49			0.06		
v/c Ratio	0.90	0.92	0.51	0.68	0.69	0.00	0.88	0.52		0.12	0.76	
Uniform Delay, d1	68.5	68.6	64.6	70.8	70.8	66.5	51.9	18.6		17.8	30.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.0	37.8	0.9	9.9	10.4	0.0	30.3	0.6		0.1	2.2	
Delay (s)	103.4	106.4	65.5	80.7	81.3	66.5	82.3	19.3		17.9	32.9	
Level of Service	F	F	E	F	F	E	F	B		B	C	
Approach Delay (s/veh)		87.9			80.6			26.3			32.8	
Approach LOS		F			F			C			C	

Intersection Summary

HCM 2000 Control Delay (s/veh)	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

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HCM 7th Edition methodology expects strict NEMA phasing.

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Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	2	1550	1	0	1913
Future Vol, veh/h	0	2	1550	1	0	1913
Conflicting Peds, #/hr	0	0	0	7	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	1742	1	0	2149

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	878	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	4	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-
Pot Cap-1 Maneuver	0	638	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	633	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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Approach	WB	NB	SB
HCM Control Delay, s/v	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	633
HCM Lane V/C Ratio	-	-	0.004
HCM Control Delay (s/veh)	-	-	10.7
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

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Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗ ↑↑↑			↗ ↑↑↑		↗
Traffic Vol, veh/h	0	0	79	0	0	4	12	1512	4	14	1869	6
Future Vol, veh/h	0	0	79	0	0	4	12	1512	4	14	1869	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	89	0	0	4	13	1699	4	16	2100	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1050	-	-	855	2107	0	0	1706	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	4	-	-	4	4	-	-	4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3	4	-	-	3	-	-
Pot Cap-1 Maneuver	0	0	480	0	0	649	224	-	-	338	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	480	-	-	647	224	-	-	337	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

DRC

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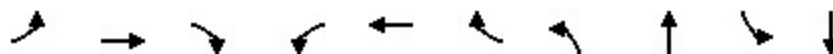
Approach	EB	WB	NB	SB
HCM Control Delay, s/v14.19		10.6	0.17	0.12
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	224	-	-	480	647	337	-
HCM Lane V/C Ratio	0.06	-	-	0.185	0.007	0.047	-
HCM Control Delay (s/veh)	22.1	-	-	14.2	10.6	16.2	-
HCM Lane LOS	C	-	-	B	B	C	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0	0.1	-

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	315	24	180	57	63	19	303	1688	30	1349
Future Volume (vph)	315	24	180	57	63	19	303	1688	30	1349
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	11.0	35.0	11.0	35.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	31.0	67.0	25.0	61.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	17.2%	37.2%	13.9%	33.9%
Maximum Green (s)	38.0	38.0	38.0	38.0	38.0	38.0	24.0	60.0	18.0	54.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 180

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Actuated Cycle Length: 180

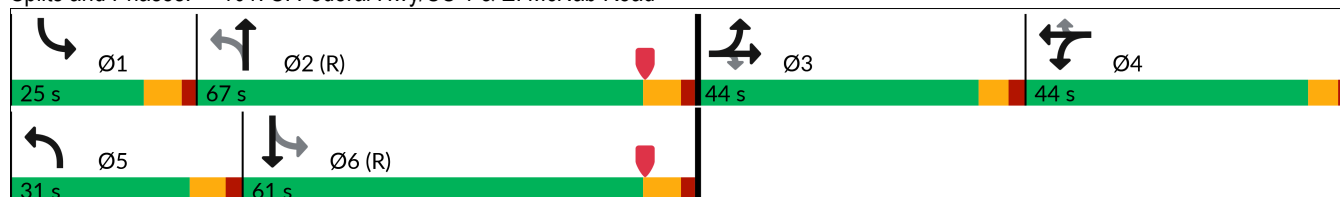
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Offset: 39 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

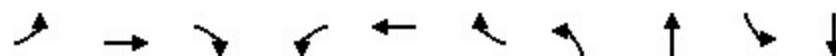
Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road



101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	181	180	191	55	73	20	322	1870	32	1778
v/c Ratio	0.80	0.79	0.51	0.50	0.63	0.10	0.73	0.58	0.23	0.83
Control Delay (s/veh)	100.2	98.6	12.4	95.3	104.4	1.0	62.0	21.3	20.7	49.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.2	98.6	12.4	95.3	104.4	1.0	62.0	21.3	20.7	49.1
Queue Length 50th (ft)	223	221	0	67	90	0	308	457	11	647
Queue Length 95th (ft)	306	304	77	121	150	0	438	624	30	#882
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	285		220	
Base Capacity (vph)	354	358	479	354	372	406	439	3229	264	2132
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.50	0.40	0.16	0.20	0.05	0.73	0.58	0.12	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

DRC

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HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/27/2025

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (vph)	315	24	180	57	63	19	303	1688	70	30	1349	322
Future Volume (vph)	315	24	180	57	63	19	303	1688	70	30	1349	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1697	1557	1681	1762	1542	1770	5049		1770	4909	
Flt Permitted	0.95	0.96	1.00	0.95	1.00	1.00	0.05	1.00		0.11	1.00	
Satd. Flow (perm)	1681	1697	1557	1681	1762	1542	88	5049		203	4909	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	335	26	191	61	67	20	322	1796	74	32	1435	343
RTOR Reduction (vph)	0	0	165	0	0	19	0	1	0	0	18	0
Lane Group Flow (vph)	181	180	26	55	73	1	322	1869	0	32	1760	0
Confl. Peds. (#/hr)	10		1	1		10	3		2	2		3
Confl. Bikes (#/hr)			2						4			1
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	24.1	24.1	24.1	11.9	11.9	11.9	125.0	113.7		81.9	77.6	
Effective Green, g (s)	24.1	24.1	24.1	11.9	11.9	11.9	125.0	113.7		81.9	77.6	
Actuated g/C Ratio	0.13	0.13	0.13	0.07	0.07	0.07	0.69	0.63		0.46	0.43	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	225	227	208	111	116	101	438	3189		129	2116	
v/s Ratio Prot	c0.11	0.11		0.03	c0.04		c0.16	0.37		0.01	c0.36	
v/s Ratio Perm			0.02			0.00	0.34			0.11		
v/c Ratio	0.80	0.79	0.12	0.50	0.63	0.01	0.74	0.59		0.25	0.83	
Uniform Delay, d1	75.7	75.5	68.6	81.2	81.9	78.6	53.7	19.4		27.2	45.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.6	16.1	0.1	1.3	7.5	0.0	5.5	0.8		0.4	4.0	
Delay (s)	93.2	91.6	68.7	82.4	89.4	78.6	59.2	20.2		27.6	49.4	
Level of Service	F	F	E	F	F	E	E	C		C	D	
Approach Delay (s/veh)		84.2			85.3			25.9			49.0	
Approach LOS		F			F			C			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

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HCM 7th Edition methodology expects strict NEMA phasing.

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Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	27	2110	2	0	1590
Future Vol, veh/h	0	27	2110	2	0	1590
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	2269	2	0	1710

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	1141	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	4	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3	-	-	-
Pot Cap-1 Maneuver	0	523	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	520	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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Approach	WB	NB	SB
HCM Control Delay, s/v12.33		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	520
HCM Lane V/C Ratio	-	-	0.056
HCM Control Delay (s/veh)	-	-	12.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

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Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗ ↑↑↑			↗ ↑↑↑		↗
Traffic Vol, veh/h	0	0	31	0	0	12	19	2078	2	6	1560	18
Future Vol, veh/h	0	0	31	0	0	12	19	2078	2	6	1560	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	92	93	92	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	0	0	13	21	2234	2	6	1677	19

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	839	-	-	1122	1697	0	0	2241	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	4	-	-	4	4	-	-	4	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3	3	-	-	3	-	-
Pot Cap-1 Maneuver	0	0	552	0	0	531	340	-	-	220	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	-	552	-	-	529	340	-	-	219	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

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Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.95		11.98	0.15	0.08
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	340	-	-	552	529	219	-
HCM Lane V/C Ratio	0.061	-	-	0.06	0.024	0.029	-
HCM Control Delay (s/veh)	16.3	-	-	11.9	12	21.9	-
HCM Lane LOS	C	-	-	B	B	C	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.1	0.1	-

DRC

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Future (2027) Total SYNCHRO Output

DRC

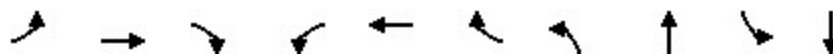
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101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	339	18	274	123	60	5	197	1365	17	1524
Future Volume (vph)	339	18	274	123	60	5	197	1365	17	1524
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	11.0	35.0	11.0	35.0
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	25.0	79.0	25.0	79.0
Total Split (%)	17.5%	17.5%	17.5%	17.5%	17.5%	17.5%	15.6%	49.4%	15.6%	49.4%
Maximum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	18.0	72.0	18.0	72.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 160

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Actuated Cycle Length: 160

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Offset: 55 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 135

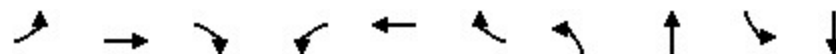
Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road

	Ø1		Ø2 (R)		Ø3		Ø4
25 s		79 s		28 s		28 s	
	Ø5		Ø6 (R)				
25 s		79 s					

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	200	205	311	102	106	6	224	1584	19	1973
v/c Ratio	0.90	0.92	0.76	0.69	0.69	0.02	0.87	0.51	0.11	0.79
Control Delay (s/veh)	106.9	109.9	29.8	93.1	92.7	0.2	76.3	19.2	13.9	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	106.9	109.9	29.8	93.1	92.7	0.2	76.3	19.2	13.9	37.4
Queue Length 50th (ft)	218	225	74	111	115	0	179	354	7	638
Queue Length 95th (ft)	#358	#370	183	172	177	0	#316	426	18	714
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	285		220	
Base Capacity (vph)	231	232	416	231	238	313	270	3121	323	2485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.88	0.75	0.44	0.45	0.02	0.83	0.51	0.06	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

DRC

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HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

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07/02/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (vph)	339	18	274	123	60	5	197	1365	29	17	1524	212
Future Volume (vph)	339	18	274	123	60	5	197	1365	29	17	1524	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.96	1.00	0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1693	1549	1681	1738	1555	1770	5066		1770	4977	
Flt Permitted	0.95	0.96	1.00	0.95	0.98	1.00	0.05	1.00		0.13	1.00	
Satd. Flow (perm)	1681	1693	1549	1681	1738	1555	86	5066		251	4977	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	385	20	311	140	68	6	224	1551	33	19	1732	241
RTOR Reduction (vph)	0	0	205	0	0	5	0	1	0	0	10	0
Lane Group Flow (vph)	200	205	106	102	106	1	224	1583	0	19	1963	0
Confl. Peds. (#/hr)	5		8	8		5	1		2	2		1
Confl. Bikes (#/hr)									8			2
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	21.1	21.1	21.1	14.1	14.1	14.1	105.8	95.8		82.6	79.6	
Effective Green, g (s)	21.1	21.1	21.1	14.1	14.1	14.1	105.8	95.8		82.6	79.6	
Actuated g/C Ratio	0.13	0.13	0.13	0.09	0.09	0.09	0.66	0.60		0.52	0.50	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	221	223	204	148	153	137	258	3033		158	2476	
v/s Ratio Prot	0.12	c0.12		0.06	c0.06		c0.10	0.31		0.00	0.39	
v/s Ratio Perm			0.07			0.00	c0.47			0.06		
v/c Ratio	0.90	0.92	0.52	0.69	0.69	0.00	0.87	0.52		0.12	0.79	
Uniform Delay, d1	68.5	68.6	64.7	70.8	70.8	66.5	52.5	18.7		19.1	33.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.0	37.8	1.1	10.2	10.4	0.0	24.4	0.6		0.1	2.7	
Delay (s)	103.4	106.4	65.8	81.0	81.3	66.5	76.9	19.4		19.2	36.1	
Level of Service	F	F	E	F	F	E	E	B		B	D	
Approach Delay (s/veh)		87.9			80.7			26.5			35.9	
Approach LOS		F			F			C			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

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07/02/2025

HCM 7th Edition methodology expects strict NEMA phasing.

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102: S. Federal Hwy/US 1 & North Driveway (Outbound Only)

PZ24-12000027

07/02/2025

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	47	1550	0	0	1943
Future Vol, veh/h	0	47	1550	0	0	1943
Conflicting Peds, #/hr	0	0	0	7	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	1742	0	0	2183

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	871	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3	-
Pot Cap-1 Maneuver	0	641	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	641	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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Approach	WB	NB	SB
HCM Control Delay, s/v11.12		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 641	-
HCM Lane V/C Ratio	- 0.082	-
HCM Control Delay (s/veh)	- 11.1	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.3	-

103: S. Federal Hwy/US 1 & South Driveway (Inbound Only)

PZ24-12000027

07/02/2025

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗				↗ ↑↑↑			↗ ↑↑↑		↗
Traffic Vol, veh/h	0	0	79	0	0	0	12	1512	14	25	1888	6
Future Vol, veh/h	0	0	79	0	0	0	12	1512	14	25	1888	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	89	0	0	0	13	1699	16	28	2121	7

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	1061			2128	0	0	1718
Stage 1	-	-	-			-	-	-	-
Stage 2	-	-	-			-	-	-	-
Critical Hdwy	-	-	4			4	-	-	4
Critical Hdwy Stg 1	-	-	-			-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-
Follow-up Hdwy	-	-	3.92			3	-	-	3
Pot Cap-1 Maneuver	0	0	477			241	-	-	335
Stage 1	0	0	-			-	-	-	-
Stage 2	0	0	-			-	-	-	-
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	-	0	477			241	-	-	335
Mov Cap-2 Maneuver	-	0	-			-	-	-	-
Stage 1	-	0	-			-	-	-	-
Stage 2	-	0	-			-	-	-	-

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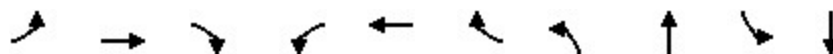
Approach	EB	NB	SB
HCM Control Delay, s/v14.28		0.16	0.22
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	241	-	-	477	335	-	-
HCM Lane V/C Ratio	0.056	-	-	0.186	0.084	-	-
HCM Control Delay (s/veh)	20.8	-	-	14.3	16.7	-	-
HCM Lane LOS	C	-	-	B	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.3	-	-

101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	315	24	185	60	63	19	325	1704	30	1370
Future Volume (vph)	315	24	185	60	63	19	325	1704	30	1370
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	11.0	35.0	11.0	35.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	31.0	67.0	25.0	61.0
Total Split (%)	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	17.2%	37.2%	13.9%	33.9%
Maximum Green (s)	38.0	38.0	38.0	38.0	38.0	38.0	24.0	60.0	18.0	54.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 180

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Actuated Cycle Length: 180

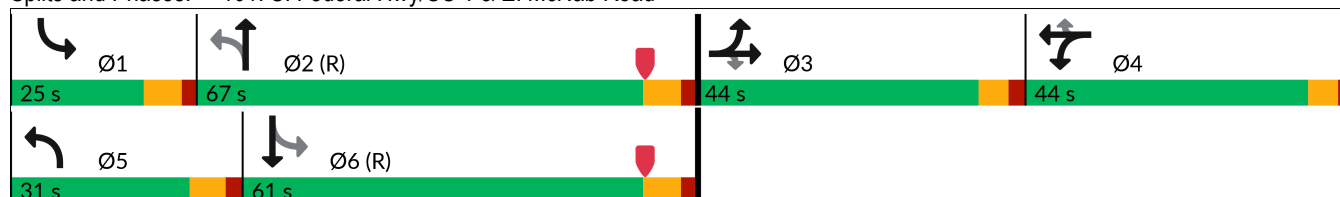
07/02/2025

Offset: 39 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 145

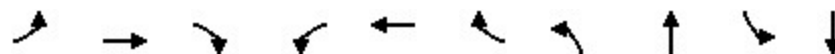
Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road



101: S. Federal Hwy/US 1 & E. McNab Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	181	180	197	58	73	20	346	1890	32	1800
v/c Ratio	0.80	0.79	0.52	0.53	0.63	0.10	0.70	0.59	0.25	0.92
Control Delay (s/veh)	99.3	97.8	12.3	97.1	104.4	1.0	56.9	21.7	22.6	58.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	99.3	97.8	12.3	97.1	104.4	1.0	56.9	21.7	22.6	58.1
Queue Length 50th (ft)	223	221	0	71	90	0	327	465	11	690
Queue Length 95th (ft)	304	302	76	126	150	0	466	642	31	#947
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	285		220	
Base Capacity (vph)	354	358	484	354	372	406	497	3223	255	1966
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.50	0.41	0.16	0.20	0.05	0.70	0.59	0.13	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/27/2025

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (vph)	315	24	185	60	63	19	325	1704	72	30	1370	322
Future Volume (vph)	315	24	185	60	63	19	325	1704	72	30	1370	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1697	1557	1681	1762	1542	1770	5048		1770	4911	
Flt Permitted	0.95	0.96	1.00	0.95	1.00	1.00	0.05	1.00		0.11	1.00	
Satd. Flow (perm)	1681	1697	1557	1681	1762	1542	95	5048		199	4911	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	335	26	197	64	67	20	346	1813	77	32	1457	343
RTOR Reduction (vph)	0	0	170	0	0	19	0	1	0	0	19	0
Lane Group Flow (vph)	181	180	27	58	73	1	346	1889	0	32	1781	0
Confl. Peds. (#/hr)	10		1	1		10	3		2	2		3
Confl. Bikes (#/hr)			2						4			1
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	24.3	24.3	24.3	11.9	11.9	11.9	124.8	113.5		75.7	71.4	
Effective Green, g (s)	24.3	24.3	24.3	11.9	11.9	11.9	124.8	113.5		75.7	71.4	
Actuated g/C Ratio	0.14	0.14	0.14	0.07	0.07	0.07	0.69	0.63		0.42	0.40	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	226	229	210	111	116	101	497	3183		121	1948	
v/s Ratio Prot	c0.11	0.11		0.03	c0.04		c0.18	0.37		0.01	c0.36	
v/s Ratio Perm			0.02			0.00	0.30			0.10		
v/c Ratio	0.80	0.79	0.13	0.52	0.63	0.01	0.70	0.59		0.26	0.91	
Uniform Delay, d1	75.5	75.3	68.5	81.3	81.9	78.6	50.5	19.6		30.8	51.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.2	15.0	0.1	2.0	7.5	0.0	3.4	0.8		0.4	8.1	
Delay (s)	92.7	90.3	68.6	83.3	89.4	78.6	53.9	20.4		31.2	59.6	
Level of Service	F	F	E	F	F	E	D	C		C	E	
Approach Delay (s/veh)		83.4			85.6			25.6			59.1	
Approach LOS		F			F			C			E	

Intersection Summary

HCM 2000 Control Delay (s/veh)	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

PZ24-12000027

07/02/2025

HCM 7th Edition methodology expects strict NEMA phasing.

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07/02/2025

102: S. Federal Hwy/US 1 & North Driveway (Outbound Only)

PZ24-12000027

07/02/2025

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	79	2110	0	0	1637
Future Vol, veh/h	0	79	2110	0	0	1637
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	85	2269	0	0	1760

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	1134	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3	-
Pot Cap-1 Maneuver	0	526	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	526	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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Approach	WB	NB	SB
HCM Control Delay, s/v13.16		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 526	-
HCM Lane V/C Ratio	- 0.161	-
HCM Control Delay (s/veh)	- 13.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.6	-

103: S. Federal Hwy/US 1 & South Driveway (Inbound Only)

PZ24-12000027

07/02/2025

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗				↗ ↑↑↑			↗ ↑↑↑		↗
Traffic Vol, veh/h	0	0	31	0	0	0	19	2078	28	35	1578	18
Future Vol, veh/h	0	0	31	0	0	0	19	2078	28	35	1578	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	100	-	-	100	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	33	0	0	0	20	2234	30	38	1697	19

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	848			1716	0	0	2269
Stage 1	-	-	-			-	-	-	-
Stage 2	-	-	-			-	-	-	-
Critical Hdwy	-	-	4			4	-	-	4
Critical Hdwy Stg 1	-	-	-			-	-	-	-
Critical Hdwy Stg 2	-	-	-			-	-	-	-
Follow-up Hdwy	-	-	3.92			3	-	-	3
Pot Cap-1 Maneuver	0	0	548			335	-	-	215
Stage 1	0	0	-			-	-	-	-
Stage 2	0	0	-			-	-	-	-
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	-	0	548			335	-	-	215
Mov Cap-2 Maneuver	-	0	-			-	-	-	-
Stage 1	-	0	-			-	-	-	-
Stage 2	-	0	-			-	-	-	-

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Approach	EB	NB	SB
HCM Control Delay, s/v11.99		0.15	0.54
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	335	-	-	548	215	-	-
HCM Lane V/C Ratio	0.061	-	-	0.061	0.175	-	-
HCM Control Delay (s/veh)	16.4	-	-	12	25.3	-	-
HCM Lane LOS	C	-	-	B	D	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.6	-	-

DRC

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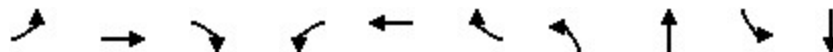
Future (2027) Total SYNCHRO Output – *Optimized*

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	200	205	311	102	106	6	224	1584	19	1973
v/c Ratio	0.88	0.90	0.76	0.69	0.69	0.02	0.89	0.51	0.11	0.79
Control Delay (s/veh)	102.1	104.4	30.4	93.1	92.7	0.2	80.4	19.7	14.6	37.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	102.1	104.4	30.4	93.1	92.7	0.2	80.4	19.7	14.6	37.7
Queue Length 50th (ft)	217	223	79	111	115	0	182	361	7	629
Queue Length 95th (ft)	#347	#358	187	172	177	0	271	431	19	767
Internal Link Dist (ft)		990			992			1534		468
Turn Bay Length (ft)	230		280	140		140	300		220	
Base Capacity (vph)	241	243	420	231	238	355	303	3102	175	2483
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.84	0.74	0.44	0.45	0.02	0.74	0.51	0.11	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

DRC

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






















HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/28/2025

PZ24-12000027

07/02/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	18	274	123	60	5	197	1365	29	17	1524	212
Future Volume (vph)	339	18	274	123	60	5	197	1365	29	17	1524	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.96	1.00	0.95	0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1693	1549	1681	1738	1555	1770	5066		1770	4977	
Flt Permitted	0.95	0.96	1.00	0.95	0.98	1.00	0.05	1.00		0.13	1.00	
Satd. Flow (perm)	1681	1693	1549	1681	1738	1555	86	5066		248	4977	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	385	20	311	140	68	6	224	1551	33	19	1732	241
RTOR Reduction (vph)	0	0	200	0	0	5	0	1	0	0	10	0
Lane Group Flow (vph)	200	205	111	102	106	1	224	1583	0	19	1963	0
Confl. Peds. (#/hr)	5		8	8		5	1		2	2		1
Confl. Bikes (#/hr)									8			2
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	21.7	21.7	21.7	14.1	14.1	14.1	105.2	95.2		82.5	79.5	
Effective Green, g (s)	21.7	21.7	21.7	14.1	14.1	14.1	105.2	95.2		82.5	79.5	
Actuated g/C Ratio	0.14	0.14	0.14	0.09	0.09	0.09	0.66	0.60		0.52	0.50	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	227	229	210	148	153	137	253	3014		156	2472	
v/s Ratio Prot	0.12	c0.12		0.06	c0.06		c0.10	0.31		0.00	0.39	
v/s Ratio Perm			0.07			0.00	c0.48			0.06		
v/c Ratio	0.88	0.90	0.53	0.69	0.69	0.00	0.89	0.53		0.12	0.79	
Uniform Delay, d1	67.9	68.0	64.4	70.8	70.8	66.5	52.9	19.1		19.2	33.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.6	32.1	1.3	10.2	10.4	0.0	27.9	0.7		0.1	2.7	
Delay (s)	97.5	100.1	65.7	81.0	81.3	66.5	80.9	19.7		19.3	36.2	
Level of Service	F	F	E	F	F	E	F	B		B	D	
Approach Delay (s/veh)		84.4			80.7			27.3			36.0	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			42.0									
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			160.0									
Intersection Capacity Utilization			81.8%									
Analysis Period (min)			15									
c Critical Lane Group												

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07/02/2025

HCM 7th Edition methodology expects strict NEMA phasing.

DRC

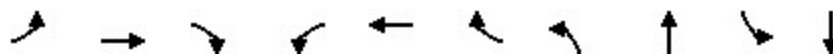
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101: S. Federal Hwy/US 1 & E. McNab Road

PZ24-12000027

07/02/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	315	24	185	60	63	19	325	1704	30	1370
Future Volume (vph)	315	24	185	60	63	19	325	1704	30	1370
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	3		4	4		5	2	1	6
Permitted Phases			3			4	2		6	
Detector Phase	3	3	3	4	4	4	5	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	12.0	4.0	12.0
Minimum Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	11.0	35.0	11.0	35.0
Total Split (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	77.0	19.0	64.0
Total Split (%)	23.3%	23.3%	23.3%	23.3%	23.3%	23.3%	17.8%	42.8%	10.6%	35.6%
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	25.0	70.0	12.0	57.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0	1.5	3.0
Recall Mode	None	None	None	None	None	None	None	C-Max	None	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Don't Walk (s)	31.0	31.0	31.0	31.0	31.0	31.0		21.0		21.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	DRC	0

Intersection Summary

Cycle Length: 180

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Actuated Cycle Length: 180

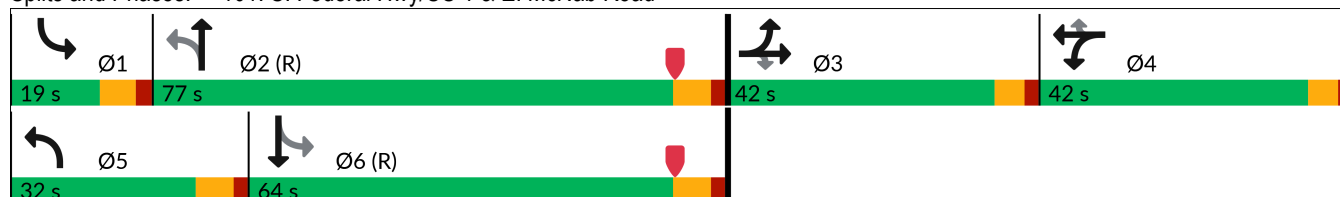
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Offset: 39 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

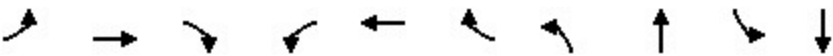
Natural Cycle: 145

Control Type: Actuated-Coordinated

Splits and Phases: 101: S. Federal Hwy/US 1 & E. McNab Road



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	181	180	197	58	73	20	346	1890	32	1800
v/c Ratio	0.80	0.79	0.52	0.53	0.63	0.08	0.70	0.59	0.25	0.91
Control Delay (s/veh)	99.3	97.8	12.3	97.1	104.4	0.7	57.1	21.7	22.8	57.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	99.3	97.8	12.3	97.1	104.4	0.7	57.1	21.7	22.8	57.1
Queue Length 50th (ft)	223	221	0	71	90	0	327	465	11	690
Queue Length 95th (ft)	304	302	76	126	150	0	461	642	31	#964
Internal Link Dist (ft)	990				992		1534		468	
Turn Bay Length (ft)	230		280		140		300		220	
Base Capacity (vph)	336	339	469	336	352	424	493	3224	197	1980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.53	0.42	0.17	0.21	0.05	0.70	0.59	0.16	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



















HCM Signalized Intersection Capacity Analysis

101: S. Federal Hwy/US 1 & E. McNab Road

04/28/2025

PZ24-12000027

07/02/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	315	24	185	60	63	19	325	1704	72	30	1370	322
Future Volume (vph)	315	24	185	60	63	19	325	1704	72	30	1370	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1697	1557	1681	1762	1542	1770	5048		1770	4911	
Flt Permitted	0.95	0.96	1.00	0.95	1.00	1.00	0.05	1.00		0.11	1.00	
Satd. Flow (perm)	1681	1697	1557	1681	1762	1542	94	5048		199	4911	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	335	26	197	64	67	20	346	1813	77	32	1457	343
RTOR Reduction (vph)	0	0	170	0	0	19	0	1	0	0	19	0
Lane Group Flow (vph)	181	180	27	58	73	1	346	1889	0	32	1781	0
Confl. Peds. (#/hr)	10		1	1		10	3		2	2		3
Confl. Bikes (#/hr)			2						4			1
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3			4	2			6		
Actuated Green, G (s)	24.3	24.3	24.3	11.9	11.9	11.9	124.8	113.5		76.2	71.9	
Effective Green, g (s)	24.3	24.3	24.3	11.9	11.9	11.9	124.8	113.5		76.2	71.9	
Actuated g/C Ratio	0.14	0.14	0.14	0.07	0.07	0.07	0.69	0.63		0.42	0.40	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	226	229	210	111	116	101	492	3183		121	1961	
v/s Ratio Prot	c0.11	0.11		0.03	c0.04		c0.18	0.37		0.01	c0.36	
v/s Ratio Perm			0.02			0.00	0.31			0.11		
v/c Ratio	0.80	0.79	0.13	0.52	0.63	0.01	0.70	0.59		0.26	0.91	
Uniform Delay, d1	75.5	75.3	68.5	81.3	81.9	78.6	50.9	19.6		30.5	50.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.2	15.0	0.1	2.0	7.5	0.0	3.7	0.8		0.4	7.7	
Delay (s)	92.7	90.3	68.6	83.3	89.4	78.6	54.6	20.4		30.9	58.6	
Level of Service	F	F	E	F	F	E	D	C		C	E	
Approach Delay (s/veh)		83.4			85.6			25.7			58.1	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			46.8				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			26.0		
Intersection Capacity Utilization			84.9%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

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HCM 7th Edition methodology expects strict NEMA phasing.

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APPENDIX J

NCHRP Report 745 Excerpts

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

PZ24-12000027

07/02/2025

NCHRP REPORT 745

Left-Turn Accommodations at Unsignalized Intersections

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Subscriber Categories

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or high volumes. Therefore, the no-speed-reduction lengths given in Table 6 should be accepted as a desirable goal and should be provided where practical.

Vehicle Storage Length

The left-turn lane should be sufficiently long to store the number of vehicles likely to accumulate during a critical period; the definition of that critical period can vary depending on the traffic conditions at the site. Regardless of the specific critical period, the storage length should be sufficient to avoid the possibility of the left-turning queue spilling over into the through lane.

According to the *Green Book* (5), at unsignalized intersections, the storage length—exclusive of taper—may be based on the number of turning vehicles likely to arrive in an average 2-minute period within the peak hour. Space for at least two passenger cars should be provided; with over 10 percent truck traffic, provisions should be made for at least one car and one truck. The 2-minute waiting time may need to be changed to some other interval that depends largely on the opportunities for completing the left-turn maneuver. These intervals, in turn, depend on the volume of opposing traffic, which the *Green Book* does not address. For additional information on storage length, the *Green Book* refers the reader to

the *Highway Capacity Manual* (3). The equation presented in the *TRB Access Management Manual* (6) (and reproduced in Table 7) can be used to determine the design length for left-turn storage as described by the *Green Book*.

NCHRP Report 457 (11) developed suggested storage length values using equations identified from Harmelink's work (12) regarding storage length of left-turn bays at unsignalized intersections. The storage length equation is a function of movement capacity, which is dependent upon assumed critical gap and follow-up gap. Critical gap is defined by the *Highway Capacity Manual* as the minimum time interval in the major street traffic stream that allows intersection entry for one minor-street vehicle. Thus, the driver's critical gap is the minimum gap that would be acceptable. The time between the departure of one vehicle from the minor street and the departure of the next vehicle using the same major street gap, under a condition of continuous queuing on the minor street, is called the follow-up time.

NCHRP Report 457 used a smaller critical gap (4.1 sec as recommended in the *Highway Capacity Manual* compared to the 5.0 or 6.0 sec used by Harmelink for two-lane and four-lane highways, respectively), which resulted in shorter values than those generated by Harmelink. The assumptions made regarding critical gap or follow-up gap and the

Table 7. Equations used to determine storage length.

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Equation in <i>TRB Access Management Manual</i>		
$L = \frac{V}{N_c} ks \quad (1)$		
<p>Where:</p> <p>L = design length for left-turn storage (ft)</p> <p>V = estimated left-turn volume, vehicles per hour (veh/hr)</p> <p>N_c = number of cycles per hour. For the <i>Green Book</i> unsignalized procedure, this would be 30 (V/N is the average number of turning vehicles per cycle).</p> <p>k = factor that is the length of the longest queue (design queue length) divided by average queue length (a value of 2.0 is commonly used for major arterials, and a value of 1.5 to 1.8 might be considered for an approach on a minor street or on a collector where capacity will not be critical). For the <i>Green Book</i> procedure, this would be 1.0.</p> <p>s = average length per vehicle, including the space between vehicles, generally assumed to be 25 ft (adjustments for trucks and buses are available in several documents such as the <i>TRB Access Management Manual</i>)</p>		
Equations Used in <i>NCHRP Report 457</i>		
Equations also used to generate values in Table 8		
$P(n > N) = \left(\frac{v}{c}\right)^{(N+1)}$	$c = \frac{V_o e^{-V_o t_c / 3600}}{1 - e^{-V_o t_f / 3600}}$	$N = \frac{\ln[P(n > N)]}{\ln[v/c]} - 1$
<p>Where:</p> <p>$P(n > N)$ = probability of bay overflow</p> <p>v = left-turn vehicle volume (veh/hr)</p> <p>N = number of vehicle storage positions</p> <p>c = movement capacity (veh/hr)</p> <p>V_o = major-road volume conflicting with the minor movement, assumed to be equal to one-half of the two-way major-road volume (veh/hr)</p> <p>t_c = critical gap (sec)</p> <p>t_f = follow-up gap (sec)</p>		

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resulting capacity for the movement used in these procedures can have a significant effect on the calculated storage length recommendations as demonstrated by several researchers (13, 14).

It is generally recognized that a storage area should adequately store the turn demand a large percentage of the time (e.g., 95 percent or more). A 0.5 percent limit was used for the major road left-turn bay lengths in *NCHRP Report 457* based on the recommendation of Harmelink. This smaller limit reflects the greater potential for severe consequences when a bay overflows on an unstopped, major road approach. The critical and follow-up gaps were assumed to equal 4.1 and 2.2 sec, respectively. When the critical gap of 5.0 and 6.25 sec determined in the NCHRP Project 3-91 field studies are used for critical gap (follow-up gap was 2.2 sec), the stor-

age lengths shown in Table 8 are generated. A critical gap of 5.0 sec represents the 50th percentile, while the critical gap of 6.25 sec represents the 85th percentile value (which is preferred for design) for the data collected as part of the field studies in this project.

Each of the sources on storage length emphasize that the appropriate storage length is dependent on both the volume of turning traffic and the volume of opposing traffic. If volume data are not available, for urban and suburban streets with lower speeds (e.g., less than 40 mph), it is recommended that the minimum storage length be at least 50 ft to accommodate two cars; for high speed and rural locations, a minimum storage length of 100 ft is recommended. Some cities use 250-ft storage lanes for left-turn lanes approaching arterial streets, and 150-ft storage lanes for those approach-

Table 8. Recommended storage lengths for arterials from Access Management Manual equation and NCHRP Report 457 equations with revised critical gap.

Left-Turn Volume (veh/hr)	Storage Length, Rounded Up to Nearest 25-ft Increment (ft)						
	Storage Lengths from Other Manuals for Comparison		Storage Lengths Calculated from Equations ^b Documented in <i>NCHRP Report 457</i> Using Revised Critical Gaps and 0.005 Probability of Overflow				
			Opposing Volume (veh/hr)				
	<i>Green Book</i> Procedure (<i>k</i> =1) ^a	Equation (<i>k</i> =2) ^a	200	400	600	800	1000
Critical Gap = 5.0 sec, Follow-Up Gap = 2.2 sec (Represents the 50th Percentile Critical Gap Found in Field Studies)							
40	75	75	50	50	50	50	50
60	50	100	50	50	50	50	50
80	75	150	50	50	50	50	50
100	100	175	50	50	50	50	75
120	100	200	50	50	50	75	75
140	125	250	50	50	50	75	75
160	150	275	50	50	75	75	100
180	150	300	50	50	75	75	100
200	175	350	50	75	75	100	125
220	200	375	50	75	75	100	125
240	200	400	75	75	100	125	150
260	225	450	75	75	100	125	175
280	250	475	75	75	100	125	175
300	250	500	75	100	125	150	200
Critical Gap = 6.25 sec, Follow-Up Gap = 2.2 sec (Represents the 85th Percentile Critical Gap Found in Field Studies, 85th Percentile Preferred for Design)							
40	75	75	50	50	50	50	50
60	50	100	50	50	50	50	50
80	75	150	50	50	50	50	75
100	100	175	50	50	50	75	75
120	100	200	50	50	75	75	100
140	125	250	50	50	75	100	125
160	150	275	50	75	75	100	150
180	150	300	50	75	75	125	150
200	175	350	50	75	100	125	200
220	200	375	75	75	100	150	225
240	200	400	75	75	125	150	275
260	225	450	75	100	125	175	325
280	250	475	75	100	125	200	400
0	250	500	75	100	150	225	525
^{a, b} See Table 7 for equations. This table assumes 25 ft per vehicle spacing. Table 4 provides other suggested spacing lengths based on percent trucks.							

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