KBP CONSULTING, INC.

MEMORANDUM

To: Jay Doucette
Spring Engineering

From: Karl Peterson, P.E.

Date: January 24, 2026

Subject: Al Hendrickson Toyota – Coconut Creek, Florida
Trip Generation Statement

Introduction

Al Hendrickson Toyota is an existing automobile dealership located on the north side of W. Sample Road (State Road 834) between Banks Road and NW 54th Avenue in Coconut Creek, Broward County, Florida. More specifically, the subject site is located at 5201 W. Sample Road, and the Broward County Parcel ID number is 4842 18 03 0010. A project location map is presented in Attachment A to this memorandum.

Existing Land Use and Access

The subject site has a land area of approximately 12.338 acres (537,453 square feet) and the floor area of the existing facilities is 39,315 square feet. Vehicular access to the site is provided by one (1) right-turn in only driveway on W. Sample Road, one (1) full access driveway on Banks Road, and one (1) full access driveway on NW 54th Avenue.

Proposed Land Use and Access

The subject site will be redeveloped and expanded with new automobile sales and service facilities and a new parking garage with 568 vehicle inventory parking spaces. The parking garage will include a carwash and automobile detailing area. Vehicular access to the site will be provided by the existing driveways.

Traffic Impact Study

A traffic impact study for this proposed redevelopment plan was prepared in August 2024 in accordance with a methodology that was reviewed and approved by the City. This study considered a proposed floor area of 106,337 square feet. The detailed operational analyses of the study area indicated that each of the study intersections and project driveways are projected to operate at an acceptable Level of Service (LOS) with the increased traffic associated with the proposed redevelopment activity. The trip generation analysis table contained within the approved traffic impact study is presented in Attachment B to this memorandum.

8400 North University Drive, Suite 309, Tamarac, Florida 33321
Tel: (954) 560-7103 Fax: (954) 582-0989

Over the past several months, the proposed site plan and development program have undergone several modifications. The result of this is a reduction in the floor area of the proposed facilities. The proposed floor area is now 97,991 square feet, which is a reduction of 8,346 square feet. The final site plan (including the site data, building area breakdown, and truck circulation pathways) is presented in Attachment C.

Updated Trip Generation Analysis

The previously referenced trip generation analysis was conducted in accordance with the data presented in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. Since that analysis was completed, the *12th Edition* of the *Trip Generation Manual* has been released. The updated equations for ITE Land Use #840 – Automobile Sales (New) are presented below.

Automobile Sales (New) – ITE Land Use #840

- Weekday: T = 28.65 (X) – 29.45
  where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: Ln(T) = 0.81 Ln(X) + 1.31 (73% in / 27% out)
- PM Peak Hour: Ln(T) = 0.84 Ln(X) + 1.34 (40% in / 60% out)

Table 1 below presents the updated trip generation analysis for the existing and proposed facilities at the Al Hendrickson Toyota site in Coconut Creek, Florida. This analysis reflects the latest (reduced) floor area and the current ITE trip generation equations for this land use. Excerpts from the referenced ITE manual are presented in Attachment D.

Table 1
Al Hendrickson Toyota
Trip Generation Summary
Coconut Creek, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Use Automobile Sales (New)	39,315 SF	1,097	53	20	73	33	50	83
Proposed Use Automobile Sales (New)	97,991 SF	2,778	111	41	152	72	108	180
Difference (Proposed - Existing)	**58,676 SF**	**1,681**	**58**	**21**	**79**	**39**	**58**	**97**

Compiled by: KBP Consulting, Inc. (January 2026).
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (12th Edition).

As indicated in Table 1 above, the proposed facilities are anticipated to generate 2,778 daily vehicle trips, 152 AM peak hour vehicle trips (111 inbound and 41 outbound), and 180 vehicle trips (72 inbound and 108 outbound) during the typical afternoon peak hour. When considering the existing Al Hendrickson Toyota facilities on the subject site, this represents an increase of 1,681 daily vehicle trips, an increase of 79 AM peak hour vehicle trips, and an increase of 97 PM peak hour vehicle trips.

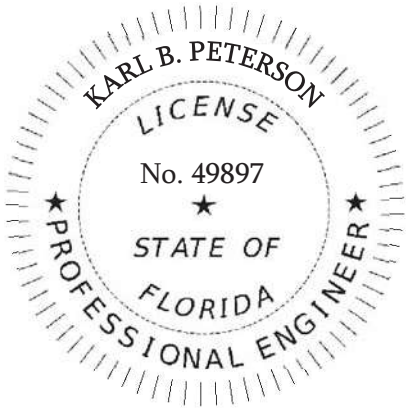
The foregoing trip generation analysis reveals a reduction in the number of additional trips to be generated by the proposed redevelopment of the site. This reduction is attributed to both the decrease in the proposed floor area and the updated trip generation data published by ITE. A summary of the reduction in future trips is presented below.

- **Daily Trips**
  - Previously Approved Increase: +1,920 Trips
  - Currently Proposed Increase: +1,681 Trips
  - Difference: – 239 Trips (–12.4%)
- **AM Peak Hour Trips**
  - Previously Approved Increase: +125 Trips
  - Currently Proposed Increase: +79 Trips
  - Difference: – 46 Trips (–36.8%)
- **PM Peak Hour Trips**
  - Previously Approved Increase: +121 Trips
  - Currently Proposed Increase: +97 Trips
  - Difference: – 24 Trips (–19.8%)

Given that the number of additional daily and peak hour trips to be generated by the proposed Al Hendrickson Toyota site is less than that of the number of additional trips estimated in the previously prepared and approved traffic impact study for this site, it is evident that the conclusions of that traffic study remain valid and that an updated traffic study is not warranted.

Please let me know if you have any questions or comments.

APPROVED BY:



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Karl B Peterson 2026.01.24 14:23:28 -05'00'

ON THE DATE ADJACENT TO THE SEAL.
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PH: 954-560-7103
KARL B. PETERSON, P.E. NO. 49897

Attachment A

Project Location Map

KBP
CONSULTING, INC.

Project Location Map

Attachment A
Al Hendrickson Toyota
Coconut Creek, Florida

Attachment B

Trip Generation Analysis – August 2024

Trip generation table from the approved traffic impact study.

Table 1
Al Hendrickson Toyota
Trip Generation Summary
Coconut Creek, Florida

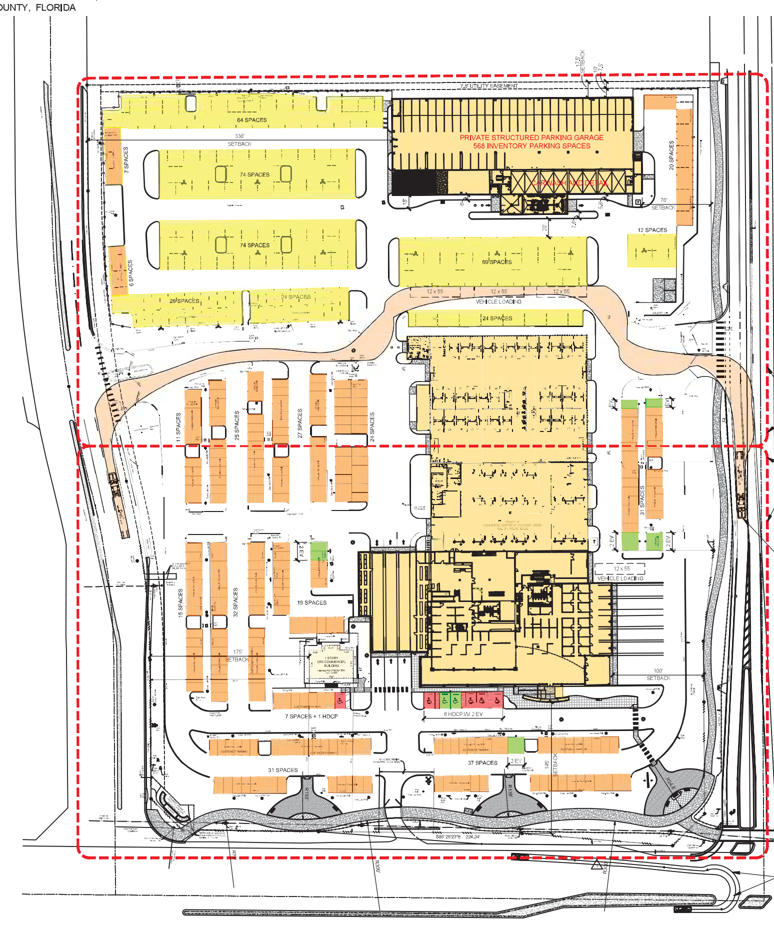
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Use								
Automobile Sales (New)	39,315 SF	1,097	53	20	73	37	55	92
Proposed Use								
Automobile Sales (New)	106,337 SF	3,017	145	53	198	85	128	213
Difference (Proposed - Existing)	**67,022 SF**	**1,920**	**92**	**33**	**125**	**48**	**73**	**121**

Compiled by: KBP Consulting, Inc. (August 2024).
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).

Attachment C

Proposed Site Plan

SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST
BROWARD COUNTY, FLORIDA



SEE ENLARGED SITE PLAN ON SHEET C2.2

SEE ENLARGED SITE PLAN ON SHEET C2.1

WB-67 TRUCK ROUTE

CUSTOMER U-TURN

OVERALL SITE PLAN
SCALE: 1"= 50'

BUILDING AREA BREAKDOWN

EXISTING
TOYOTA: 36,205 SF + AUXILIARY: 1,526 SF + CARWASH: 1,584 SF

TOTAL BLDG AREA: 39,315 SF

SALES / OFFICE AREA
1st FLOOR = 29,384 SF
2nd FLOOR = 19,883 SF

SERVICE AREA
1st FLOOR = 47,198 SF

TOYOTA BLDG AREA: 96,465 SF

PROPOSED
NEW TOYOTA BUILDOUT: 96,465 SF
EXISTING AUXILIARY: 1,526 SF
NEW CARWASH/ DETAIL: 6,015 SF
NEW PARKING GARAGE: 151,278 SF

SALES/ SERVICE AREA: 97,991 SF

TOTAL BLDG AREA: 255,284 SF = 5.861 AC

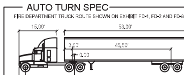
PARKING LEGEND

- HANDICAP SPACES (12x18) = 5 SPACES + 2 EV
- STANDARD SPACES (9x18) = 270 SPACES
- EV CHARGING (10 9x18 & 2 HDCP) = 12 SPACES
- INVENTORY SPACES (9x18) = 369 SPACES
- PARKING GARAGE (9x18) = 568 SPACES

TOTAL PROVIDED PARKING = 1,224 SPACES + 6 BICYCLE SPACES

AUTO TURN SPEC

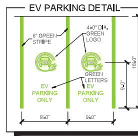
FIRE DEPARTMENT TRUCK ROUTE SHOWN ON EXHIBIT FD-1, FD-2 AND FD-3.



WB-67

Tractor Width	: 8.00'	Lock to Lock Time	: 6.0
Trailer Width	: 8.50'	Steering Angle	: 28.4
Tractor Track	: 8.00'	Articulating Angle	: 75.0
Trailer Track	: 8.50'		

EV PARKING DETAIL



PROJECT DATA

PROJECT NAME: AL HENDRICKSON TOYOTA

OWNER: COCONUT CREEK AUTOMOTIVE MANAGEMENT, LLC
3031 NORTH ROCKY POINT DRIVE, SUITE 770
TAMPA, FLORIDA 33607
PHONE: (813) 535-7857
E-mail: tsantos@morganautogroup.com

ENGINEER: SPRING ENGINEERING, INC.
3014 US HIGHWAY 19
HOLIDAY, FLORIDA 34691
PHONE: (727) 938-1516
E-MAIL: sei@springengineeringinc.com

SURVEYOR: PARAMOUNT ENGINEERING GROUP, INC.
902 CLINT MOORE ROAD, SUITE 218
BOCA RATON, FLORIDA 33487
PHONE: (561) 989-2280
EMAIL: ParamountEngineeringGroup@aol.com

SITE DATA

PARCEL I.D. #: 4842 18 03 0010 - 12.338 AC

EXISTING USE: AUTOMOTIVE SALES AND SERVICE
PROPOSED USE: AUTOMOTIVE SALES AND SERVICE

ZONING DESIGNATION: B-4 REGIONAL SHOPPING DISTRICT TO PMDD PLANNED MAIN STREET DEVELOPMENT DISTRICT

BUILDING SETBACKS:	B-4 / PMDD / PROV.	BUFFERS: REQ / PROV
NORTH:	50' / 5' / 17.5'	NORTH: 5' / 17.5'
SOUTH:	75' / 28' / 145'	SOUTH: 5' / 5'
EAST:	30' / 10' / 76'	EAST: 5' / 16.5'
WEST:	30' / 10' / 175'	WEST: 5' / 16.5'

BUILDING HEIGHT: PROVIDED 97' ALLOWED: 120' / 10 STORY

FLOOD ZONE: THIS PROJECT IS LOCATED IN FLOOD ZONE 'X' ACCORDING TO F.I.R.M. NUMBER 12011C 0165 H, PREPARED BY F.E.M.A., LAST REVISED AUGUST 18, 2014.

BUILDING AREA: 255,284 SF - SEE AREA BREAKDOWN ABOVE

FLOOR AREA RATIO: 5.861 / 12.338 = 0.475

SITE AREAS: 12.338 AC

	EXISTING	PROPOSED	TOTAL	
- BUILDING AREA	0.903 AC	1.587 AC	2.490 AC	20.2 %
- PAVING / CONC. AREA	8.891 AC	-1.841 AC	7.050 AC	57.1 %
- PERVIOUS PAVING	0.000 AC	0.140 AC	0.140 AC	1.1 %
- LANDSCAPE AREA	2.544 AC	0.114 AC	2.658 AC	21.6 %
- IMPERVIOUS AREA	9.794 AC	-0.254 AC	9.540 AC	77.3 %
- PERVIOUS	2.544 AC	0.254 AC	2.798 AC	22.7 %

REQUIRED PARKING: (3 SPACES PER 1000 SF GFA)
TOYOTA NEW SALES: 96,465 SF / 1000 SF x 3 = 290 SPACES
AUXILIARY BUILDING: 1,526 SF / 1000 SF x 3 = 5 SPACES
TOTAL REQUIRED = 295 SPACES REQUIRED

PROVIDED PARKING: 1,224 SPACES + 6 BICYCLE SPACES (SEE LEGEND)
EXISTING PARKING BEFORE DEVELOPMENT = 985 SPACES

UTILITY COMPANY:
WATER / SEWER: COCONUT CREEK UTILITIES
ELECTRIC: FLORIDA POWER AND LIGHT

PERVIOUS AREA CALCULATION

POST - BASIN - A
2.798 AC PERVIOUS AREA
9.540 AC IMPERVIOUS AREA
12.338 TOTAL BASIN AREA

POST-DEVELOPMENT BASIN MAP
SCALE: 1"= 150'

100%
CONSTRUCTION DOCS.
ISSUE DATE: 04.09.2024

REV	DATE	DESCRIPTION
1	12.19.2024	PER CITY OF COCONUT CREEK
2	04.24.2025	PER CITY OF COCONUT CREEK
3	09.18.2025	PER CITY OF COCONUT CREEK

YANCEY B. ABUTON, P.E. LICENSE No. 65706 STATE OF FLORIDA PROFESSIONAL ENGINEER

Al Hendrickson TOYOTA
5201 W SAMPLE ROAD - COCONUT CREEK, FLORIDA 33073

CONTRACT DATE:
JANUARY 10, 2024

Spring Engineering
Architecture • Engineering • Land Planning

OVERALL SITE PLAN

DESIGNED BY: JAY
DRAWN BY: JAY
CHECKED BY: RPD
JOB NO. 2023-07
SHEET NO. C2.0

Attachment D

ITE Trip Generation Data

Land Use: 840
Automobile Sales (New)

Description

A new automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or leasing of new cars is the primary business at these facilities. However, the land use also commonly provides automobile servicing, parts sales, and used car sales. The dealerships may also provide truck sales and service.

Additional Data

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Delaware, Florida, Georgia, Indiana, New York, New Jersey, North Carolina, Ontario (CAN), Oregon, Texas, Vermont, and Virginia.

Source Numbers

328, 414, 427, 438, 440, 507, 571, 583, 612, 715, 728, 880, 881, 936, 974, 975, 1036, 1219, 1236

Automobile Sales (New)
(840)

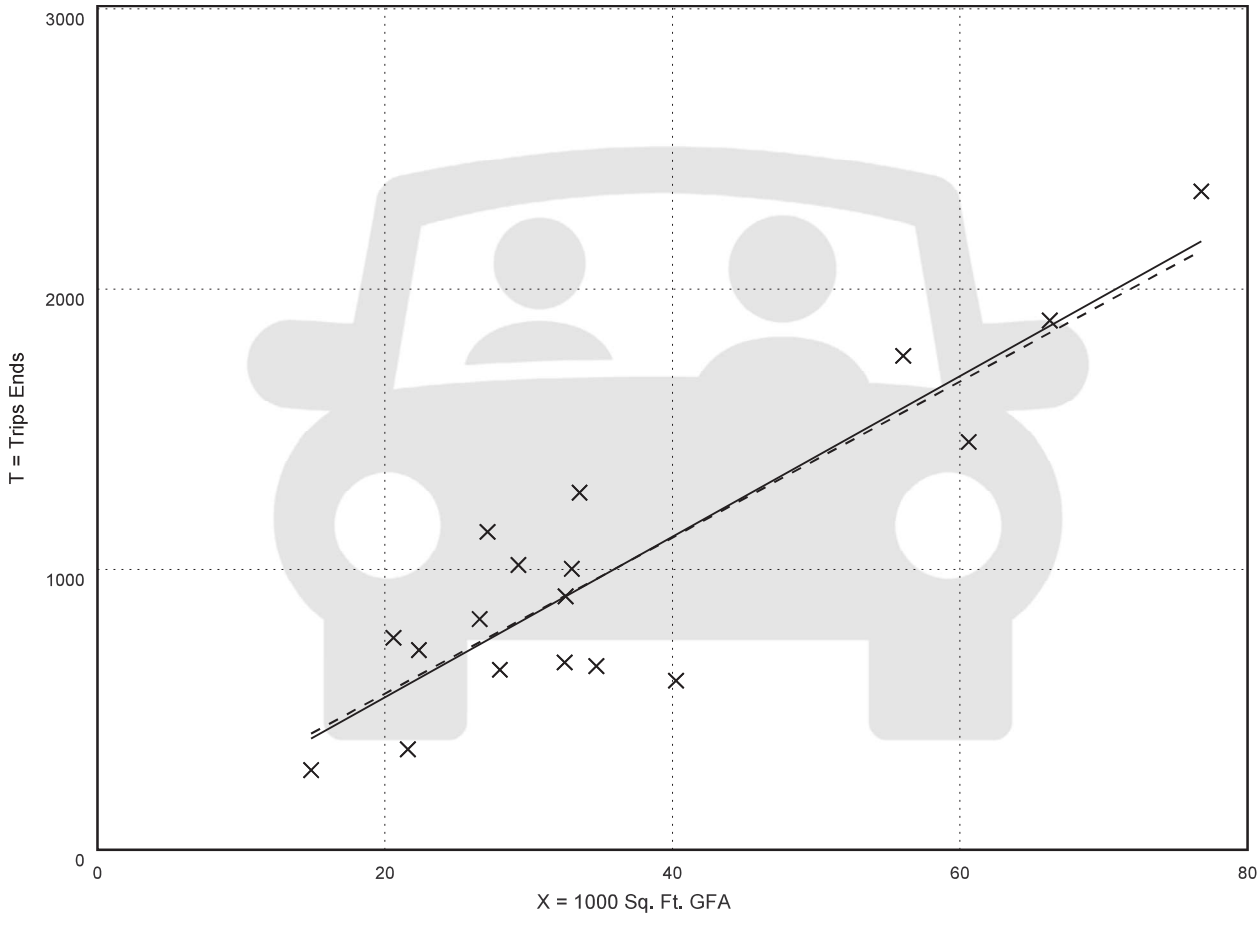
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 36
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
27.84	14.98 - 41.78	7.01

Data Plot and Equation



Fitted Curve Equation: T = 28.65(X) - 29.45

R^2= 0.80

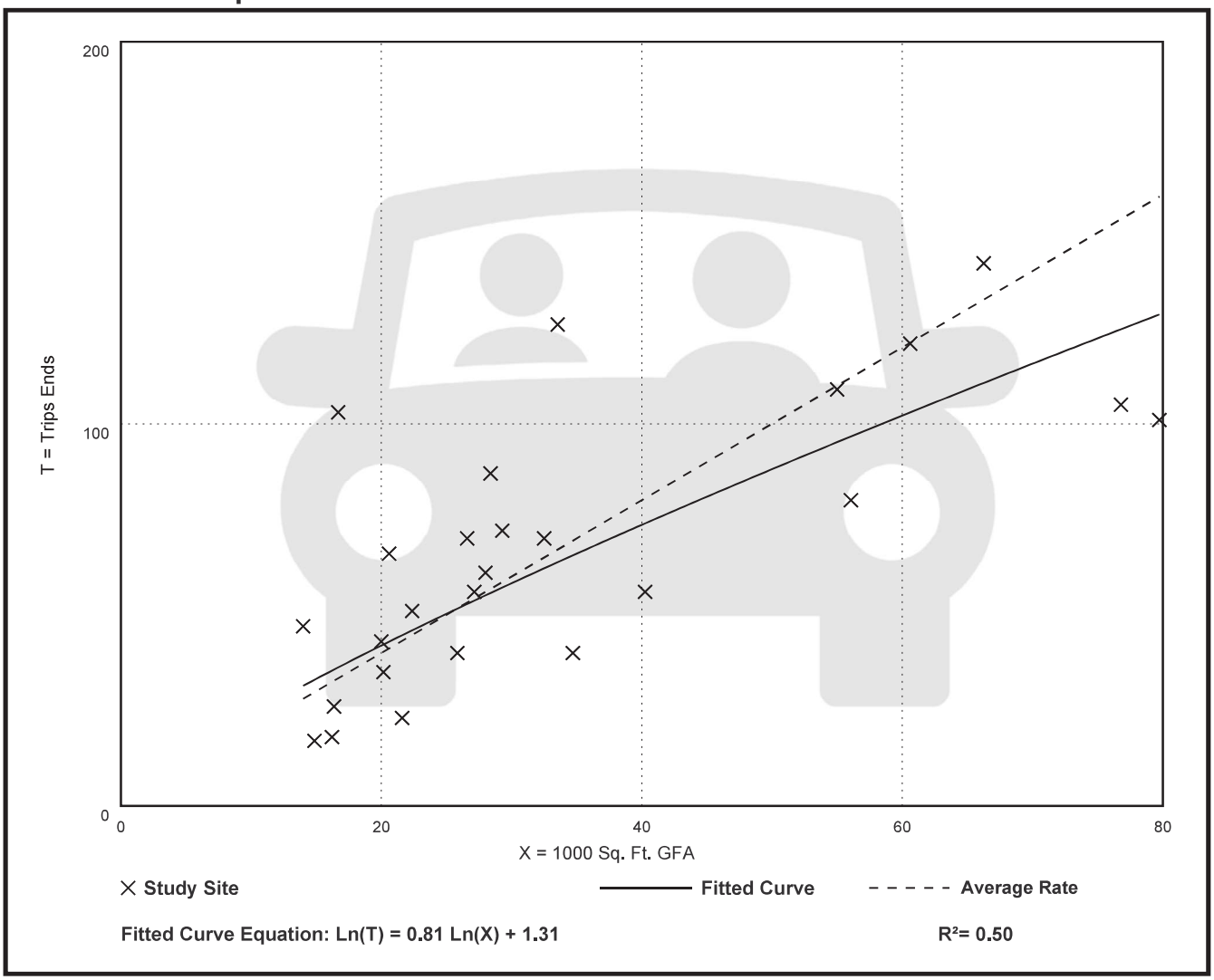
Automobile Sales (New)
(840)

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:	26
Avg. 1000 Sq. Ft. GFA:	34
Directional Distribution:	73% entering, 27% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.00	1.06 - 6.17	0.90

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.81 Ln(X) + 1.31

R^2= 0.50

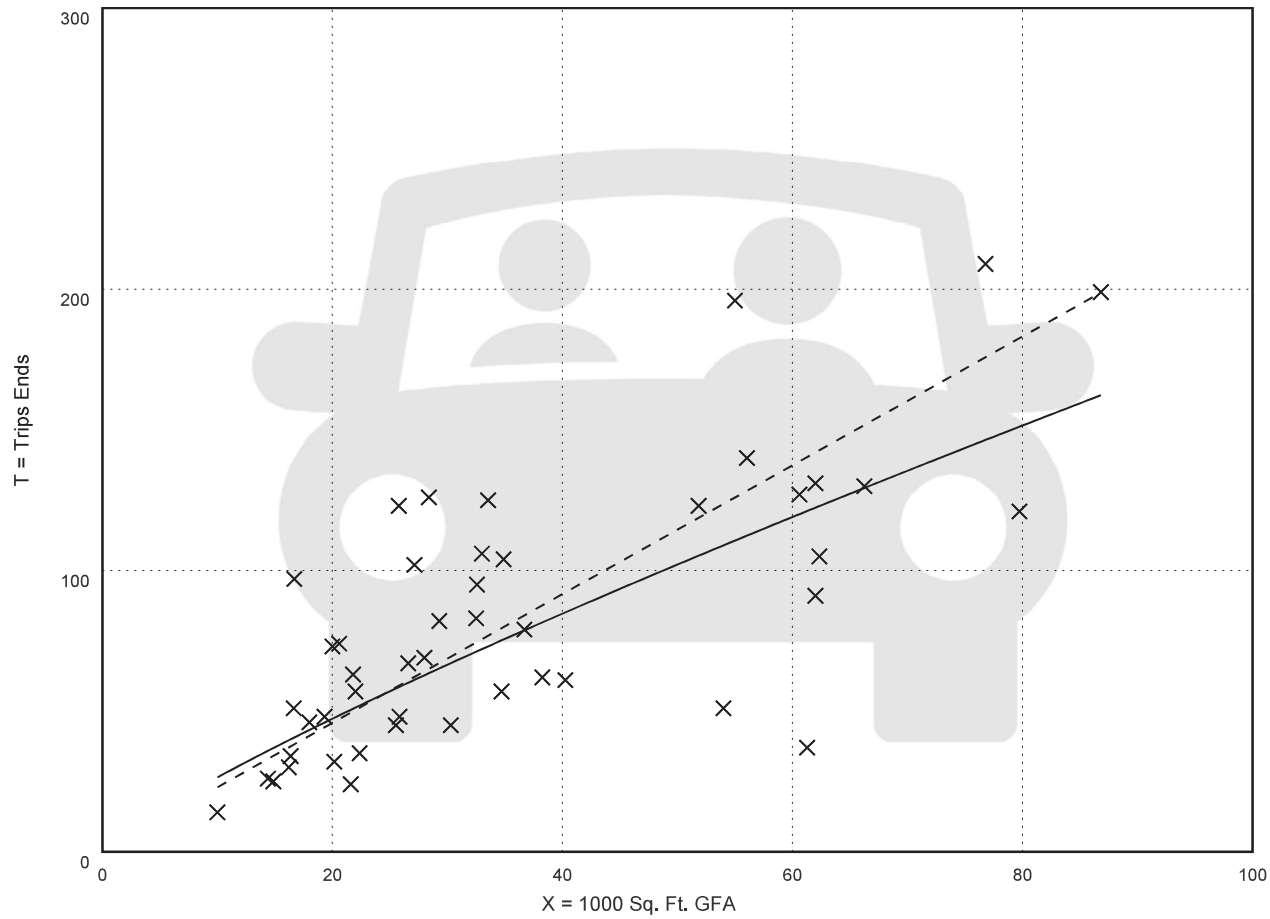
Automobile Sales (New)
(840)

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:	47
Avg. 1000 Sq. Ft. GFA:	36
Directional Distribution:	40% entering, 60% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.29	0.60 - 5.81	0.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.84 Ln(X) + 1.34

R^2= 0.53

Al Hendrickson Toyota

5201 W. Sample Road

Coconut Creek, Florida

TRAFFIC IMPACT STUDY

prepared for:
Spring Engineering

KBP CONSULTING, INC.

August 2024

Al Hendrickson Toyota

5201 W. Sample Road

Coconut Creek, Florida

Traffic Impact Study

August 2024

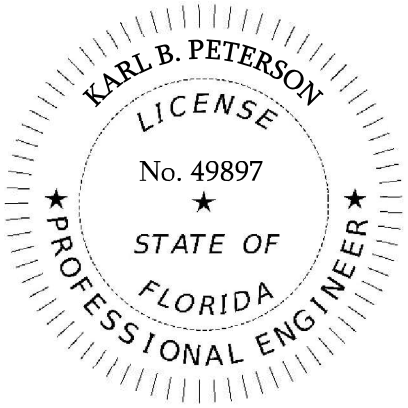
Prepared for:

Spring Engineering

Prepared by:

KBP Consulting, Inc.

APPROVED BY:



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TAMARAC, FLORIDA 33321
PH: 954-560-7103
KARL B. PETERSON, P.E. NO. 49897

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Appendices

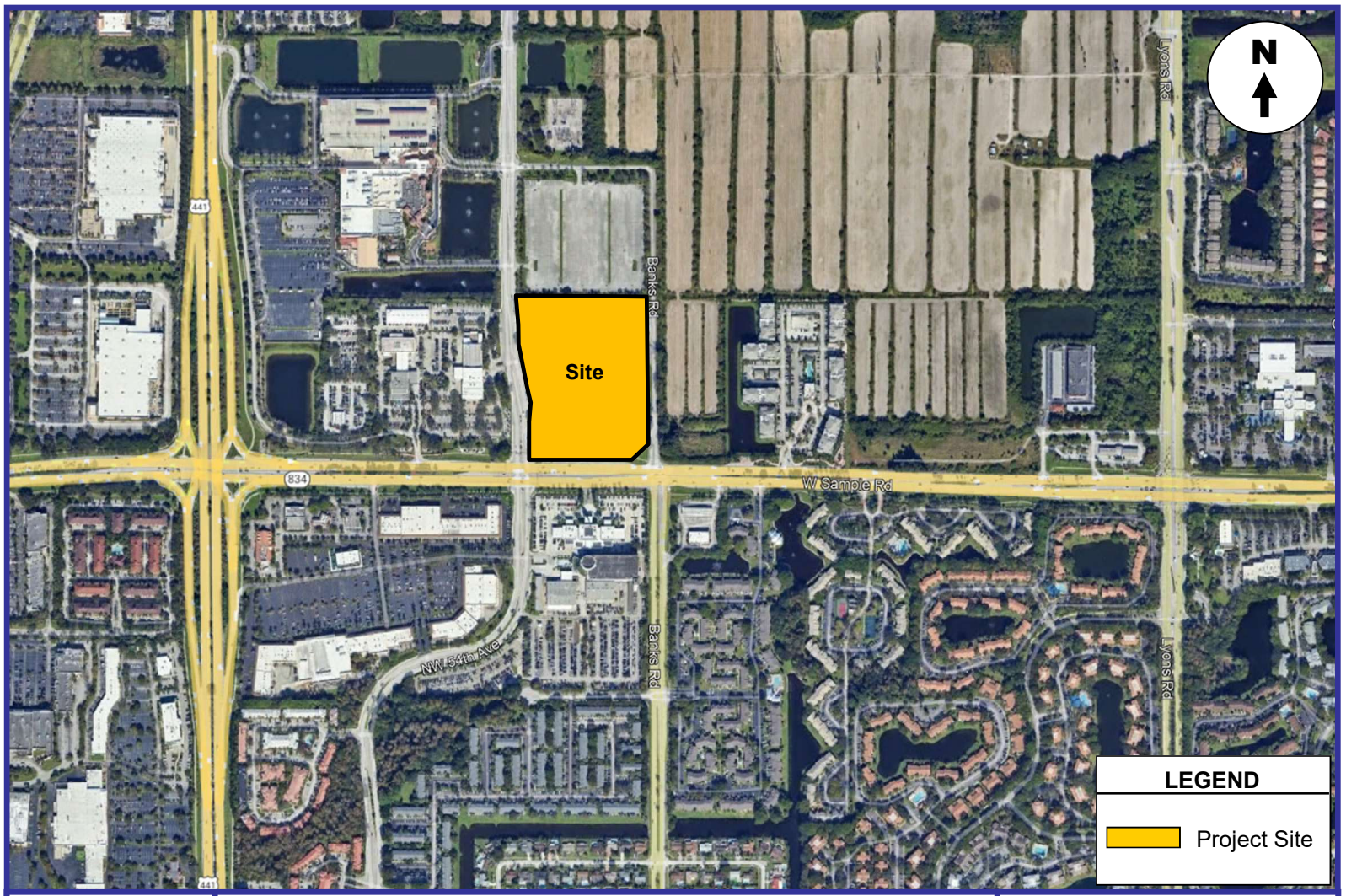
INTRODUCTION

Al Hendrickson Toyota is an existing automobile dealership located on the north side of W. Sample Road (State Road 834) between Banks Road and NW 54th Avenue in Coconut Creek, Broward County, Florida. More specifically, the subject site is located at 5201 W. Sample Road and the Broward County Parcel ID number is 4842 18 03 0010. The location of this project site is illustrated in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by Spring Engineering to conduct a traffic impact study in connection with the proposed redevelopment and expansion of this facility.[1] This study addresses the trip generation, site access, and the traffic impacts created by the proposed redevelopment / expansion project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

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

[1] The methodology for this traffic impact study was presented to the City of Coconut Creek in June 2024 and approved by staff on July 8, 2024. The methodology memorandum is presented in Appendix A of this report.



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Project Location Map

FIGURE 1
Al Hendrickson Toyota
Coconut Creek, Florida

INVENTORY

Existing Land Use and Access

The subject site has a land area of approximately 12.34 acres (537,453 square feet) and is occupied by the Al Hendrickson Toyota new car dealership. The floor area of the existing facilities is 39,315 square feet. Vehicular access to the site is provided by one (1) right-turn in only driveway on W. Sample Road, one (1) full access driveway on Banks Road, and one (1) full access driveway on NW 54th Avenue.

Proposed Land Use and Access

The subject site will be redeveloped and expanded to include a total floor area of 106,337 square feet. Vehicular access to the site will be provided by the existing driveways. The proposed project is anticipated to be completed by 2026 and Appendix B contains the preliminary site plan for the proposed redevelopment / expansion.

Traffic Circulation

As noted, vehicular access to the site is proposed along W. Sample Road, Banks Road, and NW 54th Avenue. All elements of the site are, and will continue to be, accessible from any access point to the site. The vehicle service facilities are most directly accessible from the westbound right-turn-in only driveway on W. Sample Road.

Transit Service and Facilities

Broward County Transit (BCT) Route 34 serves the project site. This route provides transit service along Sample Road between Pompano Beach / Lighthouse Point and The Corporate Park of Coral Springs at Sample Road and Coral Ridge Drive. The nearest westbound bus stop is located in the northwest quadrant of the intersection at W. Sample Road and NW 54th Avenue. The nearest eastbound bus stop is located directly across W. Sample Road between NW 54th Avenue and Banks Road in front of the JM Lexus car dealership.

EXISTING CONDITIONS

This section of the report addresses the transportation system located in the vicinity of the Al Hendrickson Toyota site.

Roadway System

W. Sample Road (State Road 834) is a six-lane divided, state-maintained principal arterial roadway oriented in the east-west direction. Within the project study area, the posted speed limit on W. Sample Road is 45 miles per hour (mph) and the state's access classification of this roadway is "3". Adjacent to the site, Banks Road is a locally maintained, two-lane roadway oriented in the north-south direction. And, adjacent to the site, NW 54th Avenue is a four-lane divided locally maintained roadway oriented in the north-south direction.

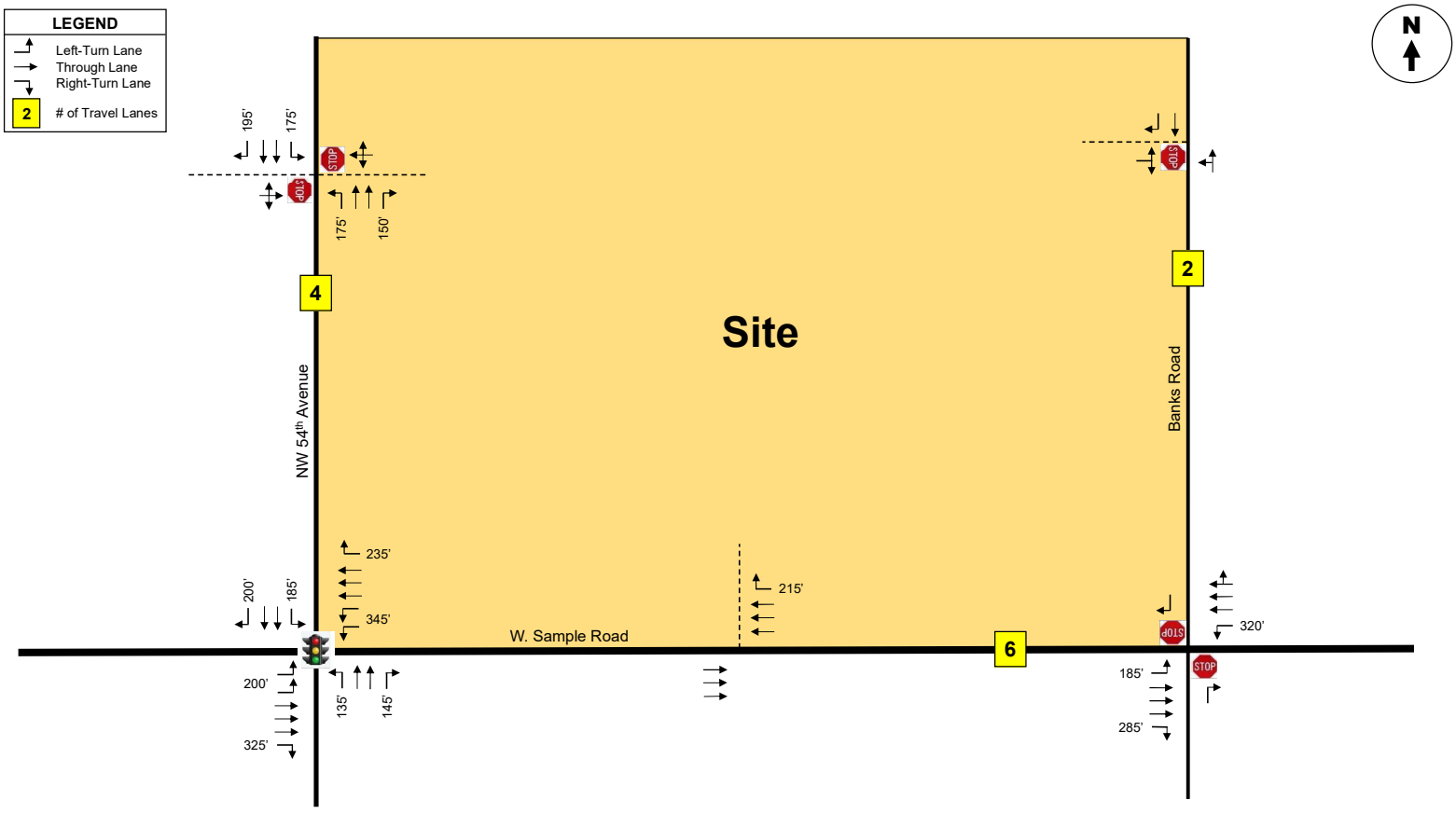
Study Intersections

For purpose of this traffic study, the following two (2) intersections were selected for detailed analysis purposes. These intersections are:

- W. Sample Road and Banks Road (unsignalized)
- W. Sample Road and NW 54th Avenue (signalized)

In addition, each of the project driveways has been evaluated as part of this traffic impact analysis.

Figure 2 on the following page depicts the number of lanes on the roadways located within the study area of the proposed project. The geometry of the intersections selected for detailed analysis purposes are also illustrated in this figure.



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Existing Lane Geometry
With Driveway Location & Geometry

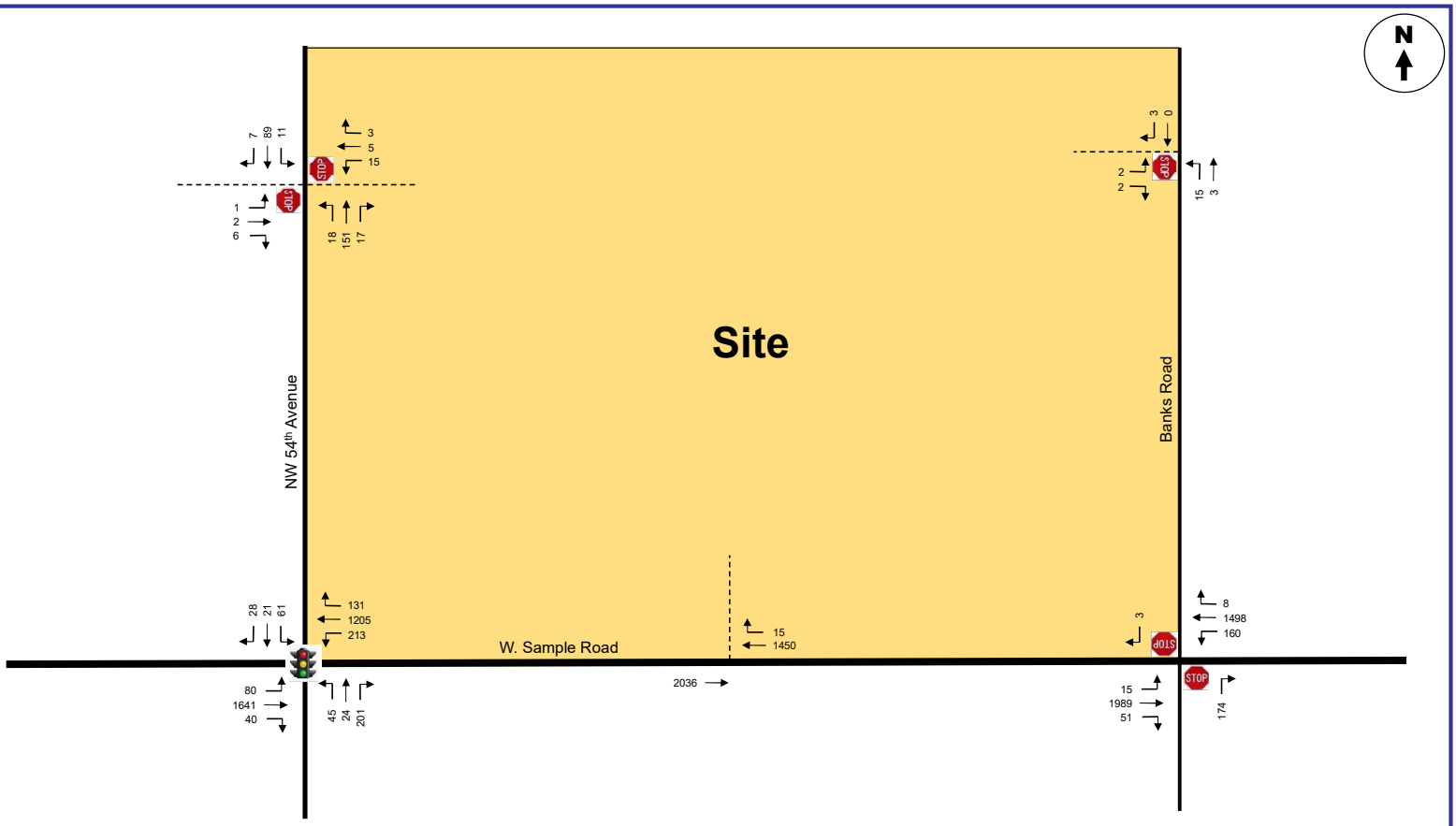
FIGURE 2
Al Hendrickson Toyota
Coconut Creek, Florida

TRAFFIC COUNTS

KBP Consulting, Inc., in association with Video Data Solutions, Inc., collected turning movement counts at the following locations:

- W. Sample Road and NW 54th Avenue
- W. Sample Road and Project Driveway
- W. Sample Road and Banks Road
- NW 54th Avenue and Project Driveway
- Banks Road and Project Driveway

The intersection turning movement counts were collected on Thursday, July 18, 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 as collected in the field. *(Note that the volumes presented in Figures 3 and 4 represent average peak season conditions in accordance with the FDOT peak season conversion factor data for this area of Broward County. The applicable Peak Season Factor Category Report is presented in Appendix D.)*



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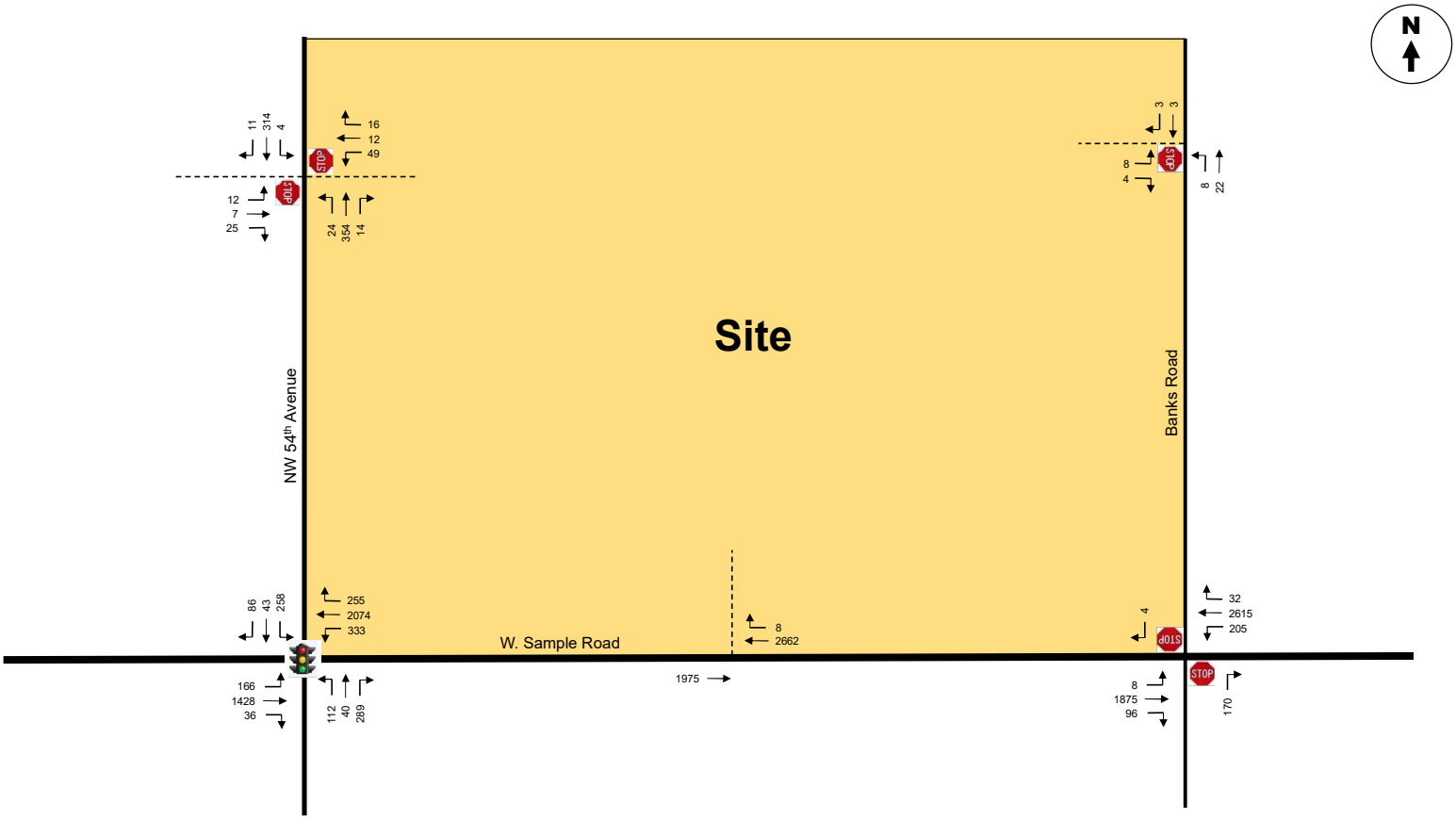
Existing (2024) AM Peak Hour (7:00-9:00) Traffic Counts

Seasonally Adjusted
Source: Video Data Solutions, Inc.

FIGURE 3
Al Hendrickson Toyota
Coconut Creek, Florida



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Existing (2024) PM Peak Hour (4:00-6:00) Traffic Counts
Seasonally Adjusted
Source: Video Data Solutions, Inc.

FIGURE 4
Al Hendrickson Toyota
Coconut Creek, Florida

TRIP GENERATION

The trip generation analysis for the Al Hendrickson Toyota project is based upon information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. According to the subject ITE manual, the most appropriate land use category for the existing and proposed development is Land Use #840 – Automobile Sales (New). The trip generation rates and equations used to determine the vehicle trips associated with this analysis are presented below.

Automobile Sales (New) – ITE Land Use #840

- Weekday: T = 28.65 (X) – 29.45
  where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: T = 1.86 (X) (73% in / 27% out)
- PM Peak Hour: T = 1.81 (X) + 20.91 (40% in / 60% out)

Table 1 below summarizes the vehicle trips expected to be generated by the expanded Al Hendrickson Toyota development. Excerpts from the referenced ITE manual are presented in Appendix E.

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Trip Generation Summary
Coconut Creek, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
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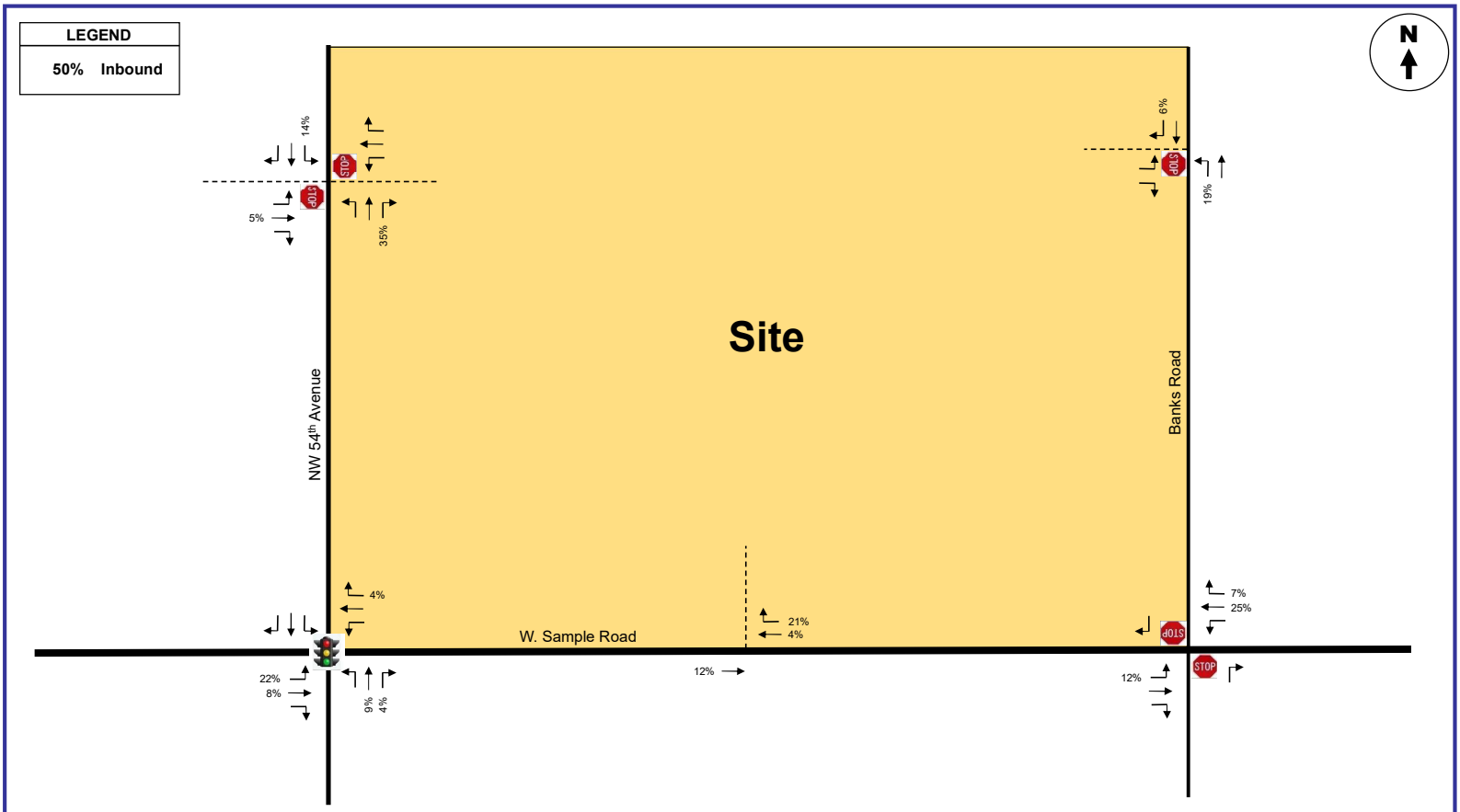
Proposed Use								
Automobile Sales (New)	106,337 SF	3,017	145	53	198	85	128	213
Difference (Proposed - Existing)	**67,022 SF**	**1,920**	**92**	**33**	**125**	**48**	**73**	**121**

Compiled by: KBP Consulting, Inc. (August 2024).
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).

As indicated in Table 1 above, the proposed development intensity is anticipated to generate 3,017 daily vehicle trips, 198 AM peak hour vehicle trips (145 inbound and 53 outbound) and 213 vehicle trips (85 inbound and 128 outbound) during the typical afternoon peak hour. When considering the existing automobile sales facility on the site, this represents an increase of 1,920 daily vehicle trips, an increase of 125 AM peak hour vehicle trips, and an increase of 121 PM peak hour vehicle trips.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

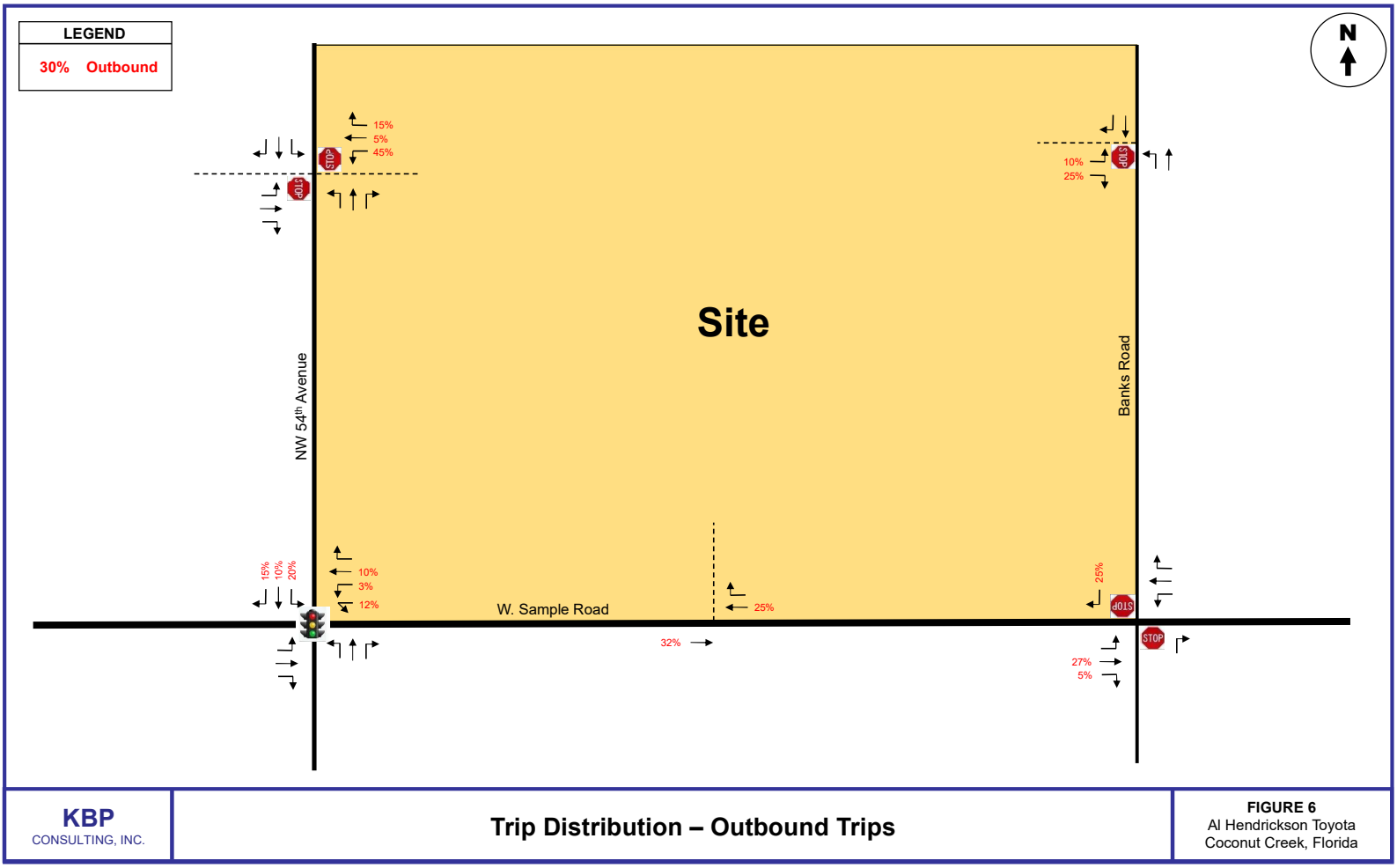
The trip distribution and traffic assignment for the Al Hendrickson Toyota project was developed based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes and existing land use patterns, and input from the project team. The resulting trip distribution for the project trips is presented in Figure 5 (inbound trips) and Figure 6 (outbound trips). The anticipated AM and PM peak hour trip assignment for the project is based upon these estimated trip distribution patterns and is presented in Figures 7 and 8.



KBP
CONSULTING, INC.

Trip Distribution – Inbound Trips

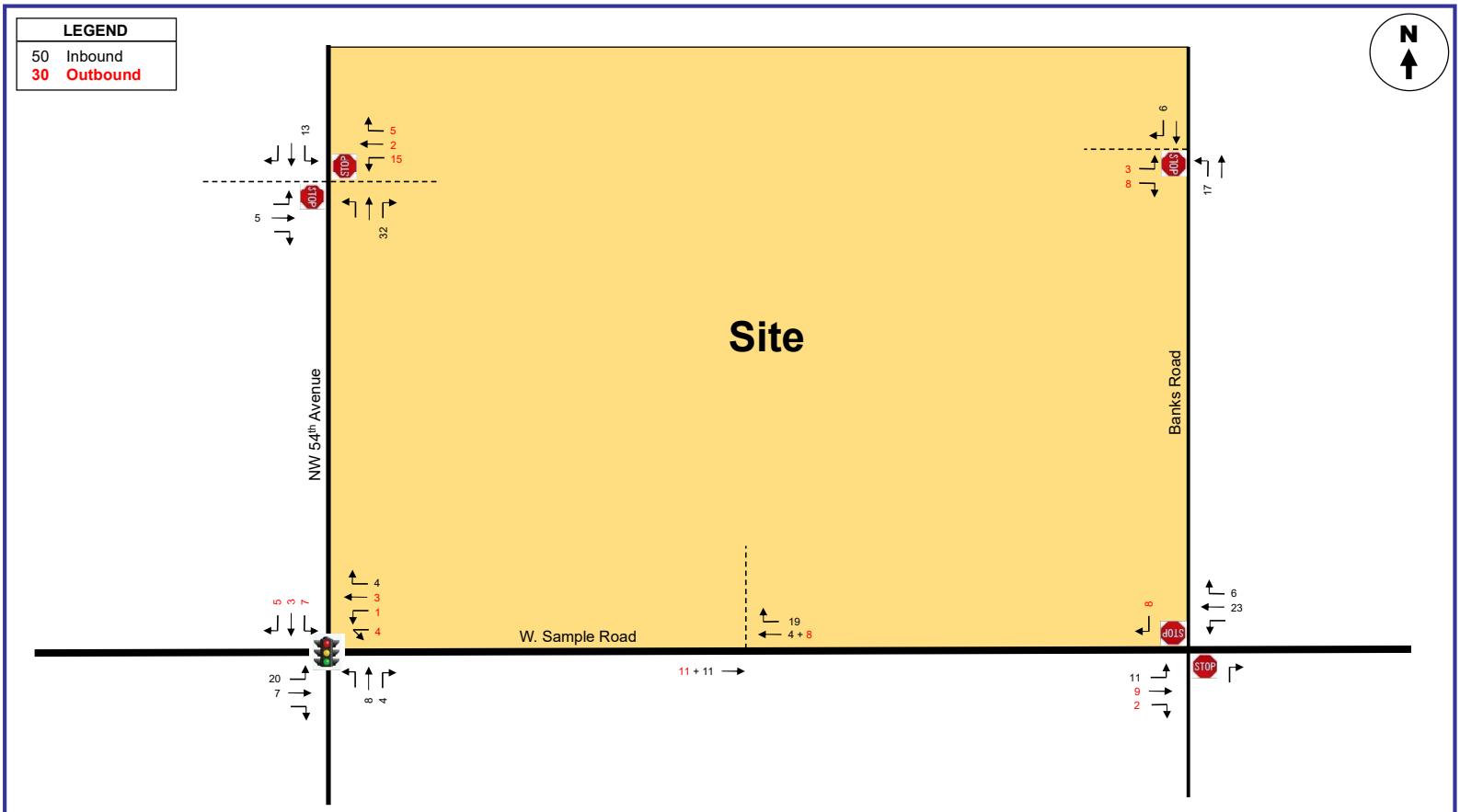
FIGURE 5
Al Hendrickson Toyota
Coconut Creek, Florida



KBP
CONSULTING, INC.

Trip Distribution – Outbound Trips

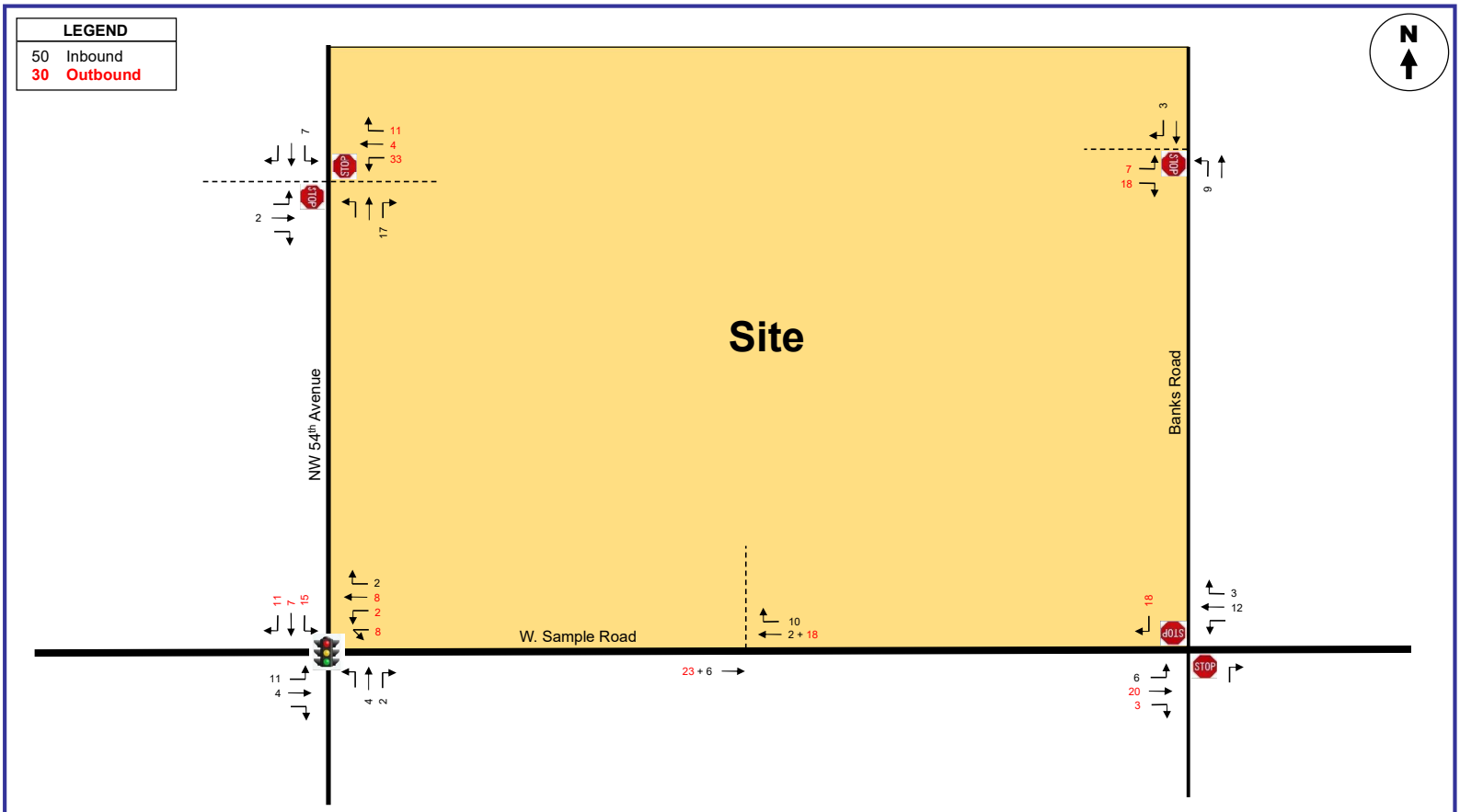
FIGURE 6
Al Hendrickson Toyota
Coconut Creek, Florida



KBP
CONSULTING, INC.

Project Traffic Assignment – AM Peak Hour

FIGURE 7
Al Hendrickson Toyota
Coconut Creek, Florida



KBP
CONSULTING, INC.

Project Traffic Assignment – PM Peak Hour

FIGURE 8
Al Hendrickson Toyota
Coconut Creek, Florida

TRAFFIC ANALYSES

This section of the study is divided into two (2) parts. The first part of this section involves the development of future (2026) traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions for the study intersections.

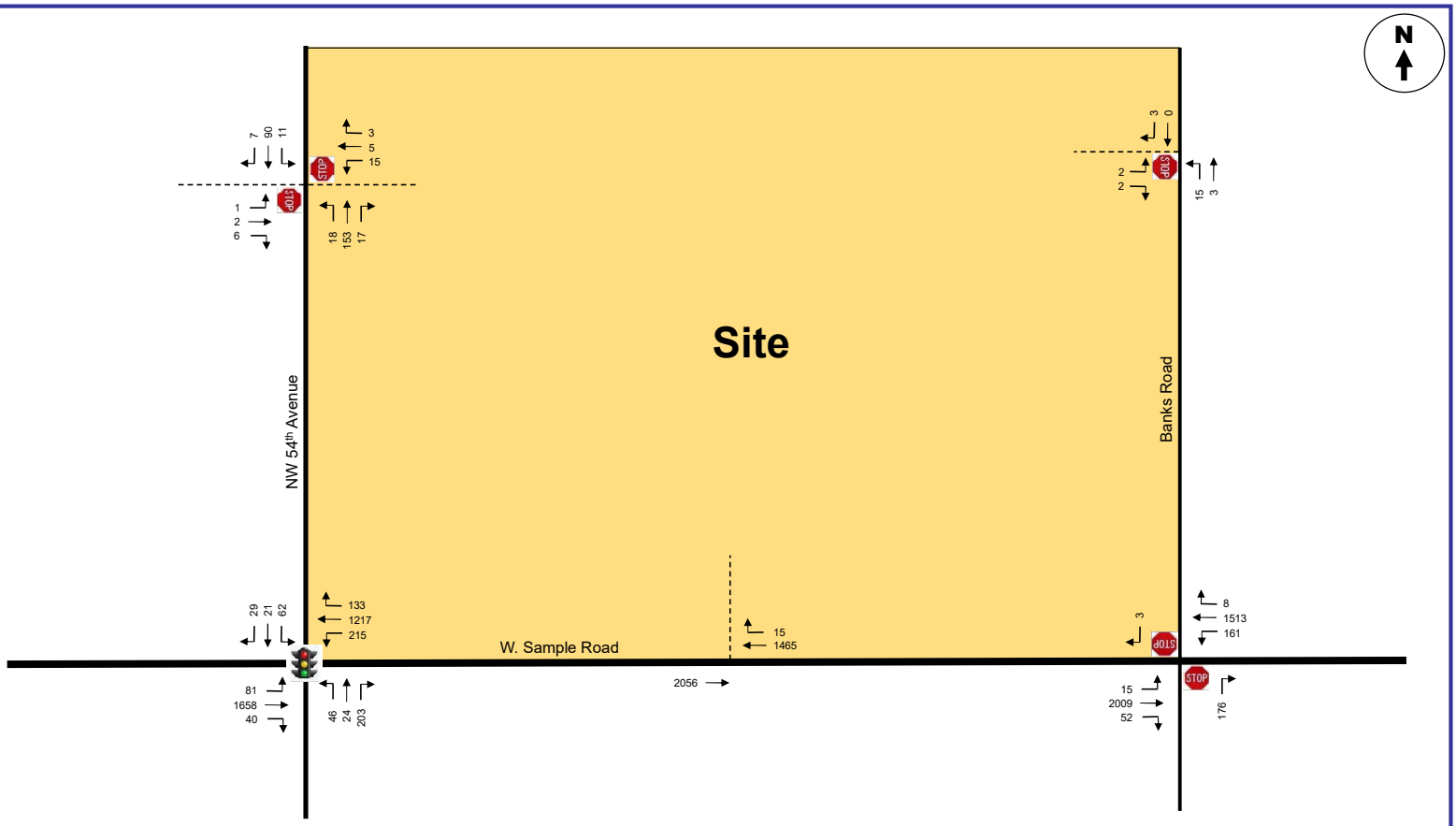
Future Conditions Traffic Volumes

Future, build-out year (2026) traffic volumes were developed for the project study area in the following manner:

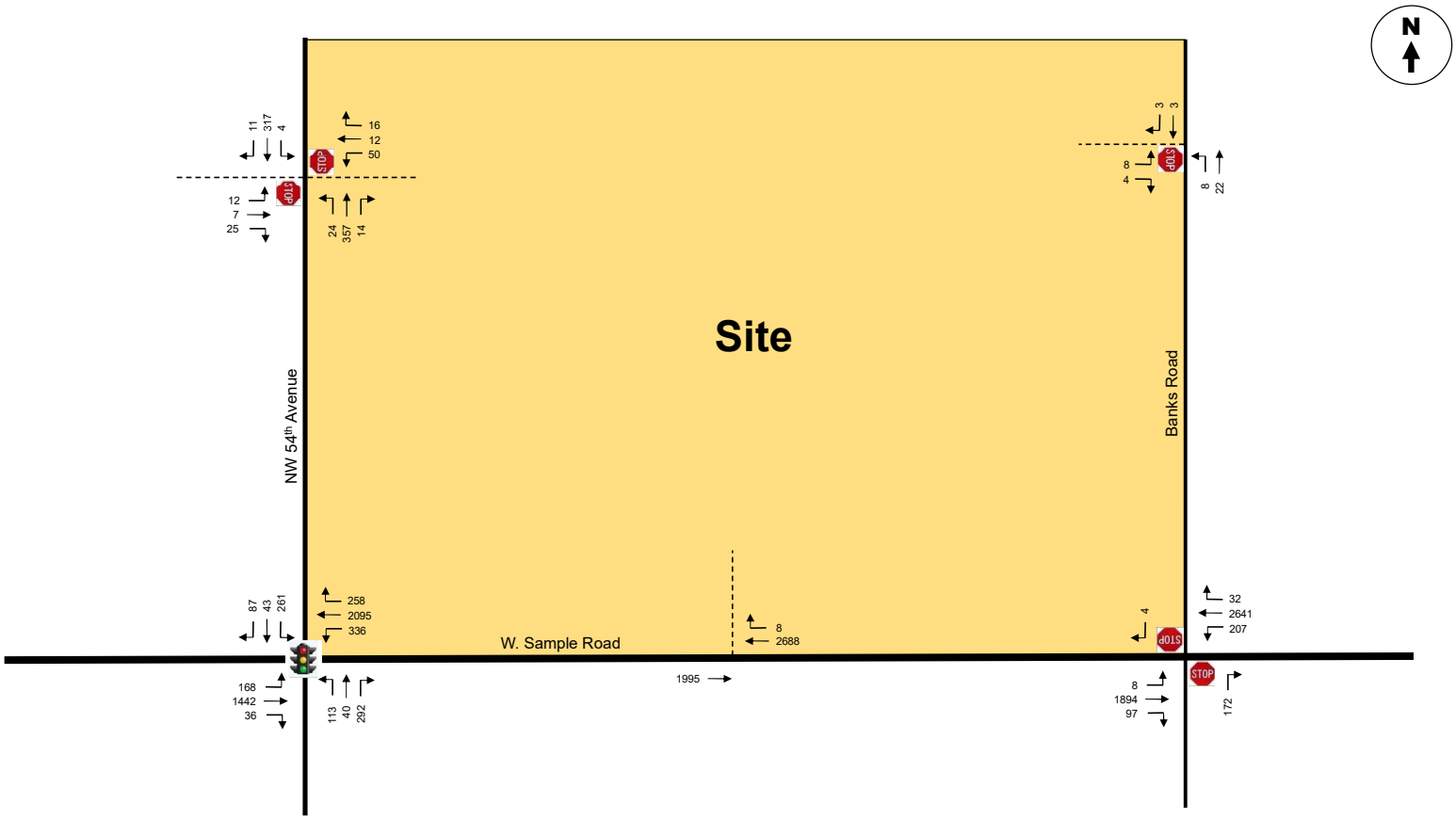
- **Average Peak Season Conversion Factor:** Traffic data collected on Thursday, July 18, 2024, was reviewed with respect to average peak season conditions. Based on FDOT's Peak Season Factor Category report (see Appendix D), a peak season adjustment factor of 1.05 has been applied.

- **Historic Growth:** The Florida Department of Transportation (FDOT) maintains four (4) traffic count stations in the immediate area of the subject project. Station #860123 is located on Sample Road west of State Road 7, Station #860467 is located on Sample Road east of State Road 7, Station #869108 is located on Banks Road south of Sample Road and Station #869769 is located on NW 31st Street east of State Road 7. The Annual Average Daily Traffic Volumes for these count stations for the past ten (10) years (2014 – 2023) exhibit a moderate decline. For the purposes of this analysis, an annual growth rate of +0.5% has been applied. The data from FDOT and the growth rate analysis are presented in Appendix F.

The future traffic calculations (peak season adjustments, background traffic growth, and the traffic associated with the proposed redevelopment / expansion of the Al Hendrickson Toyota dealership) for the study intersections and project driveways are contained in Appendix G in tabular format. Figures 9 and 10 include future background traffic only (without the proposed expansion / redevelopment) and Figures 11 and 12 include the additional traffic anticipated to be generated by the expanded / redeveloped Al Hendrickson Toyota dealership.



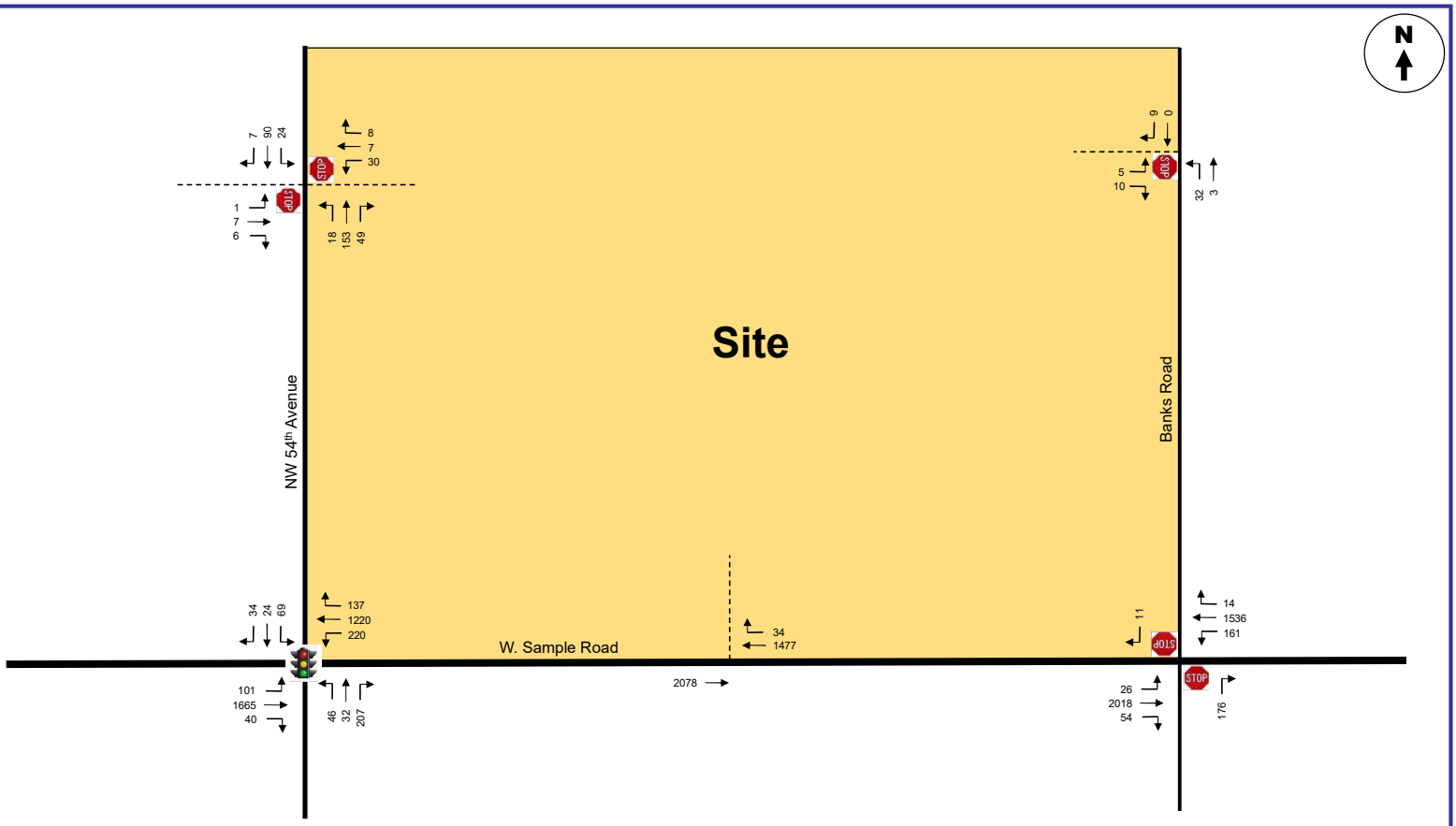
KBP CONSULTING, INC.	**Future (2026) Background (w/out Project) Traffic Volumes** **AM Peak Hour**	**FIGURE 9** Al Hendrickson Toyota Coconut Creek, Florida



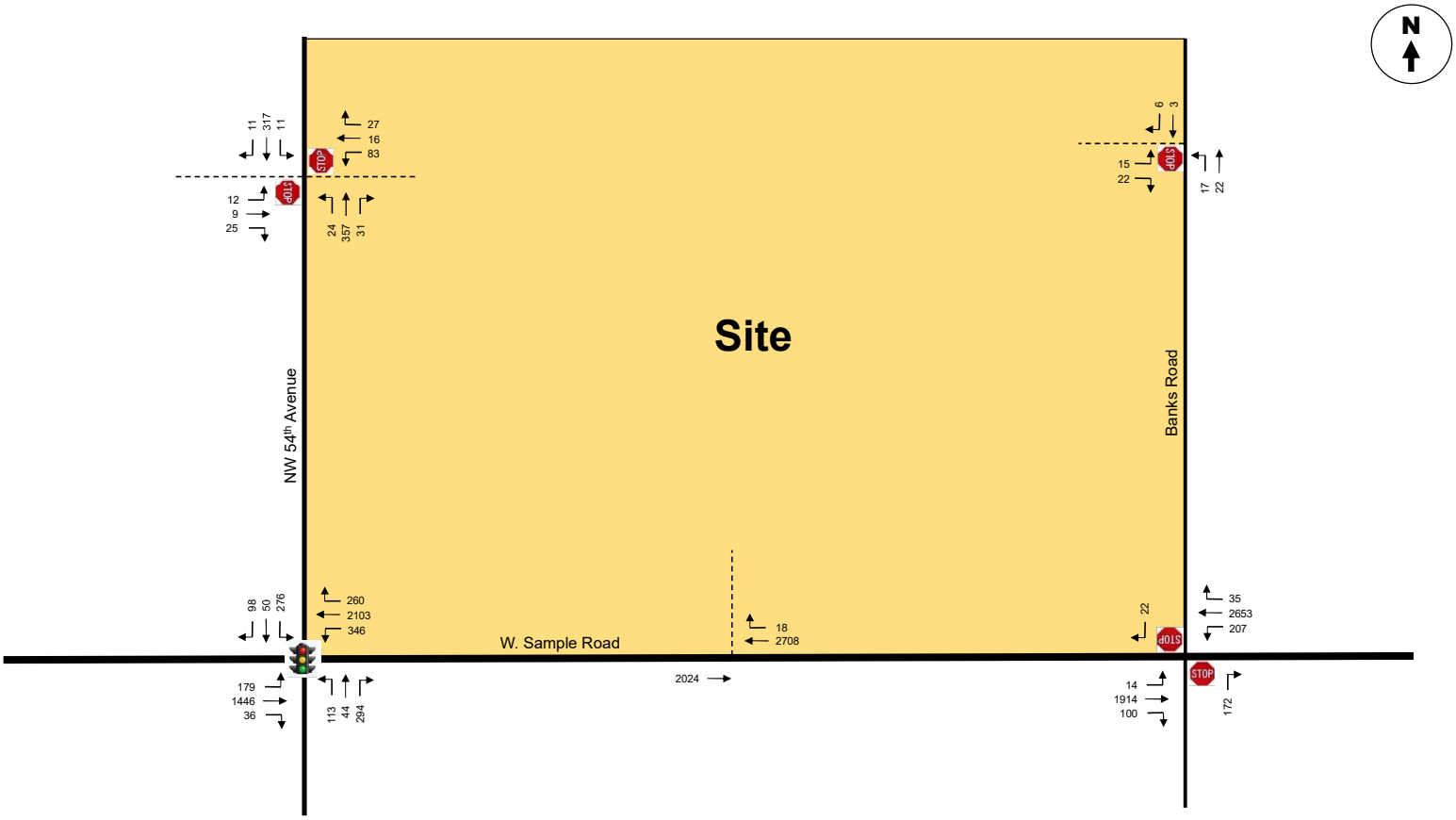
KBP
CONSULTING, INC.

Future (2026) Background (w/out Project) Traffic Volumes
PM Peak Hour

FIGURE 10
Al Hendrickson Toyota
Coconut Creek, Florida



KBP CONSULTING, INC.	**Future (2026) Total (w/ Project) Traffic Volumes** **AM Peak Hour**	**FIGURE 11** Al Hendrickson Toyota Coconut Creek, Florida



KBP CONSULTING, INC.	**Future (2026) Total (w/ Project) Traffic Volumes** **PM Peak Hour**	**FIGURE 12** Al Hendrickson Toyota Coconut Creek, Florida

Level of Service (LOS) Analyses – Intersections

Intersection capacity/level of service (LOS) analyses were conducted for the study intersections and project driveways. These analyses were undertaken following the capacity / level of service procedures outlined in the latest 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. The signal timing data from Broward County Traffic Engineering Division (BCTED) is presented in Appendix H and the Synchro printouts of the intersection capacity analyses are contained in Appendix I.

Table 2
Al Hendrickson Toyota
Intersection Levels of Service
Coconut Creek, Florida

	Existing (2024) Conditions		Future (2026) Conditions Without Project Traffic		Future (2026) Conditions With Project Traffic	
Intersection / Movement	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**PM Peak Hour**
Signalized Intersections *						
Sample Road / NW 54th Avenue	D (39.3)	E (70.7)	D (39.7)	E (71.7)	D (41.8)	E (73.3)
Optimized	--	--	--	--	--	*D (49.5)*
Unsignalized Intersections **						
Sample Road / Banks Road						
- Northbound Approach	B (14.0)	B (13.6)	B (14.2)	B (13.8)	B (14.2)	B (13.9)
- Southbound Approach	B (10.2)	B (13.3)	B (10.3)	B (13.4)	B (10.4)	B (13.9)
- Eastbound Left-Turn	C (17.1)	E (45.3)	C (17.3)	E (46.5)	C (18.2)	F (50.4)
- Westbound Left-Turn	F (86.8)	F (148.0)	F (92.9)	F (160.2)	F (95.7)	F (170.7)
NW 54th Street / Project Driveway						
- Eastbound Approach	A (8.5)	A (9.4)	A (8.5)	A (9.4)	A (8.9)	A (9.6)
- Westbound Approach	A (9.1)	B (10.5)	A (9.1)	B (10.5)	A (9.4)	B (11.0)
Banks Road / Project Driveway						
- Eastbound Approach	A (0.0)	A (8.4)	A (0.0)	A (8.4)	A (0.0)	A (8.4)

Source: Highway Capacity Manual and SYNCHRO.
Legend: D (37.7) = LOS (Average Delay - Seconds / Vehicle)
* At signalized intersections, the LOS for the intersection as a whole is documented in this table.
** At stop-control intersections, the LOS for the stop-controlled approaches and left-turns are documented in this table.

A review of the operations at each intersection and project driveway is presented on the following page.

- **Sample Road and NW 54th Avenue –** This signalized intersection is currently operating at Level of Service (LOS) "D" in the AM peak hour and LOS "E" in the PM peak hour. This condition will continue in the buildout year (2026) both with and without the additional project traffic associated with the Al Hendrickson Toyota expansion / redevelopment. A review of the operational characteristics was conducted in order to identify potential modifications to the signal timing / operations that may improve the PM peak hour LOS. As a means of reducing this intersection delay, the signal timings were optimized by holding the cycle length constant and modifying the timing splits. In addition, northbound and westbound right-turn overlaps were incorporated into the timing plan. These improvements significantly improve the northbound operations and reduce the overall intersection delay to 49.5 seconds per vehicle, or LOS "D". Coordination with the Broward County Traffic Engineering Division (BCTED) will be required to determine the viability of these timing and operational modifications.

- **Sample Road and Banks Road –** The stop-controlled approaches at this intersection (northbound and southbound) currently operate at LOS "B" and will continue to do so in the buildout year. The eastbound and westbound left-turn movements exhibit LOS "E" and "F" conditions as is common on major six-lane divided arterials in Broward County. However, actual delays and LOS's are likely to be better than reported by Synchro. Furthermore, the storage capacity of these turn lanes is sufficient to accommodate the estimated vehicle queues.

- **NW 54th Avenue and Project Driveway –** This project driveway currently operates at a very good LOS ("A" and "B") in the AM and PM peak hours. This condition will continue in the buildout year (2026) with the additional project traffic.

- **Banks Road and Project Driveway –** This project driveway also currently operates at a very good LOS ("A") in the AM and PM peak hours. This condition will continue in the buildout year (2026) with the additional project traffic.

SUMMARY & CONCLUSIONS

Al Hendrickson Toyota is an existing automobile dealership located on the north side of W. Sample Road (State Road 834) between Banks Road and NW 54th Avenue in Coconut Creek, Broward County, Florida. The subject site has a land area of approximately 12.34 acres (537,453 square feet) and is occupied by the Al Hendrickson Toyota new car dealership. The floor area of the existing facilities is 39,315 square feet. Vehicular access to the site is provided by one (1) right-turn in only driveway on W. Sample Road, one (1) full access driveway on Banks Road, and one (1) full access driveway on NW 54th Avenue. The subject site will be redeveloped and expanded to include a total floor area of 106,337 square feet. Vehicular access to the site will be provided by the existing driveways. The proposed project is anticipated to be completed by 2026.

The trip generation analysis indicates that the proposed project is anticipated to generate 3,017 daily vehicle trips, 198 AM peak hour vehicle trips (145 inbound and 53 outbound) and 213 vehicle trips (85 inbound and 128 outbound) during the typical afternoon peak hour. When considering the existing automobile sales facility on the site, this represents an increase of 1,920 daily vehicle trips, an increase of 125 AM peak hour vehicle trips, and an increase of 121 PM peak hour vehicle trips.

Intersection capacity / level of service (LOS) analyses were conducted for the study intersections and project driveways. In summary, each of these intersections and project driveways is projected to operate at an acceptable Level of Service (LOS) in the buildout year of 2026. Potential improvements to the signalized intersection of Sample Road and NW 54th Avenue were identified. These include signal timing adjustments, and the implementation of northbound and westbound right-turn overlaps. These improvements significantly improve the northbound operations and reduce the overall intersection delay to 49.5 seconds per vehicle, or LOS “D”. Coordination with the Broward County Traffic Engineering Division (BCTED) will be required to determine the viability of these timing and operational modifications.

APPENDIX A

Al Hendrickson Toyota

Traffic Study Methodology

KBP CONSULTING, INC.

MEMORANDUM

To: Michael Righetti
City of Coconut Creek

From: Karl Peterson, P.E.

Date: July 15, 2024

Subject: Al Hendrickson Toyota
Traffic Impact Study Methodology

Al Hendrickson Toyota is an existing vehicle dealership (new and used vehicle sales and service) located on the north side of W. Sample Road (State Road 834) between Banks Road and NW 54th Avenue in Coconut Creek, Broward County, Florida. The subject facility consists of 39,315 square feet of floor area. Vehicular access to the site is provided by one (1) right-turn in only driveway on W. Sample Road, one (1) full access driveway on Banks Road, and one (1) full access driveway on NW 54th Avenue. The proposed action on this site is to expand the overall floor area to 106,337 square feet. Vehicular access to the site will remain as is. The buildout year is projected to be late 2026. A preliminary site plan is presented in Attachment A. The following is the proposed traffic study methodology for this development.

- The trip generation analysis will be based upon the Institute of Transportation Engineers (ITE) *Trip Generation Manual (11th Edition)*. The trip generation rates and equations for this land use are as follows:

  ITE Land Use #840 – Automobile Sales (New)

  - Weekday: T = 28.65 (X) – 29.45
    where T = number of trips and X = 1,000 square feet of gross floor area
  - AM Peak Hour: T = 1.86 (X) (73% in / 27% out)
  - PM Peak Hour: T = 1.81 (X) + 20.91 (40% in / 60% out)

- A preliminary estimate of the existing and proposed project traffic is presented below:

Table 1
Al Hendrickson Toyota
Trip Generation Summary
Coconut Creek, Florida

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Use Automobile Sales (New)	39,315 SF	1,097	53	20	73	37	55	92
Proposed Use Automobile Sales (New)	106,337 SF	3,017	145	53	198	85	128	213
Difference (Proposed - Existing)	**67,022 SF**	**1,920**	**92**	**33**	**125**	**48**	**73**	**121**

Compiled by: KBP Consulting, Inc. (June 2024).
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).

8400 North University Drive, Suite 309, Tamarac, Florida 33321
Tel: (954) 560-7103 Fax: (954) 582-0989

- The trip distribution will be based upon the existing nearby land uses, the prevailing traffic volumes and patterns within the study area, and the transportation network in the vicinity of the project site.

- The subject traffic study will evaluate the following intersections during the typical AM and PM peak periods:

    - W. Sample Road and Banks Road (unsignalized)
    - W. Sample Road and NW 54th Avenue (signalized)

  These intersection locations are presented graphically in Attachment B.

- Intersection turning movement counts will be performed at the study intersections on a typical weekday during the AM peak period (7:00 AM to 9:00 AM) and the PM peak period (4:00 PM to 6:00 PM).

- Traffic counts will be adjusted to reflect average peak season conditions based upon the most recent available FDOT adjustment factors.

- A growth factor will be applied to the traffic counts to reflect future traffic conditions at project build-out. The growth factor will be based upon historical traffic data available for the area near the project site. A minimum annual growth rate of 1.0% will be applied.

- Traffic associated with nearby committed but unbuilt development, if any, will be obtained from the City of Coconut Creek.

- Traffic analysis figures will be prepared for the following trip scenarios for each of the intersections analyzed:

    - Existing traffic
    - Proposed project traffic distribution
    - Future background (w/out project traffic) conditions for buildout year
    - Future total (with project traffic) conditions for buildout year

- Intersection analyses will be conducted using the Synchro software for existing conditions, future conditions without the project, and future conditions with the proposed project in place. The storage capacity of the existing turn lanes will be evaluated as part of this analysis.

- All traffic data obtained and supporting traffic analysis information for this project will be included in the Appendix of the traffic study.

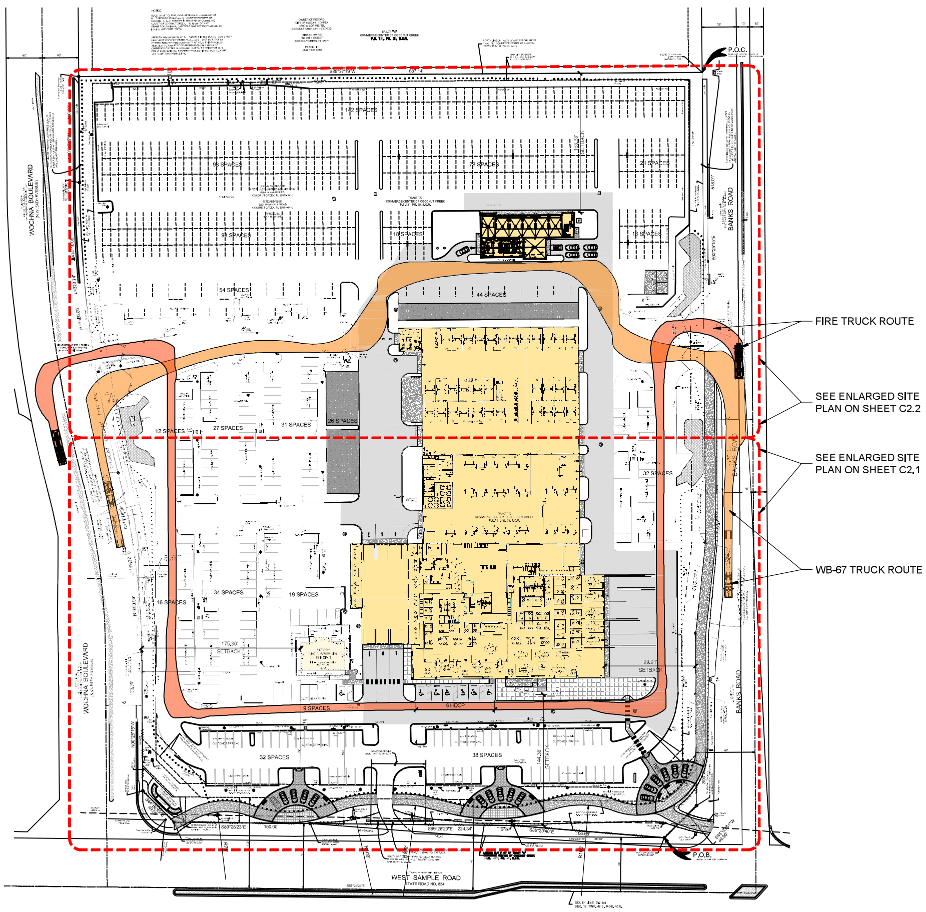
In order to minimize confusion, attachments to this memorandum have been removed.

APPENDIX B

Al Hendrickson Toyota

Preliminary Site Plan

SECTION 18, TOWNSHIP 48 SOUTH, RANGE 42 EAST
BROWARD COUNTY, FLORIDA



OVERALL SITE PLAN
SCALE: 1" = 50'

PROJECT DATA

PROJECT NAME: AL HENDRICKSON TOYOTA

OWNER: COCONUT CREEK AUTOMOTIVE MANAGEMENT, LLC
3031 NORTH ROCKY POINT DRIVE, SUITE 770
TAMPA, FLORIDA 33607
PHONE: (813) 535-7857
E-mail: tsantos@morganautogroup.com

ENGINEER: SPRING ENGINEERING, INC.
3014 US HIGHWAY 19
HOLIDAY, FLORIDA 34691
PHONE: (727) 938-1516
E-MAIL: sei@springengineeringinc.com

SURVEYOR: PARAMOUNT ENGINEERING GROUP, INC.
902 CLINT MOORE ROAD, SUITE 218
BOCA RATON, FLORIDA 33487
PHONE: (561) 989-2280
EMAIL: ParamountEngineeringGroup@aol.com

SITE DATA

PARCEL I.D. #: 4842 18 03 0010 - 12.338 AC

EXISTING USE: AUTOMOTIVE SALES AND SERVICE
PROPOSED USE: AUTOMOTIVE SALES AND SERVICE

ZONING DESIGNATION: B-4 REGIONAL SHOPPING DISTRICT TO PMDD PLANNED MAIN STREET DEVELOPMENT DISTRICT

BUILDING SETBACKS:	REQ / PROV	BUFFERS:	REQ / PROV
NORTH:	MIN. 5' / 153.33'	NORTH:	5' / 10'
SOUTH:	MIN. 28' / 144.38'	SOUTH:	5' / 5'
EAST:	MIN. 10' / 99.91'	EAST:	5' / 16.5'
WEST:	MIN. 5' / 175.36'	WEST:	5' / 16.5'

BUILDING HEIGHT: PROVIDED 30'-8" ALLOWED: 120' / 10 STORY

FLOOD ZONE: THIS PROJECT IS LOCATED IN FLOOD ZONE 'X' ACCORDING TO F.I.R.M. NUMBER 12011C 0165 H, PREPARED BY F.E.M.A., LAST REVISED AUGUST 18, 2014.

BUILDING AREA:	EXISTING	PROPOSED	TOTAL
TOYOTA:	36,205 SF	64,329 SF	100,534 SF
PRE-OWNED:	1,526 SF	0 SF	1,526 SF
CARWASH:	1,584 SF	2,693 SF	4,277 SF
TOTAL AREA:	39,315 SF	67,022 SF	106,337 SF

FLOOR AREA RATIO: 2.441 / 12.338 = 0.1978

SITE AREAS: 12.338 AC

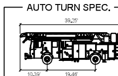
	EXISTING	PROPOSED	TOTAL	
- BUILDING AREA	0.903 AC	1.096 AC	1.999 AC	16.2 %
- PAVING / CONC. AREA	8.891 AC	-1.111 AC	7.780 AC	63.1 %
- PERVIOUS PAVING	0.000 AC	0.188 AC	0.188 AC	1.5 %
- LANDSCAPE AREA	2.544 AC	-.0173 AC	2.371 AC	19.2 %
- IMPERVIOUS AREA	9.794 AC	-0.015 AC	9.779 AC	79.3 %
- PERVIOUS	2.544 AC	0.015 AC	2.559 AC	20.7 %

REQUIRED PARKING:
SALES/OFFICE (1 SPACE PER 200 SF) 29,656 SF/ 200 = 148 SPACES
AUTO REPAIR (1 SPACE PER 250 SF) 23,762 SF/ 250 = 95 SPACES
TOTAL REQUIRED = 243 SPACES

PROVIDED PARKING:
HANDICAP SPACES (12x18) = 7 SPACES
STANDARD SPACES (9x18) = 275 SPACES
INVENTORY SPACES (9x18)= 564 SPACES
PROVIDED PARKING = 846 SPACES + 6 BICYCLE SPACES

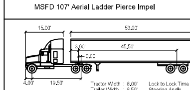
UTILITY COMPANY:
WATER / SEWER: COCONUT CREEK UTILITIES
ELECTRIC: FLORIDA POWER AND LIGHT

AUTO TURN SPEC.



Width	8.17'
Track	8.00'
Lock to Lock Time	6.0
Steering Angle	45.0

MSFD 107' Aerial Ladder Pierce Impel



WB-67

Tractor Width	: 8.00'	Lock to Lock Time	: 6.0
Trailer Width	: 8.50'	Steering Angle	: 28.4
Tractor Track	: 8.00'	Articulating Angle	: 75.0
Trailer Track	: 8.50'		

100%
CONSTRUCTION DOCS.
ISSUE DATE: 04.09.2024

REV	DATE	DESCRIPTION

Al Hendrickson TOYOTA
5201 W SAMPLE ROAD • COCONUT CREEK, FLORIDA 33073

CONTRACT DATE:
JANUARY 10, 2024

36 YEARS DELIVERING INNOVATIVE DESIGN NATIONWIDE
Spring Engineering
Architecture • Engineering • Land Planning
3014 U.S. HWY 19, HOLIDAY, FL (727) 938-1516 • FL COA NO. 00005158 & LICENSE NO. AA-C001747

OVERALL SITE PLAN

DESIGNED BY: JAY
DRAWN BY: JAY
CHECKED BY: RPD
JOB NO.
2023-07

SHEET NO.
C2.0

APPENDIX C

Traffic Counts

Traff Tech Engineering Inc.

File Name : 3-NW 54th Ave & W.Sample Rd
Site Code : 00000000
Start Date : 7/18/2024
Page No : 1

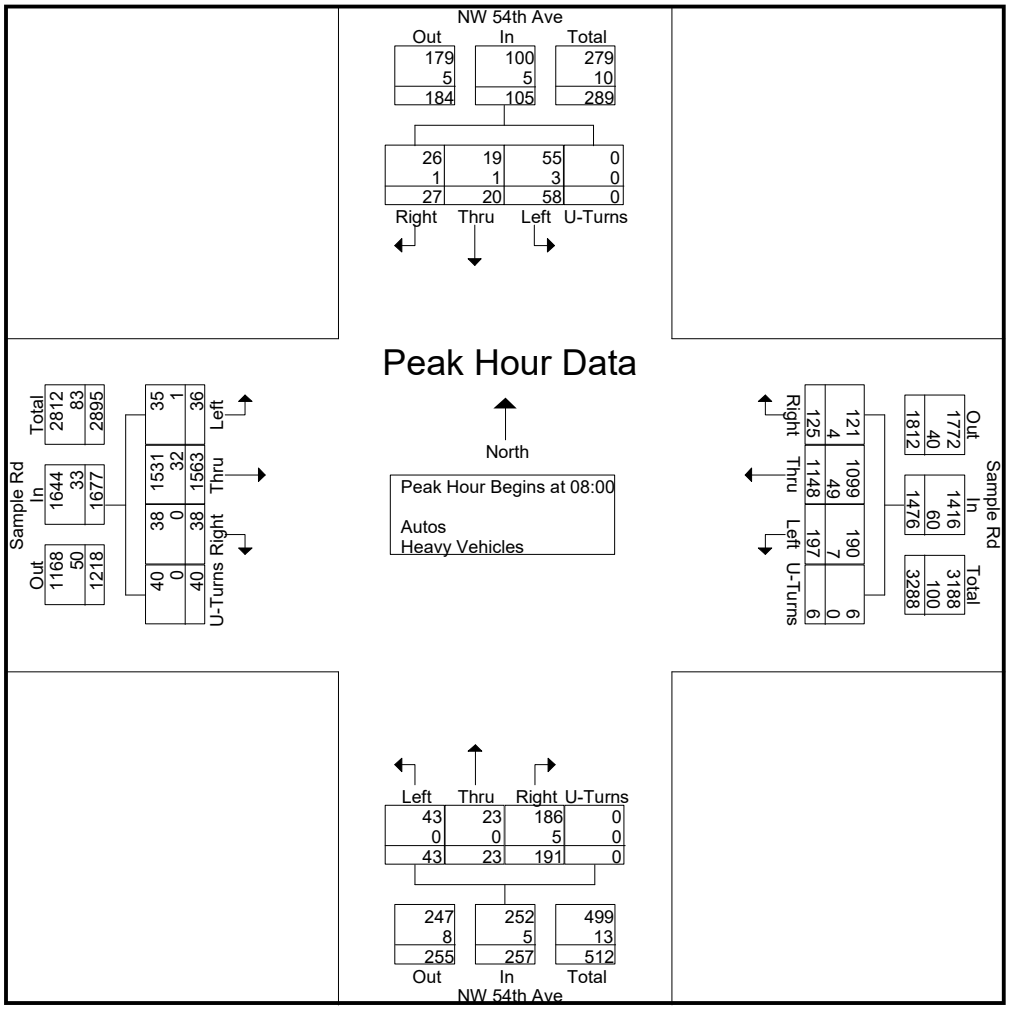
Groups Printed- Autos - Heavy Vehicles

	NW 54th Ave From North					Sample Rd From East					NW 54th Ave From South					Sample 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	6	4	9	0	19	17	201	31	1	250	36	2	4	0	42	6	369	6	3	384	695
07:15	9	1	6	0	16	18	178	32	1	229	49	6	4	0	59	7	395	9	7	418	722
07:30	6	2	13	0	21	26	283	53	2	364	46	7	3	1	57	7	445	7	8	467	909
07:45	6	5	17	0	28	34	248	42	3	327	47	6	10	0	63	12	402	7	4	425	843
Total	27	12	45	0	84	95	910	158	7	1170	178	21	21	1	221	32	1611	29	22	1694	3169
08:00	4	2	14	0	20	27	265	47	3	342	55	5	11	0	71	8	418	10	10	446	879
08:15	5	3	18	0	26	26	265	55	2	348	58	5	9	0	72	7	406	12	11	436	882
08:30	8	6	11	0	25	25	290	42	0	357	41	7	14	0	62	11	371	4	9	395	839
08:45	10	9	15	0	34	47	328	53	1	429	37	6	9	0	52	12	368	10	10	400	915
Total	27	20	58	0	105	125	1148	197	6	1476	191	23	43	0	257	38	1563	36	40	1677	3515
*** BREAK ***																					
16:00	22	15	44	1	82	62	360	82	1	505	54	9	27	0	90	10	271	23	19	323	1000
16:15	21	11	59	0	91	76	423	62	2	563	69	12	17	1	99	6	325	18	18	367	1120
16:30	27	12	60	0	99	63	438	70	3	574	64	9	27	0	100	7	284	22	12	325	1098
16:45	26	21	62	0	109	51	373	78	3	505	61	5	23	0	89	5	247	23	22	297	1000
Total	96	59	225	1	381	252	1594	292	9	2147	248	35	94	1	378	28	1127	86	71	1312	4218
17:00	27	11	60	0	98	49	462	84	4	599	73	6	31	1	111	8	332	12	23	375	1183
17:15	20	15	57	0	92	70	517	81	1	669	67	8	31	0	106	5	305	28	24	362	1229
17:30	18	11	66	0	95	62	527	61	1	651	61	12	22	0	95	14	367	17	18	416	1257
17:45	17	4	63	0	84	62	469	82	3	616	74	12	22	0	108	7	356	16	20	399	1207
Total	82	41	246	0	369	243	1975	308	9	2535	275	38	106	1	420	34	1360	73	85	1552	4876
Grand Total	232	132	574	1	939	715	5627	955	31	7328	892	117	264	3	1276	132	5661	224	218	6235	15778
Apprch %	24.7	14.1	61.1	0.1		9.8	76.8	13	0.4		69.9	9.2	20.7	0.2		2.1	90.8	3.6	3.5		
Total %	1.5	0.8	3.6	0	6	4.5	35.7	6.1	0.2	46.4	5.7	0.7	1.7	0	8.1	0.8	35.9	1.4	1.4	39.5	
Autos	230	131	567	1	929	705	5501	938	31	7175	877	115	263	3	1258	131	5558	222	218	6129	15491
% Autos	99.1	99.2	98.8	100	98.9	98.6	97.8	98.2	100	97.9	98.3	98.3	99.6	100	98.6	99.2	98.2	99.1	100	98.3	98.2
Heavy Vehicles																					
% Heavy Vehicles	0.9	0.8	1.2	0	1.1	1.4	2.2	1.8	0	2.1	1.7	1.7	0.4	0	1.4	0.8	1.8	0.9	0	1.7	1.8

Traff Tech Engineering Inc.

File Name : 3-NW 54th Ave & W.Sample Rd
Site Code : 00000000
Start Date : 7/18/2024
Page No : 4

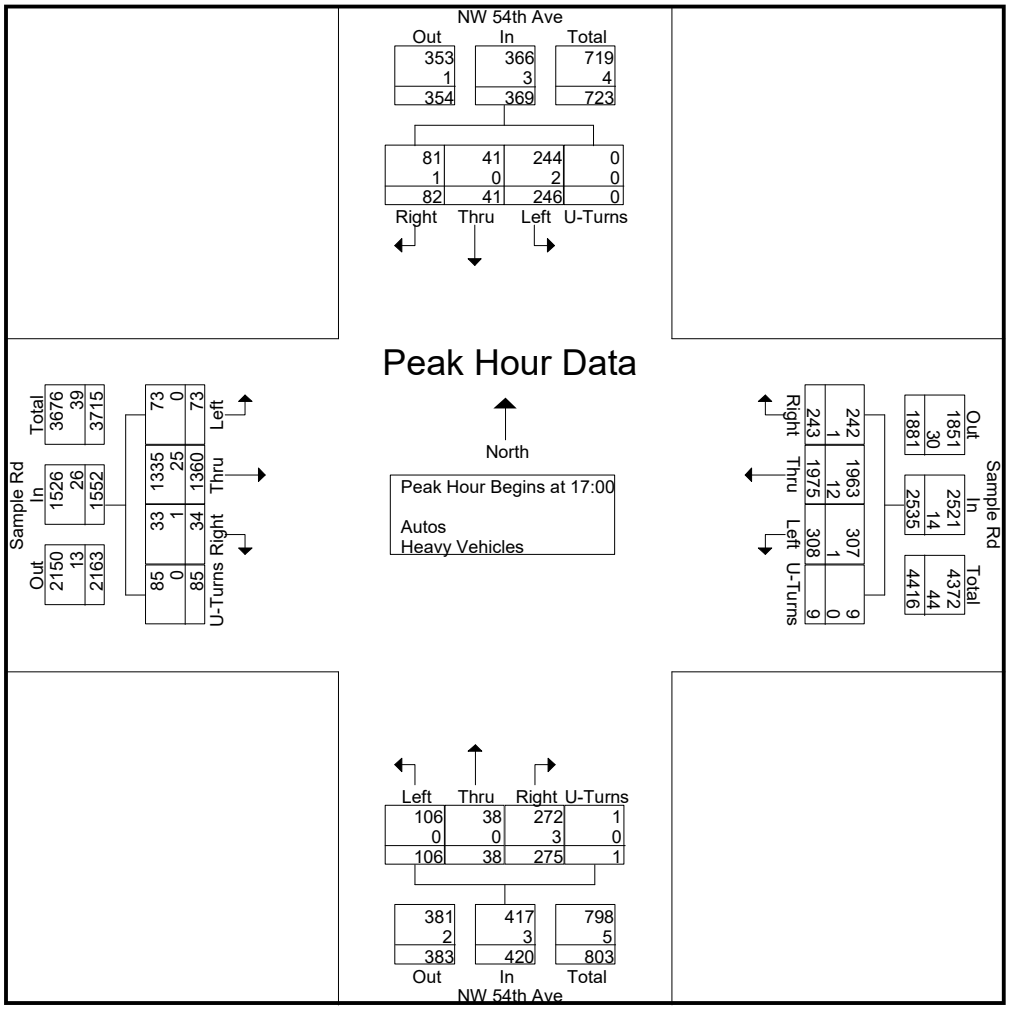
	NW 54th Ave From North					Sample Rd From East					NW 54th Ave From South					Sample Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	4	2	14	0	20	27	265	47	**3**	342	55	5	11	0	71	8	**418**	10	10	**446**	879
08:15	5	3	**18**	0	26	26	265	**55**	2	348	**58**	5	9	0	**72**	7	406	**12**	**11**	436	882
08:30	8	6	11	0	25	25	290	42	0	357	41	**7**	**14**	0	62	11	371	4	9	395	839
08:45	**10**	**9**	15	0	**34**	**47**	**328**	53	1	**429**	37	6	9	0	52	**12**	368	10	10	400	**915**
Total Volume	27	20	58	0	105	125	1148	197	6	1476	191	23	43	0	257	38	1563	36	40	1677	3515
% App. Total	25.7	19	55.2	0		8.5	77.8	13.3	0.4		74.3	8.9	16.7	0		2.3	93.2	2.1	2.4		
PHF	.675	.556	.806	.000	.772	.665	.875	.895	.500	.860	.823	.821	.768	.000	.892	.792	.935	.750	.909	.940	.960
Autos	26	19	55	0	100	121	1099	190	6	1416	186	23	43	0	252	38	1531	35	40	1644	3412
% Autos	96.3	95.0	94.8	0	95.2	96.8	95.7	96.4	100	95.9	97.4	100	100	0	98.1	100	98.0	97.2	100	98.0	97.1
Heavy Vehicles	1	1	3	0	5	4	49	7	0	60	5	0	0	0	5	0	32	1	0	33	103
% Heavy Vehicles	3.7	5.0	5.2	0	4.8	3.2	4.3	3.6	0	4.1	2.6	0	0	0	1.9	0	2.0	2.8	0	2.0	2.9



Traff Tech Engineering Inc.

File Name : 3-NW 54th Ave & W.Sample Rd
Site Code : 00000000
Start Date : 7/18/2024
Page No : 5

	NW 54th Ave From North					Sample Rd From East					NW 54th Ave From South					Sample 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 17:00																					
17:00	**27**	11	60	0	**98**	49	462	**84**	**4**	599	73	6	**31**	**1**	**111**	8	332	12	23	375	1183
17:15	20	**15**	57	0	92	**70**	517	81	1	**669**	67	8	31	0	106	5	305	**28**	**24**	362	1229
17:30	18	11	**66**	0	95	62	**527**	61	1	651	61	**12**	22	0	95	**14**	**367**	17	18	**416**	**1257**
17:45	17	4	63	0	84	62	469	82	3	616	**74**	12	22	0	108	7	356	16	20	399	1207
Total Volume	82	41	246	0	369	243	1975	308	9	2535	275	38	106	1	420	34	1360	73	85	1552	4876
% App. Total	22.2	11.1	66.7	0		9.6	77.9	12.1	0.4		65.5	9	25.2	0.2		2.2	87.6	4.7	5.5		
PHF	.759	.683	.932	.000	.941	.868	.937	.917	.563	.947	.929	.792	.855	.250	.946	.607	.926	.652	.885	.933	.970
Autos	81	41	244	0	366	242	1963	307	9	2521	272	38	106	1	417	33	1335	73	85	1526	4830
% Autos	98.8	100	99.2	0	99.2	99.6	99.4	99.7	100	99.4	98.9	100	100	100	99.3	97.1	98.2	100	100	98.3	99.1
Heavy Vehicles	1	0	2	0	3	1	12	1	0	14	3	0	0	0	3	1	25	0	0	26	46
% Heavy Vehicles	1.2	0	0.8	0	0.8	0.4	0.6	0.3	0	0.6	1.1	0	0	0	0.7	2.9	1.8	0	0	1.7	0.9



Traff Tech Engineering Inc.

File Name : 4-Sample Rd WBRT into Toyota
Site Code : 00000000
Start Date : 7/18/2024
Page No : 1

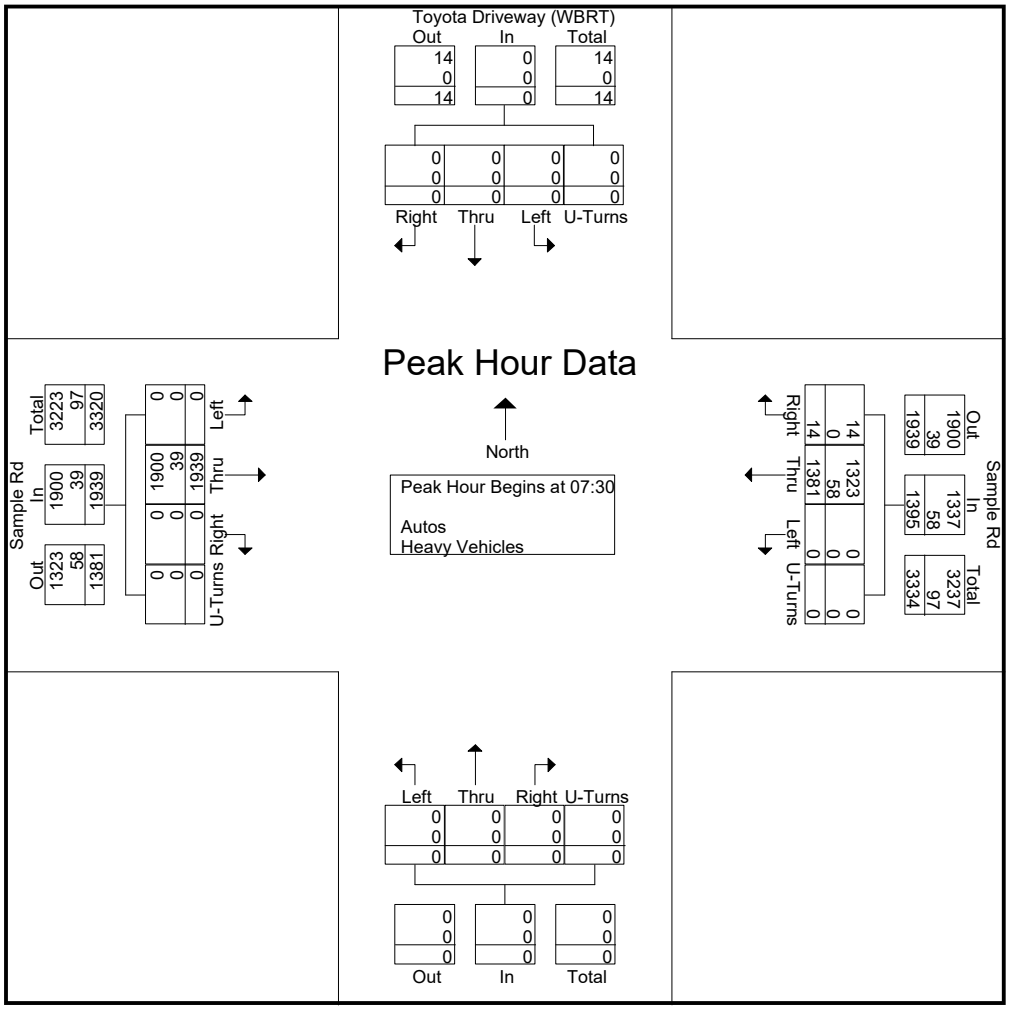
Groups Printed- Autos - Heavy Vehicles

	Toyota Driveway (WBRT) From North					Sample Rd From East					From South					Sample 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	0	0	0	0	0	5	250	0	0	255	0	0	0	0	0	0	414	0	0	414	669
07:15	0	0	0	0	0	3	229	0	0	232	0	0	0	0	0	0	450	0	0	450	682
07:30	0	0	0	0	0	4	364	0	0	368	0	0	0	0	0	0	504	0	0	504	872
07:45	0	0	0	0	0	2	327	0	0	329	0	0	0	0	0	0	466	0	0	466	795
Total	0	0	0	0	0	14	1170	0	0	1184	0	0	0	0	0	0	1834	0	0	1834	3018
08:00	0	0	0	0	0	4	342	0	0	346	0	0	0	0	0	0	487	0	0	487	833
08:15	0	0	0	0	0	4	348	0	0	352	0	0	0	0	0	0	482	0	0	482	834
08:30	0	0	0	0	0	2	357	0	0	359	0	0	0	0	0	0	423	0	0	423	782
08:45	0	0	0	0	0	5	429	0	0	434	0	0	0	0	0	0	420	0	0	420	854
Total	0	0	0	0	0	15	1476	0	0	1491	0	0	0	0	0	0	1812	0	0	1812	3303
*** BREAK ***																					
16:00	0	0	0	0	0	8	505	0	0	513	0	0	0	0	0	0	369	0	0	369	882
16:15	0	0	0	0	0	11	563	0	0	574	0	0	0	0	0	0	453	0	0	453	1027
16:30	0	0	0	0	0	4	574	0	0	578	0	0	0	0	0	0	408	0	0	408	986
16:45	1	0	0	0	1	4	505	0	0	509	0	0	0	0	0	0	370	0	0	370	880
Total	1	0	0	0	1	27	2147	0	0	2174	0	0	0	0	0	0	1600	0	0	1600	3775
17:00	0	0	0	0	0	0	599	0	0	599	0	0	0	0	0	0	465	0	0	465	1064
17:15	0	0	0	0	0	1	669	0	0	670	0	0	0	0	0	0	429	0	0	429	1099
17:30	0	0	0	0	0	6	651	0	0	657	0	0	0	0	0	0	494	0	0	494	1151
17:45	0	0	0	0	0	1	616	0	0	617	0	0	0	0	0	0	493	0	0	493	1110
Total	0	0	0	0	0	8	2535	0	0	2543	0	0	0	0	0	0	1881	0	0	1881	4424
Grand Total	1	0	0	0	1	64	7328	0	0	7392	0	0	0	0	0	0	7127	0	0	7127	14520
Apprch %	100	0	0	0		0.9	99.1	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0.4	50.5	0	0	50.9	0	0	0	0	0	0	49.1	0	0	49.1	
Autos	1	0	0	0	1	64	7175	0	0	7239	0	0	0	0	0	0	7002	0	0	7002	14242
% Autos	100	0	0	0	100	100	97.9	0	0	97.9	0	0	0	0	0	0	98.2	0	0	98.2	98.1
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	2.1	0	0	2.1	0	0	0	0	0	0	1.8	0	0	1.8	1.9

Traff Tech Engineering Inc.

File Name : 4-Sample Rd WBRT into Toyota
Site Code : 00000000
Start Date : 7/18/2024
Page No : 4

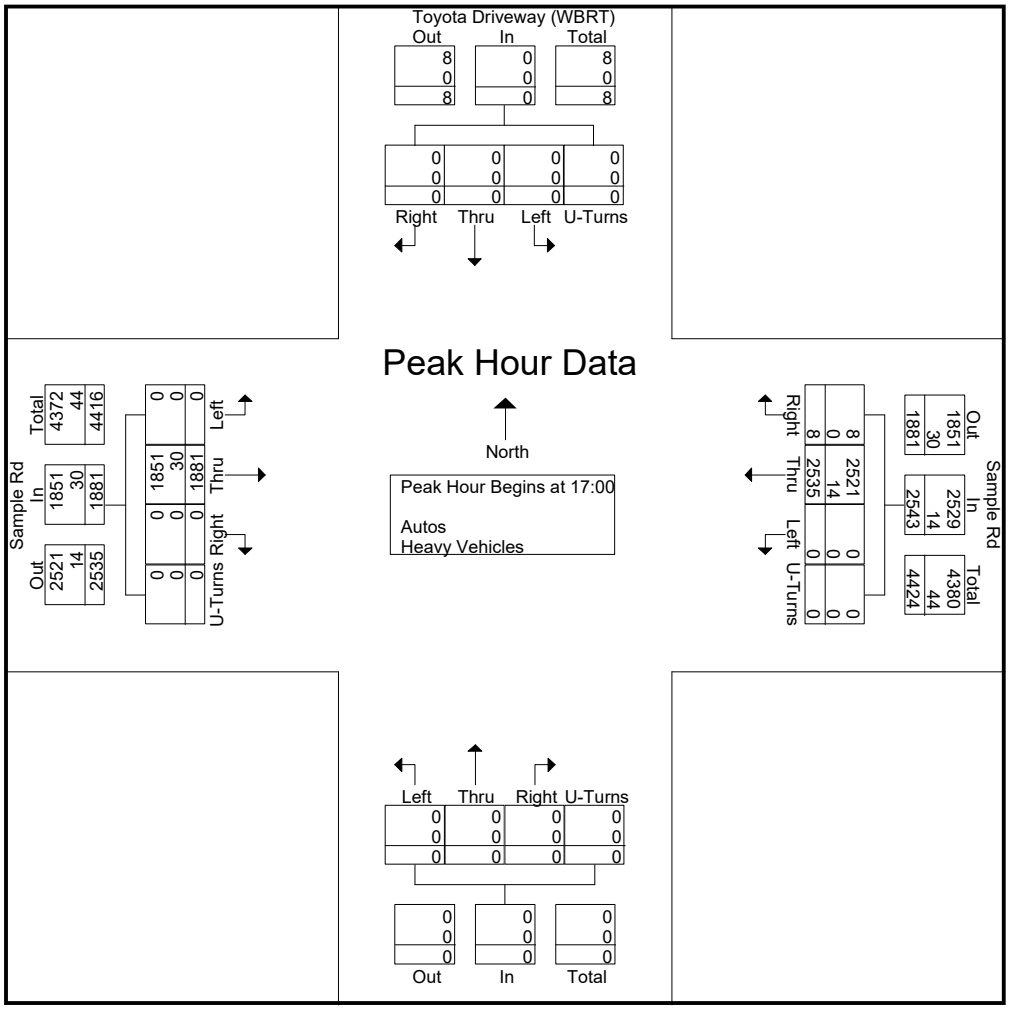
	Toyota Driveway (WBRT) From North					Sample Rd From East					From South					Sample Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	0	0	0	0	**4**	**364**	0	0	**368**	0	0	0	0	0	0	**504**	0	0	**504**	**872**
07:45	0	0	0	0	0	2	327	0	0	329	0	0	0	0	0	0	466	0	0	466	795
08:00	0	0	0	0	0	4	342	0	0	346	0	0	0	0	0	0	487	0	0	487	833
08:15	0	0	0	0	0	4	348	0	0	352	0	0	0	0	0	0	482	0	0	482	834
Total Volume	0	0	0	0	0	14	1381	0	0	1395	0	0	0	0	0	0	1939	0	0	1939	3334
% App. Total	0	0	0	0		1	99	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.875	.948	.000	.000	.948	.000	.000	.000	.000	.000	.000	.962	.000	.000	.962	.956
Autos	0	0	0	0	0	14	1323	0	0	1337	0	0	0	0	0	0	1900	0	0	1900	3237
% Autos	0	0	0	0	0	100	95.8	0	0	95.8	0	0	0	0	0	0	98.0	0	0	98.0	97.1
Heavy Vehicles	0	0	0	0	0	0	58	0	0	58	0	0	0	0	0	0	39	0	0	39	97
% Heavy Vehicles	0	0	0	0	0	0	4.2	0	0	4.2	0	0	0	0	0	0	2.0	0	0	2.0	2.9



Traff Tech Engineering Inc.

File Name : 4-Sample Rd WBRT into Toyota
Site Code : 00000000
Start Date : 7/18/2024
Page No : 5

	Toyota Driveway (WBRT) From North					Sample Rd From East					From South					Sample 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 17:00																					
17:00	0	0	0	0	0	0	599	0	0	599	0	0	0	0	0	0	465	0	0	465	1064
17:15	0	0	0	0	0	1	**669**	0	0	**670**	0	0	0	0	0	0	429	0	0	429	1099
17:30	0	0	0	0	0	**6**	651	0	0	657	0	0	0	0	0	0	**494**	0	0	**494**	**1151**
17:45	0	0	0	0	0	1	616	0	0	617	0	0	0	0	0	0	493	0	0	493	1110
Total Volume	0	0	0	0	0	8	2535	0	0	2543	0	0	0	0	0	0	1881	0	0	1881	4424
% App. Total	0	0	0	0		0.3	99.7	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.333	.947	.000	.000	.949	.000	.000	.000	.000	.000	.000	.952	.000	.000	.952	.961
Autos	0	0	0	0	0	8	2521	0	0	2529	0	0	0	0	0	0	1851	0	0	1851	4380
% Autos	0	0	0	0	0	100	99.4	0	0	99.4	0	0	0	0	0	0	98.4	0	0	98.4	99.0
Heavy Vehicles	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	30	0	0	30	44
% Heavy Vehicles	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0	1.6	0	0	1.6	1.0



Traff Tech Engineering Inc.

File Name : 5-Banks Rd & W.Sample Road
Site Code : 00000000
Start Date : 7/18/2024
Page No : 1

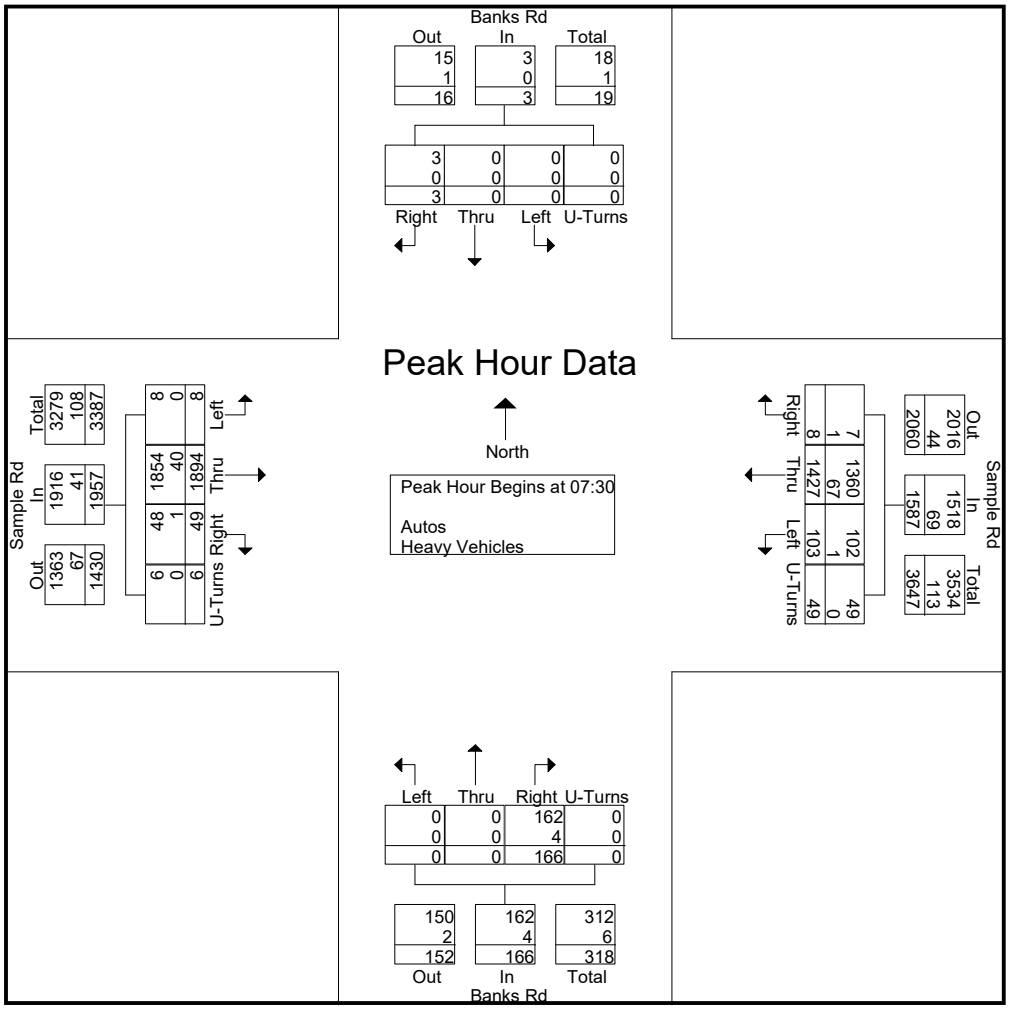
Groups Printed- Autos - Heavy Vehicles

	Banks Rd From North					Sample Rd From East					Banks Rd From South					Sample 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	0	0	0	0	0	0	244	19	10	273	39	0	2	0	41	4	406	1	5	416	730
07:15	0	0	0	0	0	0	237	19	14	270	42	0	0	0	42	7	442	1	2	452	764
07:30	1	0	0	0	1	1	370	19	6	396	42	0	0	0	42	9	488	1	0	498	937
07:45	0	0	0	0	0	2	361	34	9	406	47	0	0	0	47	7	457	6	1	471	924
Total	1	0	0	0	1	3	1212	91	39	1345	170	0	2	0	172	27	1793	9	8	1837	3355
08:00	1	0	0	0	1	2	325	29	21	377	37	0	0	0	37	18	507	1	1	527	942
08:15	1	0	0	0	1	3	371	21	13	408	40	0	0	0	40	15	442	0	4	461	910
08:30	1	0	0	0	1	2	330	19	11	362	38	0	1	0	39	14	429	1	0	444	846
08:45	0	0	0	0	0	2	440	24	8	474	27	0	0	0	27	7	406	1	2	416	917
Total	3	0	0	0	3	9	1466	93	53	1621	142	0	1	0	143	54	1784	3	7	1848	3615
*** BREAK ***																					
16:00	0	0	0	0	0	7	508	32	8	555	31	0	0	0	31	18	366	0	1	385	971
16:15	3	0	0	0	3	8	568	34	10	620	39	0	0	0	39	27	421	0	0	448	1110
16:30	2	0	0	0	2	5	547	35	11	598	37	0	0	0	37	16	374	0	4	394	1031
16:45	1	0	0	0	1	5	556	33	5	599	30	0	0	1	31	25	383	0	1	409	1040
Total	6	0	0	0	6	25	2179	134	34	2372	137	0	0	1	138	86	1544	0	6	1636	4152
17:00	1	0	0	0	1	6	574	23	5	608	55	0	0	0	55	15	431	1	2	449	1113
17:15	0	0	0	0	0	8	683	51	4	746	42	0	0	1	43	22	432	0	3	457	1246
17:30	2	0	0	0	2	9	624	50	12	695	29	0	0	0	29	23	464	0	2	489	1215
17:45	1	0	0	0	1	7	609	41	9	666	36	0	0	0	36	31	459	0	0	490	1193
Total	4	0	0	0	4	30	2490	165	30	2715	162	0	0	1	163	91	1786	1	7	1885	4767
Grand Total	14	0	0	0	14	67	7347	483	156	8053	611	0	3	2	616	258	6907	13	28	7206	15889
Apprch %	100	0	0	0		0.8	91.2	6	1.9		99.2	0	0.5	0.3		3.6	95.9	0.2	0.4		
Total %	0.1	0	0	0	0.1	0.4	46.2	3	1	50.7	3.8	0	0	0	3.9	1.6	43.5	0.1	0.2	45.4	
Autos	14	0	0	0	14	64	7186	477	156	7883	603	0	3	2	608	254	6786	13	28	7081	15586
% Autos	100	0	0	0	100	95.5	97.8	98.8	100	97.9	98.7	0	100	100	98.7	98.4	98.2	100	100	98.3	98.1
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	4.5	2.2	1.2	0	2.1	1.3	0	0	0	1.3	1.6	1.8	0	0	1.7	1.9

Traff Tech Engineering Inc.

File Name : 5-Banks Rd & W.Sample Road
Site Code : 00000000
Start Date : 7/18/2024
Page No : 4

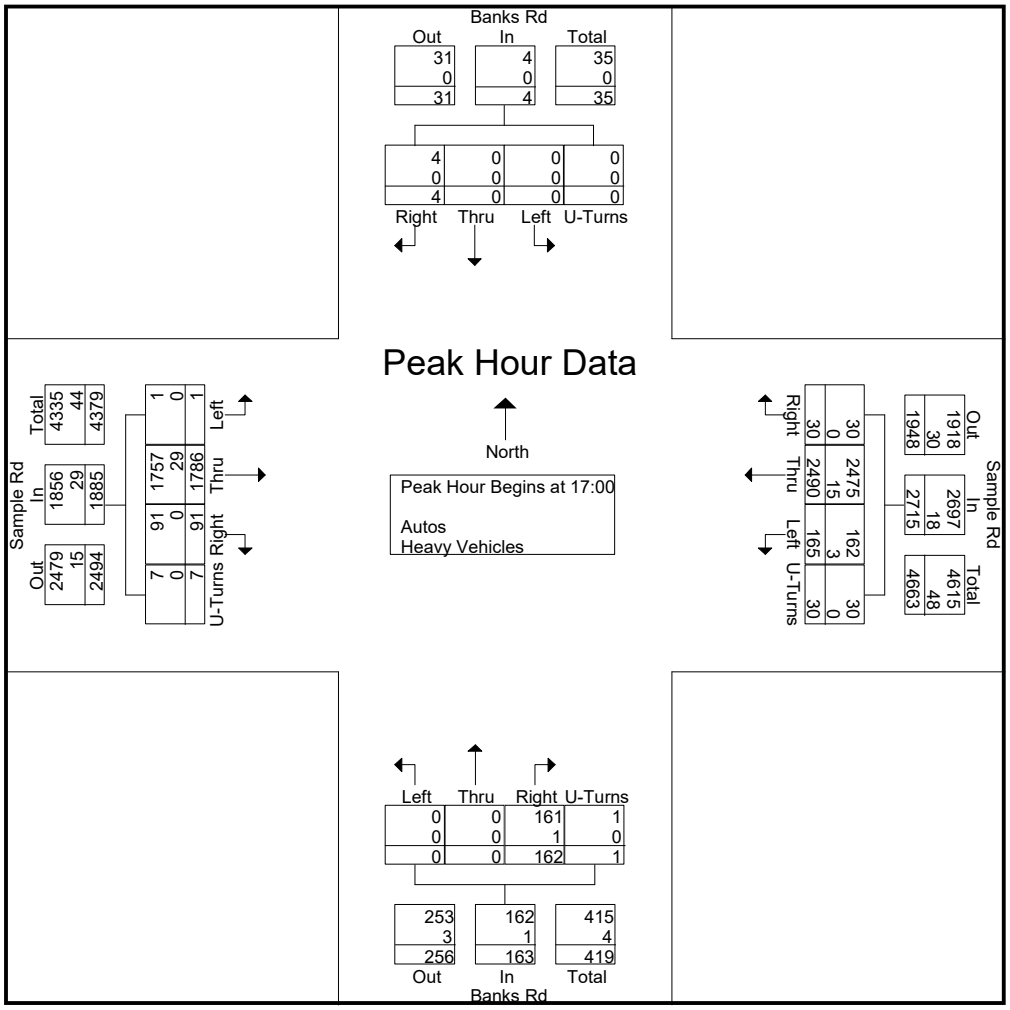
	Banks Rd From North					Sample Rd From East					Banks Rd From South					Sample Rd From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	**1**	0	0	0	**1**	1	370	19	6	396	42	0	0	0	42	9	488	1	0	498	937
07:45	0	0	0	0	0	2	361	**34**	9	406	**47**	0	0	0	**47**	7	457	**6**	1	471	924
08:00	1	0	0	0	1	2	325	29	**21**	377	37	0	0	0	37	**18**	**507**	1	1	**527**	**942**
08:15	1	0	0	0	1	**3**	**371**	21	13	**408**	40	0	0	0	40	15	442	0	**4**	461	910
Total Volume	3	0	0	0	3	8	1427	103	49	1587	166	0	0	0	166	49	1894	8	6	1957	3713
% App. Total	100	0	0	0		0.5	89.9	6.5	3.1		100	0	0	0		2.5	96.8	0.4	0.3		
PHF	.750	.000	.000	.000	.750	.667	.962	.757	.583	.972	.883	.000	.000	.000	.883	.681	.934	.333	.375	.928	.985
Autos	3	0	0	0	3	7	1360	102	49	1518	162	0	0	0	162	48	1854	8	6	1916	3599
% Autos	100	0	0	0	100	87.5	95.3	99.0	100	95.7	97.6	0	0	0	97.6	98.0	97.9	100	100	97.9	96.9
Heavy Vehicles	0	0	0	0	0	1	67	1	0	69	4	0	0	0	4	1	40	0	0	41	114
% Heavy Vehicles	0	0	0	0	0	12.5	4.7	1.0	0	4.3	2.4	0	0	0	2.4	2.0	2.1	0	0	2.1	3.1



Traff Tech Engineering Inc.

File Name : 5-Banks Rd & W.Sample Road
Site Code : 00000000
Start Date : 7/18/2024
Page No : 5

	Banks Rd From North					Sample Rd From East					Banks Rd From South					Sample 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 17:00																					
17:00	1	0	0	0	1	6	574	23	5	608	**55**	0	0	0	**55**	15	431	**1**	2	449	1113
17:15	0	0	0	0	0	8	**683**	**51**	4	**746**	42	0	0	**1**	43	22	432	0	**3**	457	**1246**
17:30	**2**	0	0	0	**2**	**9**	624	50	**12**	695	29	0	0	0	29	23	**464**	0	2	489	1215
17:45	1	0	0	0	1	7	609	41	9	666	36	0	0	0	36	**31**	459	0	0	**490**	1193
Total Volume	4	0	0	0	4	30	2490	165	30	2715	162	0	0	1	163	91	1786	1	7	1885	4767
% App. Total	100	0	0	0		1.1	91.7	6.1	1.1		99.4	0	0	0.6		4.8	94.7	0.1	0.4		
PHF	.500	.000	.000	.000	.500	.833	.911	.809	.625	.910	.736	.000	.000	.250	.741	.734	.962	.250	.583	.962	.956
Autos	4	0	0	0	4	30	2475	162	30	2697	161	0	0	1	162	91	1757	1	7	1856	4719
% Autos	100	0	0	0	100	100	99.4	98.2	100	99.3	99.4	0	0	100	99.4	100	98.4	100	100	98.5	99.0
Heavy Vehicles	0	0	0	0	0	0	15	3	0	18	1	0	0	0	1	0	29	0	0	29	48
% Heavy Vehicles	0	0	0	0	0	0	0.6	1.8	0	0.7	0.6	0	0	0	0.6	0	1.6	0	0	1.5	1.0



Traff Tech Engineering Inc.

File Name : 1-NW 54th Ave & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 1

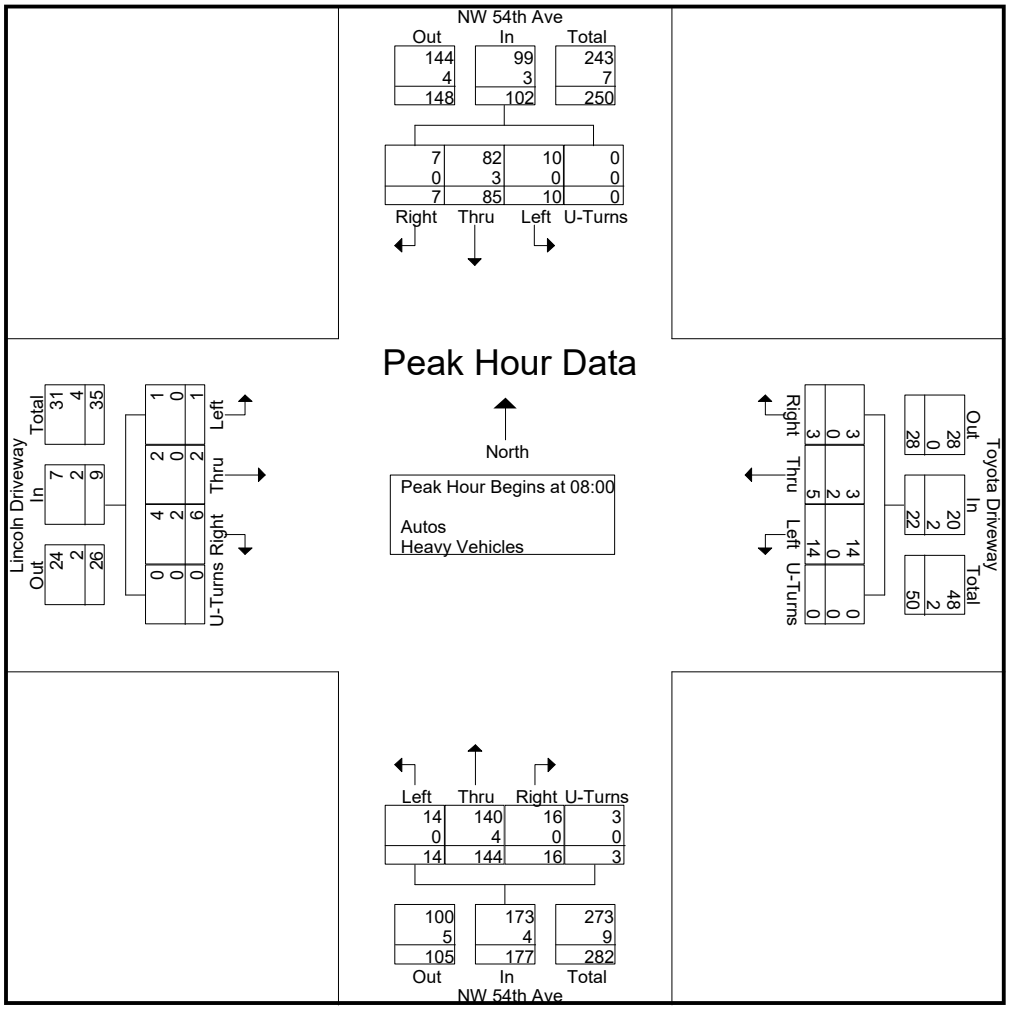
Groups Printed- Autos - Heavy Vehicles

	NW 54th Ave From North					Toyota Driveway From East					NW 54th Ave From South					Lincoln 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	19	0	0	19	1	0	0	0	1	3	20	0	0	23	0	0	0	0	0	43
07:15	2	13	2	0	17	0	0	4	0	4	3	28	3	0	34	1	1	0	0	2	57
07:30	0	21	2	0	23	1	0	1	0	2	4	35	3	0	42	1	0	0	0	1	68
07:45	3	20	2	0	25	0	1	2	0	3	8	37	0	1	46	2	2	0	0	4	78
Total	5	73	6	0	84	2	1	7	0	10	18	120	6	1	145	4	3	0	0	7	246
08:00	2	20	2	0	24	0	1	0	0	1	5	35	3	1	44	1	0	0	0	1	70
08:15	2	21	4	0	27	2	1	3	0	6	5	28	3	0	36	2	1	0	0	3	72
08:30	0	17	3	0	20	0	2	3	0	5	2	38	0	1	41	1	0	0	0	1	67
08:45	3	27	1	0	31	1	1	8	0	10	4	43	8	1	56	2	1	1	0	4	101
Total	7	85	10	0	102	3	5	14	0	22	16	144	14	3	177	6	2	1	0	9	310
*** BREAK ***																					
16:00	2	60	1	0	63	7	2	13	0	22	3	94	10	1	108	8	1	4	0	13	206
16:15	3	82	1	1	87	1	2	6	0	9	4	87	5	0	96	7	2	3	0	12	204
16:30	2	75	0	0	77	3	4	15	0	22	1	81	4	1	87	4	2	2	0	8	194
16:45	3	82	1	0	86	4	3	13	0	20	5	75	2	0	82	5	2	2	0	9	197
Total	10	299	3	1	313	15	11	47	0	73	13	337	21	2	373	24	7	11	0	42	801
17:00	2	72	2	0	76	3	1	21	0	25	3	62	3	0	68	14	1	2	0	17	186
17:15	1	65	0	0	66	5	1	7	0	13	5	86	4	2	97	7	3	0	0	10	186
17:30	1	72	0	0	73	3	1	13	0	17	5	88	5	0	98	6	0	3	0	9	197
17:45	3	73	0	0	76	2	2	12	0	16	5	80	4	1	90	7	2	1	0	10	192
Total	7	282	2	0	291	13	5	53	0	71	18	316	16	3	353	34	6	6	0	46	761
Grand Total	29	739	21	1	790	33	22	121	0	176	65	917	57	9	1048	68	18	18	0	104	2118
Apprch %	3.7	93.5	2.7	0.1		18.8	12.5	68.8	0		6.2	87.5	5.4	0.9		65.4	17.3	17.3	0		
Total %	1.4	34.9	1	0	37.3	1.6	1	5.7	0	8.3	3.1	43.3	2.7	0.4	49.5	3.2	0.8	0.8	0	4.9	
Autos	29	733	21	1	784	33	19	121	0	173	62	908	57	9	1036	65	18	17	0	100	2093
% Autos	100	99.2	100	100	99.2	100	86.4	100	0	98.3	95.4	99	100	100	98.9	95.6	100	94.4	0	96.2	98.8
Heavy Vehicles	0	6	0	0	6	0	3	0	0	3	3	9	0	0	12	3	0	1	0	4	25
% Heavy Vehicles	0	0.8	0	0	0.8	0	13.6	0	0	1.7	4.6	1	0	0	1.1	4.4	0	5.6	0	3.8	1.2

Traff Tech Engineering Inc.

File Name : 1-NW 54th Ave & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 4

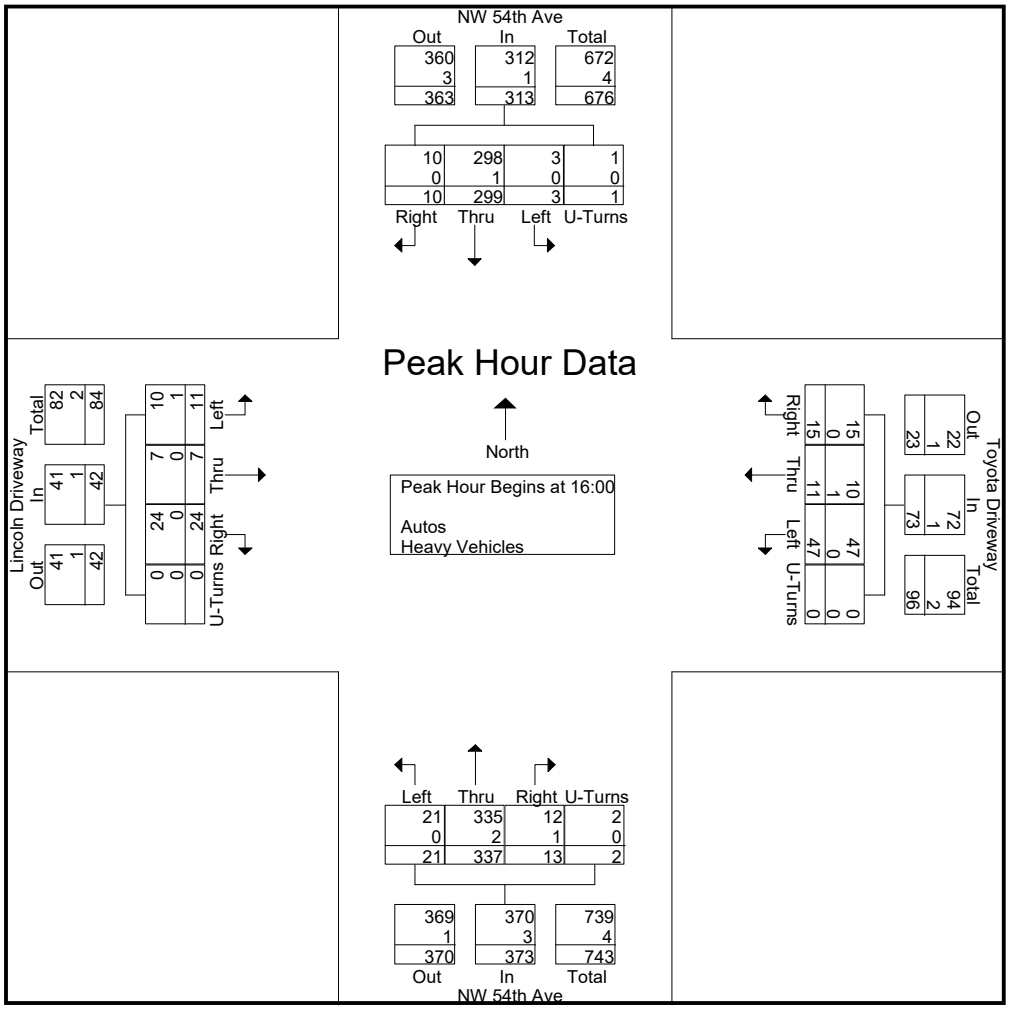
	NW 54th Ave From North					Toyota Driveway From East					NW 54th Ave From South					Lincoln Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	2	20	2	0	24	0	1	0	0	1	**5**	35	3	**1**	44	1	0	0	0	1	70
08:15	2	21	**4**	0	27	**2**	1	3	0	6	5	28	3	0	36	**2**	**1**	0	0	3	72
08:30	0	17	3	0	20	0	**2**	3	0	5	2	38	0	1	41	1	0	0	0	1	67
08:45	**3**	**27**	1	0	**31**	1	1	**8**	0	**10**	4	**43**	**8**	1	**56**	2	1	**1**	0	**4**	**101**
Total Volume	7	85	10	0	102	3	5	14	0	22	16	144	14	3	177	6	2	1	0	9	310
% App. Total	6.9	83.3	9.8	0		13.6	22.7	63.6	0		9	81.4	7.9	1.7		66.7	22.2	11.1	0		
PHF	.583	.787	.625	.000	.823	.375	.625	.438	.000	.550	.800	.837	.438	.750	.790	.750	.500	.250	.000	.563	.767
Autos	7	82	10	0	99	3	3	14	0	20	16	140	14	3	173	4	2	1	0	7	299
% Autos	100	96.5	100	0	97.1	100	60.0	100	0	90.9	100	97.2	100	100	97.7	66.7	100	100	0	77.8	96.5
Heavy Vehicles	0	3	0	0	3	0	2	0	0	2	0	4	0	0	4	2	0	0	0	2	11
% Heavy Vehicles	0	3.5	0	0	2.9	0	40.0	0	0	9.1	0	2.8	0	0	2.3	33.3	0	0	0	22.2	3.5



Traff Tech Engineering Inc.

File Name : 1-NW 54th Ave & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 5

	NW 54th Ave From North					Toyota Driveway From East					NW 54th Ave From South					Lincoln 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 16:00																					
16:00	2	60	**1**	0	63	**7**	2	13	0	**22**	3	**94**	**10**	**1**	**108**	**8**	1	**4**	0	**13**	**206**
16:15	**3**	**82**	1	**1**	**87**	1	2	6	0	9	4	87	5	0	96	7	**2**	3	0	12	204
16:30	2	75	0	0	77	3	**4**	**15**	0	22	1	81	4	1	87	4	2	2	0	8	194
16:45	3	82	1	0	86	4	3	13	0	20	**5**	75	2	0	82	5	2	2	0	9	197
Total Volume	10	299	3	1	313	15	11	47	0	73	13	337	21	2	373	24	7	11	0	42	801
% App. Total	3.2	95.5	1	0.3		20.5	15.1	64.4	0		3.5	90.3	5.6	0.5		57.1	16.7	26.2	0		
PHF	.833	.912	.750	.250	.899	.536	.688	.783	.000	.830	.650	.896	.525	.500	.863	.750	.875	.688	.000	.808	.972
Autos	10	298	3	1	312	15	10	47	0	72	12	335	21	2	370	24	7	10	0	41	795
% Autos	100	99.7	100	100	99.7	100	90.9	100	0	98.6	92.3	99.4	100	100	99.2	100	100	90.9	0	97.6	99.3
Heavy Vehicles	0	1	0	0	1	0	1	0	0	1	1	2	0	0	3	0	0	1	0	1	6
% Heavy Vehicles	0	0.3	0	0	0.3	0	9.1	0	0	1.4	7.7	0.6	0	0	0.8	0	0	9.1	0	2.4	0.7



Traff Tech Engineering Inc.

File Name : 2-Banks Rd & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 1

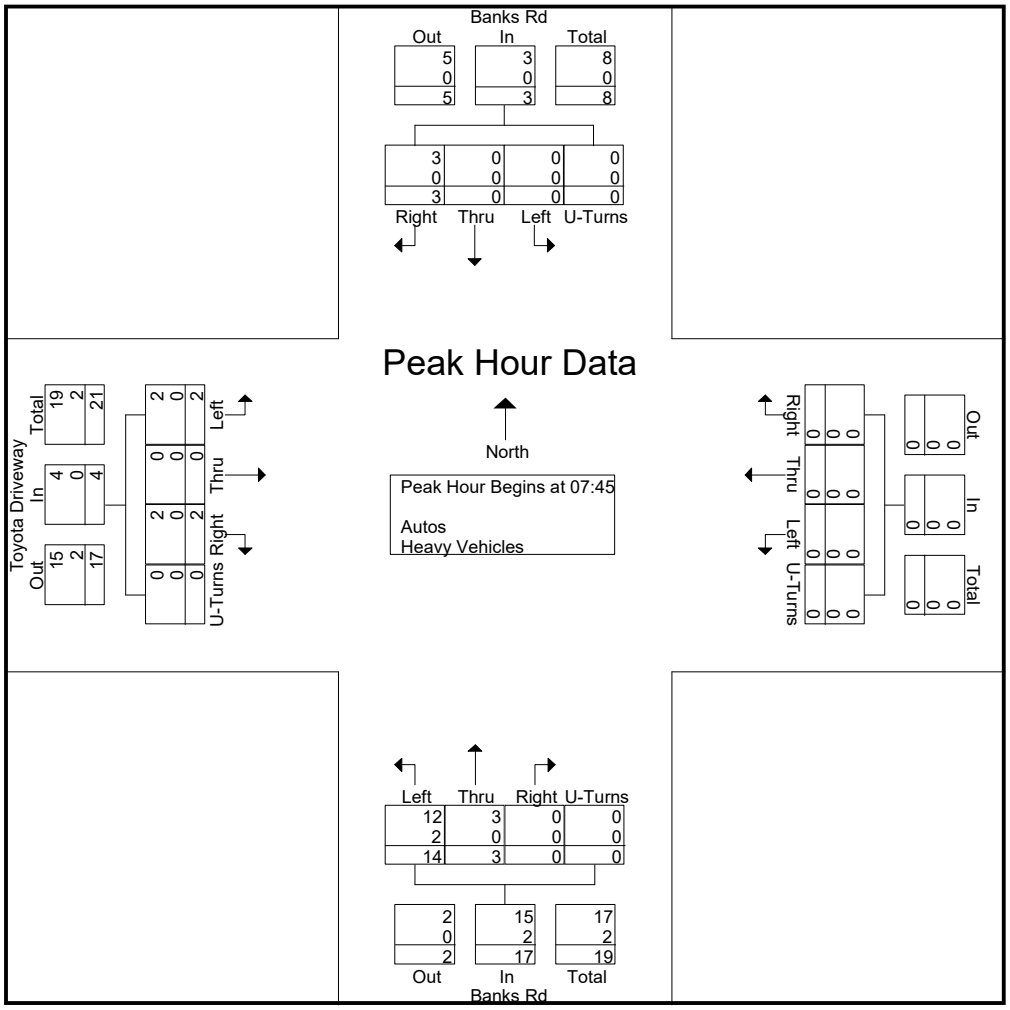
Groups Printed- Autos - Heavy Vehicles

	Banks Rd From North					From East					Banks Rd From South					Toyota 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	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1	3
07:15	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	3
07:45	0	0	0	0	0	0	0	0	0	0	0	3	5	0	8	0	0	1	0	1	9
Total	2	1	0	0	3	0	0	0	0	0	0	3	9	0	12	0	0	2	0	2	17
08:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	0	1	5
08:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
08:30	3	0	0	0	3	0	0	0	0	0	0	0	3	0	3	1	0	1	0	2	8
08:45	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3
Total	3	1	0	0	4	0	0	0	0	0	0	1	10	0	11	2	0	1	0	3	18
*** BREAK ***																					
16:00	0	0	0	0	0	0	0	0	0	0	0	8	1	0	9	0	0	1	0	1	10
16:15	1	2	0	0	3	0	0	0	0	0	0	5	4	0	9	2	0	2	1	5	17
16:30	1	0	0	0	1	0	0	0	0	0	0	2	2	0	4	1	0	2	0	3	8
16:45	1	1	0	0	2	0	0	0	0	0	0	6	1	0	7	1	0	2	0	3	12
Total	3	3	0	0	6	0	0	0	0	0	0	21	8	0	29	4	0	7	1	12	47
17:00	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	0	0	3	0	3	9
17:15	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	9
17:30	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	12
17:45	0	0	0	0	0	0	0	0	0	0	0	4	3	0	7	1	0	2	0	3	10
Total	0	2	0	0	2	0	0	0	0	0	0	26	4	0	30	2	0	6	0	8	40
Grand Total	8	7	0	0	15	0	0	0	0	0	0	51	31	0	82	8	0	16	1	25	122
Apprch %	53.3	46.7	0	0		0	0	0	0		0	62.2	37.8	0		32	0	64	4		
Total %	6.6	5.7	0	0	12.3	0	0	0	0	0	0	41.8	25.4	0	67.2	6.6	0	13.1	0.8	20.5	
Autos	8	7	0	0	15	0	0	0	0	0	0	51	28	0	79	8	0	12	1	21	115
% Autos	100	100	0	0	100	0	0	0	0	0	0	100	90.3	0	96.3	100	0	75	100	84	94.3
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	4	0	4	7
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	9.7	0	3.7	0	0	25	0	16	5.7

Traff Tech Engineering Inc.

File Name : 2-Banks Rd & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 4

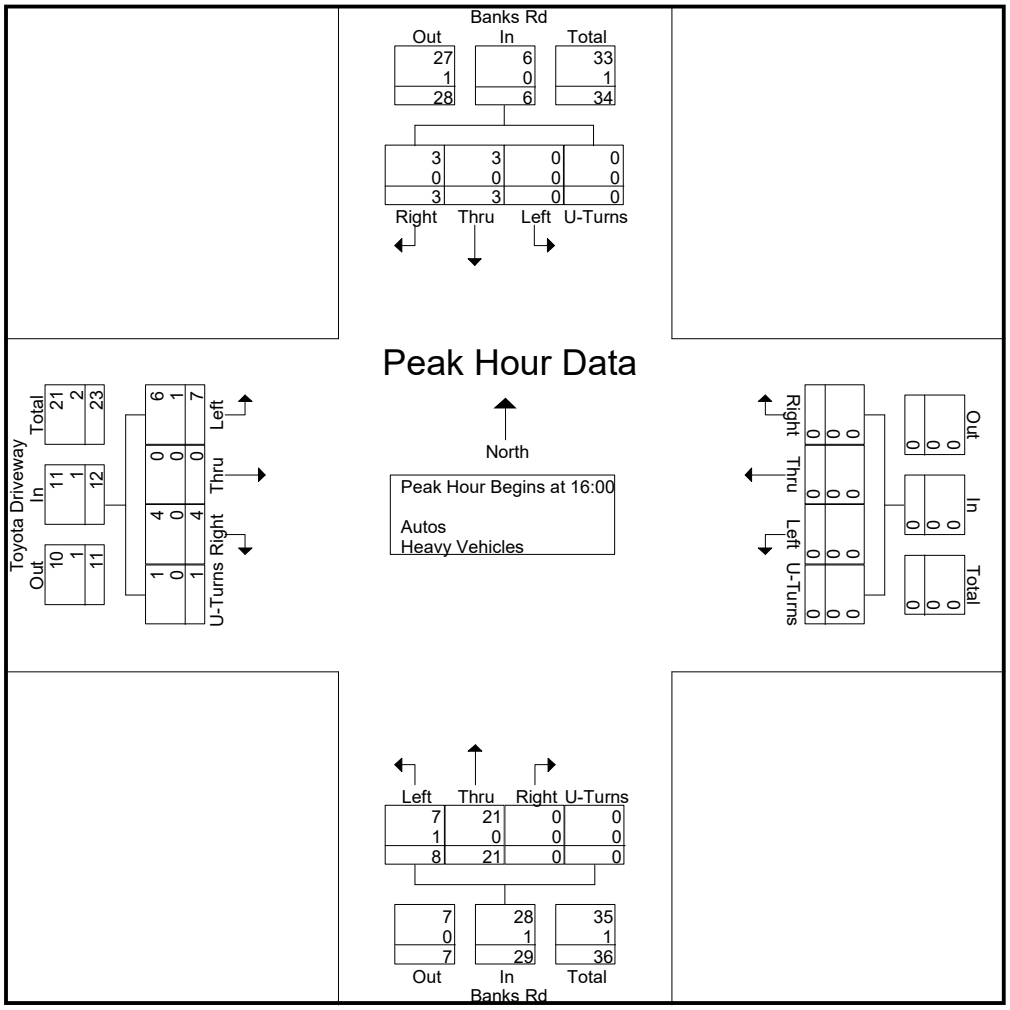
	Banks Rd From North					From East					Banks Rd From South					Toyota Driveway From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	0	0	0	0	0	0	**3**	**5**	0	**8**	0	0	**1**	0	1	**9**
08:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	**1**	0	0	0	1	5
08:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
08:30	**3**	0	0	0	**3**	0	0	0	0	0	0	0	3	0	3	1	0	1	0	**2**	8
Total Volume	3	0	0	0	3	0	0	0	0	0	0	3	14	0	17	2	0	2	0	4	24
% App. Total	100	0	0	0		0	0	0	0		0	17.6	82.4	0		50	0	50	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.250	.700	.000	.531	.500	.000	.500	.000	.500	.667
Autos	3	0	0	0	3	0	0	0	0	0	0	3	12	0	15	2	0	2	0	4	22
% Autos	100	0	0	0	100	0	0	0	0	0	0	100	85.7	0	88.2	100	0	100	0	100	91.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	11.8	0	0	0	0	0	8.3



Traff Tech Engineering Inc.

File Name : 2-Banks Rd & Toyota Driveway
Site Code : 00000000
Start Date : 7/18/2024
Page No : 5

	Banks Rd From North					From East					Banks Rd From South					Toyota 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 16:00																					
16:00	0	0	0	0	0	0	0	0	0	0	0	**8**	1	0	**9**	0	0	1	0	1	10
16:15	**1**	**2**	0	0	**3**	0	0	0	0	0	0	5	**4**	0	9	**2**	0	**2**	**1**	**5**	**17**
16:30	1	0	0	0	1	0	0	0	0	0	0	2	2	0	4	1	0	2	0	3	8
16:45	1	1	0	0	2	0	0	0	0	0	0	6	1	0	7	1	0	2	0	3	12
Total Volume	3	3	0	0	6	0	0	0	0	0	0	21	8	0	29	4	0	7	1	12	47
% App. Total	50	50	0	0		0	0	0	0		0	72.4	27.6	0		33.3	0	58.3	8.3		
PHF	.750	.375	.000	.000	.500	.000	.000	.000	.000	.000	.000	.656	.500	.000	.806	.500	.000	.875	.250	.600	.691
Autos	3	3	0	0	6	0	0	0	0	0	0	21	7	0	28	4	0	6	1	11	45
% Autos	100	100	0	0	100	0	0	0	0	0	0	100	87.5	0	96.6	100	0	85.7	100	91.7	95.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	2
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	12.5	0	3.4	0	0	14.3	0	8.3	4.3



APPENDIX D

FDOT Peak Season Conversion Factor Report

2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2023 - 01/07/2023	1.01	1.04
2	01/08/2023 - 01/14/2023	1.00	1.03
3	01/15/2023 - 01/21/2023	0.99	1.02
* 4	01/22/2023 - 01/28/2023	0.98	1.01
* 5	01/29/2023 - 02/04/2023	0.98	1.01
* 6	02/05/2023 - 02/11/2023	0.97	1.00
* 7	02/12/2023 - 02/18/2023	0.96	0.99
* 8	02/19/2023 - 02/25/2023	0.96	0.99
* 9	02/26/2023 - 03/04/2023	0.96	0.99
*10	03/05/2023 - 03/11/2023	0.96	0.99
*11	03/12/2023 - 03/18/2023	0.96	0.99
*12	03/19/2023 - 03/25/2023	0.97	1.00
*13	03/26/2023 - 04/01/2023	0.98	1.01
*14	04/02/2023 - 04/08/2023	0.99	1.02
*15	04/09/2023 - 04/15/2023	1.00	1.03
*16	04/16/2023 - 04/22/2023	0.99	1.02
17	04/23/2023 - 04/29/2023	0.99	1.02
18	04/30/2023 - 05/06/2023	0.99	1.02
19	05/07/2023 - 05/13/2023	0.99	1.02
20	05/14/2023 - 05/20/2023	0.99	1.02
21	05/21/2023 - 05/27/2023	1.00	1.03
22	05/28/2023 - 06/03/2023	1.00	1.03
23	06/04/2023 - 06/10/2023	1.01	1.04
24	06/11/2023 - 06/17/2023	1.01	1.04
25	06/18/2023 - 06/24/2023	1.02	1.05
26	06/25/2023 - 07/01/2023	1.02	1.05
27	07/02/2023 - 07/08/2023	1.02	1.05
28	07/09/2023 - 07/15/2023	1.02	1.05
29	07/16/2023 - 07/22/2023	1.02	1.05
30	07/23/2023 - 07/29/2023	1.02	1.05
31	07/30/2023 - 08/05/2023	1.02	1.05
32	08/06/2023 - 08/12/2023	1.02	1.05
33	08/13/2023 - 08/19/2023	1.02	1.05
34	08/20/2023 - 08/26/2023	1.03	1.06
35	08/27/2023 - 09/02/2023	1.03	1.06
36	09/03/2023 - 09/09/2023	1.03	1.06
37	09/10/2023 - 09/16/2023	1.03	1.06
38	09/17/2023 - 09/23/2023	1.03	1.06
39	09/24/2023 - 09/30/2023	1.02	1.05
40	10/01/2023 - 10/07/2023	1.02	1.05
41	10/08/2023 - 10/14/2023	1.01	1.04
42	10/15/2023 - 10/21/2023	1.01	1.04
43	10/22/2023 - 10/28/2023	1.01	1.04
44	10/29/2023 - 11/04/2023	1.02	1.05
45	11/05/2023 - 11/11/2023	1.03	1.06
46	11/12/2023 - 11/18/2023	1.04	1.07
47	11/19/2023 - 11/25/2023	1.03	1.06
48	11/26/2023 - 12/02/2023	1.02	1.05
49	12/03/2023 - 12/09/2023	1.02	1.05
50	12/10/2023 - 12/16/2023	1.01	1.04
51	12/17/2023 - 12/23/2023	1.01	1.04
52	12/24/2023 - 12/30/2023	1.00	1.03
53	12/31/2023 - 12/31/2023	0.99	1.02

* PEAK SEASON

APPENDIX E

ITE Trip Generation Data

Land Use: 840
Automobile Sales (New)

Description

A new automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or leasing of new cars is the primary business at these facilities. However, the land use also commonly provides automobile servicing, parts sales, and used car sales. The dealerships may also provide truck sales and servicing. Automobile sales (used) (Land Use 841) and recreational vehicle sales (Land Use 842) 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, Georgia, Indiana, New York, North Carolina, Ontario (CAN), Oregon, Texas, Vermont, and Virginia.

Source Numbers

260, 271, 280, 328, 414, 424, 427, 438, 440, 507, 571, 583, 612, 715, 728, 880, 881, 936, 974, 975, 1036

Automobile Sales (New)
(840)

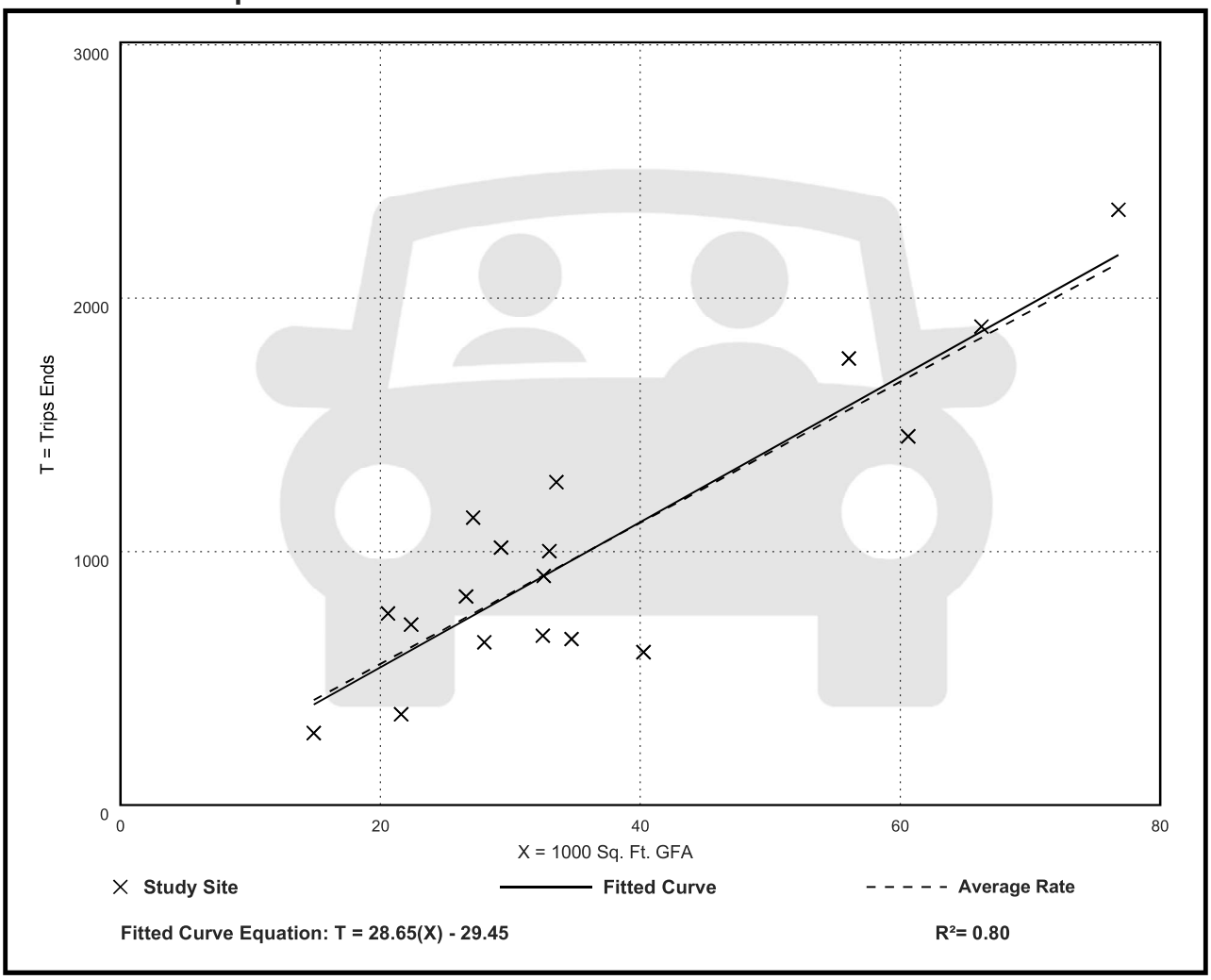
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 36
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
27.84	14.98 - 41.78	7.01

Data Plot and Equation



Fitted Curve Equation: T = 28.65(X) - 29.45

R^2= 0.80

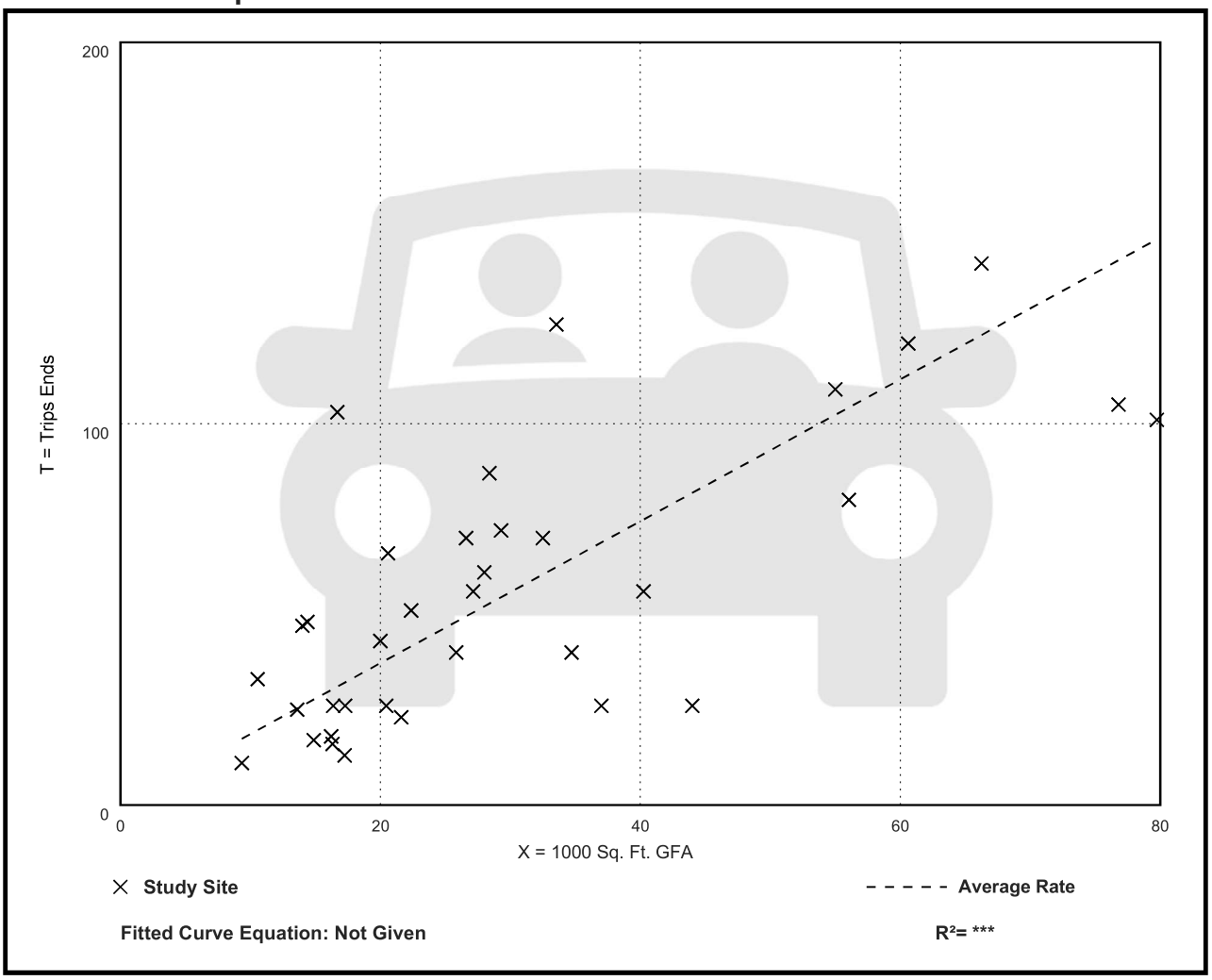
Automobile Sales (New)
(840)

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: 35
Avg. 1000 Sq. Ft. GFA: 30
Directional Distribution: 73% entering, 27% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.86	0.59 - 6.17	0.94

Data Plot and Equation



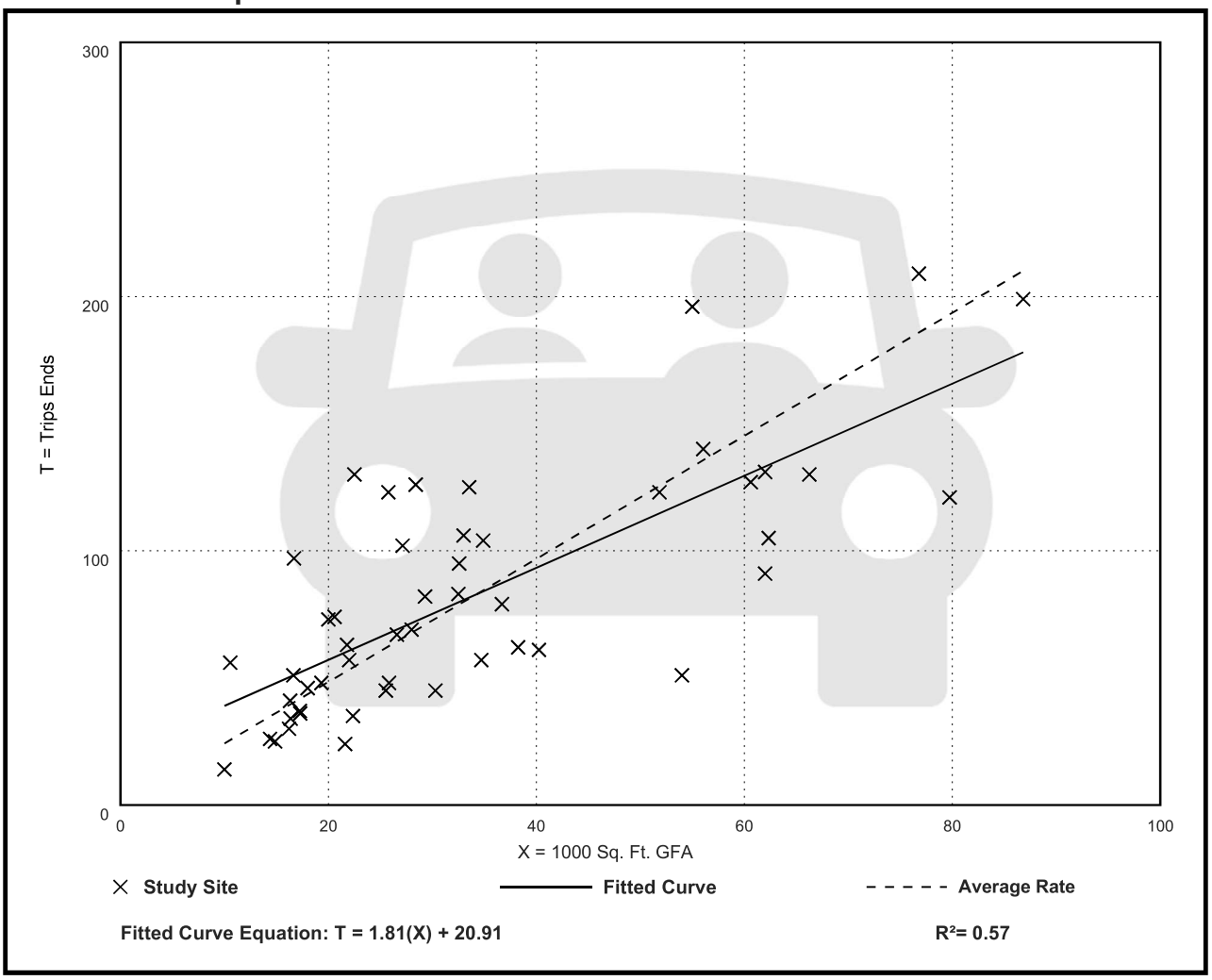
Automobile Sales (New)
(840)

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: 50
Avg. 1000 Sq. Ft. GFA: 34
Directional Distribution: 40% entering, 60% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.42	0.94 - 5.81	0.98

Data Plot and Equation



APPENDIX F

FDOT Historic Traffic Counts & Growth Rate Analysis

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0123 - SR 834/SAMPLE RD - W OF SR 7/US 441

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2023	38000 C	E 19500	W 18500	9.00	57.90	4.20
2022	43000 C	E 21000	W 22000	9.00	57.00	4.20
2021	43000 C	E 22000	W 21000	9.00	53.80	2.80
2020	46500 F	E 23500	W 23000	9.00	53.90	2.80
2019	49500 C	E 25000	W 24500	9.00	54.60	2.80
2018	50500 C	E 24500	W 26000	9.00	54.50	4.10
2017	48500 C	E 23500	W 25000	9.00	51.90	4.10
2016	43000 C	E 21500	W 21500	9.00	54.10	4.10
2015	47500 C	E 23500	W 24000	9.00	54.00	2.70
2014	45500 C	E 22000	W 23500	9.00	54.20	4.50
2013	43000 C	E 20500	W 22500	9.00	53.60	3.40
2012	45000 C	E 22500	W 22500	9.00	52.20	3.00
2011	44500 C	E 22000	W 22500	9.00	52.50	3.00
2010	47500 C	E 23500	W 24000	8.35	52.69	3.00
2009	44500 C	E 21500	W 23000	8.53	53.89	3.50
2008	51000 C	E 25000	W 26000	8.81	54.16	3.50

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0467 - SR 834/SAMPLE RD - E OF SR 7/US 441

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2023	52500 C	E 26500	W 26000	9.00	57.90	2.30
2022	56000 C	E 28500	W 27500	9.00	57.00	2.30
2021	65500 C	E 32000	W 33500	9.00	53.80	2.30
2020	60500 F	E 29000	W 31500	9.00	53.90	3.80
2019	64000 C	E 30500	W 33500	9.00	54.60	3.80
2018	57500 C	E 28500	W 29000	9.00	54.50	3.80
2017	63500 C	E 31000	W 32500	9.00	51.90	2.50
2016	63000 C	E 32000	W 31000	9.00	54.10	2.50
2015	54000 C	E 26500	W 27500	9.00	54.00	2.50
2014	57500 C	E 28500	W 29000	9.00	54.20	5.00
2013	60500 C	E 28500	W 32000	9.00	53.60	5.50
2012	60000 C	E 29500	W 30500	9.00	52.20	5.50
2011	56500 C	E 28000	W 28500	9.00	52.50	3.50
2010	55500 C	E 26000	W 29500	8.35	52.69	3.50
2009	60000 C	E 28500	W 31500	8.53	53.89	3.10
2008	63500 C	E 30500	W 33000	8.81	54.16	3.10

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9108 - BANKS RD., S OF SAMPLE RD.

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2023	4500 C	N	1900	S	2600	9.00	57.90	3.00
2022	3800 S	N	1600	S	2200	9.00	57.00	5.40
2021	3800 F	N	1600	S	2200	9.00	53.80	14.30
2020	3800 C	N	1600	S	2200	9.00	53.90	8.80
2019	5900 T	N	2600	S	3300	9.00	54.60	5.50
2018	5900 S	N	2600	S	3300	9.00	54.50	6.00
2017	5900 F	N	2600	S	3300	9.00	51.90	6.20
2016	5900 C	N	2600	S	3300	9.00	54.10	2.90
2015	5200 V		0		0	9.00	54.00	3.40
2014	5100 R					9.00	54.20	7.40
2013	5100 T		0		0	9.00	53.60	7.60
2012	5100 S		0		0	9.00	52.20	5.90
2011	5100 F		0		0	9.00	52.50	6.30
2010	5100 C	N	2200	S	2900	8.35	52.69	9.30
2009	4700 F	N	1900	S	2800	8.53	53.89	5.30
2008	4900 C	N	2000	S	2900	8.81	54.16	6.50

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9769 - NW 31 ST E OF SR 7

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2023	7800 C	E 3700	W 4100	9.00	57.90	3.00
2022	7300 S	E 3300	W 4000	9.00	57.00	5.40
2021	7300 F	E 3300	W 4000	9.00	53.80	14.30
2020	7300 C	E 3300	W 4000	9.00	53.90	8.80
2019	6100 T	E 3100	W 3000	9.00	54.60	5.50
2018	6100 S	E 3100	W 3000	9.00	54.50	6.00
2017	6100 F	E 3100	W 3000	9.00	51.90	6.20
2016	6100 C	E 3100	W 3000	9.00	54.10	2.90
2015	4900 R	E 2700	W 2200	9.00	54.00	3.40
2014	4900 T	E 2700	W 2200	9.00	54.20	7.40
2013	4900 S	E 2700	W 2200	9.00	53.60	7.60
2012	4900 F	E 2700	W 2200	9.00	52.20	5.90
2011	4900 C	E 2700	W 2200	9.00	52.50	6.30
2010	6200 F	E 2800	W 3400	8.35	52.69	9.30
2009	6200 C	E 2800	W 3400	8.53	53.89	5.30
2008	7200 F	E 2900	W 4300	8.81	54.16	6.50

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

Al Hendrickson Toyota

Coconut Creek, FL

Growth Rate Analysis

Site #860123 - SR 834 / Sample Road - West of SR 7 / US 441

Year	Volume	Growth Rate
2014	45,500	
2023	38,000	-1.79%

Site #860467 - SR 834 / Sample Road - East of SR 7 / US 441

Year	Volume	Growth Rate
2014	57,500	
2023	52,500	-0.91%

Site #869108 - Banks Road - South of Sample Road

Year	Volume	Growth Rate
2014	5,100	
2023	4,500	-1.24%

Site #869769 - NW 31st Street - East of SR 7

Year	Volume	Growth Rate
2014	4,900	
2023	7,800	4.76%

Total - All Count Stations

Year	Volume	Growth Rate
2014	113,000	
2023	102,800	-0.94%

APPENDIX G

Future Traffic Volumes Spreadsheets

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and NW 54th Avenue
AM Peak Hour

Description	NW 54th Avenue Northbound			NW 54th Avenue Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	43	23	191	58	20	27	76	1,563	38	203	1,148	125
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	45	24	201	61	21	28	80	1,641	40	213	1,205	131
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	46	24	203	62	21	29	81	1,658	40	215	1,217	133
Al Hendrickson Toyota		8	4	7	3	5	20	7		5	3	4
2026 Total Traffic	**46**	**32**	**207**	**69**	**24**	**34**	**101**	**1,665**	**40**	**220**	**1,220**	**137**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and NW 54th Avenue
PM Peak Hour

Description	NW 54th Avenue Northbound			NW 54th Avenue Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	107	38	275	246	41	82	158	1,360	34	317	1,975	243
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	112	40	289	258	43	86	166	1,428	36	333	2,074	255
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	113	40	292	261	43	87	168	1,442	36	336	2,095	258
Al Hendrickson Toyota		4	2	15	7	11	11	4		10	8	2
2026 Total Traffic	**113**	**44**	**294**	**276**	**50**	**98**	**179**	**1,446**	**36**	**346**	**2,103**	**260**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and Project Driveway
AM Peak Hour

Description	Northbound			Project Driveway Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	0	0	0	0	0	0	0	1,939	0	0	1,381	14
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	0	0	0	0	0	0	0	2,036	0	0	1,450	15
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	0	0	0	0	0	0	0	2,056	0	0	1,465	15
Al Hendrickson Toyota								22			12	19
2026 Total Traffic	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,078**	**0**	**0**	**1,477**	**34**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and Project Driveway
PM Peak Hour

Description	Northbound			Project Driveway Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	0	0	0	0	0	0	0	1,881	0	0	2,535	8
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	0	0	0	0	0	0	0	1,975	0	0	2,662	8
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	0	0	0	0	0	0	0	1,995	0	0	2,688	8
Al Hendrickson Toyota								29			20	10
2026 Total Traffic	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,024**	**0**	**0**	**2,708**	**18**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and Banks Road
AM Peak Hour

Description	Banks Road Northbound			Banks Road Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	0	0	166	0	0	3	14	1,894	49	152	1,427	8
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	0	0	174	0	0	3	15	1,989	51	160	1,498	8
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	0	0	176	0	0	3	15	2,009	52	161	1,513	8
Al Hendrickson Toyota						8	11	9	2		23	6
2026 Total Traffic	**0**	**0**	**176**	**0**	**0**	**11**	**26**	**2,018**	**54**	**161**	**1,536**	**14**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

W. Sample Road and Banks Road
PM Peak Hour

	Banks Road Northbound			Banks Road Southbound			W. Sample Road Eastbound			W. Sample Road Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	0	0	162	0	0	4	8	1,786	91	195	2,490	30
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	0	0	170	0	0	4	8	1,875	96	205	2,615	32
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	0	0	172	0	0	4	8	1,894	97	207	2,641	32
Al Hendrickson Toyota						18	6	20	3		12	3
2026 Total Traffic	**0**	**0**	**172**	**0**	**0**	**22**	**14**	**1,914**	**100**	**207**	**2,653**	**35**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 54th Avenue and Project Driveway
AM Peak Hour

Description	NW 54th Avenue Northbound			NW 54th Avenue Southbound			Project Driveway Eastbound			Project Driveway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	17	144	16	10	85	7	1	2	6	14	5	3
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	18	151	17	11	89	7	1	2	6	15	5	3
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	18	153	17	11	90	7	1	2	6	15	5	3
Al Hendrickson Toyota			32	13				5		15	2	5
2026 Total Traffic	**18**	**153**	**49**	**24**	**90**	**7**	**1**	**7**	**6**	**30**	**7**	**8**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 54th Avenue and Project Driveway
PM Peak Hour

Description	NW 54th Avenue Northbound			NW 54th Avenue Southbound			Project Driveway Eastbound			Project Driveway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	23	337	13	4	299	10	11	7	24	47	11	15
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	24	354	14	4	314	11	12	7	25	49	12	16
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	24	357	14	4	317	11	12	7	25	50	12	16
Al Hendrickson Toyota			17	7				2		33	4	11
2026 Total Traffic	**24**	**357**	**31**	**11**	**317**	**11**	**12**	**9**	**25**	**83**	**16**	**27**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Banks Road and Project Driveway
AM Peak Hour

Description	Banks Road Northbound			Banks Road Southbound			Project Driveway Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	14	3	0	0	0	3	2	0	2	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	15	3	0	0	0	3	2	0	2	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	15	3	0	0	0	3	2	0	2	0	0	0
Al Hendrickson Toyota	17					6	3		8			
2026 Total Traffic	**32**	**3**	**0**	**0**	**0**	**9**	**5**	**0**	**10**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Banks Road and Project Driveway
PM Peak Hour

	Banks Road Northbound			Banks Road Southbound			Project Driveway Eastbound			Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (7/18/2024)	8	21	0	0	3	3	8	0	4	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2024 Peak Season Traffic	8	22	0	0	3	3	8	0	4	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
2026 Background Traffic	8	22	0	0	3	3	8	0	4	0	0	0
Al Hendrickson Toyota	9					3	7		18			
2026 Total Traffic	**17**	**22**	**0**	**0**	**3**	**6**	**15**	**0**	**22**	**0**	**0**	**0**

APPENDIX H

Signal Timing Data

BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1495	**Initial Operation Date**	3/7/91
Controller Type	2070	**System Number**	1495
Modification Number	9	**Modification Date**	06/10/2020
Drawing/Project No	421656-1-52-01	**FPL Grid Number**	87291842105
Intersection	SAMPLE ROAD (SR 834) and NW 54 AVE./PERIMETER RD.		
Municipality	COCONUT CREEK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	2.0	3.0	1.5	2.0	2.0	3.0	1.5	2.0
Maximum Green I	20	50	15	30	20	50	15	30
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay				20-RT				20-RT
Walk		7		7		7		7
Pedestrian Clearance		23		31		23		31
Permissive	DUAL		YES		DUAL		YES	
Flash Operation	RED	YELLOW		RED	RED	YELLOW		RED

Attachment

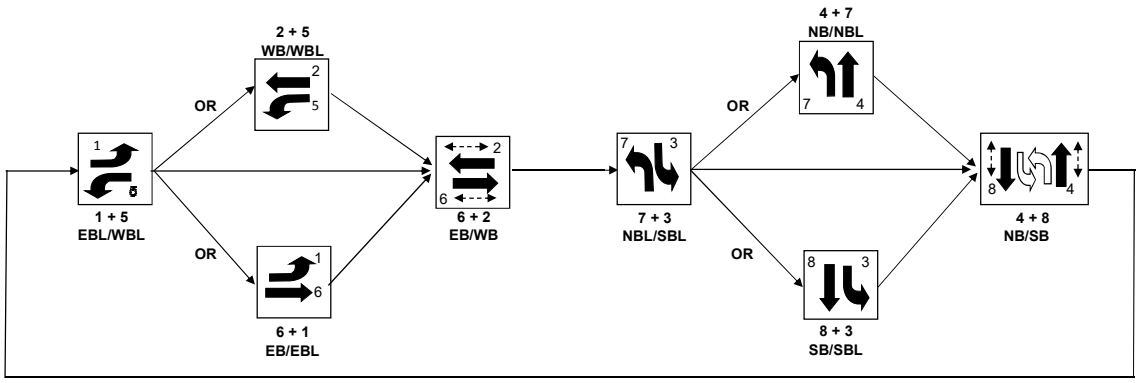
NOTES:

1. DUAL ENTRY HARDWIRED NORTH/SOUTH.
2. MOD. 9 UPDATES PHASES 2,3,6 & 7 INITIAL GREEN (MINIMUM) VALUES.
UPDATES ALL MAXIMUM GREEN I VALUES.

Submitted By _____ **Approved By** _____

Sequence of Operation for Sample Road (SR 834) and NW 54 Ave/Perimeter Rd (1495) Coconut Creek

Modification #5



Broward County Timing Sheet 8/1/2024 3:29:06 PM

Station : 1495 - Sample Rd & NW 54 Ave/Perimeter Rd (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		23		31		23		31								
Min Green	5	10	5	6	5	10	5	6	4	4	4	4				4
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2	1	1	1	1				1
Max1	20	50	15	30	20	50	15	30	90	90	30	30				90
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	5	5	5	5	5	5	5	5
Red Clr	2	2	2	2	2	2	2	2	2	2	4	4	1.5	1.5	1.5	2
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	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call		ON				ON										
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								ON
Sim Gap Enable		ON				ON										
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	4	2	3	2	4	1
Dwell Cyc Veh 2	8	6	8	5	7	6
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	5	5		
Max	6	6		
Enable	ON			
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip	ON	ON		
Priority P1	12	11		
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump	ON	ON		
Free Mode				
Alt Table	1	1		

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	1	3	4	2	4	2
Exit 2	5	7	8	6	8	6
Exit 3						
Exit 4						

Prepared By	Date Implemented
Reviewed By	Traffic Engineer

Broward County Timing Sheet 8/1/2024 3:29:06 PM

Station : 1495 - Sample Rd & NW 54 Ave/Perimeter Rd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		6	6			6	1	15	17		12	30	12	20	12	30	12	20								
6		22	22	160		22	1	15	17		30	70	40	20	30	70	25	35	70	30						60
7		22	22	160		22	1	15	17		30	70	40	20	30	70	25	35	70	30						60
9		23	23	160	100	23	1	15	17		30	70	40	20	30	70	25	35	70	30						60
15		24	24	160	105	24	1	15	17		30	70	40	20	30	70	25	35	70	30						60
19	30	4	4	120		4	1	15	17		18	64	23	15	22	60	16	22	52	30						38
23		6	6			6	1	15	17		12	30	12	20	12	30	12	20								
Day Plan 2											**Easy**															
		6	6			6	1	15	17		12	30	12	20	12	30	12	20								
6		95	254																							
7		4	4	120		4	1	15	17		18	64	23	15	22	60	16	22	52	30						38
10	30	1	1	160		1	1	15	17		30	70	40	20	30	70	25	35	70	30						60
19	30	4	4	120		4	1	15	17		18	64	23	15	22	60	16	22	52	30						38
23		6	6			6	1	15	17		12	30	12	20	12	30	12	20								
Day Plan 3											**Easy**															
		6	6			6	1	15	17		12	30	12	20	12	30	12	20								

6		95	254																							
7		4	4	120		4	1	15	17		18	64	23	15	22	60	16	22	52	30						38
10	30	1	1	160		1	1	15	17		30	70	40	20	30	70	25	35	70	30						60
19	30	4	4	120		4	1	15	17		18	64	23	15	22	60	16	22	52	30						38
23		6	6			6	1	15	17		12	30	12	20	12	30	12	20								

Station : 1495 - Sample Rd & NW 54 Ave/Perimeter Rd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															

Scheduler

	Month											Day of Weekk							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1												1	1	1	1	1		1																																2
5	1												1							1																																2
6					1								1																																1	1	1	1	1	1	1	2
7							1											1					1																												2
8							1						1	1	1	1	1					1																													2
9							1						1											1																												2
10									1				1							1	1	1	1	1	1	1																										2
11											1						1																																			2
12											1							1																																		2
13												1		1				1																																		2
14												1		1	1	1	1	1																																		2
15												1		1																																						2
16												1		1				1																																		1	2
17																																																				1
18																																																				1
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30																																																			1
31																																																			1
32																																																			1

User Comments:

APPENDIX I

SYNCHRO Output

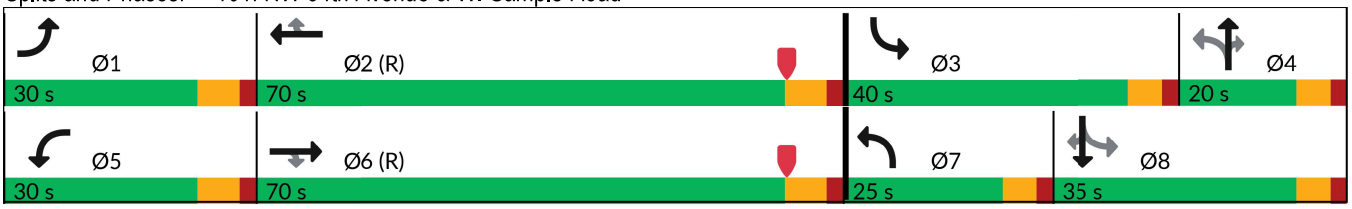
Existing (2024) SYNCHRO Output

Timings
101: NW 54th Avenue & W. Sample Road

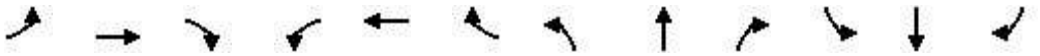
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1641	40	213	1205	131	45	24	201	61	21	28
Future Volume (vph)	80	1641	40	213	1205	131	45	24	201	61	21	28
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	8.3	104.2	104.2	14.7	110.7	110.7	15.0	8.2	8.2	17.6	9.5	9.5
Actuated g/C Ratio	0.05	0.65	0.65	0.09	0.69	0.69	0.09	0.05	0.05	0.11	0.06	0.06
v/c Ratio	0.47	0.52	0.04	0.70	0.36	0.12	0.32	0.14	0.75	0.39	0.10	0.14
Control Delay (s/veh)	82.0	16.9	0.1	82.6	11.6	1.5	63.7	72.3	25.2	66.1	70.0	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.0	16.9	0.1	82.6	11.6	1.5	63.7	72.3	25.2	66.1	70.0	1.5
LOS	F	B	A	F	B	A	E	E	C	E	E	A
Approach Delay (s/veh)		19.4			20.5			35.8			50.6	
Approach LOS		B			C			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay (s/veh): 22.0	Intersection LOS: C
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	83	1709	42	222	1255	136	47	25	209	64	22	29
v/c Ratio	0.47	0.52	0.04	0.70	0.36	0.12	0.32	0.14	0.75	0.39	0.10	0.14
Control Delay (s/veh)	82.0	16.9	0.1	82.6	11.6	1.5	63.7	72.3	25.2	66.1	70.0	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.0	16.9	0.1	82.6	11.6	1.5	63.7	72.3	25.2	66.1	70.0	1.5
Queue Length 50th (ft)	44	326	0	118	184	0	45	13	0	61	12	0
Queue Length 95th (ft)	74	481	0	161	279	23	79	30	86	101	26	0
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	3312	1083	493	3516	1140	250	312	330	376	641	381
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.52	0.04	0.45	0.36	0.12	0.19	0.08	0.63	0.17	0.03	0.08

Intersection Summary

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1641	40	213	1205	131	45	24	201	61	21	28
Future Volume (veh/h)	80	1641	40	213	1205	131	45	24	201	61	21	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	1709	42	222	1255	136	47	25	209	64	22	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	3216	998	268	3429	1064	220	311	139	214	349	155
Arrive On Green	0.04	0.63	0.63	0.08	0.67	0.67	0.03	0.09	0.09	0.04	0.10	0.10
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	83	1709	42	222	1255	136	47	25	209	64	22	29
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.8	29.8	1.6	10.1	17.1	4.9	3.8	1.0	14.0	5.2	0.9	2.7
Cycle Q Clear(g_c), s	3.8	29.8	1.6	10.1	17.1	4.9	3.8	1.0	14.0	5.2	0.9	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	3216	998	268	3429	1064	220	311	139	214	349	155
V/C Ratio(X)	0.67	0.53	0.04	0.83	0.37	0.13	0.21	0.08	1.51	0.30	0.06	0.19
Avail Cap(c_a), veh/h	497	3216	998	497	3429	1064	375	311	139	516	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	16.5	11.3	72.7	11.4	9.4	63.7	67.1	73.0	62.8	65.5	66.3
Incr Delay (d2), s/veh	2.3	0.6	0.1	2.5	0.3	0.2	0.2	0.0	261.7	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.8	0.6	4.6	6.6	1.8	1.8	0.5	15.8	2.4	0.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.5	17.1	11.3	75.2	11.7	9.7	63.9	67.1	334.7	63.1	65.5	66.5
LnGrp LOS	E	B	B	E	B	A	E	E	F	E	E	E
Approach Vol, veh/h		1834			1613			281			115	
Approach Delay, s/veh		19.8			20.3			265.6			64.4	
Approach LOS		B			C			F			E	

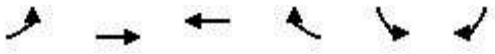
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	114.4	12.8	20.0	19.4	107.8	11.1	21.7
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	5.8	19.1	7.2	16.0	12.1	31.8	5.8	4.7
Green Ext Time (p_c), s	0.1	13.3	0.0	0.0	0.3	17.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	39.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM Unsignalized Intersection Capacity Analysis
102: W. Sample Road & Driveway (Inbound)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	2036	1450	15	0	0
Future Volume (Veh/h)	0	2036	1450	15	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2121	1510	16	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.82	
vC, conflicting volume	1526				2217	503
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1526				1710	503
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	433				67	514

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	707	707	707	503	503	503	16
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	16
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.42	0.42	0.42	0.30	0.30	0.30	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1989	51	160	1498	8	0	0	174	0	0	3
Future Vol, veh/h	15	1989	51	160	1498	8	0	0	174	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	2030	52	163	1529	8	0	0	178	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1537	0	0	2082	0	0	-	-	1015	-	-	768
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	312	-	-	187	-	-	0	0	576	0	0	692
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	312	-	-	187	-	-	-	-	576	-	-	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.13	8.33	14.02	10.23
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	576	312	-	-	187	-	-	692
HCM Lane V/C Ratio	0.308	0.049	-	-	0.871	-	-	0.004
HCM Control Delay (s/veh)	14	17.1	-	-	86.8	-	-	10.2
HCM Lane LOS	B	C	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.3	0.2	-	-	6.5	-	-	0

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	6	15	5	3	18	151	17	11	89	7
Future Volume (Veh/h)	1	2	6	15	5	3	18	151	17	11	89	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	1	3	8	19	6	4	23	196	22	14	116	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	295	408	58	338	395	98	125			218		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	295	408	58	338	395	98	125			218		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	97	99	100	98			99		
cM capacity (veh/h)	614	518	996	573	526	939	1459			1349		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	12	29	23	98	98	22	14	58	58	9
Volume Left	1	19	23	0	0	0	14	0	0	0
Volume Right	8	4	0	0	0	22	0	0	0	9
cSH	776	594	1459	1700	1700	1700	1349	1700	1700	1700
Volume to Capacity	0.02	0.05	0.02	0.06	0.06	0.01	0.01	0.03	0.03	0.01
Queue Length 95th (ft)	1	4	1	0	0	0	1	0	0	0
Control Delay (s/veh)	9.7	11.4	7.5	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Lane LOS	A	B	A				A			
Approach Delay (s/veh)	9.7	11.4	0.7				0.8			
Approach LOS	A	B								

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	20.7%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	6	15	5	3	18	151	17	11	89	7
Future Vol, veh/h	1	2	6	15	5	3	18	151	17	11	89	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	8	19	6	4	23	196	22	14	116	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	292	409	58	331	396	98	125	0	0	218	0	0
Stage 1	144	144	-	243	243	-	-	-	-	-	-	-
Stage 2	148	265	-	88	153	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	938	899	1153	908	907	1121	1460	-	-	1349	-	-
Stage 1	980	1020	-	853	912	-	-	-	-	-	-	-
Stage 2	975	890	-	1061	1010	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	904	875	1153	876	883	1121	1460	-	-	1349	-	-
Mov Cap-2 Maneuver	904	875	-	876	883	-	-	-	-	-	-	-
Stage 1	970	1009	-	839	898	-	-	-	-	-	-	-
Stage 2	949	875	-	1040	999	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.48	9.12	0.73	0.79
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1460	-	-	1047	903	1349	-	-
HCM Lane V/C Ratio	0.016	-	-	0.011	0.033	0.011	-	-
HCM Control Delay (s/veh)	7.5	-	-	8.5	9.1	7.7	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

HCM Unsignalized Intersection Capacity Analysis
105: Banks Road & Driveway

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	2	15	3	0	3
Future Volume (Veh/h)	2	2	15	3	0	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	3	3	22	4	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	48	0	4			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	48	0	4			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	948	1085	1618			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	6	26	0	4
Volume Left	3	22	0	0
Volume Right	3	0	0	4
cSH	1012	1618	1700	1700
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	0	1	0	0
Control Delay (s/veh)	8.6	6.2	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.6	6.2	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	15	3	0	3
Future Vol, veh/h	2	2	15	3	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	3	22	4	0	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	0	4	0	-	0
Stage 1	0	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	5	4.5	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1144	-	1617	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1137	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1128	-	1617	-	-	-
Mov Cap-2 Maneuver	1038	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1137	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v		6.05	0
HCM LOS	-		

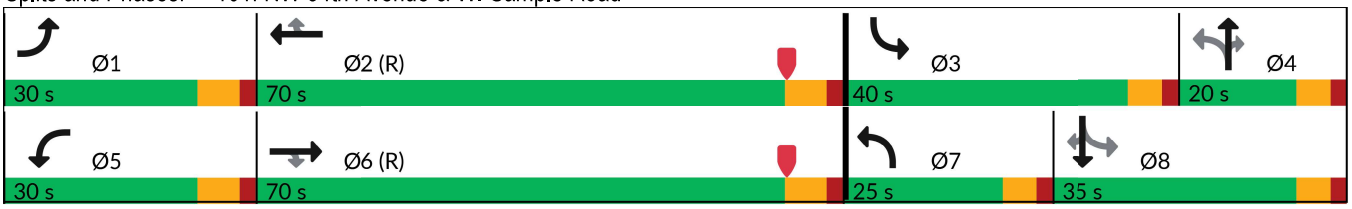
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1500	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s/veh)	7.3	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Timings
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1428	36	333	2074	255	112	40	289	258	43	86
Future Volume (vph)	166	1428	36	333	2074	255	112	40	289	258	43	86
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	12.3	79.9	79.9	19.8	87.4	87.4	21.0	8.9	8.9	40.3	22.2	22.2
Actuated g/C Ratio	0.08	0.50	0.50	0.12	0.55	0.55	0.13	0.06	0.06	0.25	0.14	0.14
v/c Ratio	0.65	0.58	0.04	0.81	0.77	0.28	0.55	0.21	0.81	0.75	0.09	0.28
Control Delay (s/veh)	82.9	31.1	0.1	83.2	32.4	10.4	57.4	72.8	24.1	64.9	57.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.9	31.1	0.1	83.2	32.4	10.4	57.4	72.8	24.1	64.9	57.9	5.7
LOS	F	C	A	F	C	B	E	E	C	E	E	A
Approach Delay (s/veh)		35.7			36.6			37.0			50.9	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 105 (66%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 37.4	Intersection LOS: D
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	171	1472	37	343	2138	263	115	41	298	266	44	89
v/c Ratio	0.65	0.58	0.04	0.81	0.77	0.28	0.55	0.21	0.81	0.75	0.09	0.28
Control Delay (s/veh)	82.9	31.1	0.1	83.2	32.4	10.4	57.4	72.8	24.1	64.9	57.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.9	31.1	0.1	83.2	32.4	10.4	57.4	72.8	24.1	64.9	57.9	5.7
Queue Length 50th (ft)	91	383	0	182	607	55	99	22	0	252	21	0
Queue Length 95th (ft)	130	537	0	236	#879	143	138	42	100	307	39	27
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	2540	865	493	2777	932	285	320	414	412	654	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.58	0.04	0.70	0.77	0.28	0.40	0.13	0.72	0.65	0.07	0.23

Intersection Summary

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

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1428	36	333	2074	255	112	40	289	258	43	86
Future Volume (veh/h)	166	1428	36	333	2074	255	112	40	289	258	43	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	171	1472	37	343	2138	263	115	41	298	266	44	89
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	2510	779	389	2764	858	281	311	139	385	579	258
Arrive On Green	0.06	0.49	0.49	0.11	0.54	0.54	0.07	0.09	0.09	0.15	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	171	1472	37	343	2138	263	115	41	298	266	44	89
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.8	33.0	1.9	15.6	52.9	14.6	9.3	1.7	14.0	21.2	1.7	8.0
Cycle Q Clear(g_c), s	7.8	33.0	1.9	15.6	52.9	14.6	9.3	1.7	14.0	21.2	1.7	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	2510	779	389	2764	858	281	311	139	385	579	258
V/C Ratio(X)	0.79	0.59	0.05	0.88	0.77	0.31	0.41	0.13	2.15	0.69	0.08	0.34
Avail Cap(c_a), veh/h	497	2510	779	497	2764	858	366	311	139	504	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.9	29.1	21.2	70.0	29.0	20.2	60.6	67.4	73.0	53.5	56.7	59.4
Incr Delay (d2), s/veh	2.4	1.0	0.1	12.2	2.2	0.9	0.4	0.1	540.1	1.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.8	0.8	7.6	22.0	5.7	4.3	0.8	26.5	9.7	0.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.4	30.1	21.3	82.1	31.1	21.1	61.0	67.5	613.1	54.9	56.8	59.7
LnGrp LOS	E	C	C	F	C	C	E	E	F	D	E	E
Approach Vol, veh/h		1680			2744			454			399	
Approach Delay, s/veh		34.6			36.6			424.0			56.2	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	93.6	29.4	20.0	25.0	85.6	17.3	32.1
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	9.8	54.9	23.2	16.0	17.6	35.0	11.3	10.0
Green Ext Time (p_c), s	0.2	7.3	0.2	0.0	0.4	13.4	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	70.7
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	1975	2662	8	0	0
Future Volume (Veh/h)	0	1975	2662	8	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2057	2773	8	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.80	
vC, conflicting volume	2781				3459	924
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2781				3197	924
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	138				6	271

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	686	686	686	924	924	924	8
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	8
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.40	0.40	0.40	0.54	0.54	0.54	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1875	96	205	2615	32	0	0	170	0	0	4
Future Vol, veh/h	8	1875	96	205	2615	32	0	0	170	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	1953	100	214	2724	33	0	0	177	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2757	0	0	2053	0	0	-	-	977	-	-	1379
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	98	-	-	~ 192	-	-	0	0	593	0	0	436
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	98	-	-	~ 192	-	-	-	-	593	-	-	436
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.18	10.64	13.64	13.33
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	593	98	-	-	~ 192	-	-	436
HCM Lane V/C Ratio	0.299	0.085	-	-	1.109	-	-	0.01
HCM Control Delay (s/veh)	13.6	45.3	-	-	148	-	-	13.3
HCM Lane LOS	B	E	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.2	0.3	-	-	10.4	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	25	49	12	16	24	354	14	4	314	11
Future Volume (Veh/h)	12	7	25	49	12	16	24	354	14	4	314	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	12	7	26	51	12	16	25	365	14	4	324	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	587	761	162	615	758	183	335			379		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	587	761	162	615	758	183	335			379		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	98	97	86	96	98	98			100		
cM capacity (veh/h)	368	326	854	352	327	829	1221			1176		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	45	79	25	183	183	14	4	162	162	11
Volume Left	12	51	25	0	0	0	4	0	0	0
Volume Right	26	16	0	0	0	14	0	0	0	11
cSH	532	393	1221	1700	1700	1700	1176	1700	1700	1700
Volume to Capacity	0.08	0.20	0.02	0.11	0.11	0.01	0.00	0.10	0.10	0.01
Queue Length 95th (ft)	7	19	2	0	0	0	0	0	0	0
Control Delay (s/veh)	12.4	16.4	8.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	B	C	A				A			
Approach Delay (s/veh)	12.4	16.4	0.5				0.1			
Approach LOS	B	C								

Intersection Summary					
Average Delay	2.4				
Intersection Capacity Utilization	32.1%	ICU Level of Service		A	
Analysis Period (min)	15				

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	7	25	49	12	16	24	354	14	4	314	11
Future Vol, veh/h	12	7	25	49	12	16	24	354	14	4	314	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	26	51	12	16	25	365	14	4	324	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	570	761	162	588	758	182	335	0	0	379	0	0
Stage 1	332	332	-	414	414	-	-	-	-	-	-	-
Stage 2	238	429	-	174	343	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	739	696	1072	728	697	1056	1221	-	-	1176	-	-
Stage 1	752	824	-	668	750	-	-	-	-	-	-	-
Stage 2	858	738	-	940	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	698	679	1072	686	681	1056	1221	-	-	1176	-	-
Mov Cap-2 Maneuver	698	679	-	686	681	-	-	-	-	-	-	-
Stage 1	749	821	-	655	735	-	-	-	-	-	-	-
Stage 2	814	723	-	906	811	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.39	10.46	0.49	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1221	-	-	866	739	1176	-	-
HCM Lane V/C Ratio	0.02	-	-	0.052	0.107	0.004	-	-
HCM Control Delay (s/veh)	8	-	-	9.4	10.5	8.1	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	22	3	3
Future Volume (Veh/h)	8	4	8	22	3	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	12	6	12	32	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60	4	8			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	4	8			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	99			
cM capacity (veh/h)	940	1080	1612			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	18	44	4	4
Volume Left	12	12	0	0
Volume Right	6	0	0	4
cSH	982	1612	1700	1700
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s/veh)	8.7	2.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.7	2.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	4	8	22	3	3
Future Vol, veh/h	8	4	8	22	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	6	12	32	4	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	59	4	9	0	-	0
Stage 1	4	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	4.5	4	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1142	1196	1611	-	-	-
Stage 1	1194	-	-	-	-	-
Stage 2	1130	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1134	1196	1611	-	-	-
Mov Cap-2 Maneuver	1031	-	-	-	-	-
Stage 1	1186	-	-	-	-	-
Stage 2	1130	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.38	1.93	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	480	-	1081	-	-
HCM Lane V/C Ratio	0.007	-	0.016	-	-
HCM Control Delay (s/veh)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

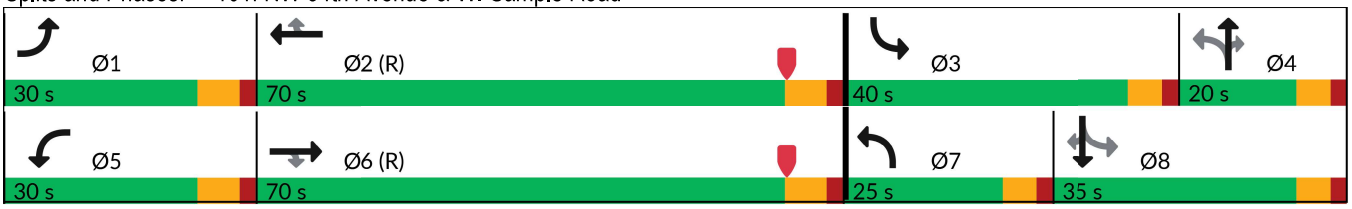
Future (2026) Background SYNCHRO Output

Timings
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	1658	40	215	1217	133	46	24	203	62	21	29
Future Volume (vph)	81	1658	40	215	1217	133	46	24	203	62	21	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	8.3	101.8	101.8	14.8	108.3	108.3	16.1	8.2	8.2	19.9	11.8	11.8
Actuated g/C Ratio	0.05	0.64	0.64	0.09	0.68	0.68	0.10	0.05	0.05	0.12	0.07	0.07
v/c Ratio	0.47	0.53	0.04	0.71	0.37	0.12	0.31	0.14	0.75	0.37	0.08	0.13
Control Delay (s/veh)	82.0	17.8	0.1	82.5	12.2	1.7	62.9	72.3	25.1	64.7	69.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.0	17.8	0.1	82.5	12.2	1.7	62.9	72.3	25.1	64.7	69.5	1.2
LOS	F	B	A	F	B	A	E	E	C	E	E	A
Approach Delay (s/veh)		20.4			21.0			35.7			49.3	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay (s/veh): 22.6	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	1727	42	224	1268	139	48	25	211	65	22	30
v/c Ratio	0.47	0.53	0.04	0.71	0.37	0.12	0.31	0.14	0.75	0.37	0.08	0.13
Control Delay (s/veh)	82.0	17.8	0.1	82.5	12.2	1.7	62.9	72.3	25.1	64.7	69.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.0	17.8	0.1	82.5	12.2	1.7	62.9	72.3	25.1	64.7	69.5	1.2
Queue Length 50th (ft)	44	333	0	119	187	0	45	13	0	62	12	0
Queue Length 95th (ft)	74	489	0	162	284	24	81	30	86	103	26	0
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	3234	1061	493	3440	1119	251	312	332	376	641	381
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.53	0.04	0.45	0.37	0.12	0.19	0.08	0.64	0.17	0.03	0.08

Intersection Summary

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

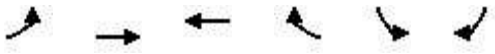
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	1658	40	215	1217	133	46	24	203	62	21	29
Future Volume (veh/h)	81	1658	40	215	1217	133	46	24	203	62	21	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1727	42	224	1268	139	48	25	211	65	22	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	3210	996	271	3424	1063	221	311	139	215	348	155
Arrive On Green	0.04	0.63	0.63	0.08	0.67	0.67	0.03	0.09	0.09	0.04	0.10	0.10
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	84	1727	42	224	1268	139	48	25	211	65	22	30
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.8	30.4	1.6	10.2	17.4	5.1	3.9	1.0	14.0	5.3	0.9	2.8
Cycle Q Clear(g_c), s	3.8	30.4	1.6	10.2	17.4	5.1	3.9	1.0	14.0	5.3	0.9	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	3210	996	271	3424	1063	221	311	139	215	348	155
V/C Ratio(X)	0.67	0.54	0.04	0.83	0.37	0.13	0.22	0.08	1.52	0.30	0.06	0.19
Avail Cap(c_a), veh/h	497	3210	996	497	3424	1063	375	311	139	516	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	16.7	11.3	72.7	11.6	9.5	63.7	67.1	73.0	62.8	65.5	66.3
Incr Delay (d2), s/veh	2.3	0.7	0.1	2.5	0.3	0.3	0.2	0.0	267.8	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	12.0	0.6	4.7	6.7	1.9	1.8	0.5	16.0	2.4	0.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.5	17.3	11.4	75.2	11.9	9.8	63.8	67.1	340.8	63.0	65.5	66.6
LnGrp LOS	E	B	B	E	B	A	E	E	F	E	E	E
Approach Vol, veh/h		1853			1631			284			117	
Approach Delay, s/veh		20.0			20.4			269.9			64.4	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	114.3	12.9	20.0	19.5	107.6	11.2	21.7
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	5.8	19.4	7.3	16.0	12.2	32.4	5.9	4.8
Green Ext Time (p_c), s	0.1	13.5	0.0	0.0	0.3	17.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	39.7
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	2056	1465	15	0	0
Future Volume (Veh/h)	0	2056	1465	15	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2142	1526	16	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.81	
vC, conflicting volume	1542				2240	509
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1542				1699	509
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	427				67	510

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	714	714	714	509	509	509	16
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	16
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.42	0.42	0.42	0.30	0.30	0.30	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	2009	52	161	1513	8	0	0	176	0	0	3
Future Vol, veh/h	15	2009	52	161	1513	8	0	0	176	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	2050	53	164	1544	8	0	0	180	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1552	0	0	2103	0	0	-	-	1025	-	-	776
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	307	-	-	184	-	-	0	0	571	0	0	688
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	307	-	-	184	-	-	-	-	571	-	-	688
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.13	8.89	14.16	10.26
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	307	-	-	184	-	-	688
HCM Lane V/C Ratio	0.314	0.05	-	-	0.895	-	-	0.004
HCM Control Delay (s/veh)	14.2	17.3	-	-	92.9	-	-	10.3
HCM Lane LOS	B	C	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.3	0.2	-	-	6.7	-	-	0

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	6	15	5	3	18	153	17	11	90	7
Future Volume (Veh/h)	1	2	6	15	5	3	18	153	17	11	90	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	1	3	8	19	6	4	23	199	22	14	117	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	298	412	59	341	399	100	126			221		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	298	412	59	341	399	100	126			221		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	97	99	100	98			99		
cM capacity (veh/h)	612	515	995	570	524	937	1458			1345		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	12	29	23	100	100	22	14	59	59	9
Volume Left	1	19	23	0	0	0	14	0	0	0
Volume Right	8	4	0	0	0	22	0	0	0	9
cSH	774	591	1458	1700	1700	1700	1345	1700	1700	1700
Volume to Capacity	0.02	0.05	0.02	0.06	0.06	0.01	0.01	0.03	0.03	0.01
Queue Length 95th (ft)	1	4	1	0	0	0	1	0	0	0
Control Delay (s/veh)	9.7	11.4	7.5	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Lane LOS	A	B	A				A			
Approach Delay (s/veh)	9.7	11.4	0.7				0.8			
Approach LOS	A	B								

Intersection Summary					
Average Delay	1.7				
Intersection Capacity Utilization	20.7%	ICU Level of Service		A	
Analysis Period (min)	15				

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	6	15	5	3	18	153	17	11	90	7
Future Vol, veh/h	1	2	6	15	5	3	18	153	17	11	90	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	8	19	6	4	23	199	22	14	117	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	295	413	58	334	400	99	126	0	0	221	0	0
Stage 1	145	145	-	245	245	-	-	-	-	-	-	-
Stage 2	149	268	-	88	155	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	936	896	1152	906	905	1120	1458	-	-	1346	-	-
Stage 1	978	1019	-	850	909	-	-	-	-	-	-	-
Stage 2	973	887	-	1060	1008	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	902	873	1152	873	881	1120	1458	-	-	1346	-	-
Mov Cap-2 Maneuver	902	873	-	873	881	-	-	-	-	-	-	-
Stage 1	968	1008	-	836	895	-	-	-	-	-	-	-
Stage 2	947	873	-	1039	998	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.48	9.13	0.72	0.78
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1458	-	-	1045	901	1346	-	-
HCM Lane V/C Ratio	0.016	-	-	0.011	0.033	0.011	-	-
HCM Control Delay (s/veh)	7.5	-	-	8.5	9.1	7.7	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

HCM Unsignalized Intersection Capacity Analysis
105: Banks Road & Driveway

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	2	15	3	0	3
Future Volume (Veh/h)	2	2	15	3	0	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	3	3	22	4	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	48	0	4			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	48	0	4			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	948	1085	1618			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	6	26	0	4
Volume Left	3	22	0	0
Volume Right	3	0	0	4
cSH	1012	1618	1700	1700
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	0	1	0	0
Control Delay (s/veh)	8.6	6.2	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.6	6.2	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	15	3	0	3
Future Vol, veh/h	2	2	15	3	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	3	22	4	0	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	0	4	0	-	0
Stage 1	0	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	5	4.5	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1144	-	1617	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1137	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1128	-	1617	-	-	-
Mov Cap-2 Maneuver	1038	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1137	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v		6.05	0
HCM LOS	-		

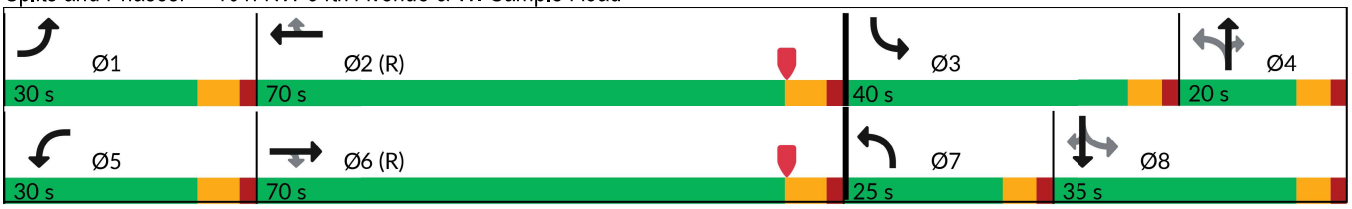
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1500	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s/veh)	7.3	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Timings
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	1442	36	336	2095	258	113	40	292	261	43	87
Future Volume (vph)	168	1442	36	336	2095	258	113	40	292	261	43	87
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	12.4	79.6	79.6	19.9	87.1	87.1	21.1	8.9	8.9	40.5	22.3	22.3
Actuated g/C Ratio	0.08	0.50	0.50	0.12	0.54	0.54	0.13	0.06	0.06	0.25	0.14	0.14
v/c Ratio	0.65	0.59	0.04	0.81	0.78	0.29	0.55	0.21	0.82	0.75	0.09	0.28
Control Delay (s/veh)	83.0	31.5	0.1	83.4	32.9	10.6	57.4	72.9	25.7	65.0	57.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.0	31.5	0.1	83.4	32.9	10.6	57.4	72.9	25.7	65.0	57.8	5.9
LOS	F	C	A	F	C	B	E	E	C	E	E	A
Approach Delay (s/veh)		36.0			37.1			38.0			51.0	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 105 (66%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 37.9	Intersection LOS: D
Intersection Capacity Utilization 83.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	173	1487	37	346	2160	266	116	41	301	269	44	90
v/c Ratio	0.65	0.59	0.04	0.81	0.78	0.29	0.55	0.21	0.82	0.75	0.09	0.28
Control Delay (s/veh)	83.0	31.5	0.1	83.4	32.9	10.6	57.4	72.9	25.7	65.0	57.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.0	31.5	0.1	83.4	32.9	10.6	57.4	72.9	25.7	65.0	57.8	5.9
Queue Length 50th (ft)	92	390	0	184	621	57	100	22	4	254	21	0
Queue Length 95th (ft)	131	545	0	238	#921	146	139	42	105	311	39	28
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	2531	863	493	2768	930	284	318	412	413	654	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.59	0.04	0.70	0.78	0.29	0.41	0.13	0.73	0.65	0.07	0.23

Intersection Summary

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

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1442	36	336	2095	258	113	40	292	261	43	87
Future Volume (veh/h)	168	1442	36	336	2095	258	113	40	292	261	43	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	173	1487	37	346	2160	266	116	41	301	269	44	90
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	2498	775	392	2753	855	281	311	139	388	583	260
Arrive On Green	0.06	0.49	0.49	0.11	0.54	0.54	0.07	0.09	0.09	0.15	0.16	0.16
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	173	1487	37	346	2160	266	116	41	301	269	44	90
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.9	33.6	2.0	15.8	54.1	14.9	9.4	1.7	14.0	21.4	1.7	8.1
Cycle Q Clear(g_c), s	7.9	33.6	2.0	15.8	54.1	14.9	9.4	1.7	14.0	21.4	1.7	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	2498	775	392	2753	855	281	311	139	388	583	260
V/C Ratio(X)	0.79	0.60	0.05	0.88	0.78	0.31	0.41	0.13	2.17	0.69	0.08	0.35
Avail Cap(c_a), veh/h	497	2498	775	497	2753	855	366	311	139	503	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.9	29.5	21.4	69.9	29.4	20.4	60.6	67.4	73.0	53.4	56.6	59.3
Incr Delay (d2), s/veh	2.4	1.1	0.1	12.4	2.3	0.9	0.4	0.1	549.7	1.5	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	14.1	0.8	7.7	22.6	5.8	4.3	0.8	26.9	9.8	0.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.3	30.5	21.5	82.3	31.8	21.4	61.0	67.5	622.7	54.9	56.6	59.6
LnGrp LOS	E	C	C	F	C	C	E	E	F	D	E	E
Approach Vol, veh/h		1697			2772			458			403	
Approach Delay, s/veh		35.0			37.1			430.7			56.1	
Approach LOS		C			D			F			E	

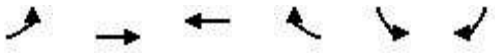
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	93.3	29.6	20.0	25.1	85.3	17.4	32.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	9.9	56.1	23.4	16.0	17.8	35.6	11.4	10.1
Green Ext Time (p_c), s	0.2	6.3	0.2	0.0	0.4	13.4	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	71.7
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM Unsignalized Intersection Capacity Analysis
102: W. Sample Road & Driveway (Inbound)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	1995	2688	8	0	0
Future Volume (Veh/h)	0	1995	2688	8	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2078	2800	8	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.79	
vC, conflicting volume	2808				3493	933
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2808				3233	933
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	135				6	268

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	693	693	693	933	933	933	8
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	8
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.41	0.41	0.41	0.55	0.55	0.55	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1894	97	207	2641	32	0	0	172	0	0	4
Future Vol, veh/h	8	1894	97	207	2641	32	0	0	172	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	1973	101	216	2751	33	0	0	179	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2784	0	0	2074	0	0	-	-	986	-	-	1392
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	95	-	-	~ 189	-	-	0	0	588	0	0	432
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	95	-	-	~ 189	-	-	-	-	588	-	-	432
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.19	11.52	13.78	13.42
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	588	95	-	-	~ 189	-	-	432
HCM Lane V/C Ratio	0.305	0.088	-	-	1.143	-	-	0.01
HCM Control Delay (s/veh)	13.8	46.5	-	-	160.2	-	-	13.4
HCM Lane LOS	B	E	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.3	0.3	-	-	10.8	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	7	25	50	12	16	24	357	14	4	317	11
Future Volume (Veh/h)	12	7	25	50	12	16	24	357	14	4	317	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	12	7	26	52	12	16	25	368	14	4	327	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	591	767	164	619	764	184	338			382		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	591	767	164	619	764	184	338			382		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	98	97	85	96	98	98			100		
cM capacity (veh/h)	365	323	852	349	324	827	1218			1173		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	45	80	25	184	184	14	4	164	164	11
Volume Left	12	52	25	0	0	0	4	0	0	0
Volume Right	26	16	0	0	0	14	0	0	0	11
cSH	529	390	1218	1700	1700	1700	1173	1700	1700	1700
Volume to Capacity	0.09	0.21	0.02	0.11	0.11	0.01	0.00	0.10	0.10	0.01
Queue Length 95th (ft)	7	19	2	0	0	0	0	0	0	0
Control Delay (s/veh)	12.4	16.6	8.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	B	C	A				A			
Approach Delay (s/veh)	12.4	16.6	0.5				0.1			
Approach LOS	B	C								

Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	32.4%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	7	25	50	12	16	24	357	14	4	317	11
Future Vol, veh/h	12	7	25	50	12	16	24	357	14	4	317	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	26	52	12	16	25	368	14	4	327	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	575	767	163	593	764	184	338	0	0	382	0	0
Stage 1	335	335	-	418	418	-	-	-	-	-	-	-
Stage 2	240	432	-	175	346	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	736	693	1070	725	694	1055	1218	-	-	1173	-	-
Stage 1	748	821	-	665	747	-	-	-	-	-	-	-
Stage 2	856	735	-	938	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	695	676	1070	683	678	1055	1218	-	-	1173	-	-
Mov Cap-2 Maneuver	695	676	-	683	678	-	-	-	-	-	-	-
Stage 1	746	818	-	652	732	-	-	-	-	-	-	-
Stage 2	812	720	-	904	808	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.4	10.49	0.49	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	863	736	1173	-	-
HCM Lane V/C Ratio	0.02	-	-	0.053	0.109	0.004	-	-
HCM Control Delay (s/veh)	8	-	-	9.4	10.5	8.1	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0	-	-

HCM Unsignalized Intersection Capacity Analysis
105: Banks Road & Driveway

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	22	3	3
Future Volume (Veh/h)	8	4	8	22	3	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	12	6	12	32	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60	4	8			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	4	8			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	99			
cM capacity (veh/h)	940	1080	1612			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	18	44	4	4
Volume Left	12	12	0	0
Volume Right	6	0	0	4
cSH	982	1612	1700	1700
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s/veh)	8.7	2.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.7	2.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	4	8	22	3	3
Future Vol, veh/h	8	4	8	22	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	6	12	32	4	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	59	4	9	0	-	0
Stage 1	4	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	4.5	4	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1142	1196	1611	-	-	-
Stage 1	1194	-	-	-	-	-
Stage 2	1130	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1134	1196	1611	-	-	-
Mov Cap-2 Maneuver	1031	-	-	-	-	-
Stage 1	1186	-	-	-	-	-
Stage 2	1130	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.38	1.93	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	480	-	1081	-	-
HCM Lane V/C Ratio	0.007	-	0.016	-	-
HCM Control Delay (s/veh)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

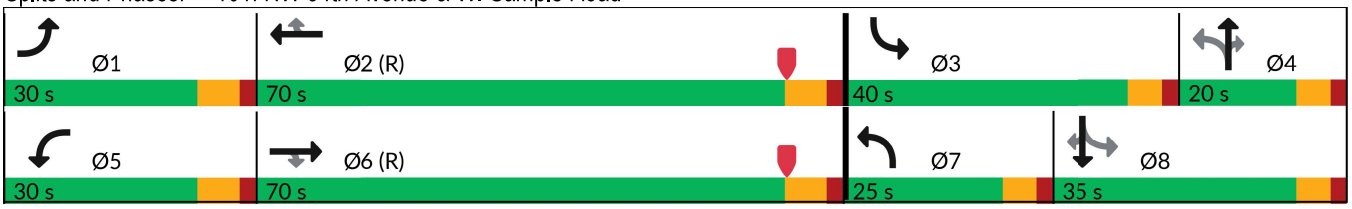
Future (2026) Total SYNCHRO Output

Timings
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	1665	40	220	1220	137	46	32	207	69	24	34
Future Volume (vph)	101	1665	40	220	1220	137	46	32	207	69	24	34
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.3	101.0	101.0	15.0	106.7	106.7	16.1	8.3	8.3	21.0	12.4	12.4
Actuated g/C Ratio	0.06	0.63	0.63	0.09	0.67	0.67	0.10	0.05	0.05	0.13	0.08	0.08
v/c Ratio	0.53	0.54	0.04	0.71	0.37	0.13	0.31	0.18	0.76	0.40	0.09	0.15
Control Delay (s/veh)	82.4	18.4	0.1	82.5	13.0	1.9	62.3	73.2	25.1	64.9	69.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.4	18.4	0.1	82.5	13.0	1.9	62.3	73.2	25.1	64.9	69.0	1.4
LOS	F	B	A	F	B	A	E	E	C	E	E	A
Approach Delay (s/veh)		21.6			21.7			36.4			48.9	
Approach LOS		C			C			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 23.7	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	1734	42	229	1271	143	48	33	216	72	25	35
v/c Ratio	0.53	0.54	0.04	0.71	0.37	0.13	0.31	0.18	0.76	0.40	0.09	0.15
Control Delay (s/veh)	82.4	18.4	0.1	82.5	13.0	1.9	62.3	73.2	25.1	64.9	69.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.4	18.4	0.1	82.5	13.0	1.9	62.3	73.2	25.1	64.9	69.0	1.4
Queue Length 50th (ft)	56	340	0	122	194	0	45	17	0	69	13	0
Queue Length 95th (ft)	89	500	0	165	295	27	81	36	87	111	29	0
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	3208	1054	493	3391	1105	254	312	336	376	641	381
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.54	0.04	0.46	0.37	0.13	0.19	0.11	0.64	0.19	0.04	0.09

Intersection Summary

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	1665	40	220	1220	137	46	32	207	69	24	34
Future Volume (veh/h)	101	1665	40	220	1220	137	46	32	207	69	24	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	1734	42	229	1271	143	48	33	216	72	25	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	3181	988	276	3369	1046	221	311	139	218	363	162
Arrive On Green	0.04	0.62	0.62	0.08	0.66	0.66	0.03	0.09	0.09	0.05	0.10	0.10
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	105	1734	42	229	1271	143	48	33	216	72	25	35
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.8	31.0	1.6	10.4	18.0	5.4	3.9	1.4	14.0	5.8	1.0	3.2
Cycle Q Clear(g_c), s	4.8	31.0	1.6	10.4	18.0	5.4	3.9	1.4	14.0	5.8	1.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	3181	988	276	3369	1046	221	311	139	218	363	162
V/C Ratio(X)	0.71	0.55	0.04	0.83	0.38	0.14	0.22	0.11	1.56	0.33	0.07	0.22
Avail Cap(c_a), veh/h	497	3181	988	497	3369	1046	374	311	139	513	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.6	17.2	11.7	72.6	12.3	10.2	63.7	67.2	73.0	62.4	64.9	65.9
Incr Delay (d2), s/veh	2.3	0.7	0.1	2.5	0.3	0.3	0.2	0.1	283.0	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	12.4	0.6	4.8	7.0	2.0	1.8	0.6	16.6	2.7	0.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.9	17.9	11.8	75.1	12.6	10.4	63.8	67.3	356.0	62.7	65.0	66.2
LnGrp LOS	E	B	B	E	B	B	E	E	F	E	E	E
Approach Vol, veh/h		1881			1643			297			132	
Approach Delay, s/veh		21.1			21.2			276.7			64.1	
Approach LOS		C			C			F			E	

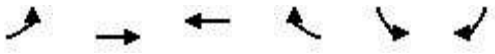
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	112.6	13.6	20.0	19.8	106.7	11.2	22.3
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	6.8	20.0	7.8	16.0	12.4	33.0	5.9	5.2
Green Ext Time (p_c), s	0.1	13.5	0.0	0.0	0.3	17.0	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	41.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM Unsignalized Intersection Capacity Analysis
102: W. Sample Road & Driveway (Inbound)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	2078	1477	34	0	0
Future Volume (Veh/h)	0	2078	1477	34	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2165	1539	35	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.80	
vC, conflicting volume	1574				2261	513
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1574				1711	513
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	415				66	506

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	722	722	722	513	513	513	35
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	35
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.42	0.42	0.42	0.30	0.30	0.30	0.02
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	2018	54	161	1536	14	0	0	176	0	0	11
Future Vol, veh/h	26	2018	54	161	1536	14	0	0	176	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	2059	55	164	1567	14	0	0	180	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1582	0	0	2114	0	0	-	-	1030	-	-	791
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	299	-	-	182	-	-	0	0	569	0	0	681
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	299	-	-	182	-	-	-	-	569	-	-	681
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.23	9	14.21	10.38
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	569	299	-	-	182	-	-	681
HCM Lane V/C Ratio	0.315	0.089	-	-	0.904	-	-	0.016
HCM Control Delay (s/veh)	14.2	18.2	-	-	95.7	-	-	10.4
HCM Lane LOS	B	C	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.3	0.3	-	-	6.8	-	-	0.1

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	7	6	30	7	8	18	153	49	24	90	7
Future Volume (Veh/h)	1	7	6	30	7	8	18	153	49	24	90	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	1	9	8	39	9	10	23	199	64	31	117	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	339	488	59	378	433	100	126			263		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	339	488	59	378	433	100	126			263		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	93	98	99	98			98		
cM capacity (veh/h)	559	460	995	525	494	937	1458			1298		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	18	58	23	100	100	64	31	59	59	9
Volume Left	1	39	23	0	0	0	31	0	0	0
Volume Right	8	10	0	0	0	64	0	0	0	9
cSH	612	562	1458	1700	1700	1700	1298	1700	1700	1700
Volume to Capacity	0.03	0.10	0.02	0.06	0.06	0.04	0.02	0.03	0.03	0.01
Queue Length 95th (ft)	2	9	1	0	0	0	2	0	0	0
Control Delay (s/veh)	11.1	12.1	7.5	0.0	0.0	0.0	7.8	0.0	0.0	0.0
Lane LOS	B	B	A				A			
Approach Delay (s/veh)	11.1	12.1	0.6				1.5			
Approach LOS	B	B								

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	26.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	7	6	30	7	8	18	153	49	24	90	7
Future Vol, veh/h	1	7	6	30	7	8	18	153	49	24	90	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	9	8	39	9	10	23	199	64	31	117	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	330	488	58	371	434	99	126	0	0	262	0	0
Stage 1	179	179	-	245	245	-	-	-	-	-	-	-
Stage 2	151	309	-	125	188	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	909	849	1152	878	883	1120	1458	-	-	1299	-	-
Stage 1	933	980	-	850	909	-	-	-	-	-	-	-
Stage 2	971	846	-	1006	970	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	856	815	1152	828	848	1120	1458	-	-	1299	-	-
Mov Cap-2 Maneuver	856	815	-	828	848	-	-	-	-	-	-	-
Stage 1	910	957	-	836	895	-	-	-	-	-	-	-
Stage 2	937	832	-	966	947	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.92	9.43	0.61	1.55
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1458	-	-	936	872	1299	-	-
HCM Lane V/C Ratio	0.016	-	-	0.019	0.067	0.024	-	-
HCM Control Delay (s/veh)	7.5	-	-	8.9	9.4	7.8	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	10	32	3	0	9
Future Volume (Veh/h)	5	10	32	3	0	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	7	15	48	4	0	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	100	0	13			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100	0	13			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	97			
cM capacity (veh/h)	872	1085	1606			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	22	52	0	13
Volume Left	7	48	0	0
Volume Right	15	0	0	13
cSH	1007	1606	1700	1700
Volume to Capacity	0.02	0.03	0.00	0.01
Queue Length 95th (ft)	2	2	0	0
Control Delay (s/veh)	8.7	6.8	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.7	6.8	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	32	3	0	9
Future Vol, veh/h	5	10	32	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	15	48	4	0	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	100	0	13	0	-	0
Stage 1	0	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	5	4.5	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1089	-	1605	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1076	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1056	-	1605	-	-	-
Mov Cap-2 Maneuver	982	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1076	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v		6.69	0
HCM LOS	-		

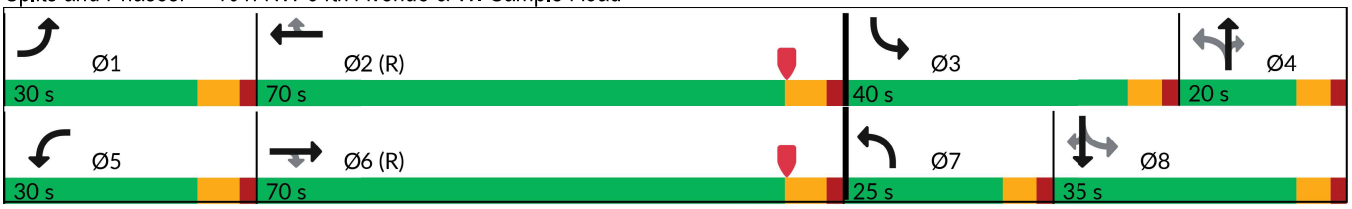
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1601	-	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	-
HCM Control Delay (s/veh)	7.3	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Timings
101: NW 54th Avenue & W. Sample Road

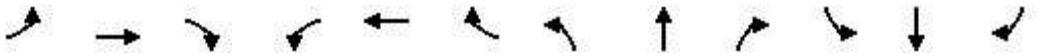
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	1446	36	346	2103	260	113	44	294	276	50	98
Future Volume (vph)	179	1446	36	346	2103	260	113	44	294	276	50	98
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (s)	30.0	70.0	70.0	30.0	70.0	70.0	25.0	20.0	20.0	40.0	35.0	35.0
Total Split (%)	18.8%	43.8%	43.8%	18.8%	43.8%	43.8%	15.6%	12.5%	12.5%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	13.0	78.1	78.1	20.3	85.3	85.3	20.9	8.7	8.7	41.7	23.6	23.6
Actuated g/C Ratio	0.08	0.49	0.49	0.13	0.53	0.53	0.13	0.05	0.05	0.26	0.15	0.15
v/c Ratio	0.67	0.60	0.04	0.82	0.80	0.29	0.56	0.23	0.84	0.77	0.10	0.31
Control Delay (s/veh)	82.8	32.7	0.1	83.9	34.6	11.2	57.1	73.8	29.1	65.1	57.2	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.8	32.7	0.1	83.9	34.6	11.2	57.1	73.8	29.1	65.1	57.2	8.3
LOS	F	C	A	F	C	B	E	E	C	E	E	A
Approach Delay (s/veh)		37.4			38.7			40.5			51.0	
Approach LOS		D			D			D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 105 (66%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 39.4	Intersection LOS: D
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road



Queues
101: NW 54th Avenue & W. Sample Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1491	37	357	2168	268	116	45	303	285	52	101
v/c Ratio	0.67	0.60	0.04	0.82	0.80	0.29	0.56	0.23	0.84	0.77	0.10	0.31
Control Delay (s/veh)	82.8	32.7	0.1	83.9	34.6	11.2	57.1	73.8	29.1	65.1	57.2	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.8	32.7	0.1	83.9	34.6	11.2	57.1	73.8	29.1	65.1	57.2	8.3
Queue Length 50th (ft)	98	402	0	189	645	59	98	24	12	269	25	0
Queue Length 95th (ft)	139	546	0	245	#935	149	139	45	118	330	44	39
Internal Link Dist (ft)		565			1217			887			1346	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	2480	849	493	2711	914	283	310	404	417	654	387
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.60	0.04	0.72	0.80	0.29	0.41	0.15	0.75	0.68	0.08	0.26

Intersection Summary

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

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

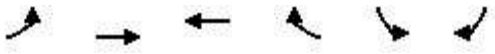
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1446	36	346	2103	260	113	44	294	276	50	98
Future Volume (veh/h)	179	1446	36	346	2103	260	113	44	294	276	50	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	1491	37	357	2168	268	116	45	303	285	52	101
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	2441	758	402	2694	836	279	311	139	400	611	273
Arrive On Green	0.07	0.48	0.48	0.12	0.53	0.53	0.07	0.09	0.09	0.16	0.17	0.17
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	185	1491	37	357	2168	268	116	45	303	285	52	101
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	8.4	34.4	2.0	16.3	55.8	15.4	9.4	1.9	14.0	22.7	2.0	9.0
Cycle Q Clear(g_c), s	8.4	34.4	2.0	16.3	55.8	15.4	9.4	1.9	14.0	22.7	2.0	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	2441	758	402	2694	836	279	311	139	400	611	273
V/C Ratio(X)	0.80	0.61	0.05	0.89	0.80	0.32	0.42	0.14	2.18	0.71	0.09	0.37
Avail Cap(c_a), veh/h	497	2441	758	497	2694	836	365	311	139	502	644	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.6	30.8	22.3	69.7	31.0	21.5	60.6	67.5	73.0	52.9	55.7	58.6
Incr Delay (d2), s/veh	2.4	1.1	0.1	13.4	2.7	1.0	0.4	0.1	556.1	2.2	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	14.5	0.8	8.0	23.4	6.1	4.3	0.9	27.1	10.5	0.9	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.0	31.9	22.4	83.1	33.7	22.5	61.0	67.5	629.1	55.1	55.7	58.9
LnGrp LOS	E	C	C	F	C	C	E	E	F	E	E	E
Approach Vol, veh/h		1713			2793			464			438	
Approach Delay, s/veh		36.5			38.9			432.6			56.0	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	91.4	30.9	20.0	25.6	83.5	17.4	33.5
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	63.0	34.0	14.0	23.0	63.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	10.4	57.8	24.7	16.0	18.3	36.4	11.4	11.0
Green Ext Time (p_c), s	0.3	4.8	0.2	0.0	0.3	13.2	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	73.3
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		
Traffic Volume (veh/h)	0	2024	2708	18	0	0
Future Volume (Veh/h)	0	2024	2708	18	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	2108	2821	19	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1297				
pX, platoon unblocked					0.79	
vC, conflicting volume	2840				3524	940
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2840				3264	940
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	131				5	265

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4
Volume Total	703	703	703	940	940	940	19
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	19
cSH	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.41	0.41	0.41	0.55	0.55	0.55	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							
Approach Delay (s/veh)	0.0			0.0			
Approach LOS							

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	1914	100	207	2653	35	0	0	172	0	0	22
Future Vol, veh/h	14	1914	100	207	2653	35	0	0	172	0	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	185	-	285	320	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1994	104	216	2764	36	0	0	179	0	0	23

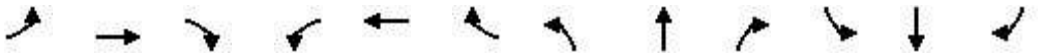
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2800	0	0	2098	0	0	-	-	997	-	-	1400
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.5	-	-	4.5	-	-	-	-	4	-	-	4
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3	-	-	3	-	-	-	-	3	-	-	3
Pot Cap-1 Maneuver	94	-	-	~ 184	-	-	0	0	584	0	0	429
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	94	-	-	~ 184	-	-	-	-	584	-	-	429
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.35	12.2	13.88	13.86
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	584	94	-	-	~ 184	-	-	429
HCM Lane V/C Ratio	0.307	0.156	-	-	1.169	-	-	0.053
HCM Control Delay (s/veh)	13.9	50.4	-	-	170.7	-	-	13.9
HCM Lane LOS	B	F	-	-	F	-	-	B
HCM 95th %tile Q(veh)	1.3	0.5	-	-	11.1	-	-	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Unsignalized Intersection Capacity Analysis
104: NW 54th Avenue & Driveway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	9	25	83	16	27	24	357	31	11	317	11
Future Volume (Veh/h)	12	9	25	83	16	27	24	357	31	11	317	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	12	9	26	86	16	28	25	368	32	11	327	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	619	799	164	634	778	184	338			400		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	619	799	164	634	778	184	338			400		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	97	97	74	95	97	98			99		
cM capacity (veh/h)	338	308	852	337	316	827	1218			1155		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	47	130	25	184	184	32	11	164	164	11
Volume Left	12	86	25	0	0	0	11	0	0	0
Volume Right	26	28	0	0	0	32	0	0	0	11
cSH	494	383	1218	1700	1700	1700	1155	1700	1700	1700
Volume to Capacity	0.10	0.34	0.02	0.11	0.11	0.02	0.01	0.10	0.10	0.01
Queue Length 95th (ft)	8	37	2	0	0	0	1	0	0	0
Control Delay (s/veh)	13.1	19.2	8.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	B	C	A				A			
Approach Delay (s/veh)	13.1	19.2	0.5				0.3			
Approach LOS	B	C								

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	37.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	9	25	83	16	27	24	357	31	11	317	11
Future Vol, veh/h	12	9	25	83	16	27	24	357	31	11	317	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	150	175	-	195
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	9	26	86	16	28	25	368	32	11	327	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	591	799	163	608	778	184	338	0	0	400	0	0
Stage 1	349	349	-	418	418	-	-	-	-	-	-	-
Stage 2	242	449	-	191	361	-	-	-	-	-	-	-
Critical Hdwy	4.5	4	4	4.5	4	4	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3	3	3	3	3	3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	726	676	1070	715	687	1055	1218	-	-	1155	-	-
Stage 1	733	808	-	665	747	-	-	-	-	-	-	-
Stage 2	854	720	-	918	797	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	669	656	1070	668	666	1055	1218	-	-	1155	-	-
Mov Cap-2 Maneuver	669	656	-	668	666	-	-	-	-	-	-	-
Stage 1	726	800	-	652	732	-	-	-	-	-	-	-
Stage 2	796	706	-	877	790	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.56	11.05	0.47	0.26
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	836	725	1155	-	-
HCM Lane V/C Ratio	0.02	-	-	0.057	0.179	0.01	-	-
HCM Control Delay (s/veh)	8	-	-	9.6	11.1	8.1	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.6	0	-	-

HCM Unsignalized Intersection Capacity Analysis
105: Banks Road & Driveway

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	22	17	22	3	6
Future Volume (Veh/h)	15	22	17	22	3	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	22	32	25	32	4	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	86	4	13			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	86	4	13			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	97	98			
cM capacity (veh/h)	901	1080	1606			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	54	57	4	9
Volume Left	22	25	0	0
Volume Right	32	0	0	9
cSH	999	1606	1700	1700
Volume to Capacity	0.05	0.02	0.00	0.01
Queue Length 95th (ft)	4	1	0	0
Control Delay (s/veh)	8.8	3.3	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.8	3.3	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	22	17	22	3	6
Future Vol, veh/h	15	22	17	22	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	32	25	32	4	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	86	4	13	0	-	0
Stage 1	4	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	4.5	4	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3	2.218	-	-	-
Pot Cap-1 Maneuver	1117	1196	1605	-	-	-
Stage 1	1194	-	-	-	-	-
Stage 2	1098	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1100	1196	1605	-	-	-
Mov Cap-2 Maneuver	1002	-	-	-	-	-
Stage 1	1176	-	-	-	-	-
Stage 2	1098	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.41	3.17	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	785	-	1109	-	-
HCM Lane V/C Ratio	0.015	-	0.048	-	-
HCM Control Delay (s/veh)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Future (2026) Total SYNCHRO Output – Optimized

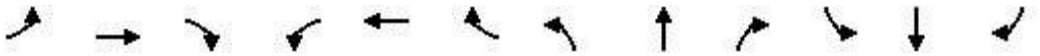
Timings
101: NW 54th Avenue & W. Sample Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	1446	36	346	2103	260	113	44	294	276	50	98
Future Volume (vph)	179	1446	36	346	2103	260	113	44	294	276	50	98
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2	3	7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	3	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	6.0	5.0	5.0	6.0	6.0
Minimum Split (s)	30.0	55.0	55.0	30.0	70.0	40.0	25.0	20.0	30.0	40.0	35.0	35.0
Total Split (s)	30.0	55.0	55.0	30.0	55.0	40.0	40.0	35.0	30.0	40.0	35.0	35.0
Total Split (%)	18.8%	34.4%	34.4%	18.8%	34.4%	25.0%	25.0%	21.9%	18.8%	25.0%	21.9%	21.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	7.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	80.9	80.9	20.9	88.8	123.6	18.0	6.8	31.3	38.2	19.8	19.8
Actuated g/C Ratio	0.08	0.51	0.51	0.13	0.56	0.77	0.11	0.04	0.20	0.24	0.12	0.12
v/c Ratio	0.67	0.58	0.04	0.80	0.77	0.21	0.63	0.30	0.75	0.81	0.12	0.34
Control Delay (s/veh)	82.8	30.9	0.1	80.9	32.0	2.4	65.2	79.2	46.4	72.4	60.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.8	30.9	0.1	80.9	32.0	2.4	65.2	79.2	46.4	72.4	60.0	9.5
LOS	F	C	A	F	C	A	E	E	D	E	E	A
Approach Delay (s/veh)		35.8			35.4			54.3			56.4	
Approach LOS		D			D			D			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 105 (66%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 160	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 38.9	Intersection LOS: D
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 54th Avenue & W. Sample Road

Queues
101: NW 54th Avenue & W. Sample Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1491	37	357	2168	268	116	45	303	285	52	101
v/c Ratio	0.67	0.58	0.04	0.80	0.77	0.21	0.63	0.30	0.75	0.81	0.12	0.34
Control Delay (s/veh)	82.8	30.9	0.1	80.9	32.0	2.4	65.2	79.2	46.4	72.4	60.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.8	30.9	0.1	80.9	32.0	2.4	65.2	79.2	46.4	72.4	60.0	9.5
Queue Length 50th (ft)	98	405	0	189	650	22	98	24	182	267	25	0
Queue Length 95th (ft)	139	531	0	239	830	53	147	47	281	349	46	41
Internal Link Dist (ft)		565			1003			887			633	
Turn Bay Length (ft)	200		325	345		235	135		145	185		200
Base Capacity (vph)	493	2570	854	506	2821	1317	417	641	431	404	641	381
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.58	0.04	0.71	0.77	0.20	0.28	0.07	0.70	0.71	0.08	0.27

Intersection Summary

HCM 7th Signalized Intersection Summary
101: NW 54th Avenue & W. Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1446	36	346	2103	260	113	44	294	276	50	98
Future Volume (veh/h)	179	1446	36	346	2103	260	113	44	294	276	50	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	1491	37	357	2168	268	116	45	303	285	52	101
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	2047	636	402	2300	937	382	637	469	470	906	404
Arrive On Green	0.07	0.40	0.40	0.12	0.45	0.45	0.07	0.18	0.18	0.14	0.25	0.25
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	185	1491	37	357	2168	268	116	45	303	285	52	101
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	8.4	39.5	2.3	16.3	64.9	13.3	8.4	1.7	26.6	20.3	1.8	8.1
Cycle Q Clear(g_c), s	8.4	39.5	2.3	16.3	64.9	13.3	8.4	1.7	26.6	20.3	1.8	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	2047	636	402	2300	937	382	637	469	470	906	404
V/C Ratio(X)	0.80	0.73	0.06	0.89	0.94	0.29	0.30	0.07	0.65	0.61	0.06	0.25
Avail Cap(c_a), veh/h	497	2047	636	497	2300	937	645	644	472	598	906	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.6	40.5	29.4	69.7	42.0	16.1	48.8	54.6	49.1	42.5	45.1	47.4
Incr Delay (d2), s/veh	2.4	2.3	0.2	13.4	9.4	0.8	0.2	0.0	2.4	0.5	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	17.1	0.9	8.0	29.1	5.1	3.8	0.8	10.9	9.1	0.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.0	42.9	29.6	83.1	51.4	16.8	49.0	54.6	51.4	42.9	45.1	47.6
LnGrp LOS	E	D	C	F	D	B	D	D	D	D	D	D
Approach Vol, veh/h		1713			2793			464			438	
Approach Delay, s/veh		46.2			52.1			51.1			44.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	79.1	28.5	34.7	25.6	71.2	16.4	46.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	48.0	34.0	29.0	23.0	48.0	34.0	29.0
Max Q Clear Time (g_c+I1), s	10.4	66.9	22.3	28.6	18.3	41.5	10.4	10.1
Green Ext Time (p_c), s	0.3	0.0	0.2	0.0	0.3	4.8	0.1	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	49.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.