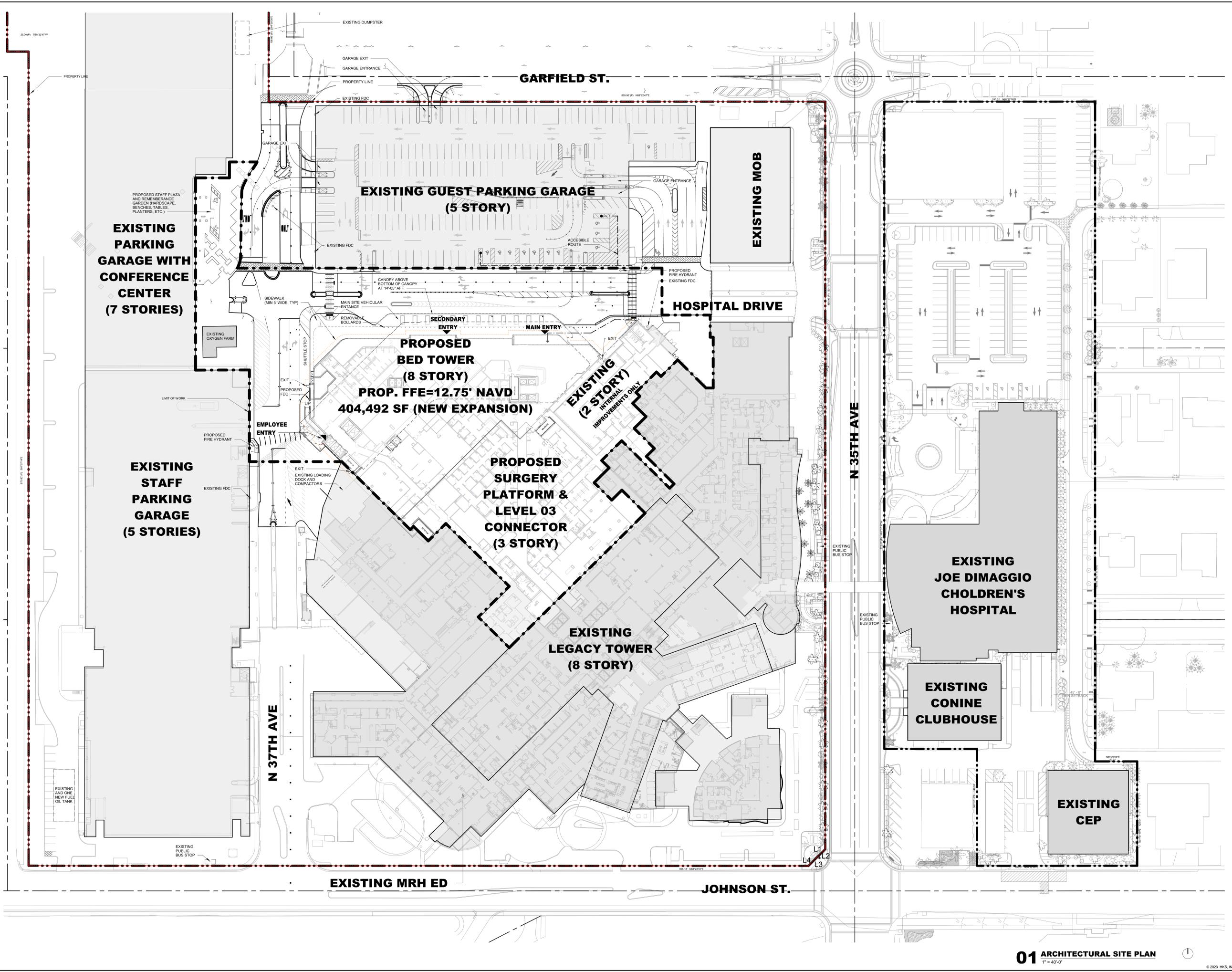


AHCA CLIENT CODE/FILE NO:
23/100038
AHCA PROJECT ID:
15005
HKS PROJECT NUMBER:
23459.000
DATE:
JUNE 17, 2024
ISSUE:
FINAL TAC

SHEET TITLE:
ARCHITECTURAL SITE PLAN

SHEET NO.
A02



01 ARCHITECTURAL SITE PLAN
1" = 40'-0"



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PRINT DATE: 5/29/2024 5:30:01 PM TEMPLATE VERSION: 21.0.0.20200831

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2020 SALZEDO STREET, 4TH FLOOR
CORAL GABLES, FL 33134

INTERIOR DESIGNER
HKS ARCHITECTS
225 EAST ROBINSON ST, SUITE #405
ORLANDO, FL 32801

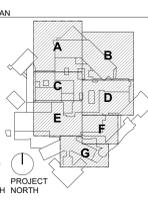
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G&G STRUCTURAL ENGINEERS
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MIAMI LAKES, FL 33016

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DEERFIELD BEACH, FL 33441

TELECOM & EQUIPMENT
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2995 SISCO DRIVE
NASHVILLE, TN 37204

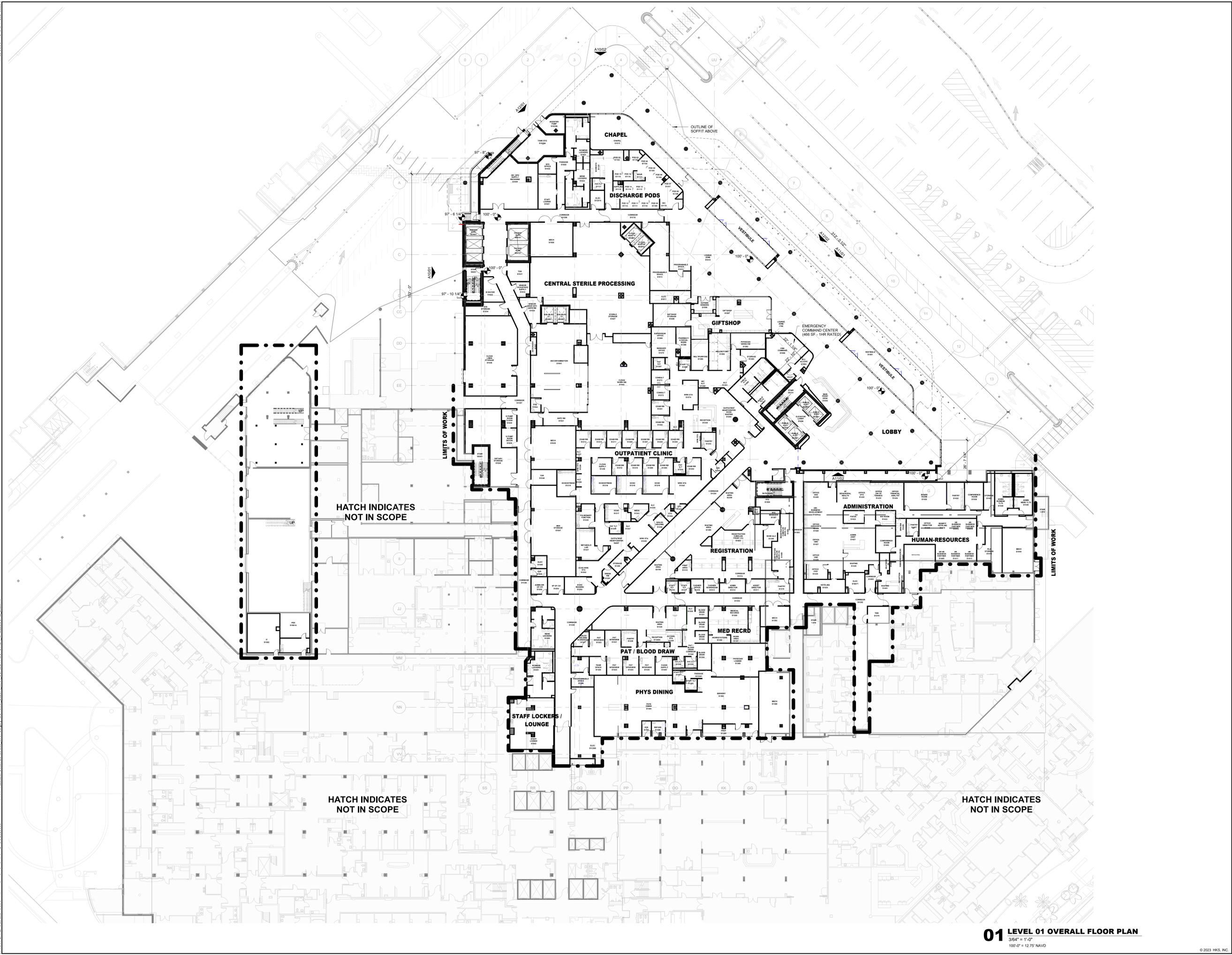
OWNER
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3501 JOHNSON STREET
HOLLYWOOD, FL 33021



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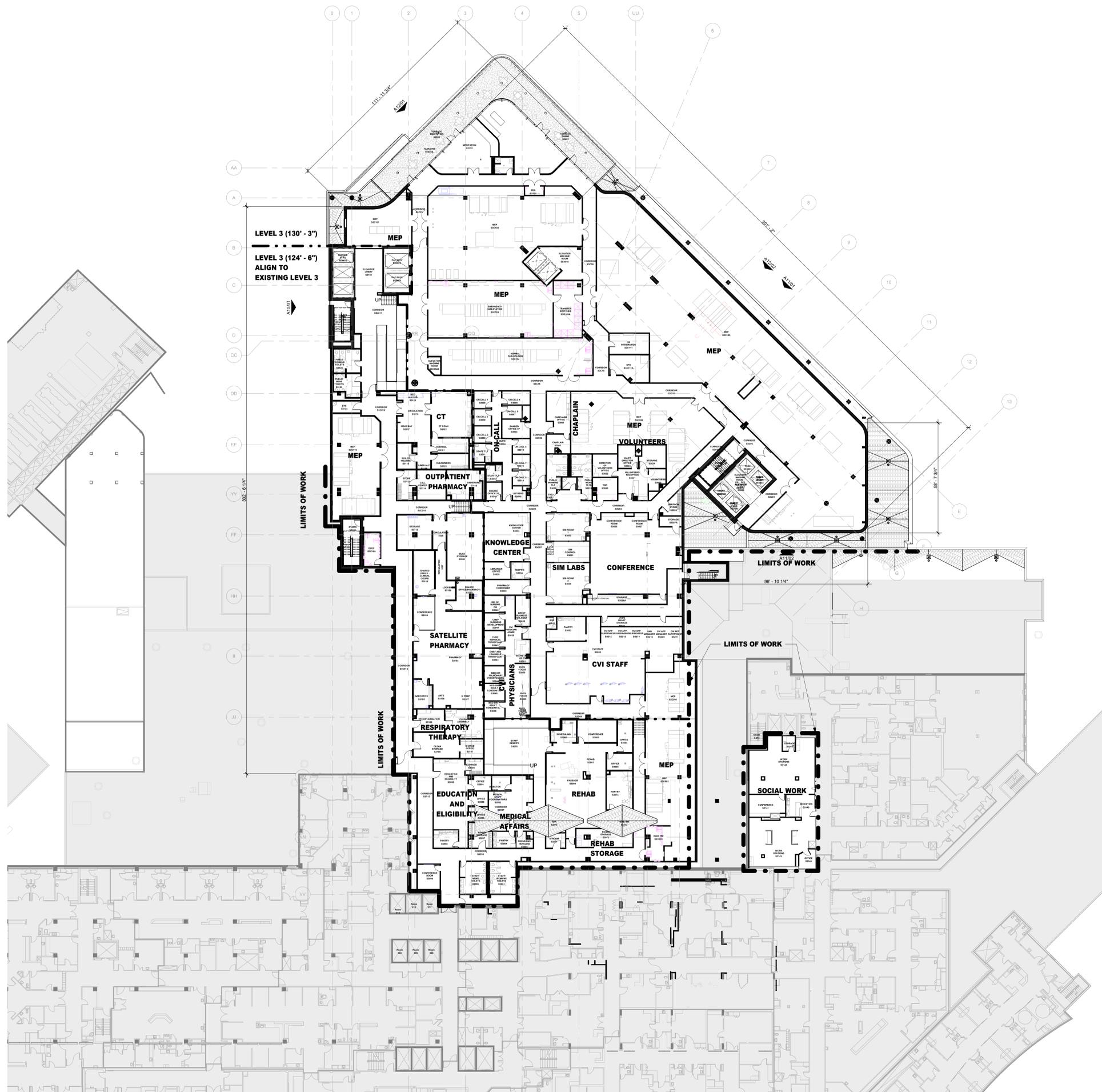
SHEET TITLE:
LEVEL 01 OVERALL FLOOR PLAN

SHEET NO.
A03



01 LEVEL 01 OVERALL FLOOR PLAN
3/84" = 1'-0"
1/00'-0" = 12.75' NAVD

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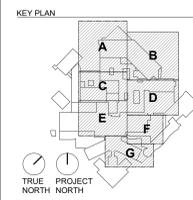
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HOLLYWOOD, FL 33021



AHCA CLIENT CODE/ FILE NO:
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AHCA PROJECT ID:
15005

HKS PROJECT NUMBER:
23459.000

DATE:
JUNE 17, 2024

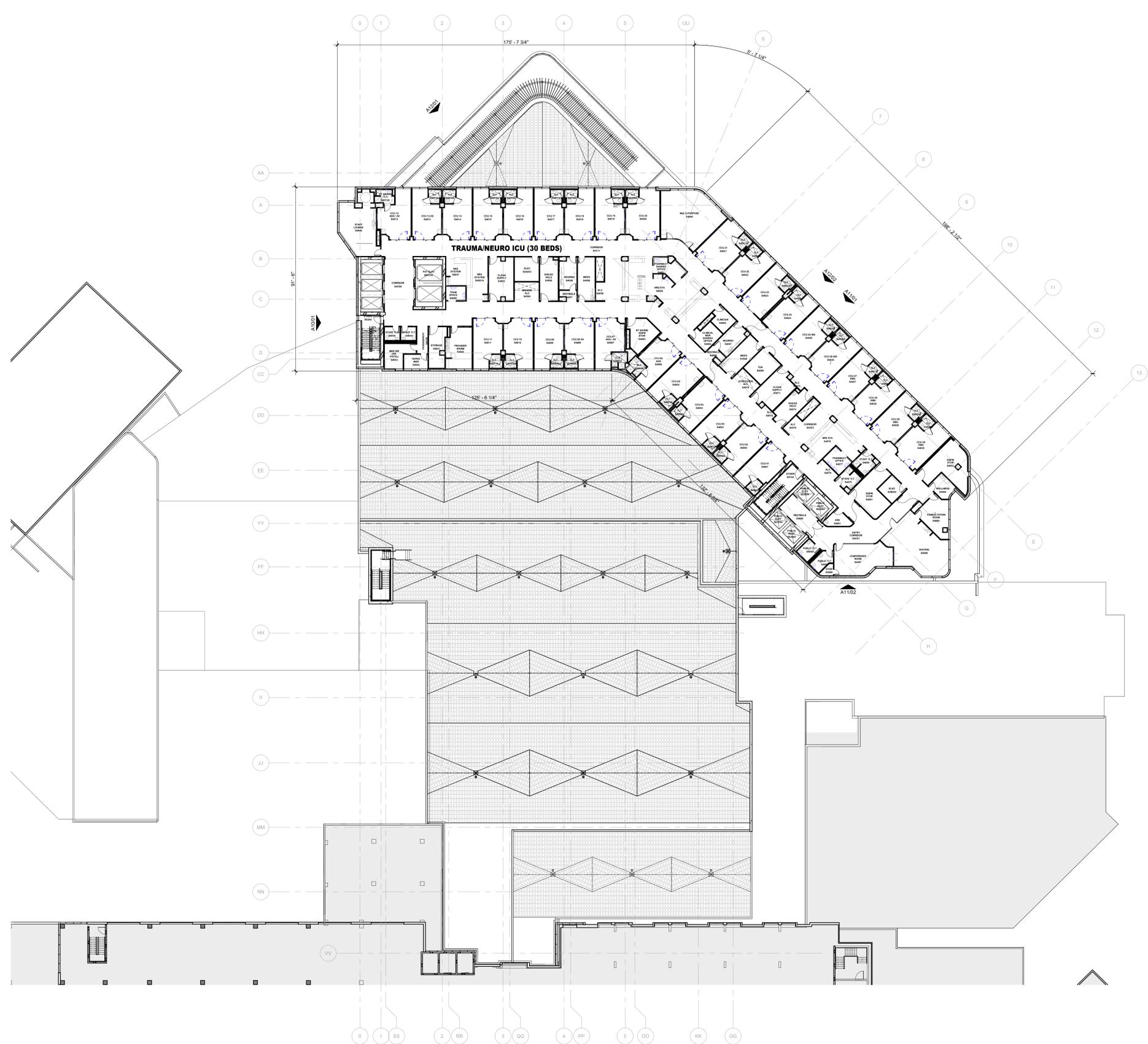
ISSUE:
FINAL TAC

SHEET TITLE:
LEVEL 03 OVERALL FLOOR PLAN

SHEET NO.
A05

01 LEVEL 03 OVERALL FLOOR PLAN
3/64" = 1'-0"

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PRINT DATE: 6/29/2024 5:38:46 PM TEMPLATE VERSION: 21.0.0.20200831



01 LEVEL 04 OVERALL FLOOR PLAN
3/64" = 1'-0"

HKS

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2020 SALZEDO STREET, 4TH FLOOR
CORAL GABLES, FL 33134

INTERIOR DESIGNER
HKS ARCHITECTS
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ORLANDO, FL 32801

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CGA SOLUTIONS
1800 ELLER DRIVE, SUITE 600
FORT LAUDERDALE, FL 33316

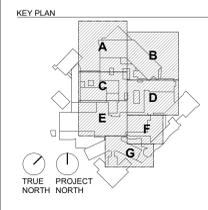
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OWNER
MEMORIAL HEALTHCARE SYSTEM
3501 JOHNSON STREET
HOLLYWOOD, FL 33021

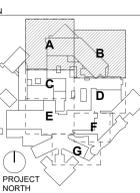
**Memorial
Regional Hospital**
SURGICAL & CRITICAL CARE TOWER EXPANSION
3501 JOHNSON STREET, HOLLYWOOD, FL 33021



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AHCA PROJECT ID:
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SHEET TITLE
**LEVEL 04 OVERALL
FLOOR PLAN**

SHEET NO.
A06



AHCA CLIENT CODE/ FILE NO:
23/100038
AHCA PROJECT ID:
15005
HKS PROJECT NUMBER:
23459.000
DATE:
JUNE 17, 2024
ISSUE:
FINAL TAC

SHEET TITLE:
**LEVEL 05, 06, 07 & 08
OVERALL FLOOR PLAN**

SHEET NO.
A07



04 LEVEL 08 OVERALL FLOOR PLAN
3/64" = 1'-0"



02 LEVEL 06 OVERALL FLOOR PLAN
3/64" = 1'-0"



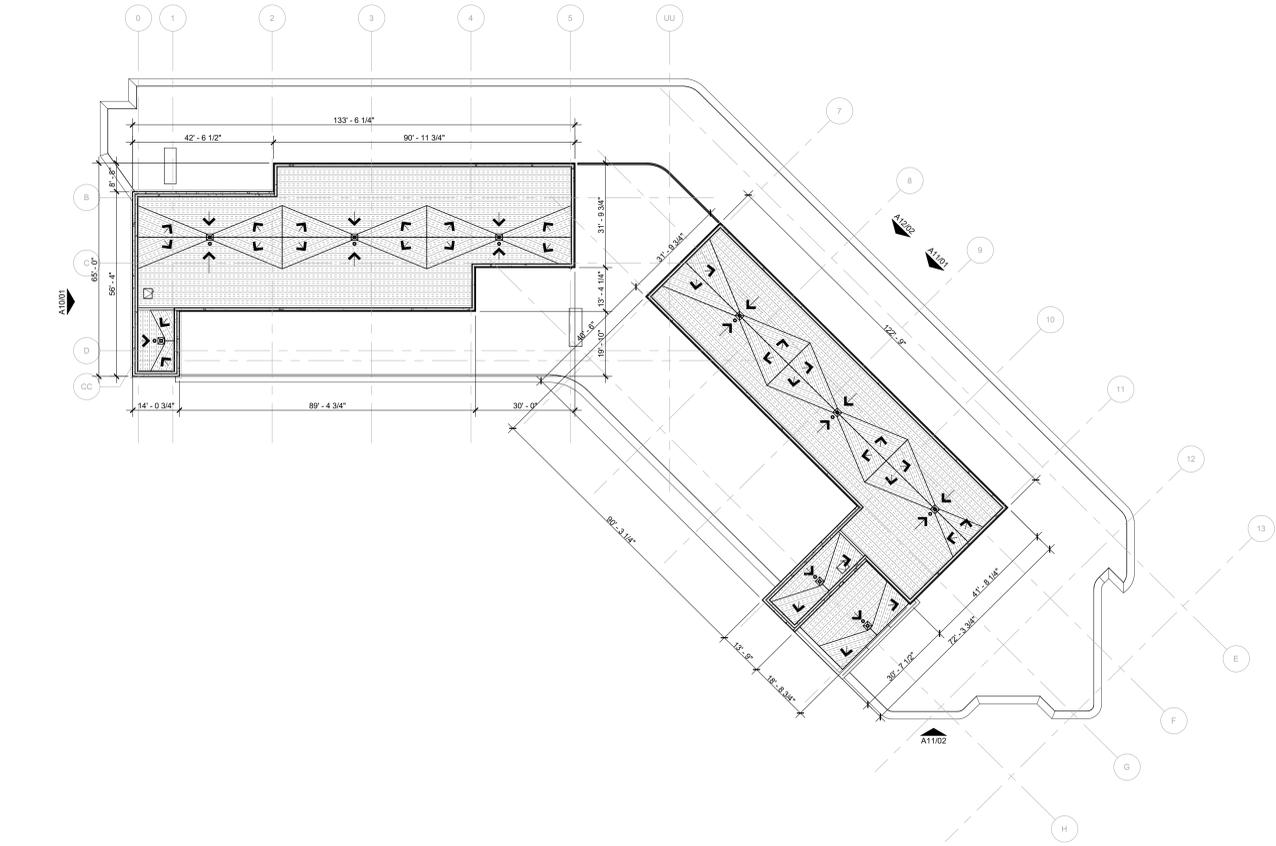
03 LEVEL 07 OVERALL FLOOR PLAN
3/64" = 1'-0"



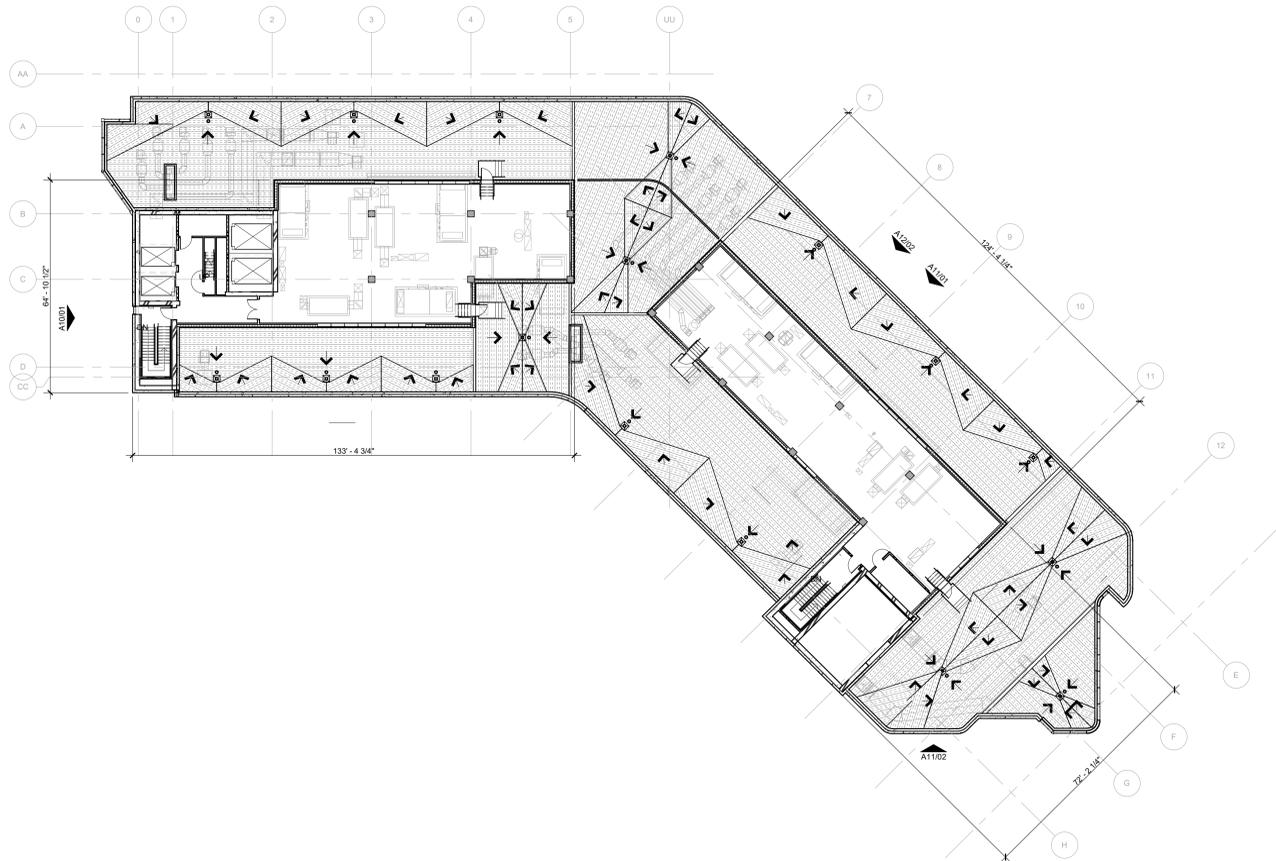
01 LEVEL 05 OVERALL FLOOR PLAN
3/64" = 1'-0"

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02 PENTHOUSE ROOF OVERALL PLAN
3/64" = 1'-0"



01 PENTHOUSE LEVEL & ROOF OVERALL FLOOR PLAN
3/64" = 1'-0"

HKS

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2020 SALZEDO STREET, 4TH FLOOR
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ORLANDO, FL 32801

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CGA SOLUTIONS
1800 ELLER DRIVE, SUITE 600
FORT LAUDERDALE, FL 33316

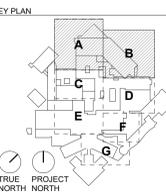
STRUCTURAL ENGINEER
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OWNER
MEMORIAL HEALTHCARE SYSTEM
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HOLLYWOOD, FL 33021

Memorial Regional Hospital
SURGICAL & CRITICAL CARE TOWER EXPANSION
3501 JOHNSON STREET, HOLLYWOOD, FL 33021



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AHCA PROJECT ID:
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SHEET TITLE
PENTHOUSE & ROOF OVERALL FLOOR PLAN

SHEET NO.
A08

TITLE BLOCK VERSION: 20210830
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 HKS ARCHITECTS, INC. 2020 SALZEDO STREET, 4TH FLOOR CORAL GABLES, FL 33134
 HKS ARCHITECTS, INC. 225 EAST ROBINSON ST. SUITE #405 ORLANDO, FL 32801
 CGA SOLUTIONS 1800 ELLER DRIVE, SUITE 600 FORT LAUDERDALE, FL 33316
 GMG STRUCTURAL ENGINEERS 14335 COMMERCE WAY MIAMI LAKES, FL 33316
 TLC ENGINEERING SOLUTIONS, INC. 800 FAIRWAY DRIVE DEERFIELD BEACH, FL 33441
 SMITH SECHAN REID, INC. 2995 SIBCO DRIVE NASHVILLE, TN 37204
 MEMORIAL HEALTHCARE SYSTEM 3501 JOHNSON STREET HOLLYWOOD, FL 33021
 STATE OF FLORIDA ARCHITECTURAL BOARD
 ANCA CLIENT CODE/FILE NO: 23/100038
 ANCA PROJECT ID: 15005
 HKS PROJECT NUMBER: 23459.000
 DATE: JUNE 17, 2024
 ISSUE: FINAL TAC
 SHEET TITLE: EXTERIOR SELECTIONS AND PERSPECTIVES
 SHEET NO: A09
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CIVIL & LANDSCAPE
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 1800 ELLER DRIVE, SUITE 600
 FORT LAUDERDALE, FL 33316

STRUCTURAL ENGINEER
 GMG STRUCTURAL ENGINEERS
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 NASHVILLE, TN 37204

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 3501 JOHNSON STREET
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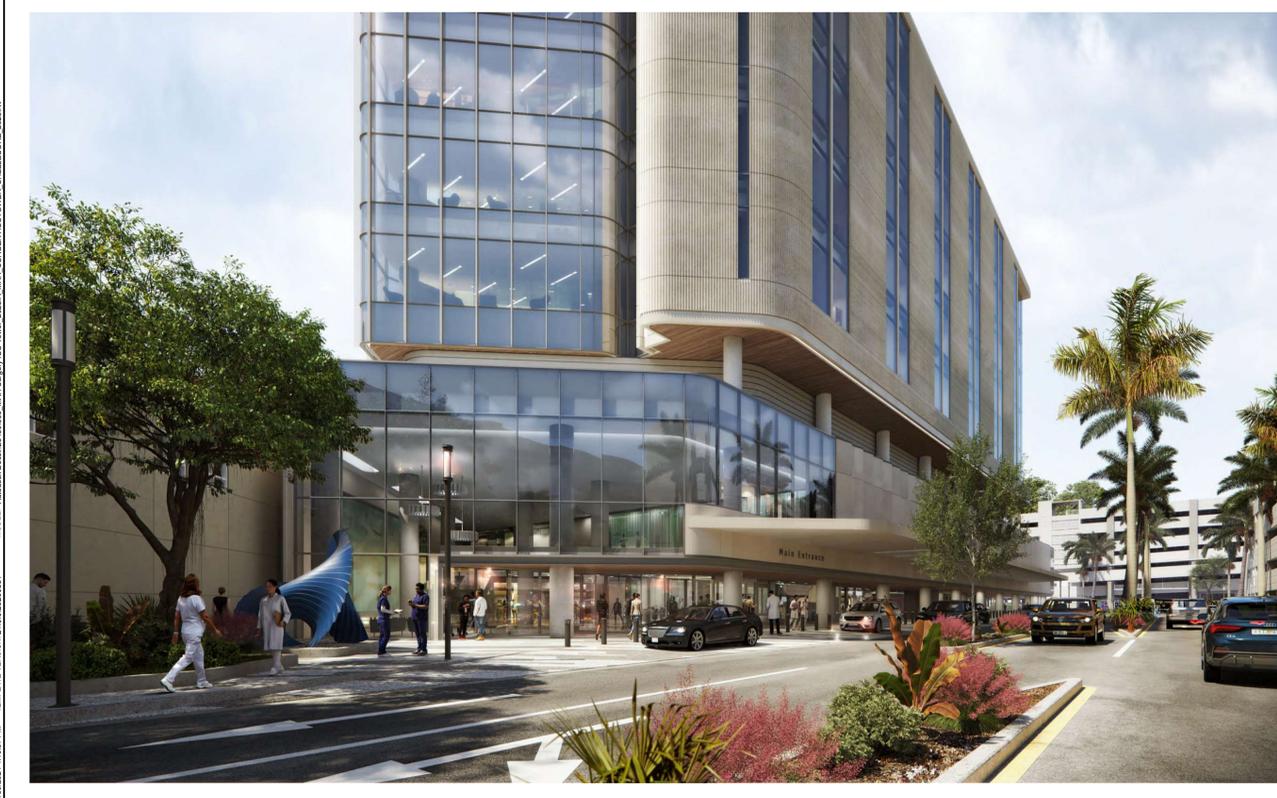


ABBREVIATIONS	EXTERIOR MATERIALS LEGEND																					
	ARCHITECTURAL PRECAST CONCRETE			SOFFIT ASSEMBLIES		GLAZING			ROOFING SYSTEMS		ARCHITECTURAL METAL FINISHES		SILICONE ELASTOMERIC COATING	MANUFACTURED METAL CANOPIES	ALUMINUM COPINGS AND FLASHINGS	DIRECT BOND PLASTER SYSTEM	EXTERIOR PAINT COLORS	CAST IN PLACE CONCRETE	CEMENT PLASTER SYSTEM	FORMED METAL PANEL		
CJ - CONTROL JOINT DJ - DEFLECTION JOINT EJ - EXPANSION JOINT PJ - PANEL JOINT	- PC01	- PC02	- PC03	- ESA01	- ESA02	- GL01	- GL02	- GL03	- GL04	- GL05	- ERA01	- ERA02	- AMF01	- AMF02	- SEC01	- MMC01	- CP01	- DBPS01	- XPT01	- CIPC01	- CPS01	- FMP01



02 EXTERIOR PERSPECTIVE 02
6" = 1'-0"

EXTERIOR MATERIAL MATRIX										
REVISION	SPECIFICATION	MARK	BASIS OF DESIGN	MODEL/COLOR	PATTERN/TEXTURE	LOCATION	FPA / NOA	FPA / NOA EXP.	COMMENTS	
ARCHITECTURAL METAL FINISH (AMF)										
	- GENERAL SELECTIONS	AMF01	PPG DURANAR	BONE WHITE UC4350	ORGANIC COATING - KYMAR 2 COAT	LEVEL 03 TERRACE CANOPY	NA	NA		
	- GENERAL SELECTIONS	AMF02	PPG DURANAR	DOVE GRAY UC0948	ORGANIC COATING - KYMAR 2 COAT	MILLIONS ALUMINUM COPINGS, SHADOW BOX, TRIM, EDGE AND FRAME DETAIL ON BUILDING FACADE	NA	NA		
ARCHITECTURAL PRECAST CONCRETE										
	DIVISION 03	PC01	GATE PRECAST	3082	FLAT PANEL / TEXTURE: LIGHT SAND BLAST	LEVELS 01 AND 02	23-0902.01	09.24.2024		
	DIVISION 03	PC02	GATE PRECAST	3082	FLAT PANEL / TEXTURE: MEDIUM SAND BLAST	LEVELS 01 AND 02	23-0902.01	09.24.2024		
	DIVISION 03	PC03	GATE PRECAST	3082	FITZGERALD FORMLINER 1424 SINE WAVE	STAIR TOWER	23-0902.01	09.24.2024		
CAST IN PLACE CONCRETE										
	DIVISION 03	CIPC01	TBD	COLOR TO MATCH PRECAST	LIGHT SAND BLAST	EXPOSED ROUND COLUMNS	NA	NA	TRAFFIC COATING TO BE APPLIED TO SKYWARD FACING SURFACE IF REQUIRED	
CEMENT PLASTER SYSTEM										
	DIVISION 07	CPS-01	STO CORP - STO POWERWALL HI	COLOR TO MATCH PRECAST - STO 16071	SMOOTH FINISH	REFER TO DRAWINGS	23-0518.03	08.03.2023		
DIRECT BOND PLASTER SYSTEM										
	DIVISION 07	DBPS-01	STO CORP - STO POWERWALL HI	COLOR TO MATCH PRECAST - STO 16071	SMOOTH FINISH	REFER TO DRAWINGS	23-0518.03	08.03.2023		
EXTERIOR SOFFIT										
	07 4293.16	ESAB1	TAKTL	COLOR TO MATCH PRECAST	SMOOTH FINISH	MAIN ENTRANCE CANOPY	21-0405.05	06.22.2025	SEALER: MICROSEAL	
	07 4293	ESAB2	LONGBOARD	SAND DRIFT 102634 / 102633	V-GROOVE SOFFIT SYSTEM	LEVEL 01 AND 03	22-0209.01	01.28.2023		
FORMED METAL WALL PANEL										
	DIVISION 07	FMP01	LONGBOARD	COLOR TO MATCH PRECAST	V-GROOVE WALL SYSTEM	LEVEL 01, 03 AND PENTHOUSE	22-0209.01	01.28.2023	DOWSIL SILICONE - COLOR: GRAY COPING TO MATCH	
ROOFING SYSTEMS										
	DIVISION 07	ERA01	SIPLAST POLY ISO INSULATION		TBD	LEVEL 03, 04, 09, PH ROOF	22-1025.11	05.13.2024		
	DIVISION 07	ERA02	WALSAU TILE INC.	CONCRETE PAVERS, TERRA-STAND PEDESTAL, HIDDEN LOC-DOWN	TBD	LEVEL 03 TERRACE	FL4518.1	NA	PEDESTALS TO BE ADHERED TO SIKA CORP. SIKALASTIC ROOFPRO SYSTEM	
SHEET METAL FLASHING AND TRIM										
	DIVISION 07	CP-01	OMG ROOFING PRODUCTS OR SIMILAR	AMF-01		AT PC-01 & PEI05-01	NA	NA		
EXTERIOR ALUMINUM ENTRANCE DOOR										
	DIVISION 08	EXT01	CRL	SERIES BAL-350 HURRICANE RESISTANT MANUAL SWING DOORS - AMF01		REFER TO DRAWINGS	NA	NA	REFERENCE DRAWINGS FOR DIMENSIONS AND PROJECTIONS	
	DIVISION 08	EXT02	TORMAX	TX3200 STORM IMPACT w/ MOTION 2301 - AMF01		REFER TO DRAWINGS	20-0726.06	06.02.2025	REFERENCE DRAWINGS FOR DIMENSIONS AND PROJECTIONS	
GLAZED ALUMINUM FRAMING SYSTEMS										
	DIVISION 08	GAF01	CRAWFORD TRACEY CORPORATION	75G		REFER TO DRAWINGS	NA	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL	
	DIVISION 08	GAF02	CRAWFORD TRACEY CORPORATION	95G		REFER TO DRAWINGS	FL2920-R14	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL	
	DIVISION 08	GAF03	CRAWFORD TRACEY CORPORATION	455G (INTERIOR USE ONLY)		INTERIOR VESTIBULE	FL2920-R14	NA	GRAY GASKET, GRAY STRUCTURAL SILICONE JOINT, GRAY WEATHER SEAL, 1/2" MILL SPACER WITH GRAY SILICONE SEAL	
GLAZING										
	DIVISION 08	GL01	VITRO	1 7/16" INSULATING - LAMINATED VISION GLASS UNIT	SENTRYGLAS CLEAR	REFER TO DRAWINGS	NA	NA		
	DIVISION 08	GL02	VITRO	1 7/16" INSULATING - LAMINATED SHADOW BOX GLASS UNIT - AMF02	SENTRYGLAS CLEAR	REFER TO DRAWINGS	NA	NA		
	DIVISION 08	GL03	VITRO	1 7/16" INSULATING - LAMINATED VISION GLASS UNIT	GRADUATED WHITE - SENTRYGLAS EXPRESSIONS	PATIENT WAITING, MULT-PURPOSE, STAFF LOUNGES ON TOWER	NA	NA		
	DIVISION 08	GL04	VITRO	1 7/16" INSULATING - LAMINATED SHADOW BOX GLASS UNIT - AMF02	GRADUATED WHITE - SENTRYGLAS EXPRESSIONS	PATIENT WAITING, MULT-PURPOSE, STAFF LOUNGES ON TOWER	NA	NA		
	DIVISION 08	GL05	VITRO	1 7/16" INSULATING - LAMINATED VISION GLASS UNIT	SENTRYGLAS CLEAR	RAILINGS	NA	NA		
STEEL DOORS										
	DIVISION 08	S001	STEEL CRAFT	H SERIES DOUBLE FLUSH OUTSWING COMMERCIAL STEEL DOORS - L.M.I		REFER TO DRAWINGS	22-0427.02	05.05.2023		
	DIVISION 08	S002	STEEL CRAFT	H SERIES SINGLE FLUSH OUTSWING COMMERCIAL STEEL DOORS - L.M.I		REFER TO DRAWINGS	22-0427.01	05.05.2023		
	DIVISION 08	S003	STEEL CRAFT	H SERIES HIGH FL. 8000 DOUBLE OUTSWING COMMERCIAL STEEL LOWERED DOORS - L.M.I		REFER TO DRAWINGS	20-1005.15	11.13.2023		
WALL LOUVERS										
	DIVISION 08	L101	CONSTRUCTION SPECIALTIES, INC.	DC-6114 / COLOR - AMF01		REFER TO DRAWINGS	23-0103.04	03.08.2023		
PAINTING										
	DIVISION 9 - 09100	XPT01	SHERWIN WILLIAMS	SW7516 MINDFUL GRAY		REFER TO DRAWINGS	NA	NA		
SILICONE ELASTOMERIC COATING										
	DIVISION 9 - 09953	SEC01	DOWSIL ALLIGARD SILICONE ELASTOMERIC COATING	TANK STORAGE ROOM		REFER TO DRAWINGS	NA	NA		
MANUFACTURED METAL CANOPIES										
	DIVISION 10	MMC01	PERFECTION ARCHITECTURAL SYSTEMS (AVALOK SUB)	AMF01		LEVEL 03 TERRACE CANOPY	NA	NA	REFERENCE DRAWINGS FOR DIMENSIONS AND PROJECTIONS	



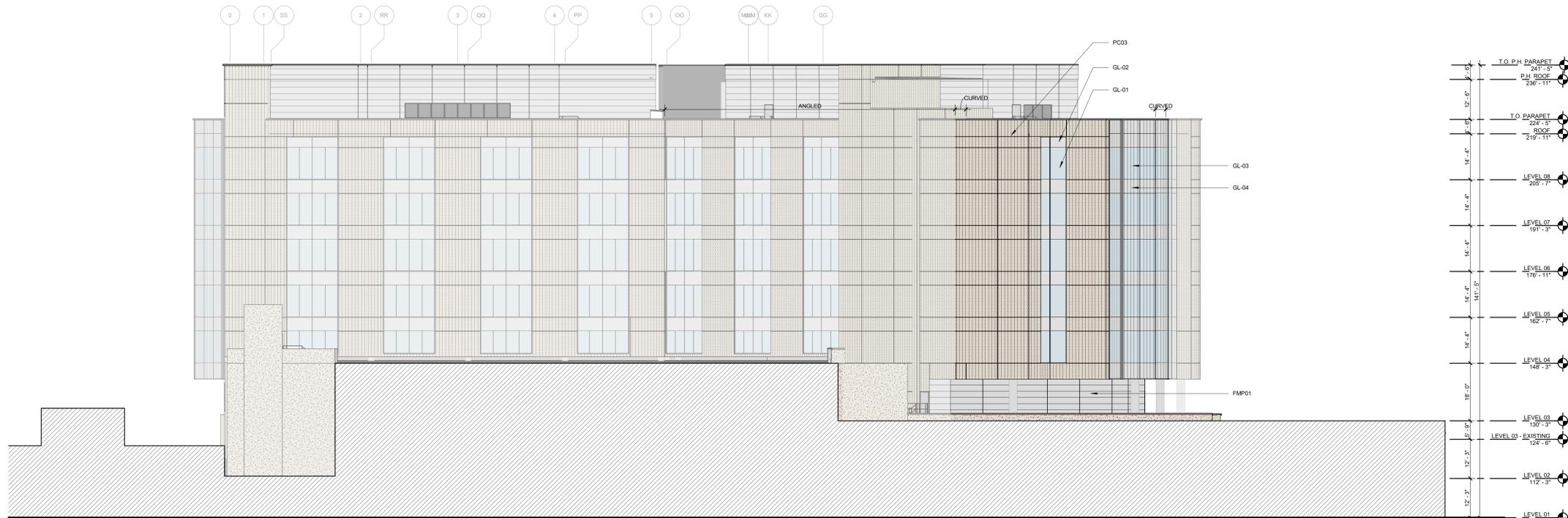
01 EXTERIOR PERSPECTIVE 01
6" = 1'-0"

EXTERIOR MATERIAL BOARD

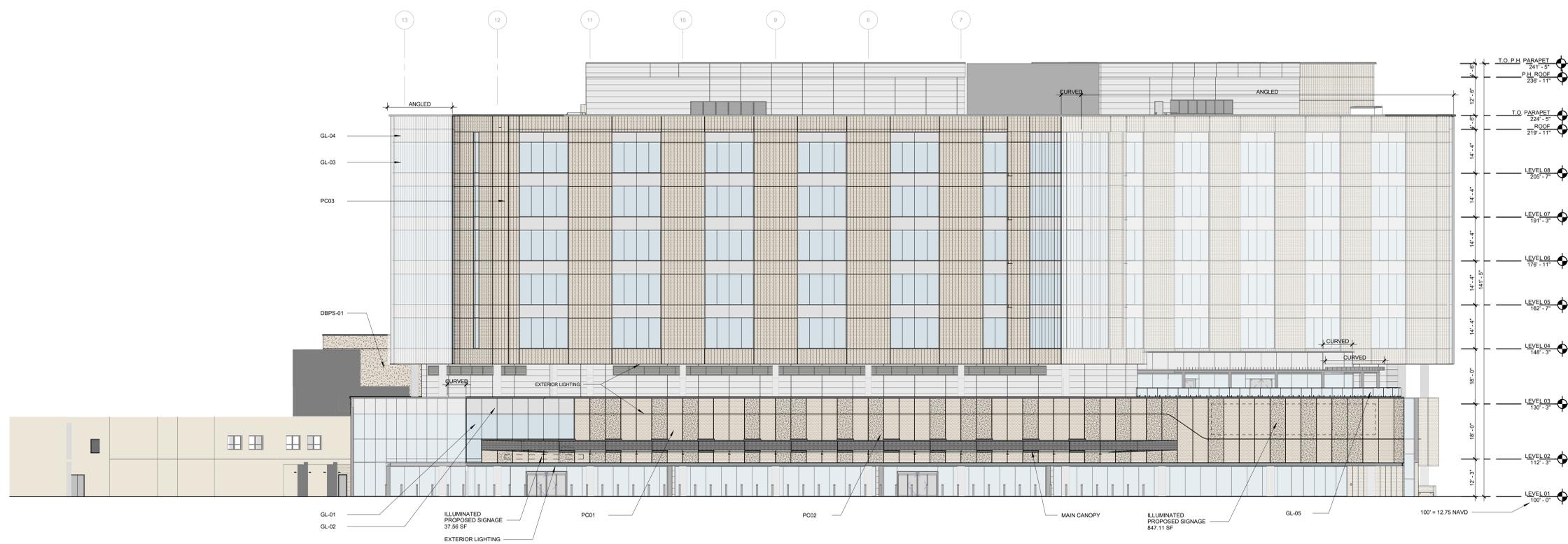
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 GL02 - SHADOW BOX	 FMAP01 - FORMED METAL	 PC03 - ARCHITECTURAL PRECAST PANEL	
 GL03 - VISION FRIT GLASS	 ESA01 - UHPC SOFFIT	 DBPS01 - 01 DIRECT BOND PLASTER SYSTEM	
 GL04 - FRIT SHADOW BOX			

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ABBREVIATIONS	EXTERIOR MATERIALS LEGEND																
CJ - CONTROL JOINT DJ - DEFLECTION JOINT EJ - EXPANSION JOINT PJ - PANEL JOINT	ARCHITECTURAL PRECAST CONCRETE		SOFFIT ASSEMBLIES	GLAZING			ROOFING SYSTEMS		ARCHITECTURAL METAL FINISHES	SILICONE ELASTOMERIC COATING	MANUFACTURED METAL CANOPIES	ALUMINUM COPINGS AND FLASHINGS	DIRECT BOND PLASTER SYSTEM	EXTERIOR PAINT COLORS	CAST IN PLACE CONCRETE	CEMENT PLASTER SYSTEM	FORMED METAL PANEL
	-PC01	-PC02	-ESA01	-GL01	-GL02	-GL03	-ERA01	-ERA02	-AMF01	-SEC01	-MMC01	-CP01	-DBPS01	-XPT01	-CPC01	-CPS01	-FMP01
	-PC03	-ESA02		-GL04	-GL05				-AMF02								



02 OVERALL SOUTH ELEVATION
1/16" = 1'-0"



01 OVERALL NORTHEAST ELEVATION
1/16" = 1'-0"



ARCHITECT
HKS ARCHITECTS, INC.
2020 SALZEDO STREET, 4TH FLOOR
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HKS PROJECT NUMBER:
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JUNE 17, 2024
ISSUE:
FINAL TAC

SHEET TITLE
OVERALL BUILDING ELEVATIONS

SHEET NO.
A11

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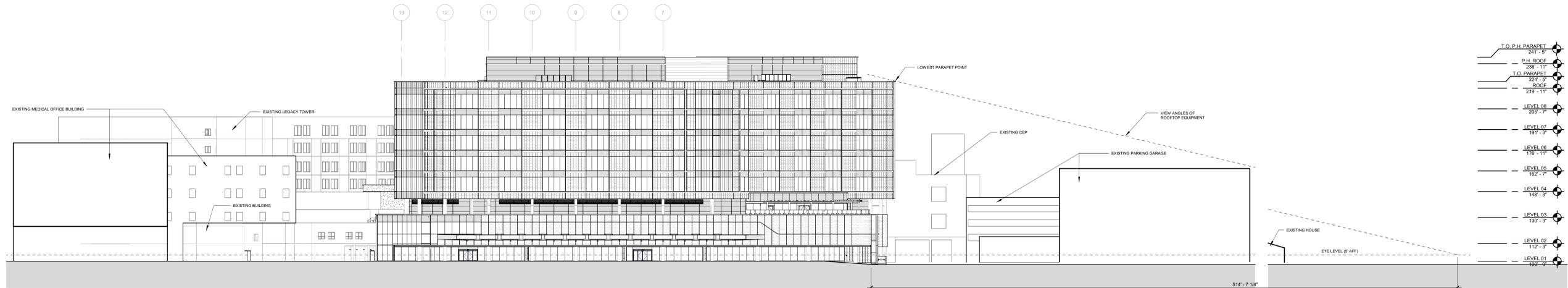
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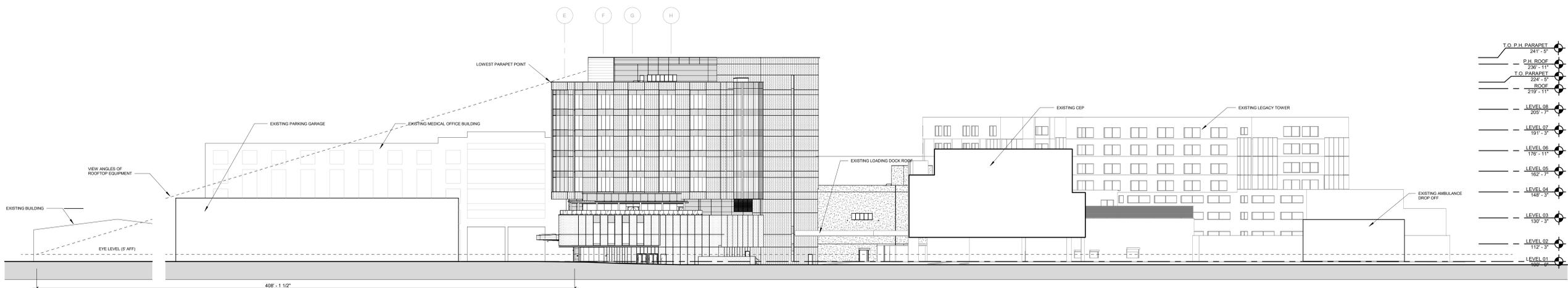
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02 NORTH ELEVATION
 1" = 30'-0"



01 WEST ELEVATION
 1" = 30'-0"

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MEMORIAL REGIONAL HOSPITAL SURGICAL AND CRITICAL CARE TOWER EXPANSION TRAFFIC IMPACT STUDY

May 2024

Prepared for:



Prepared By:



Calvin, Giordano & Associates, Inc.

A SAFEbuilt COMPANY



Calvin, Giordano & Associates, Inc.
A SAFEbuilt COMPANY



PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Calvin, Giordano & Associates, Inc., a corporation authorized to operate as an engineering business, EB 00006500, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby for:

PROJECT: Memorial Regional Hospital Surgical and Critical Care Tower Expansion —
Traffic Impact Study

LOCATION: Hollywood, Florida

I acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

This item has been digitally signed and sealed by Pablo Chon Kan, PE on the date indicated here. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

NAME: Pablo Chon Kan

P.E. NO.: 97697

DATE: 06/03/2024

SIGNATURE: _____





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EXECUTIVE SUMMARY

Calvin, Giordano, and Associates Inc. (CGA) was appointed by Memorial Healthcare System (MHS) to conduct a traffic impact study for the Memorial Regional Hospital's (MRH) Surgical & Critical Care Tower Expansion in the City of Hollywood, Florida, which is anticipated to be completed in 2030. This study aimed to evaluate the current and projected traffic conditions and offer recommendations to mitigate potential impacts.

The CGA team focused on several intersections and roadway segments surrounding the project. The following intersections were included in the analysis:

- Johnson Street and N 35th Avenue (Signalized Intersection)
- Johnson Street and N Park Road (Signalized Intersection)
- N 35th Avenue and Hospital Drive (Memorial Medical Office Centre Driveway) (Signalized Intersection)
- Garfield Street and N 35th Avenue (Roundabout)
- Garfield Street and N Park Road (Two-way Stop Controlled Intersection)
- Johnson Street and Emergency Entry Access (Two-way Stop Controlled Intersection)
- Johnson Street and N 38th Avenue (Employee Parking Access) (Two-way Stop Controlled Intersection)

CGA team also conducted a segment analysis consisting of the following segments:

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage





The assessment covered existing conditions, future scenario without the project, and future scenario with the project conditions following the Surgical and Critical Care Tower expansion. The data collection effort included 24-hour turning movement counts, signal timing, and phasing plans. The methodology for the study was developed in collaboration with the City of Hollywood. Intersection geometry, pavement markings, signage, storage lengths, and lane assignments were reviewed and corroborated during field visits. The traffic data was adjusted for Peak Season traffic growth using annual trends and collected traffic data for the future scenario.

The expansion of MRH is projected to generate an additional 2,138 daily trips, with 163 and 171 trips during the AM and PM peak hours, respectively. The trips generated were assigned to the network in the future total traffic conditions, anticipating the Surgical and Critical Care Tower expansion completion. Synchro 11 software was used to evaluate the intersection capacity and delays for the above-mentioned intersections for existing, future build without project, and future total traffic with project.

The analysis shows a reduction in the Level of Service of N 35th Avenue and Johnson Street intersection correlated with an increase in the delay in approximately 10% and 13% for the AM and the PM peak periods, respectively. However, to help mitigate the reduction in the LOS at N 35th Avenue and Johnson Street intersection, an intersection optimization plan was performed. The optimization improved the intersections' Level of Service (LOS) and reduced in 38% and 36% the delays for the AM and PM scenarios, respectively. The study also analyzed roadway segments showing that Johnson Street and N 35th Avenue maintained the same LOS before and after the introduction of the project traffic in future conditions.

The report provides an evaluation of the expected traffic impacts from the MRH Surgical & Critical Care Tower Expansion and recommendations to mitigate the effects of the project.





1. INTRODUCTION

Calvin, Giordano, and Associates Inc. (CGA) was assigned by Memorial Healthcare System (MHS) to complete a traffic impact study for the expansion of Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in the City of Hollywood, Florida. The expansion is expected to be completed in 2030.

CGA has followed the methodology developed in collaboration with the City of Hollywood. A copy of the methodology, dated 10/26/2023 is included in **Appendix A**. This report summarizes the data collection, project trip generation, trip distribution and assignment, intersection analysis, and 95th percentile queueing analysis. The intersections analyzed are listed below:

- Johnson Street and N 35th Avenue (Signalized Intersection)
- Johnson Street and Park Road (Signalized Intersection)
- N 35th Avenue and Hospital Drive (Memorial Medical Office Centre Driveway) (Signalized Intersection)
- Garfield Street and N 35th Avenue (Roundabout)
- Garfield Street and N Park Road (Two-way Stop Controlled Intersection)
- Johnson Street and Emergency Entry Access (Two-way Stop Controlled Intersection)
- Johnson Street and N 38th Avenue (Employee Parking Access) (Two-way Stop Controlled Intersection)

The following segments were analyzed:

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage





The purpose of this study is to analyze the nearby impacted intersections and segments based on existing and future (2030) traffic due to the expansion of the Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in Hollywood, Florida. and provide conclusions and recommendations to mitigate the effects of the project. The study area is located in the City of Hollywood, Florida. The study area is shown in Figure 1 below.



Figure 1 Study Area

2. EXISTING CONDITIONS

An analysis of the study area was conducted to verify the intersections' geometry, pavement markings, signing, storage lengths, and lane assignments. The studied roads are described below:

Johnson Street: Johnson Street is a two-lane two-way street that runs in an east-west direction. The road has 12 feet lanes. This street provides turn lanes, sidewalks, and a marked median to separate opposing traffic. The posted speed limit on Johnson Street is 30 mph.





N 35th Avenue: N 35th Avenue in Hollywood is a wide roadway (average lane width 11 feet) and runs in a north-south direction. It is characterized by four lanes, two in each direction, divided by a median. The road has a posted speed limit of 30 mph.

N Park Road: N Park Road in Hollywood runs in a north-south direction. It is characterized by four lanes, two in each direction, divided by a grassed median. The lanes have a standard width of 12 feet, allowing for smooth traffic flow. The road has a posted speed limit of 30 mph.

Garfield Street: Garfield Street is an east-west, two-lane two-way traffic, local roadway with a posted speed limit of 30 mph. Garfield Street has a dead end at the west end of the road between N Park Road and N 35th Avenue. There is an existing gate at the west end of the road that will be open during the construction phase to allow construction traffic only. Figure 2 shows the permitted traffic movements at each of the studied intersections.

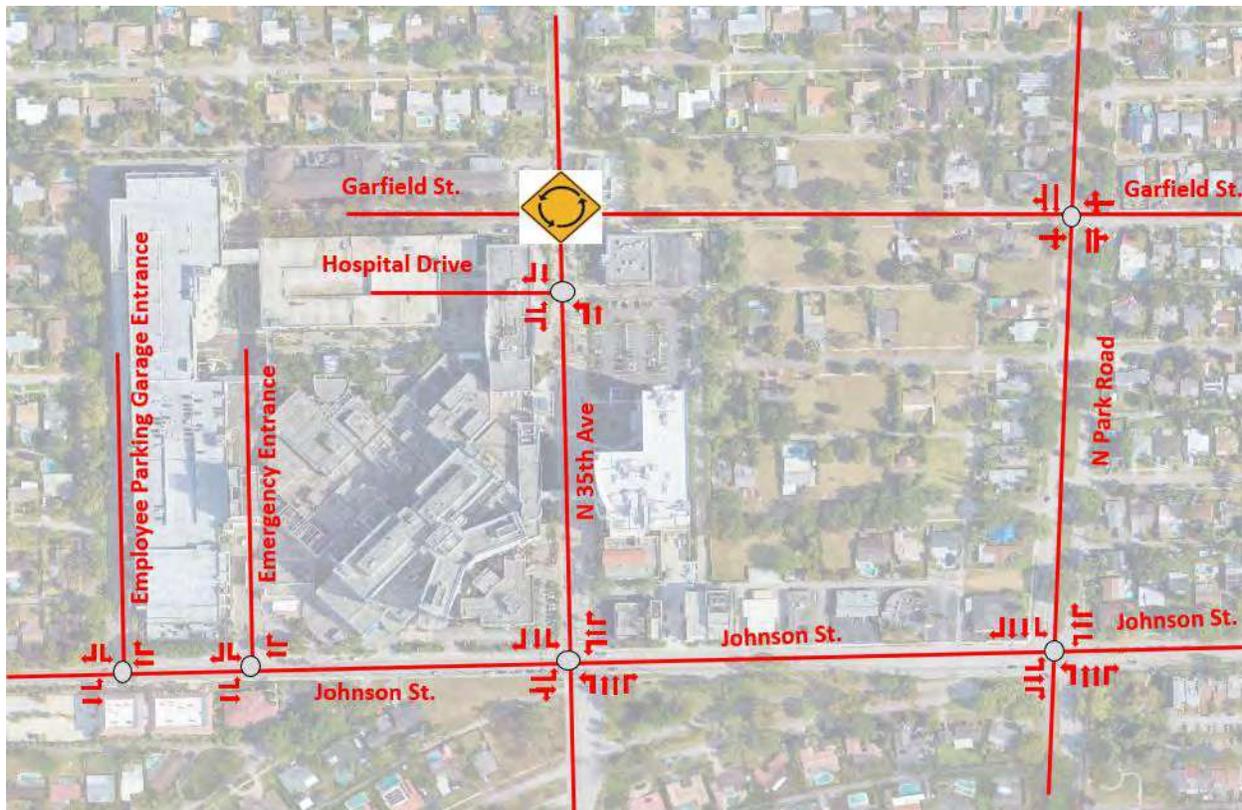


Figure 2 Permitted Movements



3. TRAFFIC OPERATION ANALYSIS

3.1 Traffic Data Collection

CGA collected 24-hr turning movement counts (TMC) on Wednesday, December 12, 2023, at seven intersections. The data includes heavy vehicles, bicycles, and pedestrians. Data was collected during the morning (6:00 AM – 10:00 AM) and afternoon (04:00 PM – 08:00 PM) periods within the study area. The peak periods were identified, and the peak periods volumes used to perform the analysis. The turning movement data is included in **Appendix B**.

The intersection signal timing data and phasing plans were obtained from the Broward County Traffic Engineering Division (BCTED) for the three signalized intersections within the study area. Copies of the existing signal timing and phasing diagrams are provided in **Appendix C**.

3.1.1 Adjustment Factors

The December 2023 turning movement counts were adjusted to peak season traffic data by applying the FDOT's Peak Season Conversion Factor (PSCF) of 1.03. The 2022 Peak Season is attached in **Appendix D**.

3.1.2 Future Traffic

Future traffic conditions are defined as the expected traffic conditions for the roadway network in the year 2030 without the construction of the project. The future traffic is estimated based on the expected growth of the area. Future total traffic volumes used in the analysis are the sum of the future traffic and additional traffic generated by the project. Volume development worksheets for the study intersections are included in **Appendix E**.

3.1.3 Background Area Growth

Traffic growth on the transportation network was determined based upon historic growth trends at nearby FDOT traffic count stations. FDOT count stations referenced in this analysis include:





- FDOT Count Station No. 8023 is located on Johnson Street, west of N 35th Avenue.
- FDOT Count Station No. 8008 is located on Johnson Street, east of N 35th Avenue
- FDOT Count Station No. 9622 is located on N Park Road, north of Johnson Street.
- FDOT Count Station No. 9623 is located on N 35th Avenue, south of Johnson Street.

The historic growth rate analysis, based on FDOT count stations, examined linear, exponential, and decaying exponential growth rates for the most recent five (5) and ten (10) year periods. The linear growth trend yielded a growth rate of negative 9.15%, so an annual growth rate of one percent (1.0%) in the vicinity of the redevelopment was calculated. To provide for a conservative analysis, the growth rate of one percent (1.0%) was applied annually to the existing traffic volumes for future (2030) traffic conditions. Detailed growth calculations are contained in **Appendix F**.

3.1.4 Project Traffic

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project. The construction plan includes a surgical and critical care tower comprising 8 floors and a mechanical penthouse, with floors four through eight allocated for patient rooms. The bed count will remain at 150 beds, as it is today, with the beds being distributed from floor 4 to 8, representing 156,370 square feet of the new building. This area will not be included in our analysis as the existing number of beds and associated services remain intact. Furthermore, an area of 40,413 square feet in level three will be dedicated to mechanical space only, this area will be excluded of the analysis. Moreover, the analysis considers the first three floors, designated for outpatient services and surgical operations and comprising 198,545 square feet.

3.1.4.1 Trip Generation

Trip generation calculations for the proposed expansion were performed using rates and/or equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the proposed project was determined using ITE Land Use Code (LUC) 610 Hospital. To provide a conservative





analysis, credit for trips generated by the existing development was not taken in any of the analyses prepared in this study.

Table 1 Trip Generation from ITE

Land Use	Land Use Code	Units (1,000 sft GFA)	Equation	Directional Distribution		AM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital Expansion	610	198.55	$T = 0.82(X)$	67%	33%	109	54	163
Land Use	Land Use Code	Units	Equation	Directional Distribution		PM Peak Hour Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital Expansion	610	198.55	$T = 0.86(X)$	35%	65%	60	111	171
Land Use	Land Use Code	Units	Equation	Directional Distribution		Daily Trips (Gross)		
				IN	OUT	IN	OUT	Total
Hospital Expansion	610	198.55	$T = 10.77 (X)$	50%	50%	1069	1069	2138

Based on Table 1, the expansion of the hospital will generate an additional 2,138 daily trips and 163 trips and 171 trips during the AM peak and PM peak hours, respectively. The excerpts from the ITE manual are provided in **Appendix G**.

3.1.4.2 Trip Distribution and Assignment

The trip distribution was determined based on the FDOT traffic online data, CGA's collected traffic data, and engineering judgement. Figure 3 below shows the trip distribution.

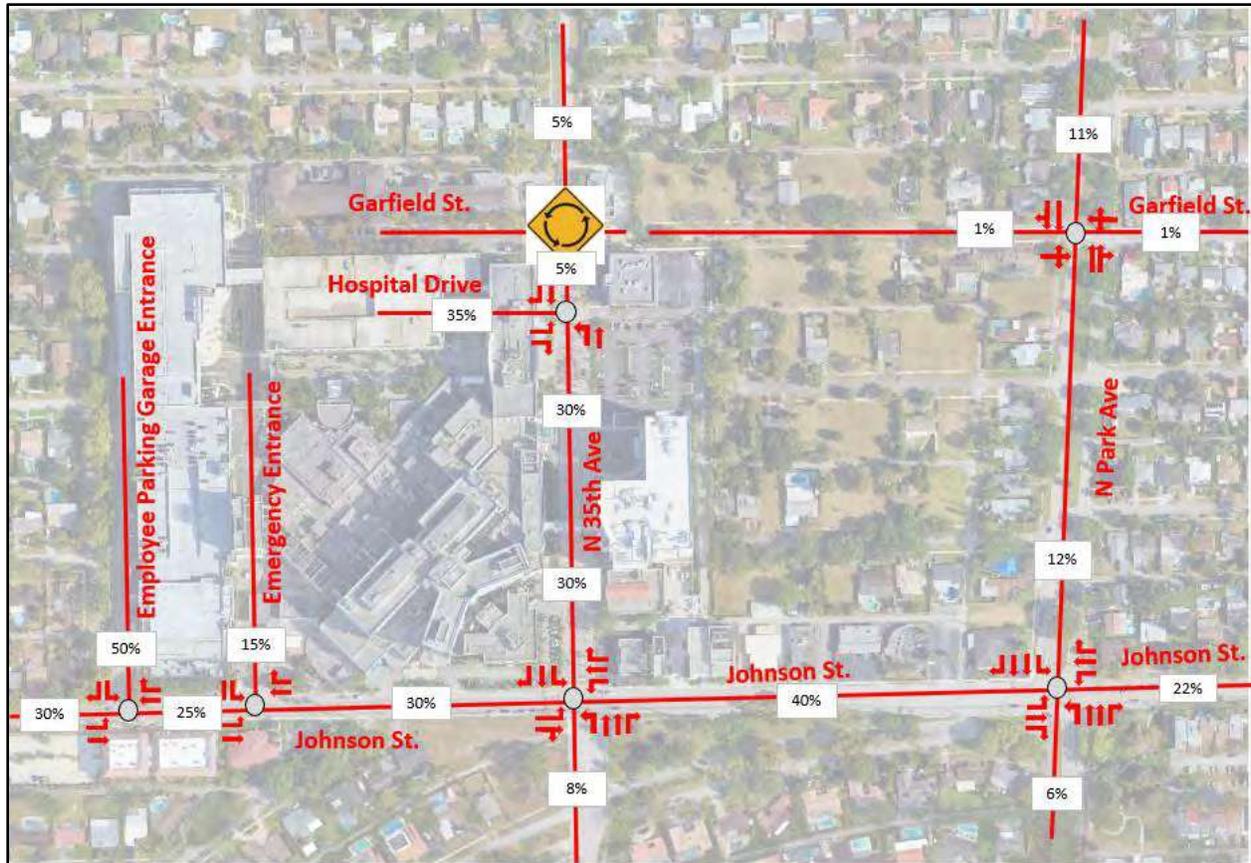


Figure 3 Trip Distribution

3.2 Intersection Capacity Analysis

The study area and surrounding network were modeled using Synchro 11 Signal Timing and Analysis Software (Synchro) to establish the Level of Service (LOS) for the intersections within the study area. Synchro applies methodologies outlined in the Highway Capacity Manual (HCM). The City of Hollywood has adopted Level of Service D as its operational standard. For each intersection, analyses were conducted for three different scenarios: existing conditions, future condition without project, and future total condition with project. The study intersections were evaluated for AM peak hours and PM peak hours. The existing volumes can be found in **Appendix E** after applying the Peak Season Correction Factor (PSCF) to determine the existing season volumes.

Table 2 below shows the Level of Service and delay for each intersection in the two peak hour scenarios for existing, future without project, and future total traffic with project. As shown, the intersections currently operate at an acceptable Level of Service of D or better,



except N 35th Avenue and Johnson Street which presents congested conditions in the existing, future, and future total traffic scenarios for both, AM peak and PM peak. Specifically, the eastbound and westbound movements fail during the AM and PM peak periods, as delays exceed LOS D. In the existing conditions, vehicles experience an average overall intersection delay of 69.4 seconds and 65.7 seconds during AM peak and PM peak, respectively. Meaning that under the current conditions the intersection operates under LOS E. For the future built year (2030) without the project traffic delays increase to 84.3 seconds and 80.7 seconds for the AM peak and PM peak, respectively. The growth from the network without the implementation of the project makes the operation of the intersection go from LOS E to LOS F.

After the completion of the project in (2030), the delays at the intersection are expected to increase. The AM peak hour intersection average delay increased to 92.6 seconds, while the PM peak hours average intersection delay went up to 91.5 seconds. Meaning that from the scenario in 2030 without project to the one with the project there will be an increase of 8.3 seconds for the AM peak hours (about a 10% increase in overall delay) and 10.8 seconds for the PM peak hours (about 13% increase in overall delay), which results in a LOS F. N 35th Avenue and Hospital Drive (Memorial Medical Office Center Driveway), maintained the same LOS B and delay changed slightly (around 4% increase in the AM peak and around 1.4% decrease in the PM peak). N Park Road and Johnson Street intersection average overall delay increased from 50.6 seconds to 55.7 seconds for the in PM Peak, which represents an increase of 10% from the future scenario without the project to the scenario with the project in 2030. The remaining four intersections are either stop-controlled or regulated by yield-control (roundabout), and the results show very minor changes in the delay. The Synchro output reports are included in **Appendix H**.



Table 2 Level of Service and Delay

Level of Service (LOS) and Delay														
Intersection	Intersection Control Type	Movement	Existing (2023)				Future No Build (2030)				Future Build (2030)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N Park Road & Johnson Street	Signalized	EB	71.8	E	82.2	F	90.7	F	102.4	F	98.5	F	116.7	F
		WB	47.9	D	47.7	D	60.4	E	59.8	E	69.6	E	63.7	F
		NB	20.4	B	20	C	21.8	C	21.1	C	22.1	C	21.3	C
		SB	15.6	B	22.3	C	17	B	24	C	17.5	B	23.8	C
		Overall	38.4	D	42.2	D	46.7	D	50.6	D	51.2	D	55.7	E
N 35 th Avenue & Johnson Street	Signalized	EB	101.9	F	129.4	F	129.8	F	161.7	F	141.5	F	189.5	F
		WB	102.6	F	71	E	124.3	F	88.1	F	137.6	F	95	F
		NB	17.6	B	9.7	A	18.4	B	9.9	A	18.9	B	10.2	B
		SB	20	C	23.4	C	21.5	C	25.9	C	22.4	C	28.8	C
		Overall	69.4	E	65.7	E	84.3	F	80.7	F	92.6	F	91.5	F
N Park Road & Garfield Street	TWSC	EB	30.8	D	41.3	E	35.3	E	51	F	36.4	E	36.1	E
		WB	21.3	C	12.2	B	22.9	C	12.6	B	23.4	C	23.3	C
		NB	0		0		0		0		0		0	
		SB	0		0.1		0		0.1		0		0	
		Overall	0.2		0.3		0.2		0.3		0.2		0.2	
N 35 th Avenue & Garfield Street	Roundabout	EB	4.7	A	6.5	A	4.9	A	6.8	A	4.9	A	6.8	A
		WB	4	A	4.8	A	4.1	A	4.9	A	4.1	A	5	A
		NB	4.8	A	5.3	A	5	A	5.5	A	5	A	5.5	A
		SB	6.6	A	5.7	A	6.9	A	5.9	A	7	A	5.9	A
		Overall	5.8	A	5.8	A	6.1	A	6	A	6.1	A	6	A





Intersection	Intersection Control Type	Movement	Existing (2023)				Future No Build (2030)				Future Build (2030)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N 35 th Avenue & MM Office Center Driveway	Signalized	EB	8.5	A	8.5	A	8.5	A	8.6	A	8.4	A	8.7	A
		NB	12.6	B	8.9	A	13.8	B	9	A	15.5	B	9.2	A
		SB	22	C	24.5	C	22.6	C	25.2	C	22.3	C	25.1	C
		Overall	14.8	B	14.5	B	15.6	B	14.8	B	16.3	B	14.6	B
Johnson Street and Emergency Driveway	TWSC	EB	2.2		1.1		2.3		1.1		2.5		1.2	
		WB	0		0		0		0		0		0	
		SB	27.1	D	25.2	D	32.3	D	30.1	D	36	E	32.9	D
		Overall	1.9		3.2		2.1		3.7		2.5		4.3	
Johnson Street and Employee Entrance Driveway	TWSC	EB	3.8		0.1		4.1		0.2		4.3		0.4	
		WB	0.1		0.1		0.1		0.1		0.1		0.1	
		NB	13	B	17.4	B	13.6	B	35.2	E	13.6	B		
		SB	19.2	C	36	E	22.5	C	53.9	F	23.3	C	66.3	F
		Overall	4.8		10.3		5.4		15.7		5.6		18.2	





3.3 95th Percentile Queue Length Analysis

A 95th percentile queue analysis was performed for the turn lanes at the study intersections. A summary of the 95th percentile queues for the studied intersections' movements is presented in Table 3. The table provides details of intersection control types, movements, and storage lengths for existing (2023), future no-build (2030), and future build (2030) scenarios during AM and PM peak hours. Additionally, it indicates instances where the 95th percentile volume exceeds capacity and where queue lengths are influenced by upstream signal metering.

The 95th percentile queue analysis shows modest increases in queue length derived from the yearly growth and additional increases resulting from additional traffic generated by the project in 2030. The most affected intersections are Johnson Street and the Employee Entrance Driveway intersection and Johnson Street and N 35th Avenue intersection. The Johnson Street and Employee Entrance Driveway saw an increase of 112.5 ft (from 262.5 ft to 375 ft) in the southbound direction (coming out of the Employee Entrance Driveway), spilling upstream to the employee parking garage. It should be noted that this intersection was modeled as a TWSC; however, currently there are off-duty officers regulating the operations during peak hours which increases the capacity of the intersection and allowing right-turn movements only. The southbound approach of Johnson Street and N 35th Avenue registered an increase of 31 ft (from 240 ft to 271 ft) from the No Build to the Build scenario. In addition, the storage available allows both intersections to handle those queues.





Table 3 95th Percentile Queue Analysis

Intersection Queue Analysis									
Intersection	Intersection Control Type	Movement	Storage Length (ft)	Existing (2023)		Future No Build (2030)		Future Build (2030)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N Park Road & Johnson Street	Signalized	EBL	210	m#134	m#136	m#139	m#138	m#139	m#135
		EBR	200	m6	m11	m7	m11	m6	m11
		WBL	190	#151	#168	#168	#186	#168	#186
		WBR	360	10	26	15	32	15	32
		NBL	150	111	61	#126	#70	#136	#75
		NBR	150	41	51	48	53	48	53
		SBL	160	60	69	64	75	64	75
		SBR	160	68	50	95	52	109	53
N 35 th Avenue & Johnson Street	Signalized	EBL	130	37	29	39	31	42	33
		WBL	195	m58	m#92	m57	m#98	m54	m#94
		WBR	280	m69	m24	m67	m25	m63	m28
		NBL	155	126	45	136	47	140	49
		NRB	155	0	0	3	1	3	1
		SBL	275	123	#207	#137	#240	#148	#271
		SBR	280	0	2	0	6	0	9
N Park Road & Garfield Street	TWSC	EBL	-	2.5	10	2.5	10	2.5	10
		WBL	-	2.5	0	5	0	5	0
		NBL	-	0	0	0	0	0	0
		SBL	-	0		0	0	0	0





Intersection Queue Analysis

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Existing (2023)		Future No Build (2030)		Future Build (2030)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N 35 th Avenue & Garfield Street	Roundabout	EBL	-	0	25	0	25	0	25
		WBL	-	0	0	0	0	0	0
		NBL	-	25	25	25	25	25	25
		SBL	-	25	25	25	25	25	25
N 35 th Avenue & MM Office Center Dwy	Signalized	EBL	125	29	42	31	56	33	60
		NBL	155	160	42	173	56	193	64
Johnson Street and Emergency Driveway	TWSC	EBL	-	17.5	7.5	20	7.5	22.5	7.5
		SBL	-	17.5	37.5	22.5	47.5	30	60
		SBR	-	10	30	12.5	35	12.5	40
Johnson Street and Employee Entrance Driveway	TWSC	EBL	-	45	0	48	0	57.5	2.5
		WBL	-	0	0	0	0	0	0
		NBL	-	0	17.5	0	23	-	-
		SBR	-	92.5	235	98	263	122.5	375

Note: # 95th percentile volume exceeds capacity, queue may be longer.
 m Volume for 95th percentile queue is metered by upstream signal.





3.4 Intersection Improvement Plan

Considering the reduction in the Level of Service at the eastbound and westbound approaches of the intersection of N 35th Avenue and Johnson Street, a signal timing optimization was implemented.

The results are documented in Table 4 Level of Service and Delay, and Table 5 Queue Length. The results show that optimizing the traffic signals for N 35th Avenue and Johnson Street could significantly improve the LOS and reduce delays at this intersection. The optimization was performed using Synchro and considered the optimization of the cycle and the splits.

Table 4 Level of Service and Delay with Signal Optimization

Intersection	Movement	Future Build (2030)				Future Build (2030) with Signal Optimization			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
N 35th Avenue & Johnson Street	EB	141.5	F	189.5	F	81.1	F	115.9	F
	WB	137.6	F	95	F	76.1	E	56.6	E
	NB	18.9	B	10.2	B	27.8	C	14.8	B
	SB	22.4	C	28.8	C	20.4	C	23	C
	Overall	92.6	F	91.5	F	57.1	E	57.9	E

Table 5 Intersection 95th Percentile Queue Length with Signal Optimization

Intersection	Intersection Control Type	Movement	Storage Length (ft)	Future Build (2030)		Future Build (2030) with Signal Optimization	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
N 35th Avenue & Johnson Street	Signalized	EBL	130	42	33	53	41
		WBL	195	m54	m#94	#119	#194
		WBR	290	m63	m28	60	12
		NBL	155	140	49	#184	60
		NBR	266	3	1	0	0
		SBL	275	#148	#271	171	254
		SBR	280	0	9	0	32



With the optimized settings, the intersection's cycle increased from 70 seconds to 95 seconds, resulting in the reduction of the overall delay in 35.5 seconds and 33.6 seconds for the AM and the PM periods, respectively. This means going from LOS F to LOS E in the future conditions with the project. The optimization process was applied to balance the existing demand of the eastbound and westbound approaches and the demand from the southbound and northbound approaches. Increasing the cycle length provides more effective green to the eastbound and westbound through movements which have the highest demand.

4. ROADWAY SEGMENTS ANALYSIS

The CGA traffic team also analyzed the roadway segment along N 35th Avenue between Johnson Street and Garfield Street and the segment of Johnson Street between N 35th Avenue and the Hospital Employee Parking Garage by following FDOT's latest Q/LOS procedures (2023). The N 35th Avenue between Johnson Street and Garfield Street is segmented into three different segments, and a total of four segments were analyzed in this study.

- N 35th Avenue – North of Garfield Street
- N 35th Avenue – Between Garfield Street & Memorial Medical Office Centre Driveway
- N 35th Avenue – Between Memorial Medical Office Centre Driveway and Johnson Street
- Johnson Street - Between N 35th Avenue and Hospital Employee Parking Garage

The area is considered as C5 – Urban Center based on the FDOT Context Classification. In the new 2023 FDOT Q/LOS procedures, the Generalized Service Volume Tables for highways and arterials are organized by context classification rather than area type. An excerpt of the FDOT context classification is shown in Figure 4 below and Table 6 provides the generalized service volume based on the context classification.





Figure 6: FDOT Context Classification

Figure 4 FDOT Context Classification

Table 6 FDOT Generalized Service Volume Tables

		Motor Vehicle Arterial Generalized Service Volume Tables														
C2T, C4, C5, & C6																
 (C2T-Rural Town)	Peak Hour Directional					Peak Hour Two-Way					AADT					
	1 Lane	*	720	940	**	2 Lane	*	1,310	1,710	**	2 Lane	*	13,800	18,000	**	
	2 Lane	*	1,140	1,640	**	4 Lane	*	2,070	2,980	**	4 Lane	*	21,800	31,400	**	
	3 Lane	*	2,120	2,510	**	6 Lane	*	3,850	4,560	**	6 Lane	*	40,500	48,000	**	
 (C4-Urban General)	1 Lane	*	*	870	1,190	2 Lane	*	*	1,580	2,160	2 Lane	*	*	17,600	24,000	
	2 Lane	*	1,210	1,790	2,020	4 Lane	*	2,200	3,250	3,670	4 Lane	*	24,400	36,100	40,800	
	3 Lane	*	2,210	2,810	2,990	6 Lane	*	4,020	5,110	5,440	6 Lane	*	44,700	56,800	60,400	
	4 Lane	*	2,590	3,310	3,510	8 Lane	*	4,710	6,020	6,380	8 Lane	*	52,300	66,900	70,900	
 (C5-Urban Center)	1 Lane	*	*	690	1,080	2 Lane	*	*	1,250	1,960	2 Lane	*	*	13,900	21,800	
	2 Lane	*	1,290	1,900	2,190	4 Lane	*	2,530	3,430	3,870	4 Lane	*	26,100	38,300	45,000	
	3 Lane	*	1,410	2,670	3,110	6 Lane	*	2,560	4,850	5,650	6 Lane	*	28,400	53,900	62,800	
	4 Lane	*	2,910	3,560	3,640	8 Lane	*	5,290	6,470	6,620	8 Lane	*	58,800	71,900	73,600	
 (C6-Urban Core)	1 Lane	*	***	790	1,030	2 Lane	*	***	1,440	1,870	2 Lane	*	***	16,000	20,800	
	2 Lane	*	***	1,490	1,920	4 Lane	*	***	2,710	3,490	4 Lane	*	***	30,100	38,800	
	3 Lane	*	***	2,730	2,940	6 Lane	*	***	4,960	5,350	6 Lane	*	***	55,100	59,400	
	4 Lane	*	***	3,250	3,490	8 Lane	*	***	5,910	6,350	8 Lane	*	***	65,700	70,600	
Adjustment Factors																
The peak hour directional service volumes should be adjusted by multiplying by 1.2 for one-way facilities The AADT service volumes should be adjusted by multiplying 0.6 for one-way facilities 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05 2 Lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80 Exclusive right turn lane(s): Multiply by 1.05 Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95 Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75 Non-State Signalized Roadway: Multiply by 0.90																
This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist. *Cannot be achieved using table input value defaults. **Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. ***LOS C thresholds are not applicable for C6 as C6 roadway facilities are neither planned nor designed to achieve automobile LOS C.																

The roadway segment analysis for N 35th Avenue and Johnson Street, was conducted for the existing year (2024) with projections for the future year (2030), both with and without the project. Table 7 shows the results of roadway segment analysis.



Table 7 Roadway Segments Analysis

Roadway	Segment	2023 (Existing Year)						Future Year (2030) without Project						Future Year (2030) with Project Traffic					
		Daily Conditions			Peak Hour Conditions			Daily Conditions			Peak Hour Conditions			Daily Conditions			Peak Hour Conditions		
		AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS	AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS	AADT	Capacity at "LOS D"	LOS	Volume	Capacity at "LOS D"	LOS
N 35th Avenue	North of Garfield Street	4141	10008	D	420	1250	D	4440	10008	D	450	1250	D	4568	10008	D	461	1250	D
	Between Garfield Street & Memorial Medical Office Centre Driveway	5743	12479	D	503	1250	D	6157	12479	D	539	1250	D	6286	12479	D	550	1250	D
	Between Memorial Medical Office Centre Driveway and Johnson Street	11663	11885	D	900	1250	D	12504	11885	E	965	1250	D	13405	11885	E	1037	1250	D
Johnson Street	Between N 35th Avenue and Hospital Employee Parking Garage	20828	36194	C	1697	3450	C	22330	36194	C	1819	3450	C	23103	36194	C	1881	3450	C

Note:

1. Context Classification - C5 Urban Center
2. "LOS D" Capacity for AADT Calculation Adjustment
 - a. 2 Lane Divided Roadway with an exclusive left turn lane (s): Multiply by 1.05
 - b. Non-State Signalized Roadway : Multiply by 0.90.
 - c. Multilane Undivided Roadway with an exclusive Left Turn Lane (s) : Multiply by 0.95
 - d. Exclusive Right Turn Lane(s): Multiply by 1.05
 - e. 2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80





The analysis focuses on daily and peak hour traffic conditions, considering Average Annual Daily Traffic (AADT) and capacity at Level of Service D.

- For N 35th Avenue north of Garfield Street, the AADT increases from 4,141 in 2023 to 4,440 in 2030 without the project, and to 4,568 with the project. Despite these increases, the LOS remains at D for both daily and peak hour conditions, suggesting that traffic conditions are expected to deteriorate slightly but will maintain the same service level.
- N 35th Ave Between Garfield Street and Memorial Medical Office Centre Driveway, AADT rises from 5,743 in 2023 to 6,157 in 2030 without the project and 6,286 with the project. Similarly, the LOS remains at D for all analyzed conditions, indicating a stable traffic flow.
- N 35th Ave Between Memorial Medical Office Centre Driveway and Johnson St, an increase in AADT is observed from 11,663 in 2023 to 12,504 in 2030 without the project, and 13,405 with the project. This segment experiences a deterioration in LOS from D in 2023 to E in 2030 due to the regular growth of the network and retains the same LOS E before and after the implementation of the project.
- For Johnson Street between N 35th Avenue and N Park Road, the data shows a stable traffic condition with a slight increase in AADT from 20,828 in 2023 to 22,330 in 2030 without the project, and to 23,103 with the project. The LOS remains at C for all conditions, indicating that this segment can manage the traffic volume efficiently compared to the segments on N 35th Avenue.

Overall, the analysis suggests that the analyzed segments could retain the same base level of service (2030) even when the traffic increases influenced by the proposed project. In addition, Johnson Street is expected to maintain its current Level of Service despite increased traffic volumes.

5. CONCLUSIONS AND RECOMMENDATIONS

The traffic impact study conducted by Calvin, Giordano, and Associates Inc. (CGA) for the expansion of Memorial Regional Hospital (MRH) Surgical and Critical Care Tower in the City of Hollywood, Florida, analyzed the potential traffic effects on the surrounding





road network. The study examined existing, future without project, and future with buildout traffic, focusing on key intersections and roadway segments within the study area.

The findings from the intersection analysis, 95th percentile queueing analysis, and roadway segment analysis indicate that while some intersections and roadway segments can maintain acceptable Levels of Service through 2030, others are expected to experience a slight reduction in the Level of Service due to the expansion of Surgical and Critical Care Tower of MRH. Specifically, the study shows that the Level of Service of the intersection of N 35th Avenue and Johnson Street is expected to decline along with the storage capacity at certain movements.

Based on the findings of this traffic impact study, CGA recommends the following actions to mitigate the anticipated traffic impacts at the intersection of N 35th Avenue and Johnson Street associated with the MRH expansion:

- **Intersection Improvements:** Implement signal optimization at N 35th Avenue and Johnson Street, to improve traffic flow and enhance the Level of Service. This includes adjusting signal timings to better accommodate peak-hour traffic volumes. Other measures such as a left turn lane extension for the southbound left turn lane were reviewed however may not be feasible due to existing geometric constraints of the corridor.

This recommendation aims to ensure that the roadway network surrounding MRH can accommodate the increased traffic demand resulting from the hospital's expansion, thereby minimizing the impact on the surrounding community, and maintaining efficient and safe traffic conditions.



APPENDIX A – Traffic Study Methodology





- Building Code Services
- Civil Engineering / Roadway & Highway Design
- Coastal Engineering
- Code Enforcement
- Construction Engineering & Inspection (CEI)
- Construction Services
- Data Technologies & Development
- Electrical Engineering
- Engineering
- Environmental Services
- Facilities Management
- Grant Management & Writing
- Geographic Information Systems (GIS)
- Governmental Services
- Indoor Air Quality (IAQ)
- Landscape Architecture
- Planning
- Project Management
- Redevelopment & Urban Design
- Surveying & Mapping
- Transportation & Mobility
- Transportation Planning
- Water / Utilities Engineering
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www.cgasolutions.com

October 26, 2023

Clarissa Ip
Traffic Engineering Department
City of Hollywood
2600 Hollywood Boulevard
Hollywood, FL 33020

**RE: Memorial Regional Hospital OR
Expansion—Traffic Impact Study
CGA Proposal No. 21-5560.05**

Dear Ms. Ip,

Enclosed for your review is the Traffic Methodology for the Traffic Impact Study for the expansion of Memorial Regional Hospital (MRH) in the City of Hollywood, Florida. The scope of the project includes studying the existing, future background, and future buildout traffic conditions to determine the impacts of the additional traffic generated by the MRH Expansion on the surrounding network.

Traffic Study Methodology

The Calvin, Giordano, and Associates (CGA) traffic team will collect turning movements for the peak hours on one weekday (6:00-10:00 a.m., 4:00-8:00 p.m.) at the following intersections:

- Johnson Street and N 35th Avenue
- Johnson Street and N 37th Avenue
- Johnson Street and N 38th Avenue (Employee Parking Access)
- Garfield Street and N 35th Avenue
- N 35th Avenue and Hospital Drive

CGA traffic engineers will complete an evaluation to determine the Level of Service for AM and PM peak periods for the existing traffic conditions, future year (2025) traffic conditions, and Buildout year (2025) with project traffic conditions. Synchro 11 will be used to analyze the conditions of the study intersections. The delay and level of service (LOS) for each movement, approach and overall intersection capacity will be determined according to Highway Capacity Manual 2016 (HCM 2016) methodology, along with the 95th percentile queue length.

CGA traffic engineers will distribute and assign the project traffic based on an area gravity model. The future traffic projections for the study area will be developed using the calculated growth rate utilizing the FDOT AADT count stations data. The project will analyze the existing conditions and the future buildout in one phase of development. Future conditions with and without the project will be analyzed.

Based on the results of the traffic analysis, mitigation measures will be recommended for impacted roadways and intersections which are anticipated to operate above the adopted level of service threshold through the build-out year. Improvements will be identified for elements of the roadway network that show significant increases in levels of congestion with respect to the No-build alternative. The extent of the improvements will aim at maintaining levels of operation without project implementation.

The CGA traffic team will also analyze the roadway segment along N 35th Avenue between the hospital limits following FDOT's latest Q/LOS procedures. For this, 24-hour ADTs will be collected at N 35th Avenue, North of the intersection with Johnson Street.

The traffic data collection and the results of the intersection evaluation will be summarized in memorandum format using figures, exhibits, and tables as necessary.

Should you have any questions or comments regarding this project please do not hesitate to reach out.

Sincerely,

CGA Traffic Department



APPENDIX B – Turning Movement Count Data





National Data & Surveying Services

Site Code: **23-140477-002**

Date: **12/06/2023**

Weather: **Sunny**

City: **Hollywood**

County: **Broward**

Count Times: **06:00 - 10:00**

16:00 - 20:00

Control: **Signalized**

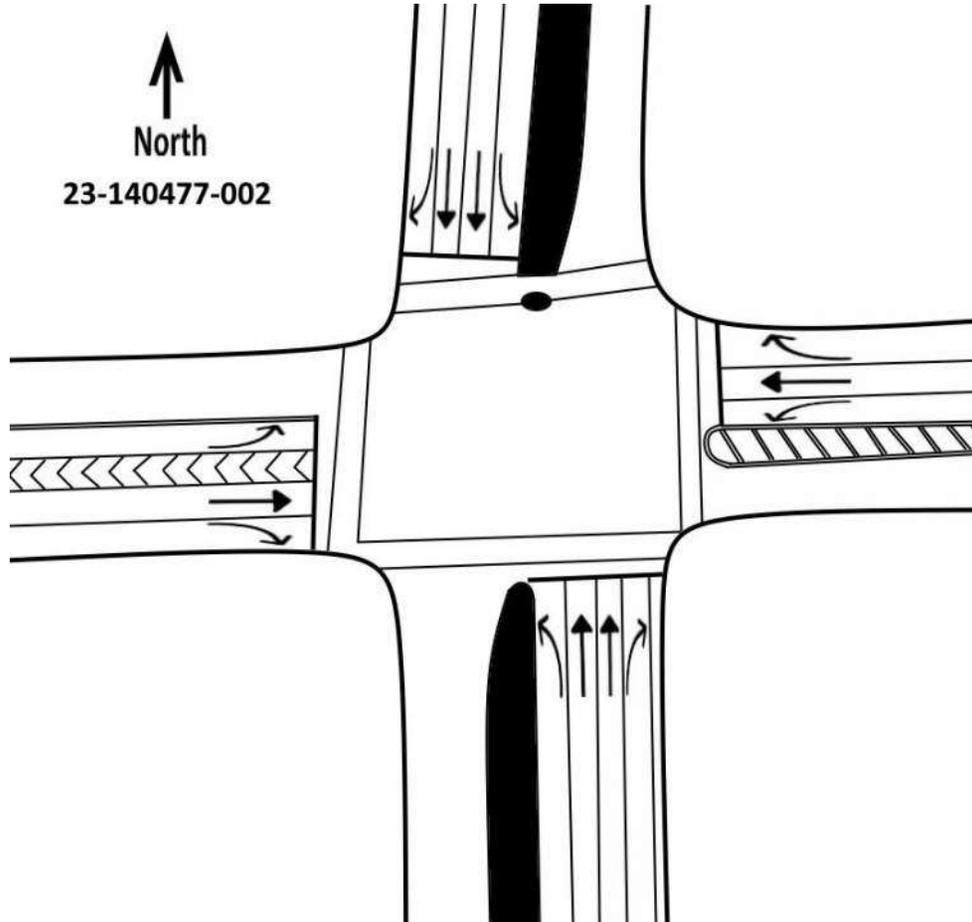
SIGNAL TIMING

PHASES	1	2	3
SL/ST	00:09	-	-
NL/SL	-	00:19	00:13
NT/ST	00:26	00:34	00:33
EL/WL	00:19	00:25	00:27
ET/WT	00:49	00:51	00:51



N/S Street: **N Park Rd**

Speed: **30 MPH**



E/W Street: **Johnson St**

Speed: **30 MPH**

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Park Rd & Johnson St
City: Hollywood
Control: Signalized

Project ID: 23-140477-002
Date: 12/6/2023

Data - Total

NS/EW Streets:	N Park Rd				N Park Rd				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	27	22	7	0	5	14	26	0	11	13	8	0	11	18	4	0	166
6:15 AM	41	19	17	0	5	21	66	0	19	23	15	0	8	40	5	0	279
6:30 AM	61	44	11	0	7	35	69	0	21	47	16	0	11	55	9	0	386
6:45 AM	52	46	18	0	11	34	61	0	32	72	18	0	25	54	12	0	435
7:00 AM	27	78	64	0	13	49	51	0	36	93	14	0	31	77	21	0	554
7:15 AM	33	68	49	0	21	41	62	0	50	109	23	0	46	95	34	0	631
7:30 AM	42	106	54	1	17	59	75	0	56	115	27	0	51	109	30	0	742
7:45 AM	62	121	48	0	34	86	86	0	62	96	20	0	54	117	33	0	819
8:00 AM	42	112	50	0	24	80	73	1	43	142	24	0	41	102	36	0	770
8:15 AM	55	133	42	0	27	95	69	0	48	100	22	0	39	77	34	0	741
8:30 AM	47	113	47	0	15	78	73	0	41	114	37	0	37	82	28	0	712
8:45 AM	32	109	39	0	22	81	51	0	49	105	27	0	29	58	26	0	628
9:00 AM	34	80	38	0	29	94	65	1	29	90	33	0	46	75	35	0	649
9:15 AM	38	82	33	0	17	66	38	0	34	84	18	0	23	63	27	0	523
9:30 AM	37	91	34	1	17	88	36	0	36	72	30	0	36	55	22	0	555
9:45 AM	35	84	24	0	15	76	41	0	32	87	28	0	37	67	23	0	549
TOTAL VOLUMES :	665	1308	575	2	279	997	942	2	599	1362	360	0	525	1144	379	0	9139
APPROACH %'s :	26.08%	51.29%	22.55%	0.08%	12.57%	44.91%	42.43%	0.09%	25.81%	58.68%	15.51%	0.00%	25.63%	55.86%	18.51%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	201	472	194	1	102	320	303	1	209	453	93	0	185	405	133	0	3072
PEAK HR FACTOR :	0.810	0.887	0.898	0.250	0.750	0.842	0.881	0.250	0.843	0.798	0.861	0.000	0.856	0.865	0.924	0.000	0.938
	0.939				0.881				0.903				0.886				

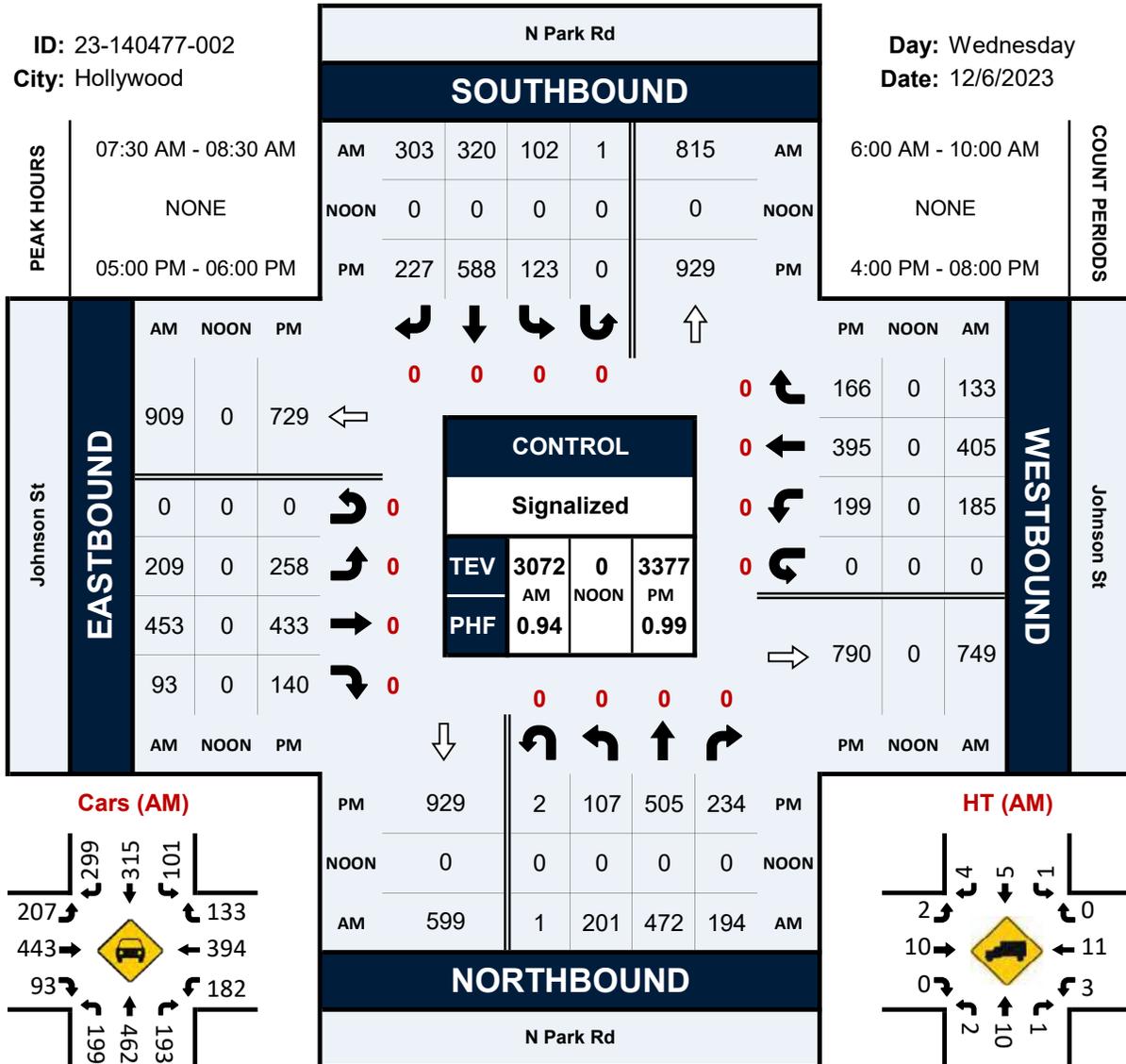
NS/EW Streets:	N Park Rd				N Park Rd				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	42	105	58	1	25	112	51	0	47	87	40	0	45	88	34	0	735
4:15 PM	19	116	49	0	32	88	44	1	61	101	39	0	46	87	44	1	728
4:30 PM	23	86	61	0	19	115	41	0	63	126	33	0	43	102	42	0	754
4:45 PM	35	125	55	1	28	121	54	1	61	92	31	0	46	99	39	0	788
5:00 PM	25	119	54	1	21	164	55	0	71	118	38	0	48	95	40	0	849
5:15 PM	26	125	60	0	34	151	54	0	73	89	46	0	55	86	47	0	846
5:30 PM	28	121	52	1	41	127	55	0	69	119	22	0	53	117	37	0	842
5:45 PM	28	140	68	0	27	146	63	0	45	107	34	0	43	97	42	0	840
6:00 PM	29	126	41	0	26	141	49	0	52	109	31	0	67	110	35	1	817
6:15 PM	53	110	59	0	21	108	78	0	41	87	35	0	46	80	24	0	742
6:30 PM	49	106	49	1	25	95	68	0	40	78	23	0	33	90	28	0	685
6:45 PM	24	76	49	0	17	90	34	0	37	91	24	0	56	81	24	0	603
7:00 PM	25	80	64	0	17	70	46	0	45	62	22	0	57	56	24	0	568
7:15 PM	28	72	31	0	16	62	40	0	52	88	42	0	22	62	22	0	537
7:30 PM	19	68	34	0	17	68	25	0	68	78	37	0	33	58	15	0	520
7:45 PM	21	72	31	0	26	53	25	0	48	54	19	0	36	59	18	0	462
TOTAL VOLUMES :	474	1647	815	5	392	1711	782	2	873	1486	516	0	729	1367	515	2	11316
APPROACH %'s :	16.12%	56.00%	27.71%	0.17%	13.58%	59.27%	27.09%	0.07%	30.37%	51.69%	17.95%	0.00%	27.90%	52.32%	19.71%	0.08%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	107	505	234	2	123	588	227	0	258	433	140	0	199	395	166	0	3377
PEAK HR FACTOR :	0.955	0.902	0.860	0.500	0.750	0.896	0.901	0.000	0.884	0.910	0.761	0.000	0.905	0.844	0.883	0.000	0.994
	0.898				0.977				0.915				0.918				

N Park Rd & Johnson St

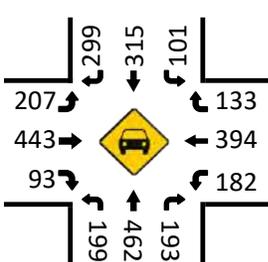
Peak Hour Turning Movement Count

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City: Hollywood

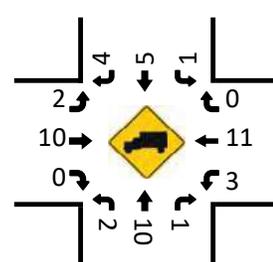
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Date: 12/6/2023



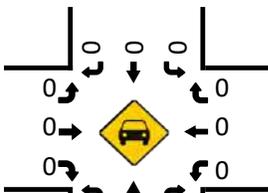
Cars (AM)



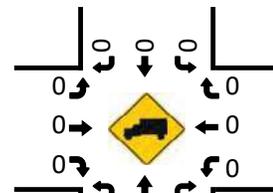
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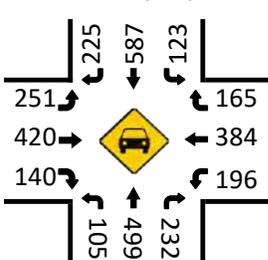
Cars (NOON)



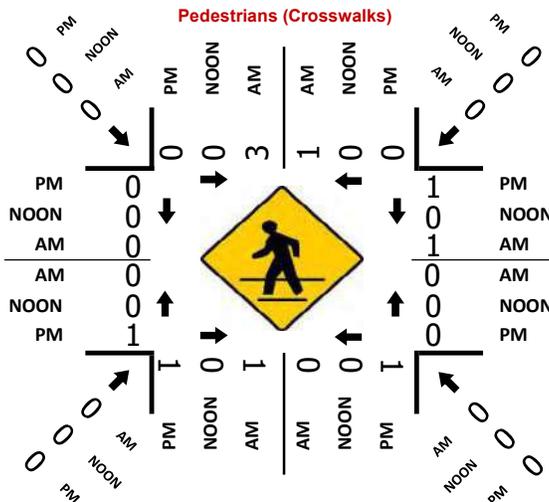
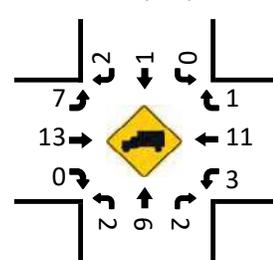
HT (NOON)



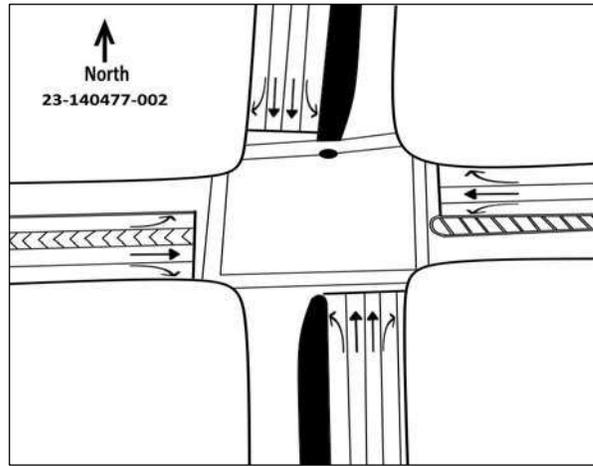
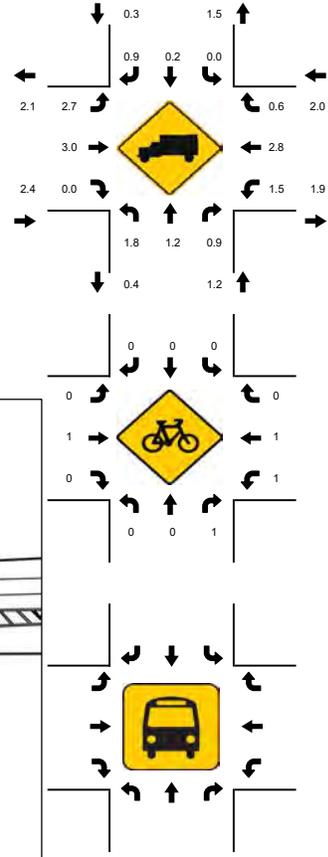
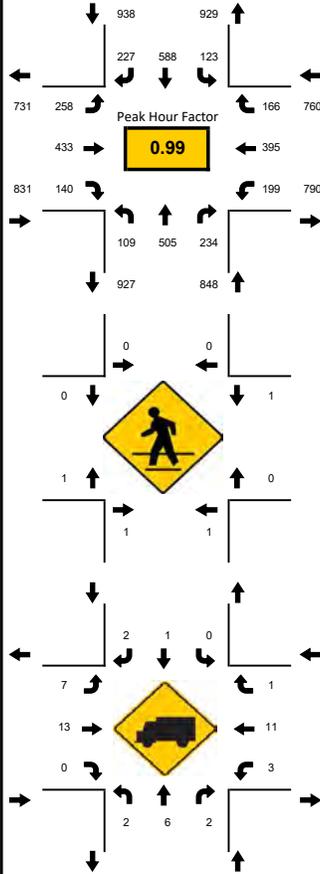
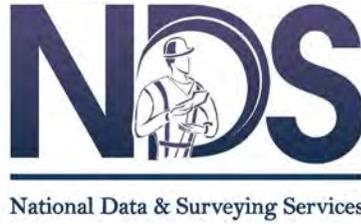
Cars (PM)



HT (PM)



Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:00 PM - 05:15 PM



15-Min Count Period Beginning At	N Park Rd Northbound					N Park Rd Southbound					Johnson St Eastbound					Johnson St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	42	105	58	1		25	112	51	0		47	87	40	0		45	88	34	0		735	3005
4:15 PM	19	116	49	0		32	88	44	1		61	101	39	0		46	87	44	1		728	3119
4:30 PM	23	86	61	0		19	115	41	0		63	126	33	0		43	102	42	0		754	3237
4:45 PM	35	125	55	1		28	121	54	1		61	92	31	0		46	99	39	0		788	3325
5:00 PM	25	119	54	1		21	164	55	0		71	118	38	0		48	95	40	0		849	3377
5:15 PM	26	125	60	0		34	151	54	0		73	89	46	0		55	86	47	0		846	3345
5:30 PM	28	121	52	1		41	127	55	0		69	119	22	0		53	117	37	0		842	3241
5:45 PM	28	140	68	0		27	146	63	0		45	107	34	0		43	97	42	0		840	3084
6:00 PM	29	126	41	0		26	141	49	0		52	109	31	0		67	110	35	1		817	2847
6:15 PM	53	110	59	0		21	108	78	0		41	87	35	0		46	80	24	0		742	2598
6:30 PM	49	106	49	1		25	95	68	0		40	78	23	0		33	90	28	0		685	2393
6:45 PM	24	76	49	0		17	90	34	0		37	91	24	0		56	81	24	0		603	2228
7:00 PM	25	80	64	0		17	70	46	0		45	62	22	0		57	56	24	0		568	2087
7:15 PM	28	72	31	0		16	62	40	0		52	88	42	0		22	62	22	0		537	1519
7:30 PM	19	68	34	0		17	68	25	0		68	78	37	0		33	58	15	0		520	982
7:45 PM	21	72	31	0		26	53	25	0		48	54	19	0		36	59	18	0		462	462
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	112	560	272	4		164	656	252	0		292	476	184	0		220	468	188	0		3848	
Heavy Trucks	4	12	8	0		0	4	4	0		8	24	0	0		8	16	4	0		92	
Pedestrians	4					0					4					4					12	
Bicycles	0	0	4	0		0	0	0	0		0	4	0	0		4	4	0	0		16	
Buses																						
Stopped Buses																						



National Data & Surveying Services

Site Code: **23-140477-001**

Date: **12/06/2023**

Weather: **Sunny**

City: **Hollywood**

County: **Broward**

Count Times: **06:00 - 10:00**

16:00 - 20:00

Control: **Signalized**

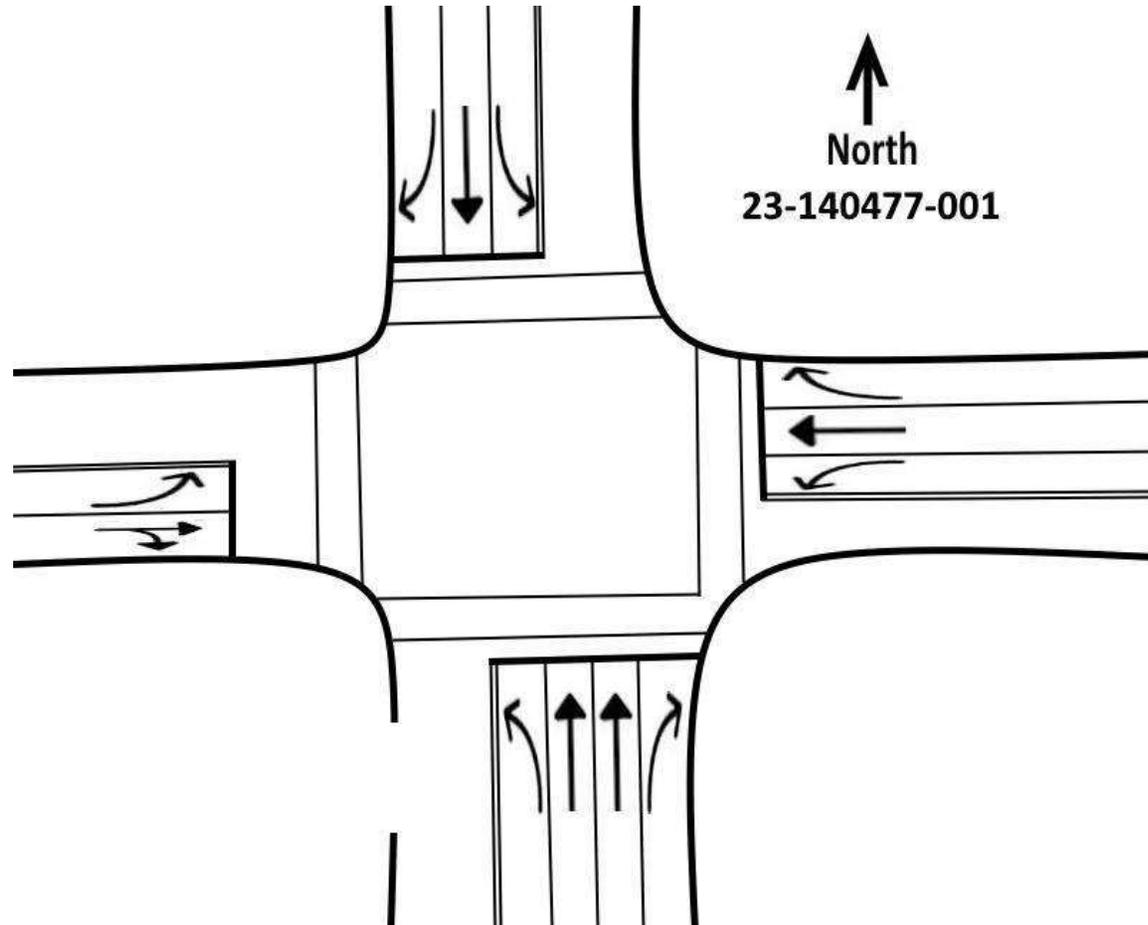
SIGNAL TIMING

PHASES	1	2	3
NL/SL	00:23	-	-
SL/ST	-	00:25	00:24
NL/NT	-	00:12	00:18
NT/ST	00:24	-	-
WL/WT	00:20	-	-
EL/WL	-	00:16	-
ET/WT	00:28	00:46	00:44



N/S Street: **N 35th Ave**

Speed: **30 MPH**



North
23-140477-001

E/W Street: **Johnson St**

Speed: **30 MPH**

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Johnson St
City: Hollywood
Control: Signalized

Project ID: 23-140477-001
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	22	18	3	0	11	11	5	0	6	19	1	1	5	44	20	0	166
6:15 AM	62	36	9	0	14	6	9	0	11	35	5	0	13	87	42	0	329
6:30 AM	73	65	9	0	29	20	12	0	15	44	6	0	16	105	71	0	465
6:45 AM	55	41	13	0	28	25	14	0	15	86	13	0	18	92	54	0	454
7:00 AM	40	26	17	0	32	14	14	0	15	89	12	0	23	96	36	0	414
7:15 AM	59	43	20	0	55	31	19	0	8	109	10	0	21	101	51	0	527
7:30 AM	68	49	25	0	63	32	18	0	11	107	13	0	27	132	56	0	601
7:45 AM	51	60	32	0	52	30	8	0	9	115	8	0	33	157	86	0	641
8:00 AM	58	59	26	0	59	27	14	0	10	104	13	0	28	113	68	0	579
8:15 AM	52	43	29	0	50	27	12	0	26	112	13	0	27	139	47	0	577
8:30 AM	37	49	26	0	51	30	20	0	20	92	15	0	25	106	69	0	540
8:45 AM	22	50	24	0	54	21	14	0	27	113	12	0	21	85	35	0	478
9:00 AM	22	43	21	0	38	27	13	0	24	99	6	0	27	114	39	0	473
9:15 AM	15	47	11	0	35	22	9	0	15	78	25	0	15	80	43	0	395
9:30 AM	28	34	16	0	49	25	16	0	19	89	15	0	17	85	33	0	426
9:45 AM	17	55	15	0	38	36	29	0	20	81	14	0	22	74	35	0	436
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	681	718	296	0	658	384	226	0	251	1372	181	1	338	1610	785	0	7501
APPROACH %'s :	40.18%	42.36%	17.46%	0.00%	51.89%	30.28%	17.82%	0.00%	13.91%	76.01%	10.03%	0.06%	12.37%	58.91%	28.72%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	229	211	112	0	224	116	52	0	56	438	47	0	115	541	257	0	2398
PEAK HR FACTOR :	0.842	0.879	0.875	0.000	0.889	0.906	0.722	0.000	0.538	0.952	0.904	0.000	0.871	0.861	0.747	0.000	0.935
	0.965				0.867				0.896				0.827				

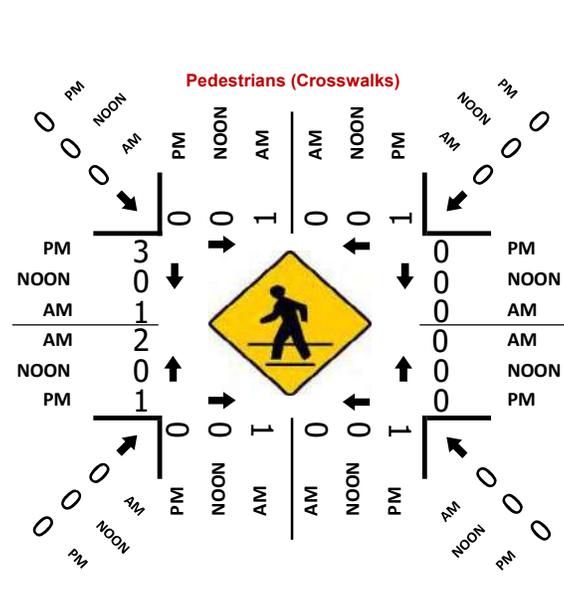
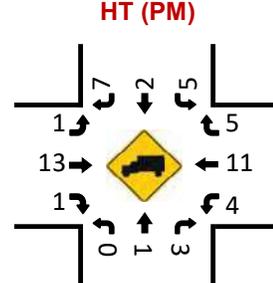
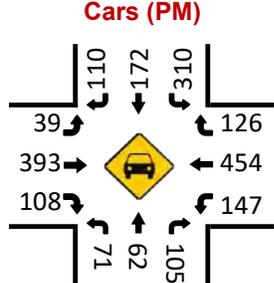
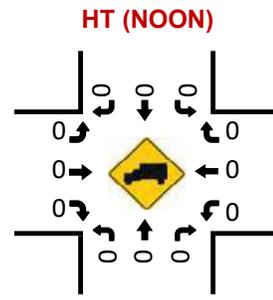
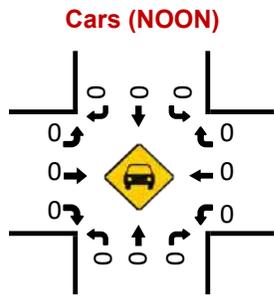
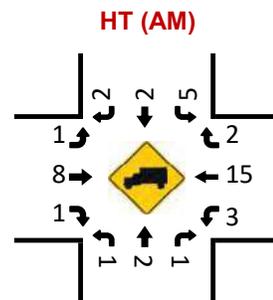
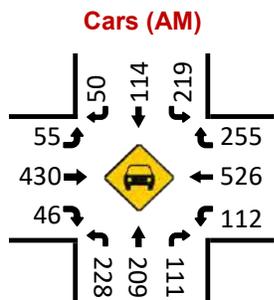
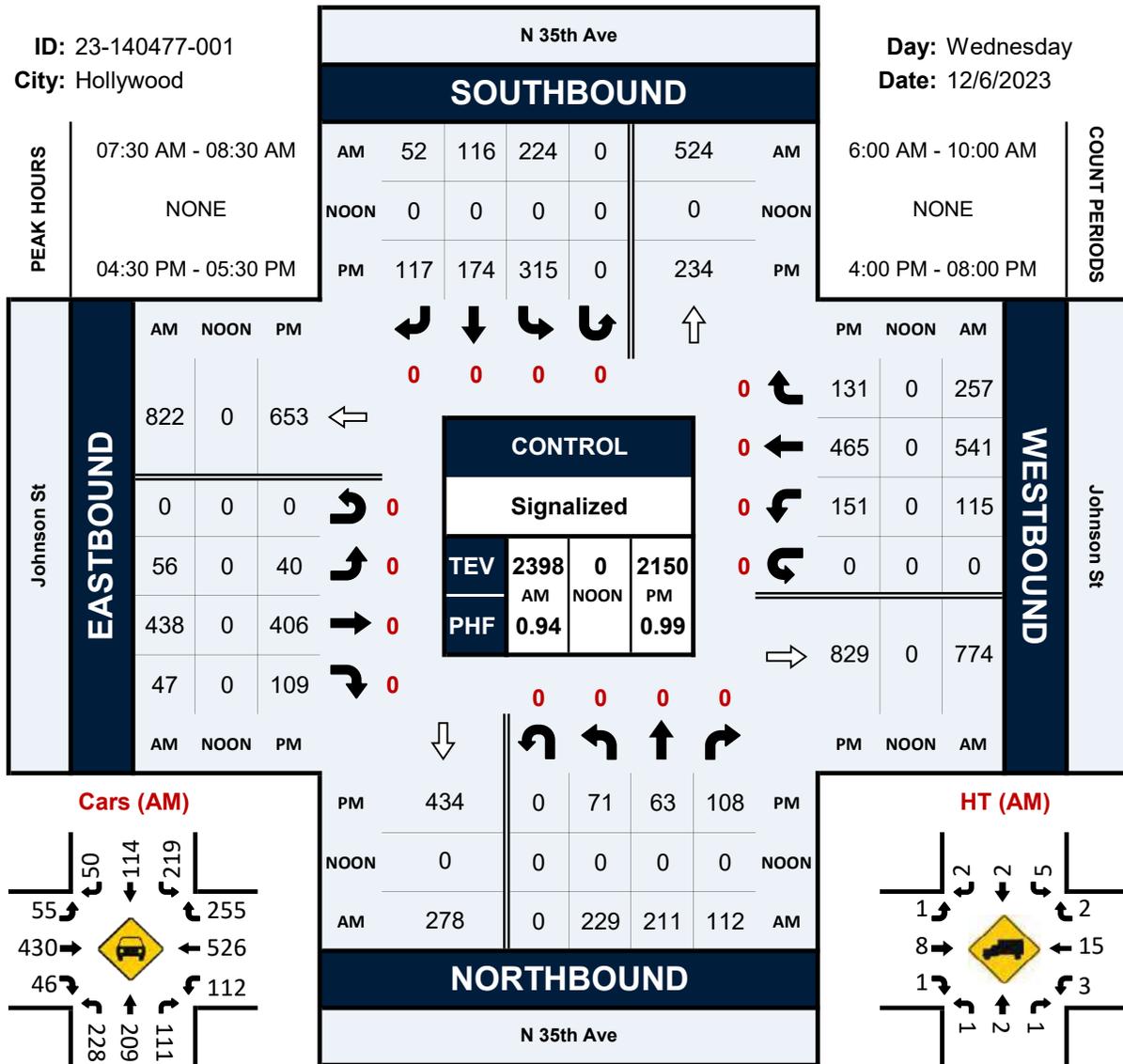
NS/EW Streets:	N 35th Ave				N 35th Ave				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	28	27	29	0	68	58	33	0	14	78	28	0	29	119	31	0	542
4:15 PM	19	21	17	0	80	38	34	0	10	111	24	0	29	116	19	0	518
4:30 PM	19	18	26	0	87	39	38	0	5	97	25	0	32	126	22	0	534
4:45 PM	19	16	30	0	70	36	22	0	18	98	26	0	36	129	32	0	532
5:00 PM	14	16	25	0	86	48	32	0	10	107	30	0	45	103	28	0	544
5:15 PM	19	13	27	0	72	51	25	0	7	104	28	0	38	107	49	0	540
5:30 PM	17	24	31	0	76	38	18	0	7	104	20	0	41	125	31	0	532
5:45 PM	13	25	34	0	60	51	11	0	14	101	28	0	46	114	33	0	530
6:00 PM	23	24	19	0	50	37	17	0	9	113	25	0	26	127	29	0	499
6:15 PM	44	26	19	0	54	21	19	0	16	95	19	0	23	139	43	0	518
6:30 PM	48	31	21	0	52	32	28	0	19	69	13	0	31	138	49	1	532
6:45 PM	16	16	8	0	45	27	15	0	10	92	11	0	27	101	18	0	386
7:00 PM	16	13	22	0	43	22	21	0	5	72	20	0	29	77	21	0	361
7:15 PM	9	14	18	0	65	43	37	0	3	91	42	0	17	92	20	0	451
7:30 PM	9	8	19	0	56	26	10	0	13	110	25	1	16	68	13	0	374
7:45 PM	13	13	10	0	44	15	21	0	5	62	27	0	24	71	16	0	321
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	326	305	355	0	1008	582	381	0	165	1504	391	1	489	1752	454	1	7714
APPROACH %'s :	33.06%	30.93%	36.00%	0.00%	51.14%	29.53%	19.33%	0.00%	8.01%	72.97%	18.97%	0.05%	18.14%	64.99%	16.84%	0.04%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	71	63	108	0	315	174	117	0	40	406	109	0	151	465	131	0	2150
PEAK HR FACTOR :	0.934	0.875	0.900	0.000	0.905	0.853	0.770	0.000	0.556	0.949	0.908	0.000	0.839	0.901	0.668	0.000	0.988
	0.931				0.913				0.944				0.948				

N 35th Ave & Johnson St

Peak Hour Turning Movement Count

ID: 23-140477-001
City: Hollywood

Day: Wednesday
Date: 12/6/2023





National Data & Surveying Services

Site Code: 23-140477-003

Date: 12/06/2023

Weather: Sunny

City: Hollywood

County: Broward

Count Times: 06:00 - 10:00

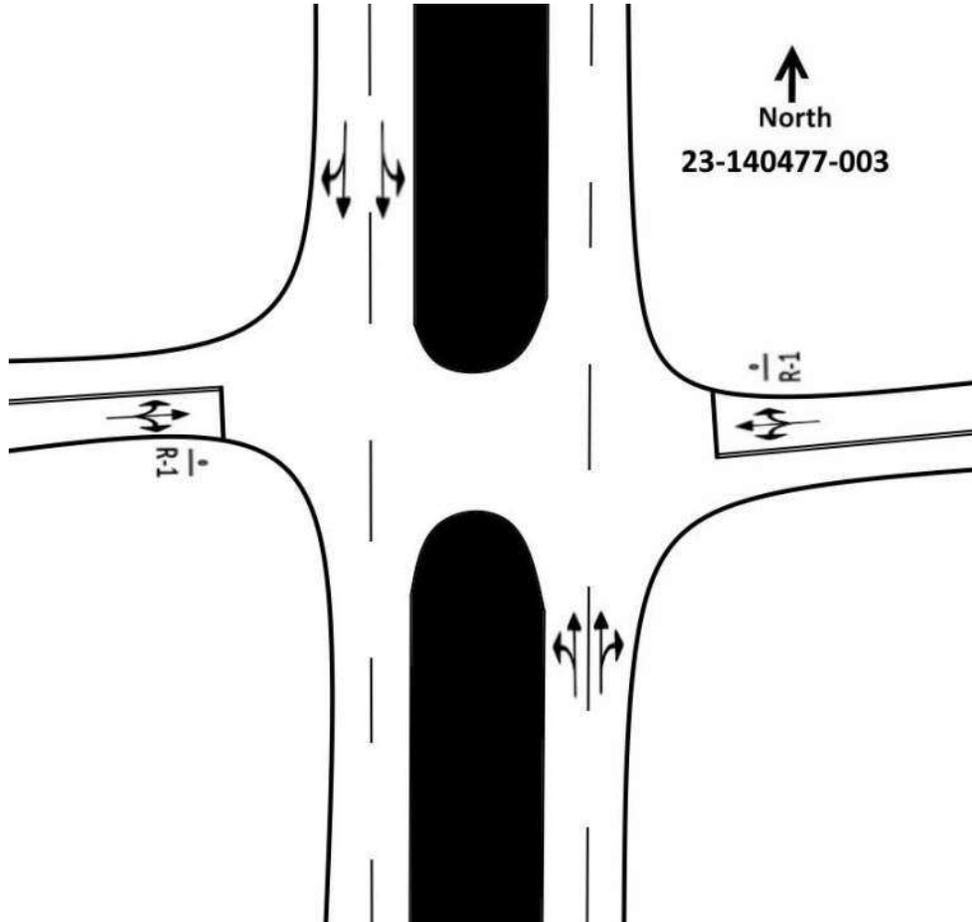
16:00 - 20:00

Control: 2-Way Stop(EB/WB)



N/S Street: N Park Rd

Speed: 30 MPH



E/W Street: Garfield St

Speed: 30 MPH

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Park Rd & Garfield St
City: Hollywood
Control: 2-Way Stop(EB/WB)

Project ID: 23-140477-003
Date: 12/6/2023

Data - Total

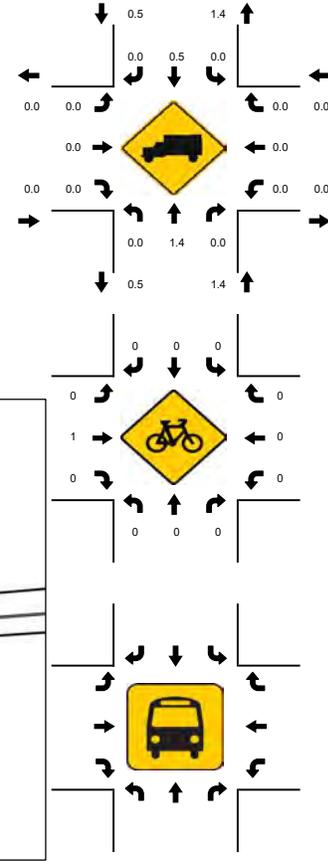
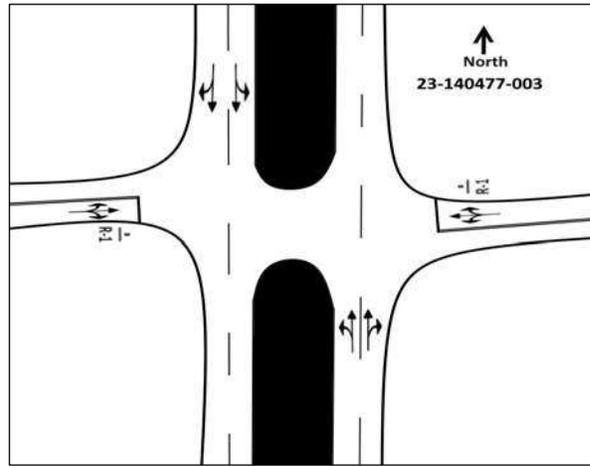
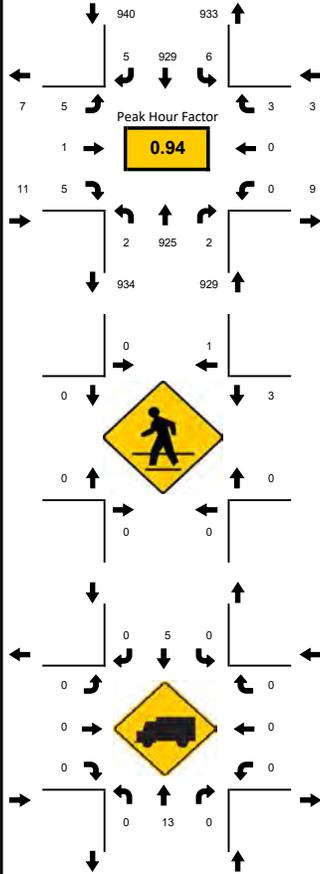
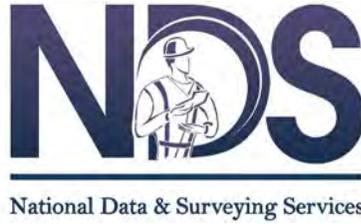
NS/EW Streets:	N Park Rd				N Park Rd				Garfield St				Garfield St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	38	0	0	1	47	0	1	0	0	0	0	0	0	0	0	87
6:15 AM	0	42	1	0	0	93	0	0	1	0	0	0	0	0	0	0	137
6:30 AM	0	73	1	0	0	107	0	0	0	0	0	0	1	0	0	0	182
6:45 AM	0	91	0	0	0	109	0	0	0	0	0	0	1	0	2	0	203
7:00 AM	0	139	1	0	0	110	0	0	0	0	0	0	1	0	1	0	252
7:15 AM	1	166	0	0	0	122	0	0	1	0	2	0	1	0	2	0	295
7:30 AM	0	186	0	0	0	161	0	0	0	0	1	0	1	0	1	0	350
7:45 AM	0	226	0	0	0	199	0	0	1	0	0	0	1	1	1	0	429
8:00 AM	3	201	2	0	2	192	1	0	1	0	0	0	1	0	5	0	408
8:15 AM	0	207	1	0	0	177	1	0	0	0	0	0	0	0	0	0	386
8:30 AM	0	186	0	0	0	170	0	0	1	0	1	0	0	0	1	0	359
8:45 AM	1	180	0	0	0	167	0	0	1	0	0	0	2	0	0	0	351
9:00 AM	0	143	0	0	1	181	1	0	0	0	0	0	0	0	0	0	326
9:15 AM	0	145	1	0	0	125	1	1	0	0	0	0	0	0	1	0	274
9:30 AM	0	145	1	0	0	129	0	0	1	0	0	0	0	0	1	0	277
9:45 AM	0	128	0	1	1	135	0	0	0	0	0	0	0	0	0	0	265
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	5	2296	8	1	5	2224	4	2	7	0	4	0	9	1	15	0	4581
APPROACH %'s :	0.22%	99.39%	0.35%	0.04%	0.22%	99.51%	0.18%	0.09%	63.64%	0.00%	36.36%	0.00%	36.00%	4.00%	60.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	3	820	3	0	2	738	2	0	3	0	1	0	2	1	7	0	1582
PEAK HR FACTOR :	0.250	0.907	0.375	0.000	0.250	0.927	0.500	0.000	0.750	0.000	0.250	0.000	0.500	0.250	0.350	0.000	0.922
	0.914				0.932				0.500				0.417				

NS/EW Streets:	N Park Rd				N Park Rd				Garfield St				Garfield St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	184	2	0	2	170	1	0	2	0	1	0	0	0	1	0	363
4:15 PM	2	209	1	0	0	154	1	1	1	0	2	0	1	0	0	0	372
4:30 PM	0	192	1	0	0	185	2	0	1	0	1	0	0	0	0	0	382
4:45 PM	0	223	0	0	0	180	0	0	1	0	1	0	2	0	1	0	408
5:00 PM	1	234	0	0	1	250	1	0	4	0	1	0	0	0	0	0	492
5:15 PM	1	243	0	0	2	248	3	0	1	0	2	0	0	0	3	0	503
5:30 PM	0	230	2	0	2	219	0	1	0	1	1	0	0	0	0	0	456
5:45 PM	0	218	0	0	0	212	1	0	0	0	1	0	0	0	0	0	432
6:00 PM	1	199	0	3	2	225	0	1	0	0	0	0	0	0	0	0	431
6:15 PM	0	175	0	1	1	193	1	1	1	0	0	0	0	0	2	0	375
6:30 PM	0	166	1	0	1	185	0	1	1	0	1	0	0	0	0	0	356
6:45 PM	0	144	2	0	1	145	0	1	1	0	0	0	1	0	1	0	296
7:00 PM	0	140	3	0	1	124	0	0	1	0	0	0	0	0	1	0	270
7:15 PM	0	148	0	0	0	124	0	0	1	0	0	0	1	0	0	0	274
7:30 PM	0	150	1	0	0	93	0	0	0	0	1	0	1	0	1	0	247
7:45 PM	0	140	0	0	0	103	0	0	0	0	0	0	0	0	2	0	245
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	5	2995	13	4	13	2810	10	6	15	1	12	0	6	0	12	0	5902
APPROACH %'s :	0.17%	99.27%	0.43%	0.13%	0.46%	98.98%	0.35%	0.21%	53.57%	3.57%	42.86%	0.00%	33.33%	0.00%	66.67%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	925	2	0	5	929	5	1	5	1	5	0	0	0	3	0	1883
PEAK HR FACTOR :	0.500	0.952	0.250	0.000	0.625	0.929	0.417	0.250	0.313	0.250	0.625	0.000	0.000	0.000	0.250	0.000	0.936
	0.952				0.929				0.550				0.250				

LOCATION: N Park Rd & Garfield St
 CITY/STATE: Hollywood, FL

PROJECT ID: 23-140477-003
 DATE: Wed, Dec 06, 2023

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



15-Min Count Period Beginning At	N Park Rd Northbound					N Park Rd Southbound					Garfield St Eastbound					Garfield St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	184	2	0		2	170	1	0		2	0	1	0		0	0	1	0		363	1525
4:15 PM	2	209	1	0		0	154	1	1		1	0	2	0		1	0	0	0		372	1654
4:30 PM	0	192	1	0		0	185	2	0		1	0	1	0		0	0	0	0		382	1785
4:45 PM	0	223	0	0		0	180	0	0		1	0	1	0		2	0	1	0		408	1859
5:00 PM	1	234	0	0		1	250	1	0		4	0	1	0		0	0	0	0		492	1883
5:15 PM	1	243	0	0		2	248	3	0		1	0	2	0		0	0	3	0		503	1822
5:30 PM	0	230	2	0		2	219	0	1		0	1	1	0		0	0	0	0		456	1694
5:45 PM	0	218	0	0		0	212	1	0		0	0	1	0		0	0	0	0		432	1594
6:00 PM	1	199	0	3		2	225	0	1		0	0	0	0		0	0	0	0		431	1458
6:15 PM	0	175	0	1		1	193	1	1		1	0	0	0		0	0	2	0		375	1297
6:30 PM	0	166	1	0		1	185	0	1		1	0	1	0		0	0	0	0		356	1196
6:45 PM	0	144	2	0		1	145	0	1		1	0	0	0		1	0	1	0		296	1087
7:00 PM	0	140	3	0		1	124	0	0		1	0	0	0		0	0	1	0		270	1036
7:15 PM	0	148	0	0		0	124	0	0		1	0	0	0		1	0	0	0		274	766
7:30 PM	0	150	1	0		0	93	0	0		0	0	1	0		1	0	1	0		247	492
7:45 PM	0	140	0	0		0	103	0	0		0	0	0	0		0	0	2	0		245	245
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	4	972	8	0		8	1000	12	4		16	4	8	0		0	0	12	0		2048	
Heavy Trucks	0	20	0	0		0	12	0	0		0	0	0	0		0	0	0	0		32	
Pedestrians	0	0	0	0		0	4	0	0		0	0	0	0		4	0	0	0		8	
Bicycles	0	0	0	0		0	0	0	0		0	4	0	0		0	0	0	0		4	
Buses																						
Stopped Buses																						



National Data & Surveying Services

Site Code: 23-140477-004

Date: 12/06/2023

Weather: Sunny

City: Hollywood

County: Broward

Count Times: 06:00 - 10:00

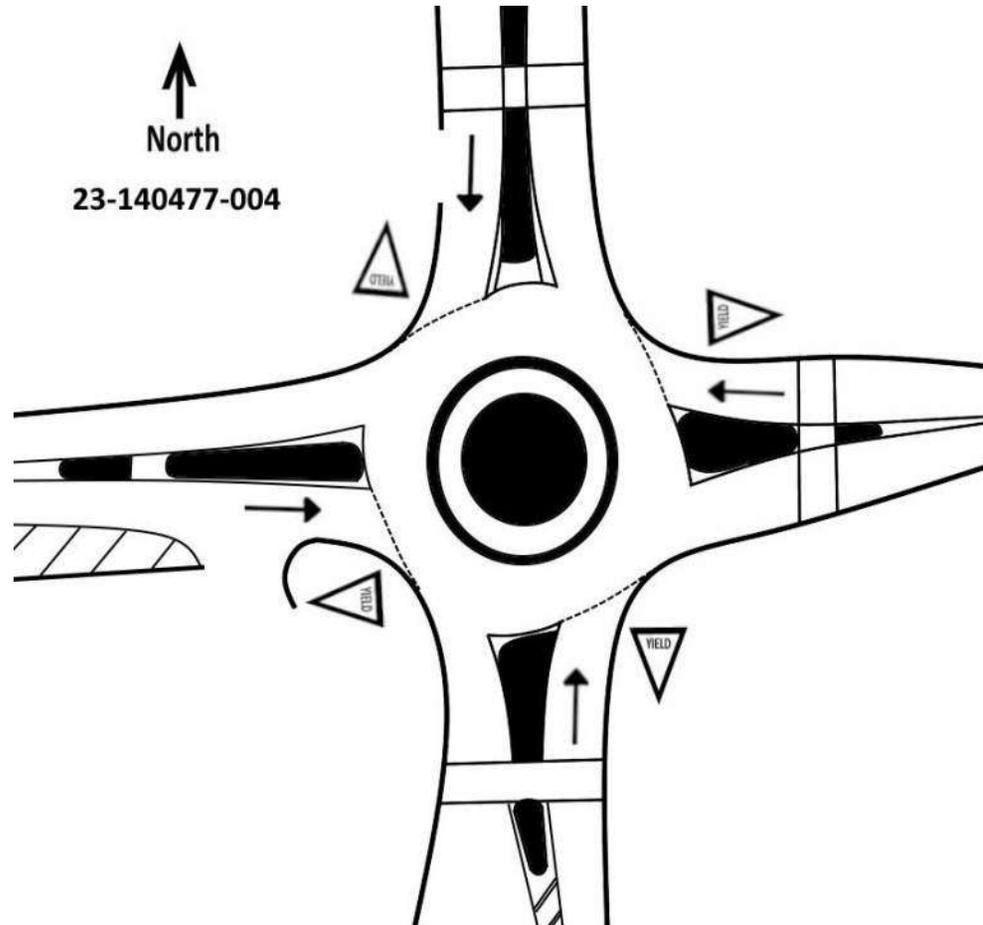
16:00 - 20:00

Control: 4-Way Yield



N/S Street: N 35th Ave

Speed: 30 MPH



E/W Street: Garfield St

Speed: 30 MPH

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Garfield St
City: Hollywood
Control: 4-Way Yield

Project ID: 23-140477-004
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Garfield St				Garfield St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	7	1	0	0	0	13	1	0	1	0	4	0	0	0	0	0	27
6:15 AM	5	4	0	1	0	20	12	0	2	0	2	0	0	0	0	0	46
6:30 AM	15	4	0	3	1	26	33	0	2	0	5	0	1	0	0	0	90
6:45 AM	14	6	0	3	0	27	15	0	3	0	6	0	0	0	0	0	74
7:00 AM	14	8	0	1	0	25	3	0	2	0	7	0	0	0	0	0	60
7:15 AM	11	15	0	4	0	33	8	0	6	0	6	2	0	0	0	0	85
7:30 AM	9	30	0	3	1	47	7	1	9	0	6	0	1	0	0	0	114
7:45 AM	8	32	1	5	0	62	9	1	5	0	5	1	1	0	0	0	130
8:00 AM	19	14	0	5	2	80	6	2	1	0	3	0	5	0	1	0	138
8:15 AM	5	23	2	5	2	56	4	1	1	0	3	0	3	0	0	0	108
8:30 AM	8	13	4	7	2	44	1	0	1	1	11	0	4	1	2	0	99
8:45 AM	5	12	3	6	1	58	5	0	3	0	6	0	4	0	0	0	103
9:00 AM	6	11	1	8	0	36	3	0	5	0	9	0	4	1	1	0	85
9:15 AM	3	19	5	6	1	32	3	0	1	0	6	0	6	0	2	0	84
9:30 AM	6	22	0	5	0	38	5	0	6	1	12	0	3	1	3	0	102
9:45 AM	8	19	2	7	3	39	2	0	9	0	15	0	3	0	1	0	108
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	143	233	18	69	13	636	117	5	57	2	106	3	35	3	10	0	1450
APPROACH %'s :	30.89%	50.32%	3.89%	14.90%	1.69%	82.49%	15.18%	0.65%	33.93%	1.19%	63.10%	1.79%	72.92%	6.25%	20.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	41	99	3	18	5	245	26	5	16	0	17	1	10	0	1	0	487
PEAK HR FACTOR :	0.539	0.773	0.375	0.900	0.625	0.766	0.722	0.625	0.444	0.000	0.708	0.250	0.500	0.000	0.250	0.000	0.882
	0.875				0.781				0.567				0.458				

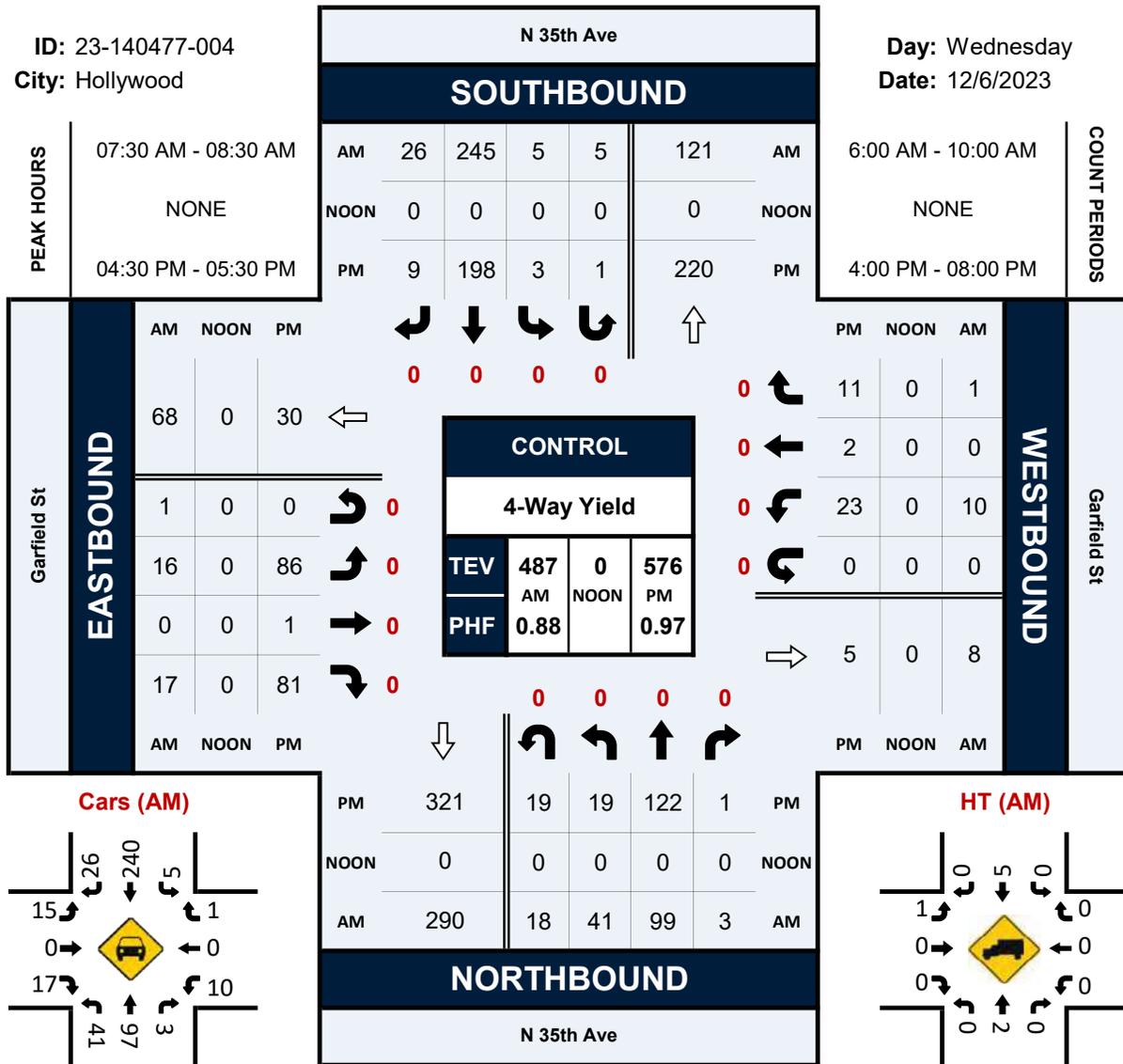
NS/EW Streets:	N 35th Ave				N 35th Ave				Garfield St				Garfield St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	29	6	10	0	33	2	1	12	0	24	1	8	1	2	0	130
4:15 PM	2	27	2	5	2	54	1	1	10	0	25	0	7	0	5	1	142
4:30 PM	5	25	1	7	0	48	4	0	20	0	26	0	6	1	5	0	148
4:45 PM	2	25	0	6	1	50	0	0	20	1	22	0	7	0	5	0	139
5:00 PM	8	22	0	1	2	55	2	1	28	0	18	0	9	1	0	0	147
5:15 PM	4	50	0	5	0	45	3	0	18	0	15	0	1	0	1	0	142
5:30 PM	4	30	0	6	0	49	3	0	11	0	19	0	3	0	2	0	127
5:45 PM	2	31	0	3	0	51	5	1	8	0	14	0	0	0	1	0	116
6:00 PM	5	12	0	1	0	43	7	0	6	0	19	0	2	0	1	0	96
6:15 PM	3	12	1	3	1	41	10	2	5	1	12	0	3	0	1	0	95
6:30 PM	4	8	2	4	0	49	11	2	4	0	13	0	3	0	2	0	102
6:45 PM	3	6	0	0	0	34	2	0	3	0	9	0	0	0	0	0	57
7:00 PM	1	10	0	1	0	31	3	0	3	0	6	0	0	0	0	0	55
7:15 PM	0	11	0	2	1	28	1	0	12	0	12	0	0	0	0	0	67
7:30 PM	1	15	0	3	0	19	0	0	9	0	8	0	1	0	0	0	56
7:45 PM	2	6	0	1	0	23	0	0	2	0	4	0	3	0	0	0	41
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	47	319	12	58	7	653	54	8	171	2	246	1	53	3	25	1	1660
APPROACH %'s :	10.78%	73.17%	2.75%	13.30%	0.97%	90.44%	7.48%	1.11%	40.71%	0.48%	58.57%	0.24%	64.63%	3.66%	30.49%	1.22%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	19	122	1	19	3	198	9	1	86	1	81	0	23	2	11	0	576
PEAK HR FACTOR :	0.594	0.610	0.250	0.679	0.375	0.900	0.563	0.250	0.768	0.250	0.779	0.000	0.639	0.500	0.550	0.000	0.973
	0.682				0.879				0.913				0.750				

N 35th Ave & Garfield St

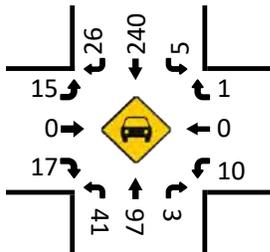
Peak Hour Turning Movement Count

ID: 23-140477-004
City: Hollywood

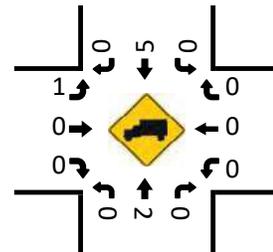
Day: Wednesday
Date: 12/6/2023



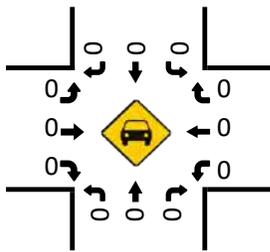
Cars (AM)



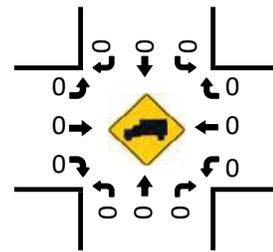
HT (AM)



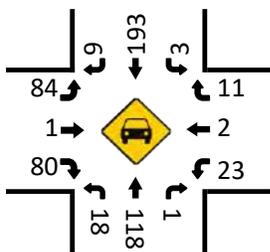
Cars (NOON)



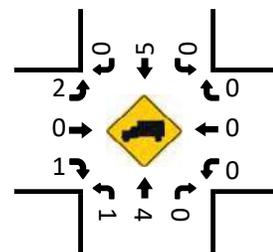
HT (NOON)



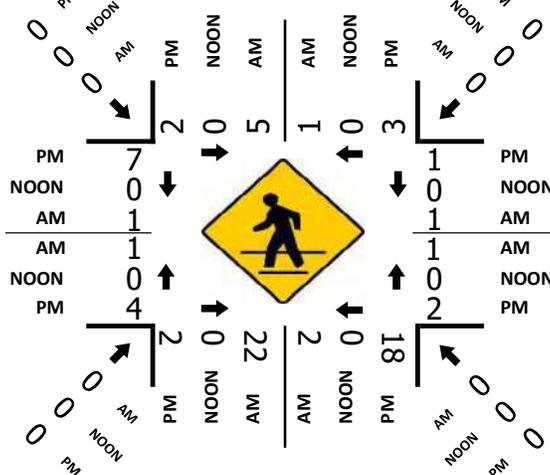
Cars (PM)



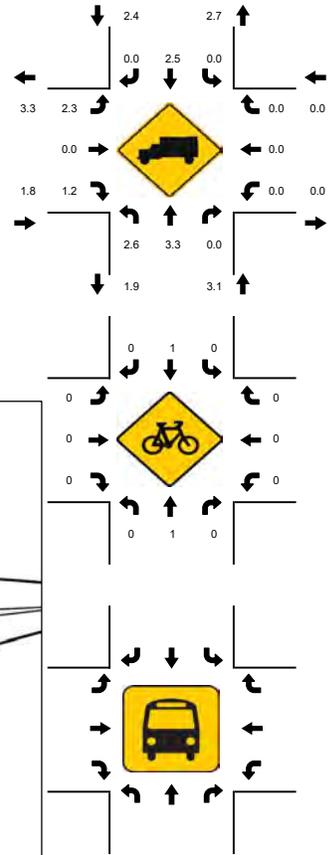
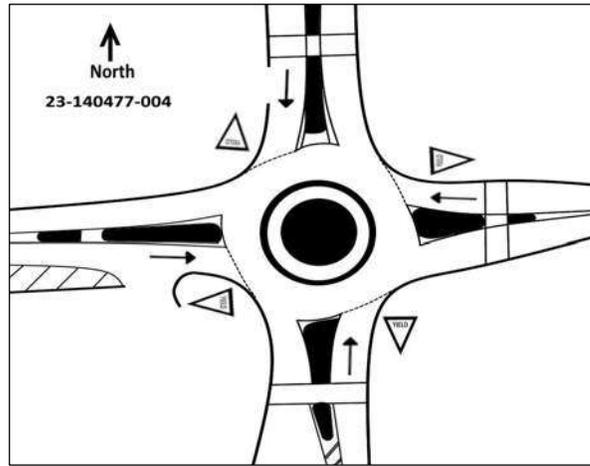
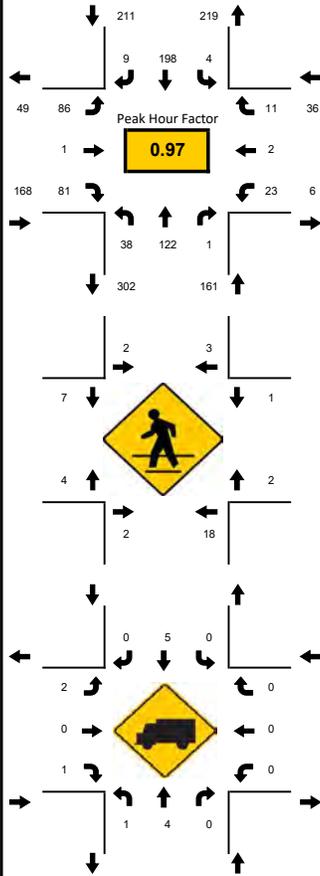
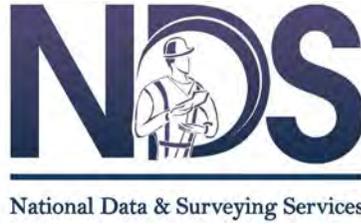
HT (PM)



Pedestrians (Crosswalks)



Peak-Hour: 04:30 PM - 05:30 PM
 Peak 15-Minute: 04:30 PM - 04:45 PM



15-Min Count Period Beginning At	N 35th Ave Northbound					N 35th Ave Southbound					Garfield St Eastbound					Garfield St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	1	29	6	10		0	33	2	1		12	0	24	1		8	1	2	0		130	559
4:15 PM	2	27	2	5		2	54	1	1		10	0	25	0		7	0	5	1		142	576
4:30 PM	5	25	1	7		0	48	4	0		20	0	26	0		6	1	5	0		148	576
4:45 PM	2	25	0	6		1	50	0	0		20	1	22	0		7	0	5	0		139	555
5:00 PM	8	22	0	1		2	55	2	1		28	0	18	0		9	1	0	0		147	532
5:15 PM	4	50	0	5		0	45	3	0		18	0	15	0		1	0	1	0		142	481
5:30 PM	4	30	0	6		0	49	3	0		11	0	19	0		3	0	2	0		127	434
5:45 PM	2	31	0	3		0	51	5	1		8	0	14	0		0	0	1	0		116	409
6:00 PM	5	12	0	1		0	43	7	0		6	0	19	0		2	0	1	0		96	350
6:15 PM	3	12	1	3		1	41	10	2		5	1	12	0		3	0	1	0		95	309
6:30 PM	4	8	2	4		0	49	11	2		4	0	13	0		3	0	2	0		102	281
6:45 PM	3	6	0	0		0	34	2	0		3	0	9	0		0	0	0	0		57	235
7:00 PM	1	10	0	1		0	31	3	0		3	0	6	0		0	0	0	0		55	219
7:15 PM	0	11	0	2		1	28	1	0		12	0	12	0		0	0	0	0		67	164
7:30 PM	1	15	0	3		0	19	0	0		9	0	8	0		1	0	0	0		56	97
7:45 PM	2	6	0	1		0	23	0	0		2	0	4	0		3	0	0	0		41	41
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	32	200	4	28		8	220	16	4		112	4	104	0		36	4	20	0		792	
Heavy Trucks	4	4	0	0		0	12	0	0		8	0	4	0		0	0	0	0		32	
Pedestrians		40					12					20					8				80	
Bicycles	0	4	0	0		0	4	0	0		0	0	0	0		0	0	0	0		8	
Buses																						
Stopped Buses																						



National Data & Surveying Services

Site Code: **23-140477-005**

Date: **12/06/2023**

Weather: **Sunny**

City: **Hollywood**

County: **Broward**

Count Times: **06:00 - 10:00**

16:00 - 20:00

Control: **Signalized**

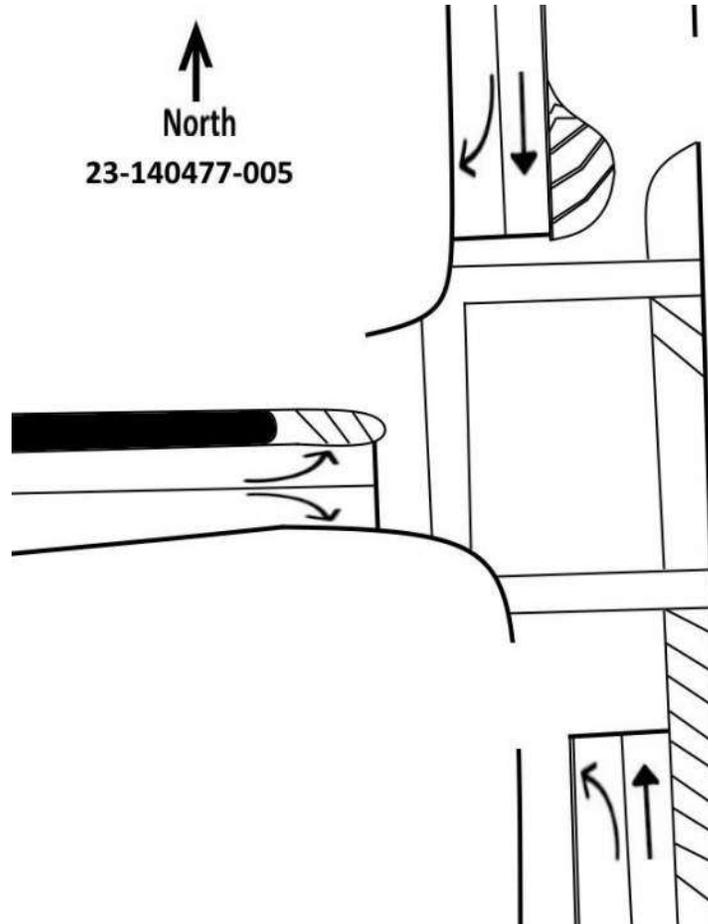
SIGNAL TIMING

PHASES	1	2	3
NT/ST	00:24	00:29	00:20
EL	00:33	00:26	00:33



N/S Street: **N 35th Ave**

Speed: **30 MPH**



E/W Street: **Memorial Medical Office Centre Dwy**

Speed: **30 MPH**

National Data & Surveying Services

Intersection Turning Movement Count

Location: N 35th Ave & Memorial Medical Office Centre Dwy
City: Hollywood
Control: Signalized

Project ID: 23-140477-005
Date: 12/6/2023

Data - Total

NS/EW Streets:	N 35th Ave				N 35th Ave				Memorial Medical Office Centre Dwy				Memorial Medical Office Centre Dwy				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	32	8	0	0	0	16	2	0	1	0	9	0	0	0	0	0	68
6:15 AM	77	9	0	0	0	15	8	0	2	0	16	0	0	0	0	0	127
6:30 AM	121	23	0	0	0	29	3	0	1	0	24	0	0	0	0	0	201
6:45 AM	74	20	0	0	0	29	8	0	3	0	28	0	0	0	0	0	162
7:00 AM	46	20	0	0	0	27	7	0	3	0	31	0	0	0	0	0	134
7:15 AM	62	32	0	0	0	36	5	0	3	0	74	0	0	0	0	0	212
7:30 AM	62	43	0	0	0	44	8	0	2	0	52	0	0	0	0	0	211
7:45 AM	94	46	0	0	0	65	7	0	4	0	28	0	0	0	0	0	244
8:00 AM	89	44	0	0	0	70	16	0	5	0	32	0	0	0	0	0	256
8:15 AM	69	37	0	0	0	55	13	0	0	0	30	0	0	0	0	0	213
8:30 AM	85	36	0	0	0	60	6	0	4	0	42	0	0	0	0	0	233
8:45 AM	79	33	0	0	0	66	11	0	2	0	26	1	0	0	0	0	218
9:00 AM	68	28	0	1	0	47	11	0	5	0	24	0	0	0	0	0	184
9:15 AM	64	33	0	0	0	40	7	2	9	0	27	0	0	0	0	0	182
9:30 AM	52	26	0	0	0	47	14	0	14	0	42	0	0	0	0	0	195
9:45 AM	65	35	0	0	0	52	11	0	9	0	43	0	0	0	0	0	215
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1139	473	0	1	0	698	137	2	76	0	528	1	0	0	0	0	3055
APPROACH %'s :	70.61%	29.32%	0.00%	0.06%	0.00%	83.39%	16.37%	0.24%	12.56%	0.00%	87.27%	0.17%	0	0	0	0	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	337	163	0	0	0	250	42	0	22	0	132	0	0	0	0	0	946
PEAK HR FACTOR :	0.896	0.886	0.000	0.000	0.000	0.893	0.656	0.000	0.611	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.924
	0.893				0.849				0.837								

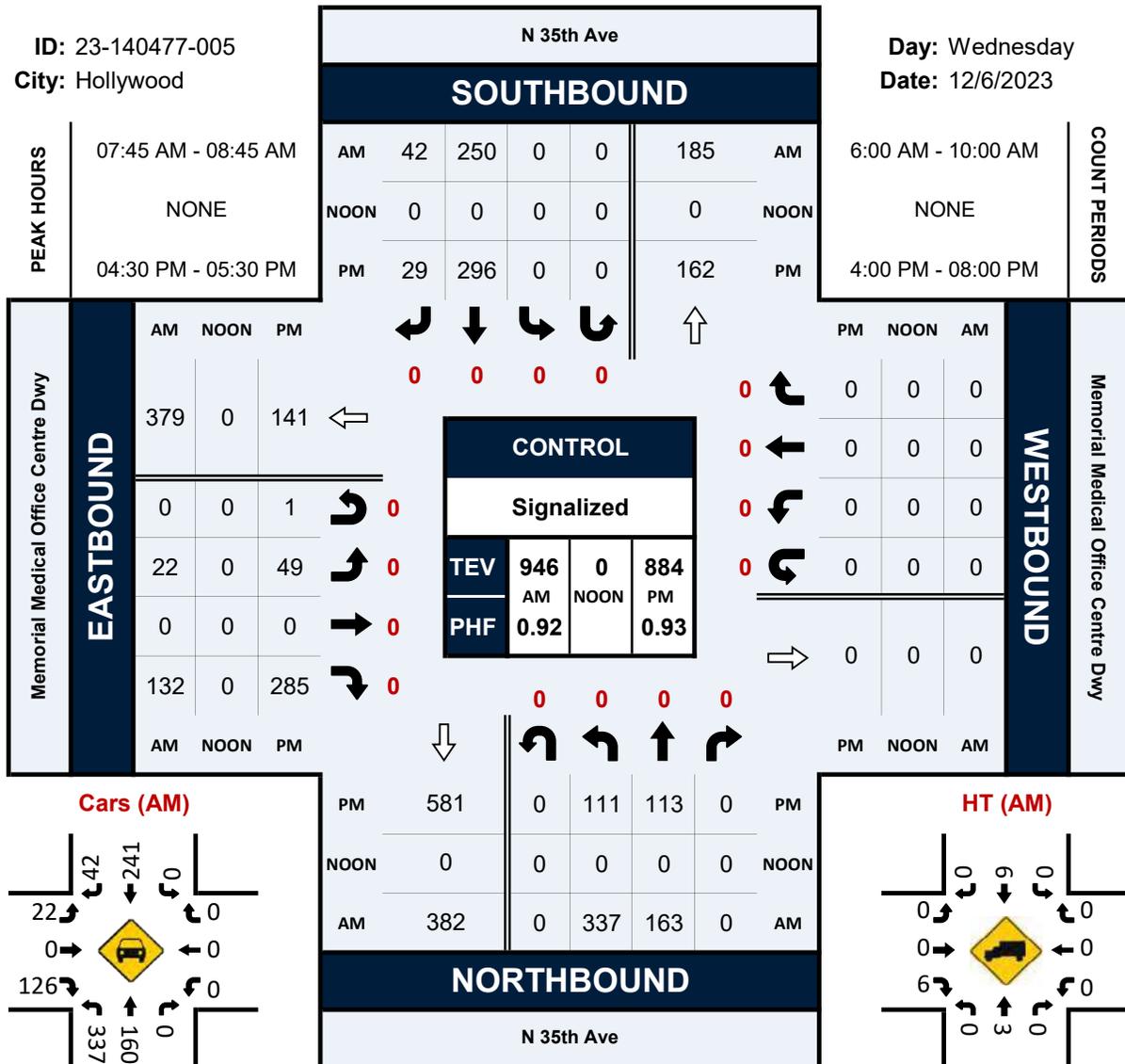
NS/EW Streets:	N 35th Ave				N 35th Ave				Memorial Medical Office Centre Dwy				Memorial Medical Office Centre Dwy				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	40	35	0	0	0	65	9	0	13	0	79	1	0	0	0	0	242
4:15 PM	23	25	0	0	0	79	7	0	9	0	65	0	0	0	0	0	208
4:30 PM	22	26	0	0	0	85	6	0	13	0	70	1	0	0	0	0	223
4:45 PM	34	22	0	0	0	69	13	0	10	0	61	0	0	0	0	0	209
5:00 PM	31	25	0	0	0	81	6	0	13	0	82	0	0	0	0	0	238
5:15 PM	24	40	0	0	0	61	4	0	13	0	72	0	0	0	0	0	214
5:30 PM	34	30	0	0	0	71	4	0	12	0	56	1	0	0	0	0	208
5:45 PM	40	23	0	0	0	59	9	0	12	0	50	1	0	0	0	0	194
6:00 PM	45	13	0	1	0	62	10	1	7	0	38	0	0	0	0	0	177
6:15 PM	56	20	0	0	0	56	2	0	0	0	38	0	0	0	0	0	172
6:30 PM	81	21	0	0	0	57	8	0	2	0	44	1	0	0	0	0	214
6:45 PM	34	5	0	0	0	46	1	0	4	0	33	0	0	0	0	0	123
7:00 PM	20	11	0	0	0	31	5	0	2	0	52	1	0	0	0	0	122
7:15 PM	20	10	0	0	0	37	4	0	4	0	95	0	0	0	0	0	170
7:30 PM	21	10	0	0	0	25	6	0	8	0	62	0	0	0	0	0	132
7:45 PM	21	8	0	1	0	29	1	1	3	0	40	0	0	0	0	0	104
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	546	324	0	2	0	913	95	2	125	0	937	6	0	0	0	0	2950
APPROACH %'s :	62.61%	37.16%	0.00%	0.23%	0.00%	90.40%	9.41%	0.20%	11.70%	0.00%	87.73%	0.56%	0	0	0	0	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	111	113	0	0	0	296	29	0	49	0	285	1	0	0	0	0	884
PEAK HR FACTOR :	0.816	0.706	0.000	0.000	0.000	0.871	0.558	0.000	0.942	0.000	0.869	0.250	0.000	0.000	0.000	0.000	0.929
	0.875				0.893				0.882								

N 35th Ave & Memorial Medical Office Centre Dwy

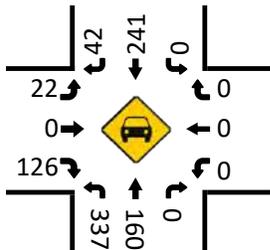
Peak Hour Turning Movement Count

ID: 23-140477-005
City: Hollywood

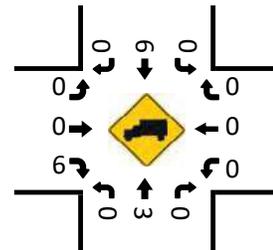
Day: Wednesday
Date: 12/6/2023



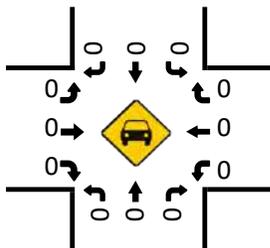
Cars (AM)



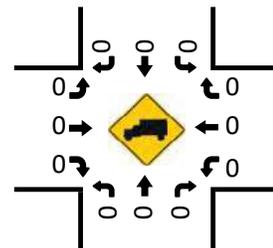
HT (AM)



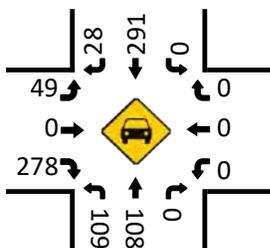
Cars (NOON)



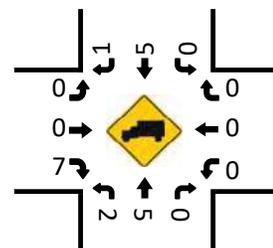
HT (NOON)



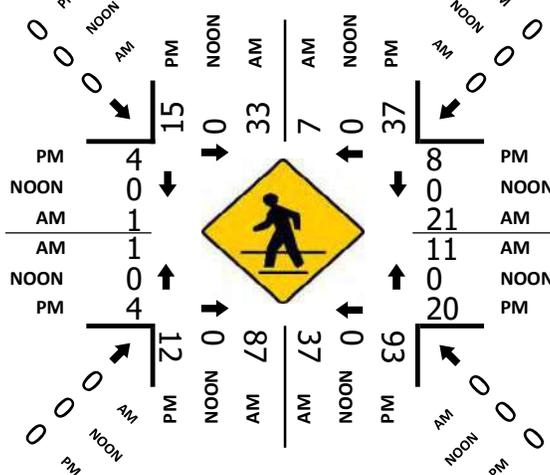
Cars (PM)



HT (PM)



Pedestrians (Crosswalks)





National Data & Surveying Services

Site Code: 23-140475-002

Date: 12/06/2023

Weather: Sunny

City: Hollywood

County: Broward

Count Times: 06:00 - 10:00

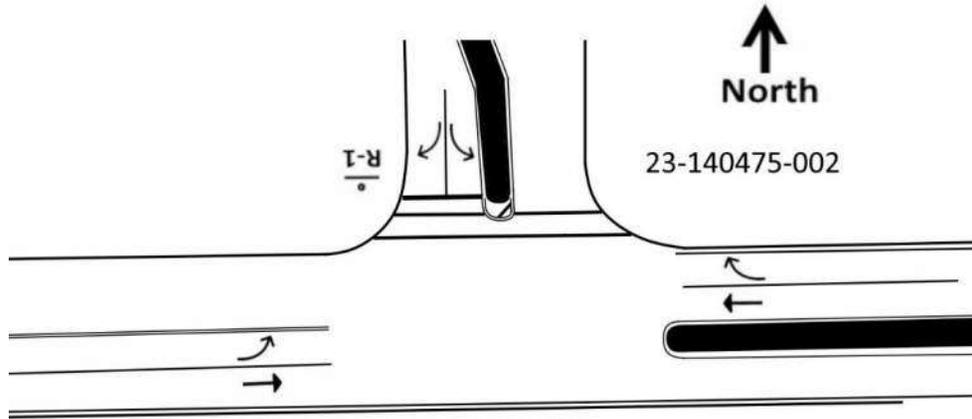
16:00 - 20:00

Control: 1-Way Stop (SB)



N/S Street: Adult Emergency Dwy

Speed: N/A



E/W Street: Johnson St

Speed: 30 MPH

National Data & Surveying Services

Intersection Turning Movement Count

Location: Adult Emergency Dwy & Johnson St
City: Hollywood
Control: 1-Wat Stop(SB)

Project ID: 23-140475-002
Date: 12/6/2023

Data - Total

NS/EW Streets:	Adult Emergency Dwy				Adult Emergency Dwy				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	2	0	8	0	25	23	0	0	0	53	19	0	130
6:15 AM	0	0	0	0	2	0	6	0	44	49	0	0	0	123	31	0	255
6:30 AM	0	0	0	0	5	0	12	0	69	55	0	3	0	159	38	0	341
6:45 AM	0	0	0	0	5	0	9	0	44	101	0	0	0	125	32	0	316
7:00 AM	0	0	0	0	10	0	11	0	28	110	0	0	0	124	30	1	314
7:15 AM	0	0	0	0	6	0	21	1	36	104	0	0	0	146	20	0	334
7:30 AM	0	0	0	0	4	0	17	0	28	126	0	0	0	210	34	0	419
7:45 AM	0	0	0	0	6	0	9	0	23	127	0	0	0	182	36	0	383
8:00 AM	0	0	0	0	3	0	12	0	42	120	0	0	0	161	26	0	364
8:15 AM	0	0	0	0	3	0	2	0	31	141	0	0	0	165	31	0	373
8:30 AM	0	0	0	0	9	0	9	0	21	133	0	0	0	145	26	0	343
8:45 AM	0	0	0	0	5	0	7	0	26	128	0	0	0	108	21	0	295
9:00 AM	0	0	0	0	4	0	6	2	14	118	0	0	0	130	20	0	294
9:15 AM	0	0	0	0	7	0	12	0	15	109	0	0	0	95	10	0	248
9:30 AM	0	0	0	0	6	0	6	0	17	106	0	0	0	103	21	0	259
9:45 AM	0	0	0	0	6	0	8	0	25	110	0	0	0	112	17	0	278
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	83	0	155	3	488	1660	0	3	0	2141	412	1	4946
PEAK HR :	07:30 AM - 08:30 AM				34.44%	0.00%	64.32%	1.24%	22.69%	77.17%	0.00%	0.14%	0.00%	83.83%	16.13%	0.04%	TOTAL
PEAK HR VOL :	0	0	0	0	16	0	40	0	124	514	0	0	0	718	127	0	1539
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.667	0.000	0.588	0.000	0.738	0.911	0.000	0.000	0.000	0.855	0.882	0.000	0.918
					0.667				0.927				0.866				

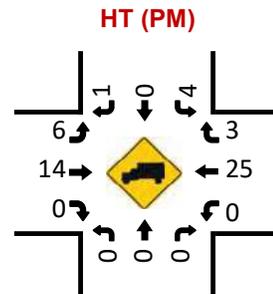
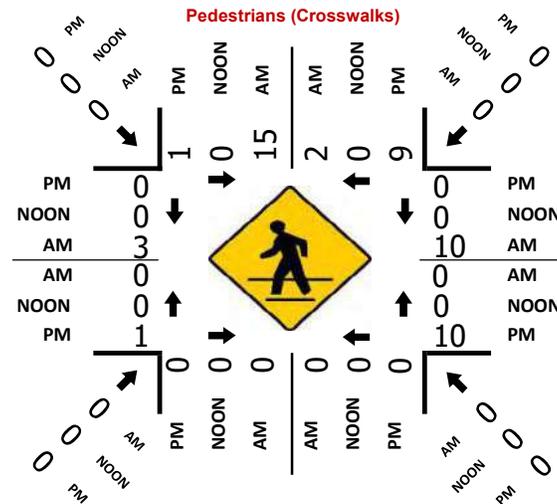
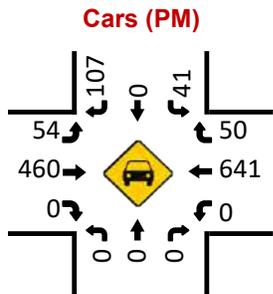
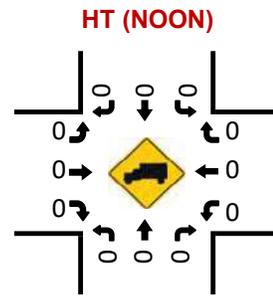
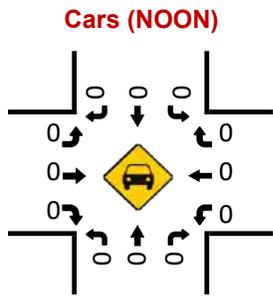
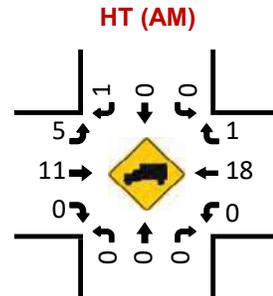
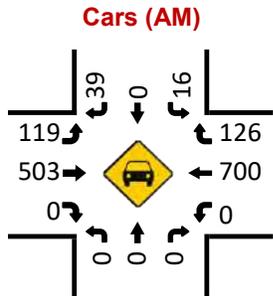
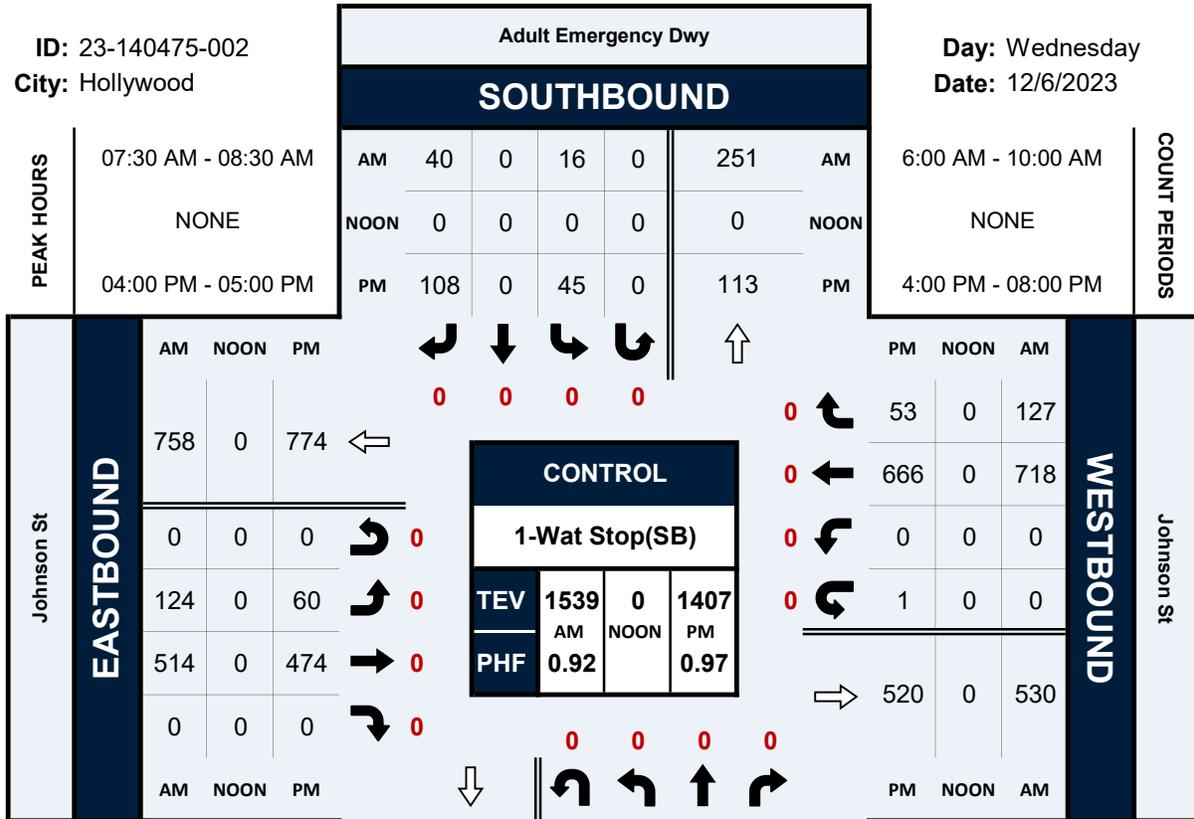
NS/EW Streets:	Adult Emergency Dwy				Adult Emergency Dwy				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	12	0	27	0	12	107	0	0	0	171	17	1	347
4:15 PM	0	0	0	0	9	0	25	0	18	132	0	0	0	167	6	0	357
4:30 PM	0	0	0	0	14	0	27	0	17	112	0	0	0	176	15	0	361
4:45 PM	0	0	0	0	10	0	29	0	13	123	0	0	0	152	15	0	342
5:00 PM	0	0	0	0	12	0	32	0	13	127	0	0	0	132	14	0	330
5:15 PM	0	0	0	0	18	0	22	2	17	115	0	0	0	145	10	0	329
5:30 PM	0	0	0	0	12	0	33	1	13	121	0	0	0	139	13	1	333
5:45 PM	0	0	0	0	9	0	19	1	13	126	0	0	0	147	7	0	322
6:00 PM	0	0	0	0	6	0	15	0	19	119	0	0	0	154	14	0	327
6:15 PM	0	0	0	0	7	0	13	0	18	110	0	0	0	180	22	0	350
6:30 PM	0	0	0	0	6	0	20	1	32	96	0	1	0	179	34	0	369
6:45 PM	0	0	0	0	8	0	16	1	25	102	0	2	0	116	16	0	286
7:00 PM	0	0	0	0	11	0	15	0	23	86	0	0	0	96	20	0	251
7:15 PM	0	0	0	0	29	0	38	0	10	128	0	0	0	120	17	0	342
7:30 PM	0	0	0	0	18	0	21	0	8	119	0	0	0	83	11	1	261
7:45 PM	0	0	0	0	14	0	12	0	9	67	0	0	0	97	10	0	209
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	195	0	364	6	260	1790	0	3	0	2254	241	3	5116
PEAK HR :	04:00 PM - 05:00 PM				34.51%	0.00%	64.42%	1.06%	12.66%	87.19%	0.00%	0.15%	0.00%	90.23%	9.65%	0.12%	TOTAL
PEAK HR VOL :	0	0	0	0	45	0	108	0	60	474	0	0	0	666	53	1	1407
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.804	0.000	0.931	0.000	0.833	0.898	0.000	0.000	0.000	0.946	0.779	0.250	0.974
					0.933				0.890				0.942				

Adult Emergency Dwy & Johnson St

Peak Hour Turning Movement Count

ID: 23-140475-002
City: Hollywood

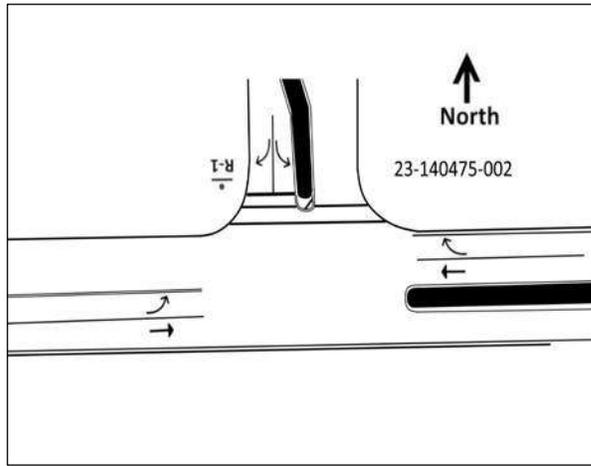
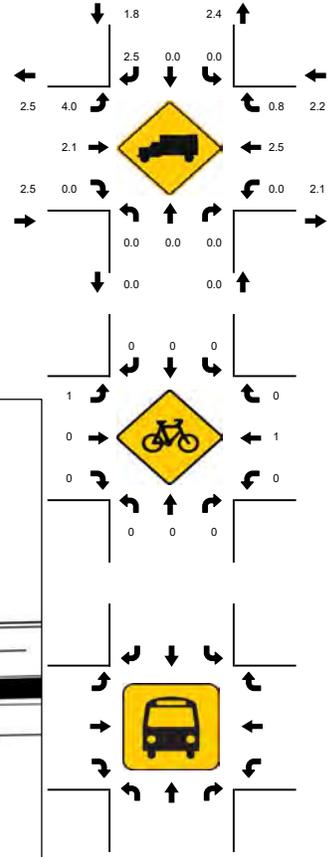
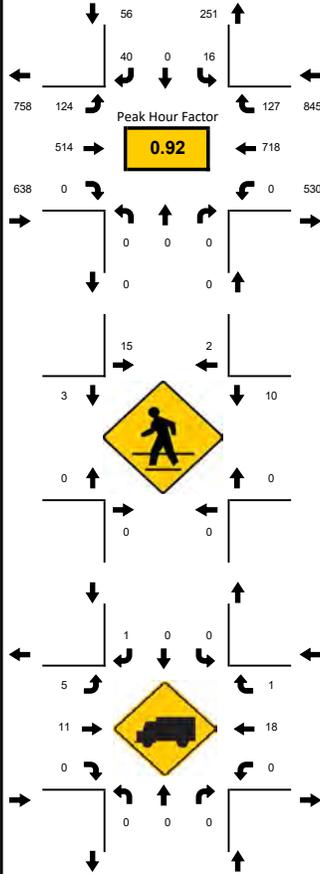
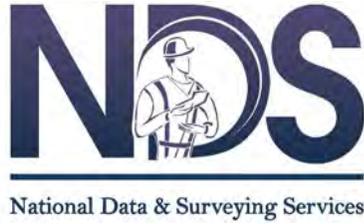
Day: Wednesday
Date: 12/6/2023



LOCATION: Adult Emergency Dwy & Johnson St
 CITY/STATE: Hollywood, FL

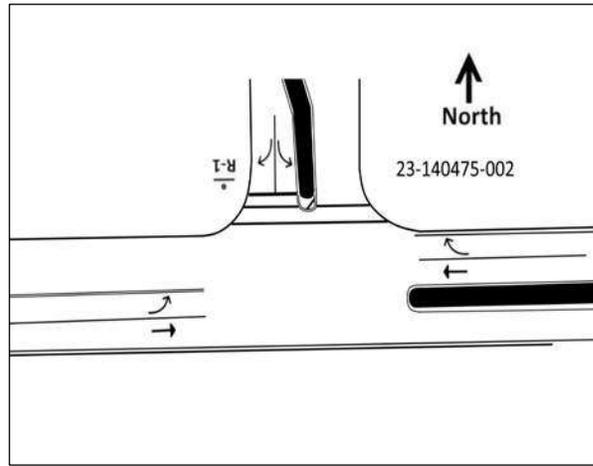
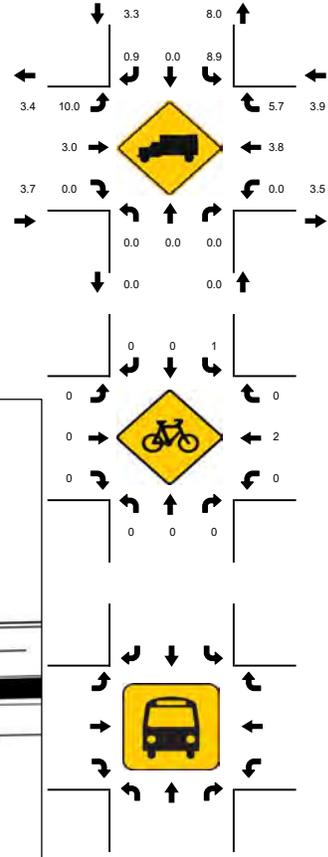
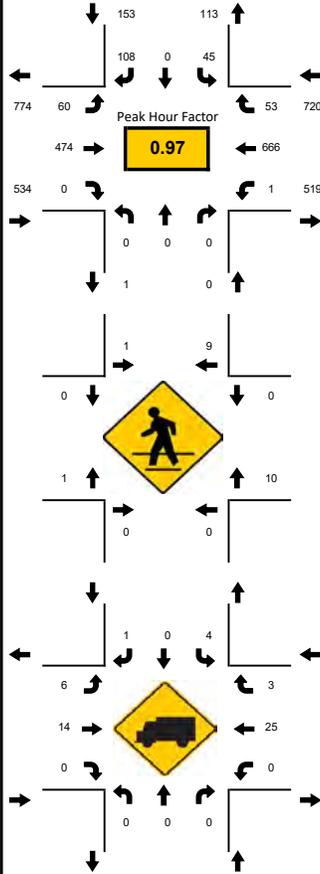
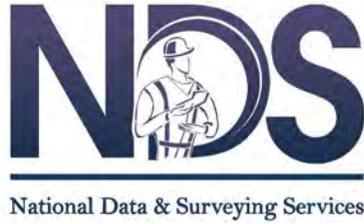
PROJECT ID: 23-140475-002
 DATE: Wed, Dec 06, 2023

Peak-Hour: 07:30 AM - 08:30 AM
 Peak 15-Minute: 07:30 AM - 07:45 AM



15-Min Count Period Beginning At	Adult Emergency Dwy Northbound					Adult Emergency Dwy Southbound					Johnson St Eastbound					Johnson St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
6:00 AM	0	0	0	0	0	2	0	8	0	0	25	23	0	0	0	0	53	19	0	0	130	1042
6:15 AM	0	0	0	0	0	2	0	6	0	0	44	49	0	0	0	0	123	31	0	0	255	1226
6:30 AM	0	0	0	0	0	5	0	12	0	0	69	55	0	3	0	0	159	38	0	0	341	1305
6:45 AM	0	0	0	0	0	5	0	9	0	0	44	101	0	0	0	0	125	32	0	0	316	1383
7:00 AM	0	0	0	0	0	10	0	11	0	0	28	110	0	0	0	0	124	30	1	0	314	1450
7:15 AM	0	0	0	0	0	6	0	21	1	0	36	104	0	0	0	0	146	20	0	0	334	1500
7:30 AM	0	0	0	0	0	4	0	17	0	0	28	126	0	0	0	0	210	34	0	0	419	1539
7:45 AM	0	0	0	0	0	6	0	9	0	0	23	127	0	0	0	0	182	36	0	0	383	1463
8:00 AM	0	0	0	0	0	3	0	12	0	0	42	120	0	0	0	0	161	26	0	0	364	1375
8:15 AM	0	0	0	0	0	3	0	2	0	0	31	141	0	0	0	0	165	31	0	0	373	1305
8:30 AM	0	0	0	0	0	9	0	9	0	0	21	133	0	0	0	0	145	26	0	0	343	1180
8:45 AM	0	0	0	0	0	5	0	7	0	0	26	128	0	0	0	0	108	21	0	0	295	1096
9:00 AM	0	0	0	0	0	4	0	6	2	0	14	118	0	0	0	0	130	20	0	0	294	1079
9:15 AM	0	0	0	0	0	7	0	12	0	0	15	109	0	0	0	0	95	10	0	0	248	785
9:30 AM	0	0	0	0	0	6	0	6	0	0	17	106	0	0	0	0	103	21	0	0	259	537
9:45 AM	0	0	0	0	0	6	0	8	0	0	25	110	0	0	0	0	112	17	0	0	278	278
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total		
All Vehicles	0	0	0	0	0	24	0	68	0	0	168	564	0	0	0	0	840	144	0	0	1808	
Heavy Trucks	0	0	0	0	0	0	0	4	0	0	12	20	0	0	0	0	24	4	0	0	64	
Pedestrians	0	0	0	0	0	0	0	36	0	0	4	4	0	0	0	0	24	0	0	0	64	
Bicycles	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	8	
Buses																						
Stopped Buses																						

Peak-Hour: 04:00 PM - 05:00 PM
 Peak 15-Minute: 04:30 PM - 04:45 PM



15-Min Count Period Beginning At	Adult Emergency Dwy Northbound					Adult Emergency Dwy Southbound					Johnson St Eastbound					Johnson St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	0	0	0	0	12	0	27	0	0	12	107	0	0	0	0	171	17	1	0	347	1407
4:15 PM	0	0	0	0	0	9	0	25	0	0	18	132	0	0	0	0	167	6	0	0	357	1390
4:30 PM	0	0	0	0	0	14	0	27	0	0	17	112	0	0	0	0	176	15	0	0	361	1362
4:45 PM	0	0	0	0	0	10	0	29	0	0	13	123	0	0	0	0	152	15	0	0	342	1334
5:00 PM	0	0	0	0	0	12	0	32	0	0	13	127	0	0	0	0	132	14	0	0	330	1314
5:15 PM	0	0	0	0	0	18	0	22	2	0	17	115	0	0	0	0	145	10	0	0	329	1311
5:30 PM	0	0	0	0	0	12	0	33	1	0	13	121	0	0	0	0	139	13	1	0	333	1332
5:45 PM	0	0	0	0	0	9	0	19	1	0	13	126	0	0	0	0	147	7	0	0	322	1368
6:00 PM	0	0	0	0	0	6	0	15	0	0	19	119	0	0	0	0	154	14	0	0	327	1332
6:15 PM	0	0	0	0	0	7	0	13	0	0	18	110	0	0	0	0	180	22	0	0	350	1256
6:30 PM	0	0	0	0	0	6	0	20	1	0	32	96	0	1	0	0	179	34	0	0	369	1248
6:45 PM	0	0	0	0	0	8	0	16	1	0	25	102	0	2	0	0	116	16	0	0	286	1140
7:00 PM	0	0	0	0	0	11	0	15	0	0	23	86	0	0	0	0	96	20	0	0	251	1063
7:15 PM	0	0	0	0	0	29	0	38	0	0	10	128	0	0	0	0	120	17	0	0	342	812
7:30 PM	0	0	0	0	0	18	0	21	0	0	8	119	0	0	0	0	83	11	1	0	261	470
7:45 PM	0	0	0	0	0	14	0	12	0	0	9	67	0	0	0	0	97	10	0	0	209	209
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	56	0	116	0	0	72	528	0	0	0	0	704	68	4	0	1548	
Heavy Trucks	0	0	0	0	0	8	0	4	0	0	16	24	0	0	0	0	36	8	0	0	96	
Pedestrians	0	0	0	0	0			24			4					16					44	
Bicycles	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	
Buses																						
Stopped Buses																						



National Data & Surveying Services

Site Code: 23-140475-001

Date: 12/06/2023

Weather: Sunny

City: Hollywood

County: Broward

Count Times: 06:00 - 10:00

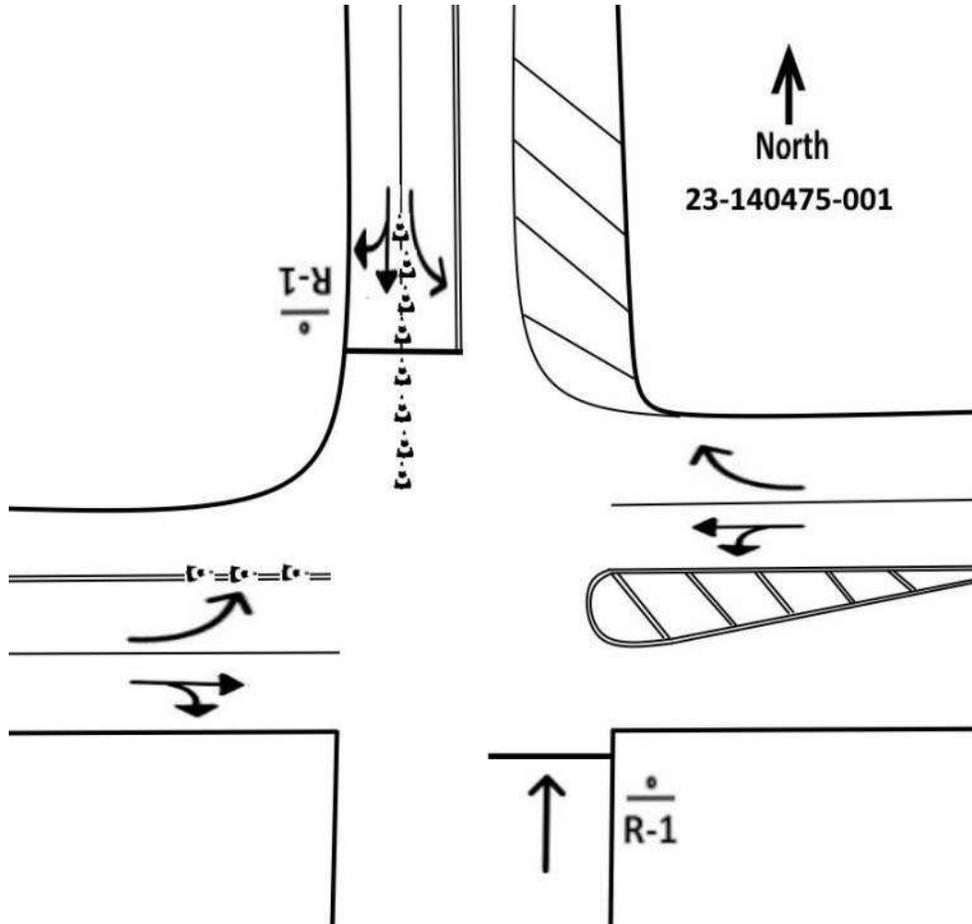
16:00 - 20:00

Control: 2-Way Stop(NB/SB)



N/S Street: Employee Parking Dwy W

Speed: N/A



E/W Street: Johnson St

Speed: 30 MPH

National Data & Surveying Services

Intersection Turning Movement Count

Location: Employee Parking Dwy W & Johnson St
City: Hollywood
Control: 2-Way Stop(NB/SB)

Project ID: 23-140475-001
Date: 12/6/2023

Data - Total

NS/EW Streets:	Employee Parking Dwy W				Employee Parking Dwy W				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
AM																	
6:00 AM	0	0	2	0	0	0	6	0	42	47	2	0	2	25	34	0	160
6:15 AM	0	0	0	0	0	0	9	0	91	95	0	0	0	38	87	0	320
6:30 AM	0	0	0	0	0	0	12	0	104	127	2	0	0	54	123	0	422
6:45 AM	0	0	0	0	1	0	4	0	91	140	0	0	0	63	69	0	368
7:00 AM	0	0	2	0	0	0	31	0	77	140	3	0	1	93	43	0	390
7:15 AM	0	0	0	0	0	0	130	0	63	136	4	0	2	117	42	0	494
7:30 AM	0	0	1	0	0	0	95	0	68	154	4	0	2	156	73	0	553
7:45 AM	0	0	2	0	0	0	53	0	76	146	3	0	4	131	57	0	472
8:00 AM	0	0	0	0	0	0	24	0	67	157	13	0	1	119	51	0	432
8:15 AM	0	0	5	0	0	0	17	0	56	168	13	0	3	112	54	0	428
8:30 AM	0	0	5	0	0	0	17	0	43	147	9	0	9	107	35	0	372
8:45 AM	0	0	9	0	0	0	10	0	31	150	10	0	4	98	16	0	328
9:00 AM	4	0	5	0	2	0	8	0	10	124	7	1	6	115	15	0	297
9:15 AM	1	0	11	0	3	0	8	0	10	113	10	0	5	89	13	0	263
9:30 AM	3	0	3	0	0	0	6	0	14	119	10	0	8	85	14	0	262
9:45 AM	3	0	4	0	6	0	5	0	7	125	6	0	8	98	13	0	275
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	11	0	49	0	12	0	435	0	850	2088	96	1	55	1500	739	0	5836
APPROACH %'s :	18.33%	0.00%	81.67%	0.00%	2.68%	0.00%	97.32%	0.00%	28.01%	68.80%	3.16%	0.03%	2.40%	65.39%	32.21%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	3	0	0	0	302	0	274	593	24	0	9	523	223	0	1951
PEAK HR FACTOR :	0.000	0.000	0.375	0.000	0.000	0.000	0.581	0.000	0.901	0.944	0.462	0.000	0.563	0.838	0.764	0.000	0.882
	0.375				0.581				0.940				0.817				

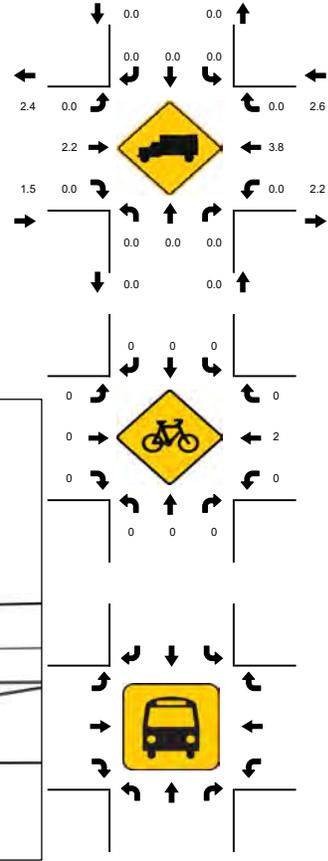
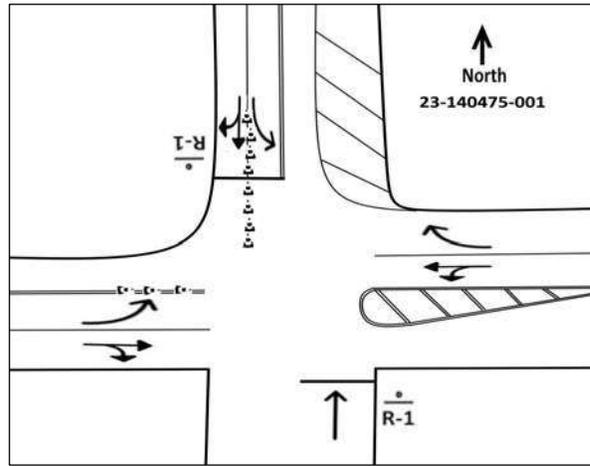
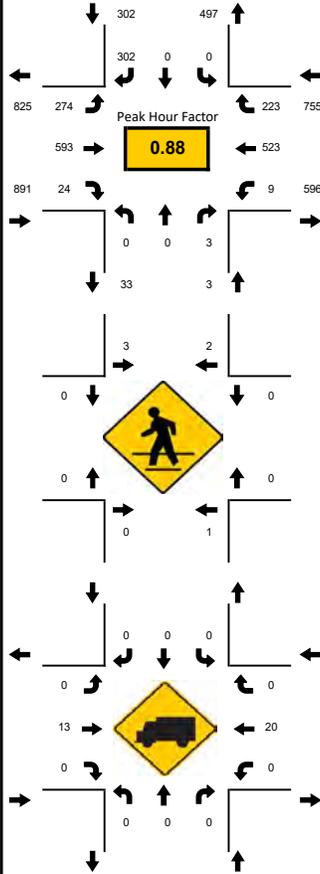
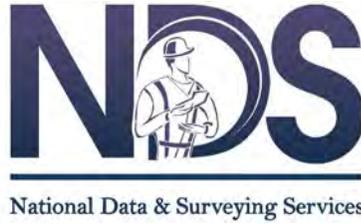
NS/EW Streets:	Employee Parking Dwy W				Employee Parking Dwy W				Johnson St				Johnson St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
PM																	
4:00 PM	2	0	12	0	14	0	60	0	1	96	9	0	5	191	1	0	391
4:15 PM	0	0	12	0	1	0	77	0	1	134	5	0	0	188	5	0	423
4:30 PM	1	0	13	0	0	0	88	0	1	115	1	0	4	195	2	0	420
4:45 PM	0	0	12	0	0	0	105	0	5	124	0	0	2	177	4	0	429
5:00 PM	0	0	22	0	0	0	135	0	1	116	1	0	1	156	1	0	433
5:15 PM	1	0	9	0	0	0	133	0	1	120	3	0	0	168	3	1	439
5:30 PM	0	0	8	0	0	0	94	0	8	124	1	0	1	162	2	0	400
5:45 PM	0	0	13	0	0	0	57	0	12	126	1	0	0	164	8	0	381
6:00 PM	0	0	4	0	0	0	50	0	16	139	0	0	0	156	12	0	377
6:15 PM	0	0	1	0	0	0	34	0	53	129	1	0	2	148	43	0	411
6:30 PM	0	0	2	0	0	0	37	0	65	129	0	0	0	147	51	0	431
6:45 PM	0	0	6	0	1	0	26	0	21	125	0	0	0	126	11	0	316
7:00 PM	0	0	2	0	3	0	48	0	0	101	0	0	0	105	5	0	264
7:15 PM	0	0	2	0	38	2	78	0	1	98	1	0	2	159	0	0	381
7:30 PM	1	0	5	0	34	0	100	0	0	88	1	0	0	102	2	0	333
7:45 PM	0	0	0	0	16	0	44	0	4	60	0	0	0	106	1	0	231
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	5	0	123	0	107	2	1166	0	190	1824	24	0	17	2450	151	1	6060
APPROACH %'s :	3.91%	0.00%	96.09%	0.00%	8.39%	0.16%	91.45%	0.00%	9.32%	89.50%	1.18%	0.00%	0.65%	93.55%	5.77%	0.04%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	0	56	0	0	0	461	0	8	475	5	0	7	696	10	1	1721
PEAK HR FACTOR :	0.500	0.000	0.636	0.000	0.000	0.000	0.854	0.000	0.400	0.958	0.417	0.000	0.438	0.892	0.625	0.250	0.980
	0.659				0.854				0.946				0.888				

LOCATION: Employee Parking Dwy W & Johnson St
 CITY/STATE: Hollywood, FL

PROJECT ID: 23-140475-001
 DATE: Wed, Dec 06, 2023

Peak-Hour: 07:15 AM - 08:15 AM
 Peak 15-Minute: 07:30 AM - 07:45 AM

Peak Hour Factor
0.88



15-Min Count Period Beginning At	Employee Parking Dwy W Northbound					Employee Parking Dwy W Southbound					Johnson St Eastbound					Johnson St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
6:00 AM	0	0	2	0	0	0	0	6	0	0	42	47	2	0	0	2	25	34	0	0	160	1270
6:15 AM	0	0	0	0	0	0	0	9	0	0	91	95	0	0	0	0	38	87	0	0	320	1500
6:30 AM	0	0	0	0	0	0	0	12	0	0	104	127	2	0	0	0	54	123	0	0	422	1674
6:45 AM	0	0	0	0	0	1	0	4	0	0	91	140	0	0	0	0	63	69	0	0	368	1805
7:00 AM	0	0	2	0	0	0	0	31	0	0	77	140	3	0	0	1	93	43	0	0	390	1909
7:15 AM	0	0	0	0	0	0	0	130	0	0	63	136	4	0	0	2	117	42	0	0	494	1951
7:30 AM	0	0	1	0	0	0	0	95	0	0	68	154	4	0	0	2	156	73	0	0	553	1885
7:45 AM	0	0	2	0	0	0	0	53	0	0	76	146	3	0	0	4	131	57	0	0	472	1704
8:00 AM	0	0	0	0	0	0	0	24	0	0	67	157	13	0	0	1	119	51	0	0	432	1560
8:15 AM	0	0	5	0	0	0	0	17	0	0	56	168	13	0	0	3	112	54	0	0	428	1425
8:30 AM	0	0	5	0	0	0	0	17	0	0	43	147	9	0	0	9	107	35	0	0	372	1260
8:45 AM	0	0	9	0	0	0	0	10	0	0	31	150	10	0	0	4	98	16	0	0	328	1150
9:00 AM	4	0	5	0	0	2	0	8	0	0	10	124	7	1	0	6	115	15	0	0	297	1097
9:15 AM	1	0	11	0	0	3	0	8	0	0	10	113	10	0	0	5	89	13	0	0	263	800
9:30 AM	3	0	3	0	0	0	0	6	0	0	14	119	10	0	0	8	85	14	0	0	262	537
9:45 AM	3	0	4	0	0	6	0	5	0	0	7	125	6	0	0	8	98	13	0	0	275	275
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total		
All Vehicles	0	0	8	0	0	0	0	520	0	0	304	628	52	0	0	16	624	292	0	0	2444	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	24	0	0	0	44	
Pedestrians	4					8					0					0					12	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	
Buses																						
Stopped Buses																						

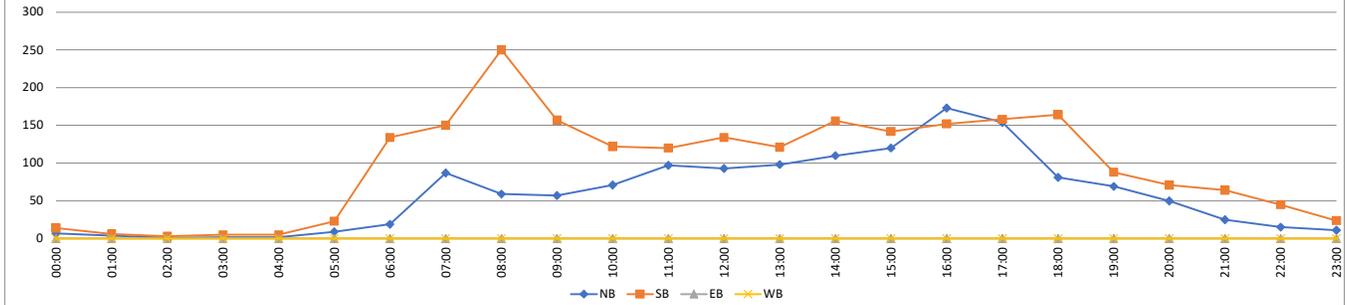
VOLUME

N 35th Ave N/O Garfield St

Day: Thursday
Date: 12/7/2023

City: Hollywood
Project #: FL23_140478_001

DAILY TOTALS											DAILY TOTALS						
						NB	SB	EB	WB	Total							
						1,414	2,308	0	0	3,722							
15-Minutes Interval												Hourly Intervals					
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	2	5			7	12:00	27	31			58	00:00	01:00	7	14		21
0:15	2	2			4	12:15	23	39			62	01:00	02:00	4	6		10
0:30	1	3			4	12:30	23	29			52	02:00	03:00	1	3		4
0:45	2	4			6	12:45	20	35			55	03:00	04:00	2	5		7
1:00	1	1			2	13:00	20	29			49	04:00	05:00	2	5		7
1:15	1	2			3	13:15	24	28			52	05:00	06:00	9	23		32
1:30	1	3			4	13:30	26	30			56	06:00	07:00	19	134		153
1:45	1	0			1	13:45	28	34			62	07:00	08:00	87	150		237
2:00	0	1			1	14:00	25	60			85	08:00	09:00	59	250		309
2:15	0	1			1	14:15	25	32			57	09:00	10:00	57	157		214
2:30	1	1			2	14:30	32	38			70	10:00	11:00	71	122		193
2:45	0	0			0	14:45	28	26			54	11:00	12:00	97	120		217
3:00	2	1			3	15:00	34	40			74	12:00	13:00	93	134		227
3:15	0	1			1	15:15	35	36			71	13:00	14:00	98	121		219
3:30	0	2			2	15:30	24	28			52	14:00	15:00	110	156		266
3:45	0	1			1	15:45	27	38			65	15:00	16:00	120	142		262
4:00	0	0			0	16:00	26	38			64	16:00	17:00	173	152		325
4:15	1	1			2	16:15	34	33			67	17:00	18:00	154	158		312
4:30	0	1			1	16:30	54	38			92	18:00	19:00	81	164		245
4:45	1	3			4	16:45	59	43			102	19:00	20:00	69	88		157
5:00	1	2			3	17:00	68	33			101	20:00	21:00	50	71		121
5:15	1	6			7	17:15	35	45			80	21:00	22:00	25	64		89
5:30	4	6			10	17:30	31	39			70	22:00	23:00	15	45		60
5:45	3	9			12	17:45	20	41			61	23:00	00:00	11	24		35
6:00	0	12			12	18:00	17	29			46	STATISTICS					
6:15	4	32			36	18:15	25	49			74		NB	SB	EB	WB	TOTAL
6:30	7	47			54	18:30	22	52			74	Peak Period	00:00	to	12:00		
6:45	8	43			51	18:45	17	34			51	Volume	415	989			1404
7:00	7	19			26	19:00	14	31			45	Peak Hour	7:30	8:00			7:30
7:15	18	37			55	19:15	23	24			47	Peak Volume	98	250			321
7:30	27	47			74	19:30	21	12			33	Peak Hour Factor	0.700	0.833			0.872
7:45	35	47			82	19:45	11	21			32	Peak Period	12:00	to	00:00		
8:00	17	75			92	20:00	15	15			30	Volume	999	1319			2318
8:15	19	54			73	20:15	12	20			32	Peak Hour	16:30	17:45			16:30
8:30	12	61			73	20:30	13	20			33	Peak Volume	216	171			375
8:45	11	60			71	20:45	10	16			26	Peak Hour Factor	0.794	0.822			0.919
9:00	14	31			45	21:00	7	13			20	Peak Period	07:00	to	09:00		
9:15	10	39			49	21:15	9	13			22	Volume	146	400			546
9:30	16	40			56	21:30	2	15			17	Peak Hour	7:30	8:00			7:30
9:45	17	47			64	21:45	7	23			30	Peak Volume	98	250			321
10:00	16	27			43	22:00	5	17			22	Peak Hour Factor	0.700	0.833			0.872
10:15	17	39			56	22:15	2	9			11	Peak Period	16:00	to	18:00		
10:30	18	28			46	22:30	4	13			17	Volume	327	310			637
10:45	20	28			48	22:45	4	6			10	Peak Hour	16:30	16:45			16:30
11:00	15	29			44	23:00	4	6			10	Peak Volume	216	160			375
11:15	36	39			75	23:15	2	9			11	Peak Hour Factor	0.794	0.889			0.919
11:30	20	24			44	23:30	2	3			5						
11:45	26	28			54	23:45	3	6			9						
TOTALS	415	989	0	0	1404	TOTALS	999	1319	0	0	2318						
SPLIT %	30%	70%	0%	0%	38%	SPLIT %	43%	57%	0%	0%	62%						



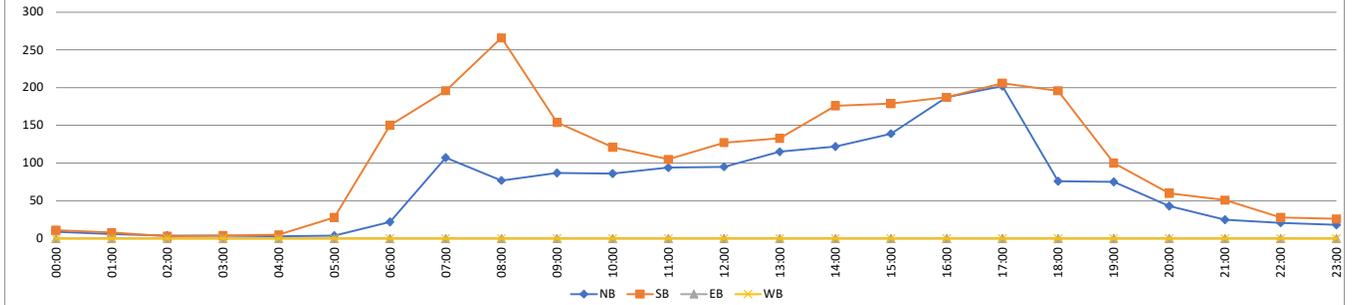
VOLUME

N 35th Ave N/O Garfield St

Day: Wednesday
Date: 12/6/2023

City: Hollywood
Project #: FL23_140478_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						1,621	2,520	0	0	4,141							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	2	5			7	12:00	18	33			51	00:00	01:00	9	11		20
0:15	3	1			4	12:15	34	28			62	01:00	02:00	6	8		14
0:30	2	2			4	12:30	22	34			56	02:00	03:00	4	3		7
0:45	2	3			5	12:45	21	32			53	03:00	04:00	4	4		8
1:00	4	4			8	13:00	21	37			58	04:00	05:00	3	5		8
1:15	0	0			0	13:15	34	28			62	05:00	06:00	4	28		32
1:30	1	2			3	13:30	26	33			59	06:00	07:00	22	150		172
1:45	1	2			3	13:45	34	35			69	07:00	08:00	107	196		303
2:00	1	1			2	14:00	24	44			68	08:00	09:00	77	266		343
2:15	1	1			2	14:15	40	47			87	09:00	10:00	87	154		241
2:30	1	0			1	14:30	29	48			77	10:00	11:00	86	121		207
2:45	1	1			2	14:45	29	37			66	11:00	12:00	94	105		199
3:00	2	3			5	15:00	29	47			76	12:00	13:00	95	127		222
3:15	0	0			0	15:15	32	46			78	13:00	14:00	115	133		248
3:30	2	0			2	15:30	43	46			89	14:00	15:00	122	176		298
3:45	0	1			1	15:45	35	40			75	15:00	16:00	139	179		318
4:00	1	1			2	16:00	46	33			79	16:00	17:00	187	187		374
4:15	0	2			2	16:15	41	58			99	17:00	18:00	202	206		408
4:30	2	1			3	16:30	51	47			98	18:00	19:00	76	196		272
4:45	0	1			1	16:45	49	49			98	19:00	20:00	75	100		175
5:00	0	1			1	17:00	56	55			111	20:00	21:00	43	60		103
5:15	2	6			8	17:15	67	46			113	21:00	22:00	25	51		76
5:30	0	6			6	17:30	39	53			92	22:00	23:00	21	28		49
5:45	2	15			17	17:45	40	52			92	23:00	00:00	18	26		44
6:00	2	14			16	18:00	25	44			69	STATISTICS					
6:15	6	34			40	18:15	21	57			78		NB	SB	EB	WB	TOTAL
6:30	5	57			62	18:30	17	62			79	Peak Period	00:00	to	12:00		
6:45	9	45			54	18:45	13	33			46	Volume	503	1051			1554
7:00	9	25			34	19:00	14	33			47	Peak Hour	7:30	7:30			7:30
7:15	21	42			63	19:15	25	28			53	Peak Volume	126	280			406
7:30	38	52			90	19:30	26	16			42	Peak Hour Factor	0.808	0.795			0.875
7:45	39	77			116	19:45	10	23			33	Peak Period	12:00	to	00:00		
8:00	26	88			114	20:00	12	17			29	Volume	1118	1469			2587
8:15	23	63			86	20:15	10	15			25	Peak Hour	16:30	17:45			16:30
8:30	15	51			66	20:30	10	13			23	Peak Volume	223	215			420
8:45	13	64			77	20:45	11	15			26	Peak Hour Factor	0.832	0.867			0.929
9:00	15	37			52	21:00	5	19			24	Peak Period	07:00	to	09:00		
9:15	18	35			53	21:15	6	7			13	Volume	184	462			646
9:30	28	40			68	21:30	7	13			20	Peak Hour	7:30	7:30			7:30
9:45	26	42			68	21:45	7	12			19	Peak Volume	126	280			406
10:00	21	31			52	22:00	6	7			13	Peak Hour Factor	0.808	0.795			0.875
10:15	26	31			57	22:15	5	13			18	Peak Period	16:00	to	18:00		
10:30	24	28			52	22:30	5	7			12	Volume	389	393			782
10:45	15	31			46	22:45	5	1			6	Peak Hour	16:30	16:15			16:30
11:00	29	27			56	23:00	4	7			11	Peak Volume	223	209			420
11:15	20	29			49	23:15	3	8			11	Peak Hour Factor	0.832	0.901			0.929
11:30	20	28			48	23:30	7	7			14						
11:45	25	21			46	23:45	4	4			8						
TOTALS	503	1051	0	0	1554	TOTALS	1118	1469	0	0	2587						
SPLIT %	32%	68%	0%	0%	38%	SPLIT %	43%	57%	0%	0%	62%						



VOLUME

N 35th Ave Bet. Garfield St & Memorial Medical Office Centre Dwy

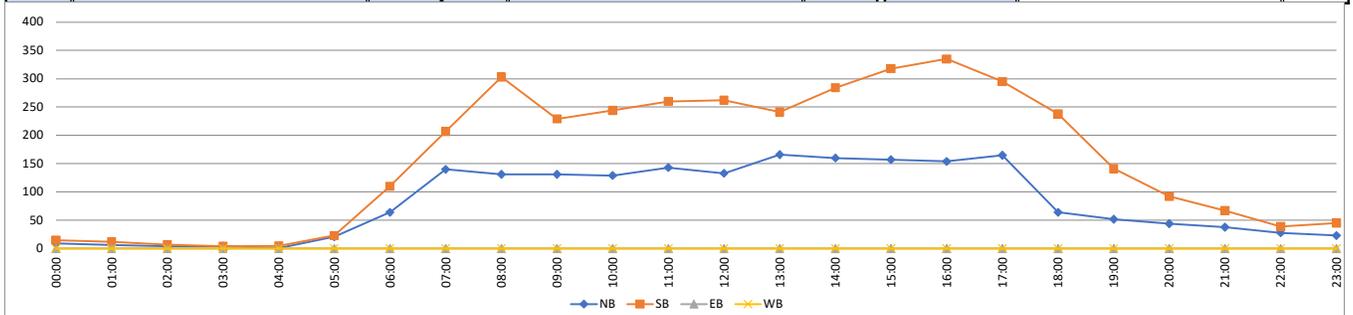
Day: Wednesday

Date: 12/6/2023

City: Hollywood

Project #: FL23_140478_002

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS																																																																																																																																				
						1,967	3,776	0	0	5,743																																																																																																																																					
15-Minutes Interval											Hourly Intervals																																																																																																																																				
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL																																																																																																																														
0:00	2	7			9	12:00	36	77			113	00:00	01:00	9	15			24																																																																																																																													
0:15	3	2			5	12:15	37	60			97	01:00	02:00	6	12			18																																																																																																																													
0:30	3	3			6	12:30	33	66			99	02:00	03:00	4	7			11																																																																																																																													
0:45	1	3			4	12:45	27	59			86	03:00	04:00	4	4			8																																																																																																																													
1:00	4	8			12	13:00	25	65			90	04:00	05:00	1	5			6																																																																																																																													
1:15	0	0			0	13:15	50	54			104	05:00	06:00	21	23			44																																																																																																																													
1:30	1	2			3	13:30	40	58			98	06:00	07:00	64	110			174																																																																																																																													
1:45	1	2			3	13:45	51	64			115	07:00	08:00	140	207			347																																																																																																																													
2:00	1	2			3	14:00	36	76			112	08:00	09:00	131	303			434																																																																																																																													
2:15	0	1			1	14:15	53	68			121	09:00	10:00	131	229			360																																																																																																																													
2:30	2	1			3	14:30	34	75			109	10:00	11:00	129	244			373																																																																																																																													
2:45	1	3			4	14:45	37	65			102	11:00	12:00	143	260			403																																																																																																																													
3:00	3	2			5	15:00	43	69			112	12:00	13:00	133	262			395																																																																																																																													
3:15	1	0			1	15:15	28	78			106	13:00	14:00	166	241			407																																																																																																																													
3:30	0	1			1	15:30	48	93			141	14:00	15:00	160	284			444																																																																																																																													
3:45	0	1			1	15:45	38	78			116	15:00	16:00	157	318			475																																																																																																																													
4:00	0	1			1	16:00	46	74			120	16:00	17:00	154	335			489																																																																																																																													
4:15	1	2			3	16:15	36	90			126	17:00	18:00	165	295			460																																																																																																																													
4:30	0	1			1	16:30	38	88			126	18:00	19:00	64	238			302																																																																																																																													
4:45	0	1			1	16:45	34	83			117	19:00	20:00	52	141			193																																																																																																																													
5:00	0	1			1	17:00	35	84			119	20:00	21:00	44	92			136																																																																																																																													
5:15	3	5			8	17:15	54	66			120	21:00	22:00	38	67			105																																																																																																																													
5:30	4	4			8	17:30	40	76			116	22:00	23:00	28	39			67																																																																																																																													
5:45	14	13			27	17:45	36	69			105	23:00	00:00	23	45			68																																																																																																																													
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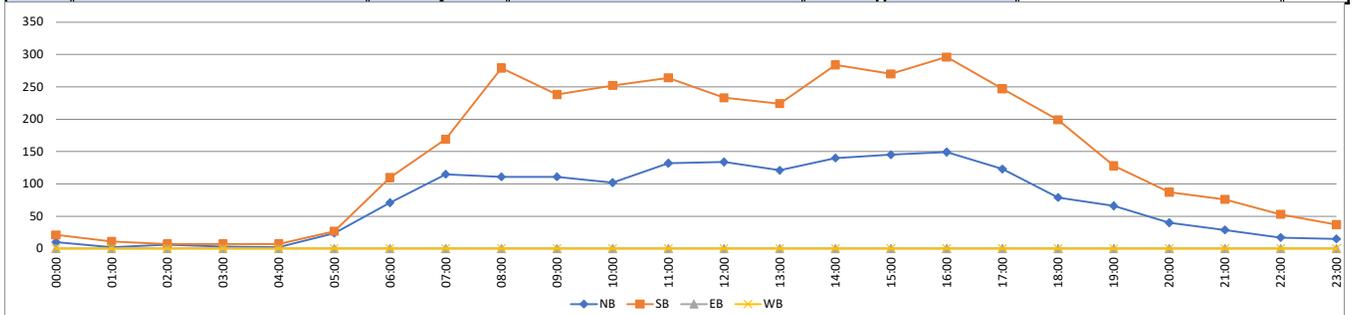
VOLUME

N 35th Ave Bet. Garfield St & Memorial Medical Office Centre Dwy

Day: Thursday
Date: 12/7/2023

City: Hollywood
Project #: FL23_140478_002

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS																																																																																																																																										
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TOTALS	689	1392	0	0	2081	TOTALS	1058	2134	0	0	3192																																																																																																																																										
SPLIT %	33%	67%	0%	0%	39%	SPLIT %	33%	67%	0%	0%	61%																																																																																																																																										



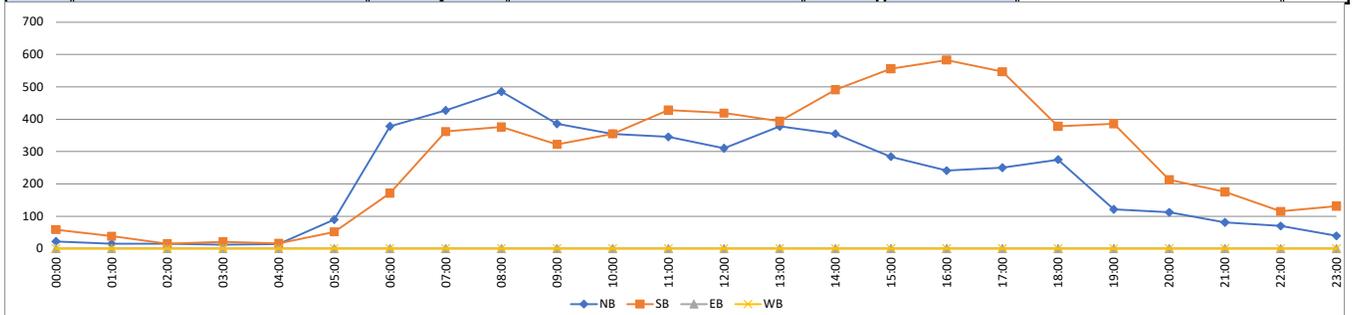
VOLUME

N 35th Ave Bet. Memorial Medical Office Centre Dwy & Johnson St

Day: Wednesday
Date: 12/6/2023

City: Hollywood
Project #: FL23_140478_003

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS																																																																																																																																				
						5,060	6,603	0	0	11,663																																																																																																																																					
15-Minutes Interval											Hourly Intervals																																																																																																																																				
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL																																																																																																																														
0:00	8	26			34	12:00	61	125			186	00:00	01:00	22	59			81																																																																																																																													
0:15	8	16			24	12:15	71	92			163	01:00	02:00	15	38			53																																																																																																																													
0:30	4	8			12	12:30	95	116			211	02:00	03:00	15	15			30																																																																																																																													
0:45	2	9			11	12:45	83	86			169	03:00	04:00	12	21			33																																																																																																																													
1:00	6	15			21	13:00	81	91			172	04:00	05:00	14	16			30																																																																																																																													
1:15	3	7			10	13:15	100	97			197	05:00	06:00	90	52			142																																																																																																																													
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2:15	5	2			7	14:15	98	126			224	09:00	10:00	386	322			708																																																																																																																													
2:30	5	3			8	14:30	80	127			207	10:00	11:00	355	355			710																																																																																																																													
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4:15	4	4			8	16:15	58	143			201	17:00	18:00	250	547			797																																																																																																																													
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5:00	13	4			17	17:00	56	163			219	20:00	21:00	112	213			325																																																																																																																													
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6:00	41	25			66	18:00	59	101			160	STATISTICS <table border="1"> <thead> <tr> <th></th> <th>NB</th> <th>SB</th> <th>EB</th> <th>WB</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Peak Period</td> <td>00:00</td> <td>to</td> <td>12:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>2544</td> <td>2215</td> <td></td> <td></td> <td>4759</td> </tr> <tr> <td>Peak Hour</td> <td>7:45</td> <td>11:00</td> <td></td> <td></td> <td>7:45</td> </tr> <tr> <td>Peak Volume</td> <td>522</td> <td>428</td> <td></td> <td></td> <td>900</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.876</td> <td>0.877</td> <td></td> <td></td> <td>0.926</td> </tr> <tr> <td>Peak Period</td> <td>12:00</td> <td>to</td> <td>00:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>2516</td> <td>4388</td> <td></td> <td></td> <td>6904</td> </tr> <tr> <td>Peak Hour</td> <td>13:15</td> <td>15:30</td> <td></td> <td></td> <td>15:30</td> </tr> <tr> <td>Peak Volume</td> <td>382</td> <td>594</td> <td></td> <td></td> <td>866</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.876</td> <td>0.905</td> <td></td> <td></td> <td>0.925</td> </tr> <tr> <td>Peak Period</td> <td>07:00</td> <td>to</td> <td>09:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>912</td> <td>738</td> <td></td> <td></td> <td>1650</td> </tr> <tr> <td>Peak Hour</td> <td>7:45</td> <td>7:15</td> <td></td> <td></td> <td>7:45</td> </tr> <tr> <td>Peak Volume</td> <td>522</td> <td>406</td> <td></td> <td></td> <td>900</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.876</td> <td>0.940</td> <td></td> <td></td> <td>0.926</td> </tr> <tr> <td>Peak Period</td> <td>16:00</td> <td>to</td> <td>18:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>491</td> <td>1130</td> <td></td> <td></td> <td>1621</td> </tr> <tr> <td>Peak Hour</td> <td>17:00</td> <td>16:15</td> <td></td> <td></td> <td>16:00</td> </tr> <tr> <td>Peak Volume</td> <td>250</td> <td>594</td> <td></td> <td></td> <td>824</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.947</td> <td>0.911</td> <td></td> <td></td> <td>0.907</td> </tr> </tbody> </table>							NB	SB	EB	WB	TOTAL	Peak Period	00:00	to	12:00			Volume	2544	2215			4759	Peak Hour	7:45	11:00			7:45	Peak Volume	522	428			900	Peak Hour Factor	0.876	0.877			0.926	Peak Period	12:00	to	00:00			Volume	2516	4388			6904	Peak Hour	13:15	15:30			15:30	Peak Volume	382	594			866	Peak Hour Factor	0.876	0.905			0.925	Peak Period	07:00	to	09:00			Volume	912	738			1650	Peak Hour	7:45	7:15			7:45	Peak Volume	522	406			900	Peak Hour Factor	0.876	0.940			0.926	Peak Period	16:00	to	18:00			Volume	491	1130			1621	Peak Hour	17:00	16:15			16:00	Peak Volume	250	594			824	Peak Hour Factor	0.947	0.911			0.907
	NB	SB	EB	WB	TOTAL																																																																																																																																										
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Peak Volume	522	428			900																																																																																																																																										
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Peak Period	12:00	to	00:00																																																																																																																																												
Volume	2516	4388			6904																																																																																																																																										
Peak Hour	13:15	15:30			15:30																																																																																																																																										
Peak Volume	382	594			866																																																																																																																																										
Peak Hour Factor	0.876	0.905			0.925																																																																																																																																										
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Volume	912	738			1650																																																																																																																																										
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Peak Volume	522	406			900																																																																																																																																										
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6:45	105	61			166	18:45	39	78			117																																																																																																																																				
7:00	72	57			129	19:00	32	84			116																																																																																																																																				
7:15	95	108			203	19:15	30	138			168																																																																																																																																				
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7:45	149	94			243	19:45	28	75			103																																																																																																																																				
8:00	133	101			234	20:00	29	63			92																																																																																																																																				
8:15	108	86			194	20:15	26	57			83																																																																																																																																				
8:30	132	97			229	20:30	36	53			89																																																																																																																																				
8:45	112	92			204	20:45	21	40			61																																																																																																																																				
9:00	102	72			174	21:00	21	46			67																																																																																																																																				
9:15	97	67			164	21:15	22	50			72																																																																																																																																				
9:30	82	87			169	21:30	19	44			63																																																																																																																																				
9:45	105	96			201	21:45	19	35			54																																																																																																																																				
10:00	95	93			188	22:00	17	31			48																																																																																																																																				
10:15	94	87			181	22:15	14	36			50																																																																																																																																				
10:30	79	84			163	22:30	18	21			39																																																																																																																																				
10:45	87	91			178	22:45	21	27			48																																																																																																																																				
11:00	92	122			214	23:00	8	40			48																																																																																																																																				
11:15	98	105			203	23:15	10	36			46																																																																																																																																				
11:30	83	106			189	23:30	15	36			51																																																																																																																																				
11:45	72	95			167	23:45	6	19			25																																																																																																																																				
TOTALS	2544	2215	0	0	4759	TOTALS	2516	4388	0	0	6904																																																																																																																																				
SPLIT %	53%	47%	0%	0%	41%	SPLIT %	36%	64%	0%	0%	59%																																																																																																																																				



VOLUME

N 35th Ave Bet. Memorial Medical Office Centre Dwy & Johnson St

Day: Thursday
Date: 12/7/2023

City: Hollywood
Project #: FL23_140478_003

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						4,592	6,205	0	0	10,797							
15-Minutes Interval											Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	10	16			26	12:00	78	100			178	00:00	01:00	27	52		79
0:15	4	14			18	12:15	58	99			157	01:00	02:00	12	27		39
0:30	6	10			16	12:30	69	96			165	02:00	03:00	13	18		31
0:45	7	12			19	12:45	103	91			194	03:00	04:00	12	20		32
1:00	3	12			15	13:00	70	79			149	04:00	05:00	14	15		29
1:15	3	7			10	13:15	91	99			190	05:00	06:00	98	58		156
1:30	5	6			11	13:30	79	84			163	06:00	07:00	345	166		511
1:45	1	2			3	13:45	87	95			182	07:00	08:00	379	329		708
2:00	3	6			9	14:00	78	131			209	08:00	09:00	421	337		758
2:15	3	4			7	14:15	77	122			199	09:00	10:00	370	317		687
2:30	4	3			7	14:30	83	105			188	10:00	11:00	315	383		698
2:45	3	5			8	14:45	91	117			208	11:00	12:00	280	392		672
3:00	6	7			13	15:00	69	123			192	12:00	13:00	308	386		694
3:15	1	4			5	15:15	69	133			202	13:00	14:00	327	357		684
3:30	1	6			7	15:30	76	122			198	14:00	15:00	329	475		804
3:45	4	3			7	15:45	53	136			189	15:00	16:00	267	514		781
4:00	2	3			5	16:00	52	128			180	16:00	17:00	240	565		805
4:15	3	2			5	16:15	57	132			189	17:00	18:00	192	502		694
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4:45	3	6			9	16:45	72	158			230	19:00	20:00	134	345		479
5:00	7	9			16	17:00	59	163			222	20:00	21:00	112	187		299
5:15	16	12			28	17:15	41	145			186	21:00	22:00	67	172		239
5:30	31	16			47	17:30	56	106			162	22:00	23:00	46	136		182
5:45	44	21			65	17:45	36	88			124	23:00	00:00	45	110		155
6:00	41	28			69	18:00	46	92			138	STATISTICS					
6:15	75	38			113	18:15	67	92			159		NB	SB	EB	WB	TOTAL
6:30	132	41			173	18:30	79	81			160	Peak Period	00:00	to	12:00		
6:45	97	59			156	18:45	47	77			124	Volume	2286	2114			4400
7:00	82	51			133	19:00	34	78			112	Peak Hour	7:45	10:30			7:15
7:15	87	107			194	19:15	39	113			152	Peak Volume	435	402			783
7:30	95	90			185	19:30	35	77			112	Peak Hour Factor	0.946	0.948			0.941
7:45	115	81			196	19:45	26	77			103	Peak Period	12:00	to	00:00		
8:00	102	106			208	20:00	29	39			68	Volume	2306	4091			6397
8:15	104	76			180	20:15	24	53			77	Peak Hour	12:45	16:30			16:15
8:30	114	72			186	20:30	35	53			88	Peak Volume	343	613			847
8:45	101	83			184	20:45	24	42			66	Peak Hour Factor	0.833	0.940			0.921
9:00	87	61			148	21:00	19	46			65	Peak Period	07:00	to	09:00		
9:15	89	74			163	21:15	18	45			63	Volume	800	666			1466
9:30	98	78			176	21:30	14	40			54	Peak Hour	7:45	7:15			7:15
9:45	96	104			200	21:45	16	41			57	Peak Volume	435	384			783
10:00	73	101			174	22:00	13	46			59	Peak Hour Factor	0.946	0.897			0.941
10:15	89	84			173	22:15	10	31			41	Peak Period	16:00	to	18:00		
10:30	78	92			170	22:30	8	37			45	Volume	432	1067			1499
10:45	75	106			181	22:45	15	22			37	Peak Hour	16:15	16:30			16:15
11:00	77	101			178	23:00	18	38			56	Peak Volume	247	613			847
11:15	73	103			176	23:15	11	25			36	Peak Hour Factor	0.858	0.940			0.921
11:30	62	89			151	23:30	5	32			37						
11:45	68	99			167	23:45	11	15			26						
TOTALS	2286	2114	0	0	4400	TOTALS	2306	4091	0	0	6397						
SPLIT %	52%	48%	0%	0%	41%	SPLIT %	36%	64%	0%	0%	59%						



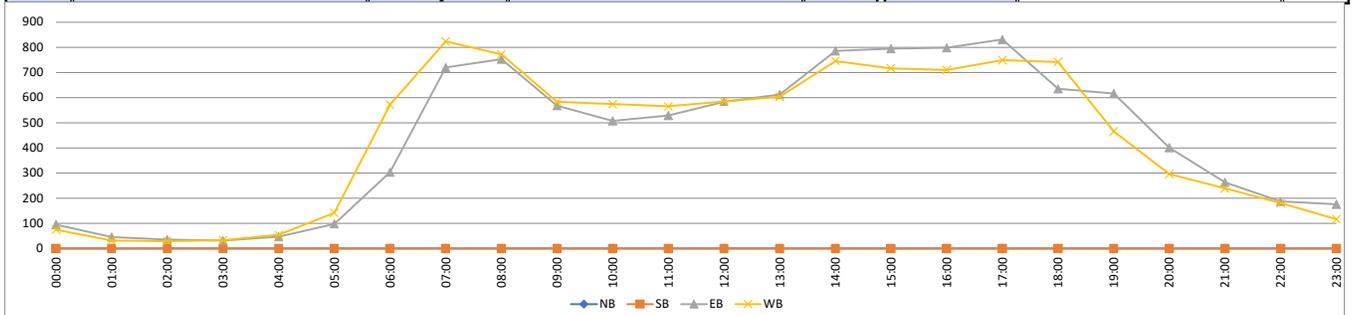
VOLUME

Johnson St Bet. N 35th Ave & N Park Rd

Day: Wednesday
Date: 12/6/2023

City: Hollywood
Project #: FL23_140478_004

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS																																																																																																																																				
						0	0	10,419	10,409	20,828																																																																																																																																					
15-Minutes Interval												Hourly Intervals																																																																																																																																			
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL																																																																																																																														
00:00			36	23	59	12:00			145	116	261	00:00 01:00			95	75	170																																																																																																																														
00:15			19	29	48	12:15			136	158	294	01:00 02:00			46	32	78																																																																																																																														
00:30			20	15	35	12:30			146	159	305	02:00 03:00			36	30	66																																																																																																																														
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01:00			15	10	25	13:00			143	131	274	04:00 05:00			47	54	101																																																																																																																														
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01:30			8	7	15	13:30			159	180	339	06:00 07:00			303	572	875																																																																																																																														
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03:00			7	11	18	15:00			201	185	386	12:00 13:00			584	585	1169																																																																																																																														
03:15			10	9	19	15:15			186	180	366	13:00 14:00			612	604	1216																																																																																																																														
03:30			8	7	15	15:30			213	187	400	14:00 15:00			786	746	1532																																																																																																																														
03:45			7	6	13	15:45			195	165	360	15:00 16:00			795	717	1512																																																																																																																														
04:00			3	8	11	16:00			185	185	370	16:00 17:00			798	710	1508																																																																																																																														
04:15			13	9	22	16:15			207	155	362	17:00 18:00			831	749	1580																																																																																																																														
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04:45			16	21	37	16:45			195	195	390	19:00 20:00			616	466	1082																																																																																																																														
05:00			16	23	39	17:00			219	180	399	20:00 21:00			401	296	697																																																																																																																														
05:15			16	20	36	17:15			205	176	381	21:00 22:00			263	239	502																																																																																																																														
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05:45			32	62	94	17:45			193	193	386	23:00 00:00			176	117	293																																																																																																																														
06:00			33	73	106	18:00			182	185	367	STATISTICS <table border="1"> <thead> <tr> <th></th> <th>NB</th> <th>SB</th> <th>EB</th> <th>WB</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Peak Period 00:00 to 12:00</td> <td></td><td></td><td>3735</td><td>4257</td><td>7992</td> </tr> <tr> <td>Volume</td> <td></td><td></td><td>7:30</td><td>7:30</td><td>7:30</td> </tr> <tr> <td>Peak Hour</td> <td></td><td></td><td>786</td><td>911</td><td>1697</td> </tr> <tr> <td>Peak Volume</td> <td></td><td></td><td>0.963</td><td>0.844</td><td>0.908</td> </tr> <tr> <td>Peak Hour Factor</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Peak Period 12:00 to 00:00</td> <td></td><td></td><td>6684</td><td>6152</td><td>12836</td> </tr> <tr> <td>Volume</td> <td></td><td></td><td>16:45</td><td>17:45</td><td>16:45</td> </tr> <tr> <td>Peak Hour</td> <td></td><td></td><td>833</td><td>793</td><td>1584</td> </tr> <tr> <td>Peak Volume</td> <td></td><td></td><td>0.951</td><td>0.935</td><td>0.957</td> </tr> <tr> <td>Peak Hour Factor</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Peak Period 07:00 to 09:00</td> <td></td><td></td><td>1473</td><td>1596</td><td>3069</td> </tr> <tr> <td>Volume</td> <td></td><td></td><td>7:30</td><td>7:30</td><td>7:30</td> </tr> <tr> <td>Peak Hour</td> <td></td><td></td><td>786</td><td>911</td><td>1697</td> </tr> <tr> <td>Peak Volume</td> <td></td><td></td><td>0.963</td><td>0.844</td><td>0.908</td> </tr> <tr> <td>Peak Hour Factor</td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Peak Period 16:00 to 18:00</td> <td></td><td></td><td>1629</td><td>1459</td><td>3088</td> </tr> <tr> <td>Volume</td> <td></td><td></td><td>16:45</td><td>16:45</td><td>16:45</td> </tr> <tr> <td>Peak Hour</td> <td></td><td></td><td>833</td><td>751</td><td>1584</td> </tr> <tr> <td>Peak Volume</td> <td></td><td></td><td>0.951</td><td>0.939</td><td>0.957</td> </tr> <tr> <td>Peak Hour Factor</td> <td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>							NB	SB	EB	WB	TOTAL	Peak Period 00:00 to 12:00			3735	4257	7992	Volume			7:30	7:30	7:30	Peak Hour			786	911	1697	Peak Volume			0.963	0.844	0.908	Peak Hour Factor						Peak Period 12:00 to 00:00			6684	6152	12836	Volume			16:45	17:45	16:45	Peak Hour			833	793	1584	Peak Volume			0.951	0.935	0.957	Peak Hour Factor						Peak Period 07:00 to 09:00			1473	1596	3069	Volume			7:30	7:30	7:30	Peak Hour			786	911	1697	Peak Volume			0.963	0.844	0.908	Peak Hour Factor						Peak Period 16:00 to 18:00			1629	1459	3088	Volume			16:45	16:45	16:45	Peak Hour			833	751	1584	Peak Volume			0.951	0.939	0.957	Peak Hour Factor					
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06:45			129	165	294	18:45			143	142	285																																																																																																																																				
07:00			140	158	298	19:00			135	130	265																																																																																																																																				
07:15			182	179	361	19:15			181	127	308																																																																																																																																				
07:30			201	217	418	19:30			183	105	288																																																																																																																																				
07:45			197	270	467	19:45			117	104	221																																																																																																																																				
08:00			204	215	419	20:00			115	79	194																																																																																																																																				
08:15			184	209	393	20:15			102	70	172																																																																																																																																				
08:30			182	203	385	20:30			92	82	174																																																																																																																																				
08:45			183	145	328	20:45			92	65	157																																																																																																																																				
09:00			158	186	344	21:00			77	75	152																																																																																																																																				
09:15			126	130	256	21:15			61	60	121																																																																																																																																				
09:30			149	130	279	21:30			52	47	99																																																																																																																																				
09:45			135	138	273	21:45			73	57	130																																																																																																																																				
10:00			116	155	271	22:00			43	42	85																																																																																																																																				
10:15			137	144	281	22:15			55	53	108																																																																																																																																				
10:30			115	142	257	22:30			44	48	92																																																																																																																																				
10:45			140	133	273	22:45			45	38	83																																																																																																																																				
11:00			140	130	270	23:00			56	39	95																																																																																																																																				
11:15			123	145	268	23:15			52	30	82																																																																																																																																				
11:30			137	130	267	23:30			41	27	68																																																																																																																																				
11:45			129	160	289	23:45			27	21	48																																																																																																																																				
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SPLIT %	0%	0%	47%	53%	38%	SPLIT %	0%	0%	52%	48%	62%																																																																																																																																				



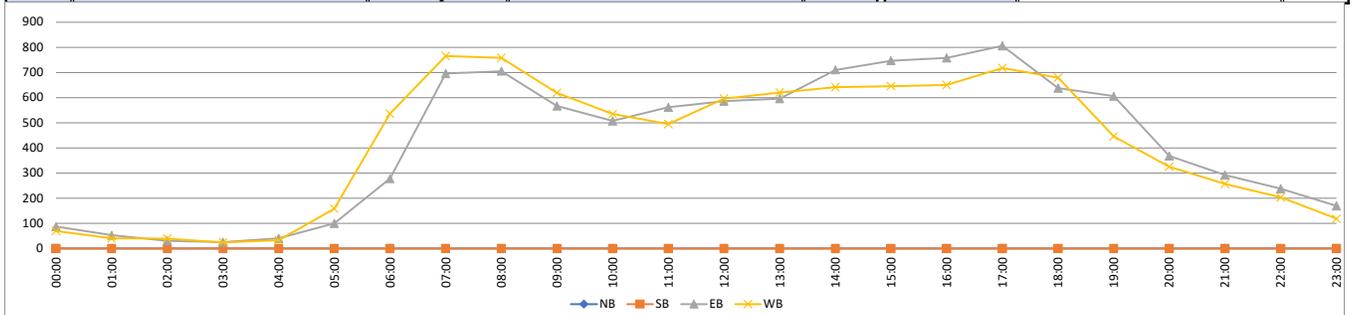
VOLUME

Johnson St Bet. N 35th Ave & N Park Rd

Day: Thursday
Date: 12/7/2023

City: Hollywood
Project #: FL23_140478_004

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS						
						0	0	10,168	9,979	20,147							
15-Minutes Interval												Hourly Intervals					
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			27	23	50	12:00			139	155	294	00:00	01:00		87	70	157
00:15			21	18	39	12:15			145	146	291	01:00	02:00		53	41	94
00:30			25	18	43	12:30			150	156	306	02:00	03:00		31	40	71
00:45			14	11	25	12:45			152	139	291	03:00	04:00		26	25	51
01:00			17	9	26	13:00			135	135	270	04:00	05:00		41	33	74
01:15			13	10	23	13:15			148	157	305	05:00	06:00		100	159	259
01:30			15	11	26	13:30			150	173	323	06:00	07:00		278	536	814
01:45			8	11	19	13:45			163	155	318	07:00	08:00		696	766	1462
02:00			13	12	25	14:00			184	161	345	08:00	09:00		705	758	1463
02:15			7	12	19	14:15			188	143	331	09:00	10:00		567	619	1186
02:30			7	9	16	14:30			175	154	329	10:00	11:00		508	535	1043
02:45			4	7	11	14:45			163	183	346	11:00	12:00		561	495	1056
03:00			6	8	14	15:00			200	179	379	12:00	13:00		586	596	1182
03:15			4	5	9	15:15			187	167	354	13:00	14:00		596	620	1216
03:30			11	8	19	15:30			187	148	335	14:00	15:00		710	641	1351
03:45			5	4	9	15:45			173	152	325	15:00	16:00		747	646	1393
04:00			9	7	16	16:00			175	174	349	16:00	17:00		758	650	1408
04:15			12	8	20	16:15			171	154	325	17:00	18:00		806	718	1524
04:30			8	5	13	16:30			214	151	365	18:00	19:00		638	679	1317
04:45			12	13	25	16:45			198	171	369	19:00	20:00		606	446	1052
05:00			11	20	31	17:00			211	186	397	20:00	21:00		368	326	694
05:15			20	21	41	17:15			210	195	405	21:00	22:00		292	257	549
05:30			31	42	73	17:30			197	159	356	22:00	23:00		238	204	442
05:45			38	76	114	17:45			188	178	366	23:00	00:00		170	119	289
06:00			33	68	101	18:00			162	195	357	STATISTICS					
06:15			56	123	179	18:15			172	182	354		NB	SB	EB	WB	TOTAL
06:30			61	191	252	18:30			149	174	323	Peak Period	00:00	to	12:00		
06:45			128	154	282	18:45			155	128	283	Volume			3653	4077	7730
07:00			146	134	280	19:00			164	129	293	Peak Hour			7:30	7:30	7:30
07:15			184	188	372	19:15			165	117	282	Peak Volume			747	845	1592
07:30			188	206	394	19:30			147	96	243	Peak Hour Factor			0.968	0.888	0.957
07:45			178	238	416	19:45			130	104	234	Peak Period	12:00	to	00:00		
08:00			193	209	402	20:00			97	83	180	Volume			6515	5902	12417
08:15			188	192	380	20:15			101	92	193	Peak Hour			16:30	17:45	16:30
08:30			173	182	355	20:30			87	91	178	Peak Volume			833	729	1536
08:45			151	175	326	20:45			83	60	143	Peak Hour Factor			0.973	0.935	0.948
09:00			141	155	296	21:00			78	78	156	Peak Period	07:00	to	09:00		
09:15			135	133	268	21:15			69	60	129	Volume			1401	1524	2925
09:30			141	182	323	21:30			78	56	134	Peak Hour			7:30	7:30	7:30
09:45			150	149	299	21:45			67	63	130	Peak Volume			747	845	1592
10:00			128	126	254	22:00			73	68	141	Peak Hour Factor			0.968	0.888	0.957
10:15			120	142	262	22:15			54	41	95	Peak Period	16:00	to	18:00		
10:30			126	133	259	22:30			68	44	112	Volume			1564	1368	2932
10:45			134	134	268	22:45			43	51	94	Peak Hour			16:30	17:00	16:30
11:00			124	131	255	23:00			46	39	85	Peak Volume			833	718	1536
11:15			122	136	258	23:15			45	26	71	Peak Hour Factor			0.973	0.921	0.948
11:30			150	101	251	23:30			50	28	78						
11:45			165	127	292	23:45			29	26	55						
TOTALS	0	0	3653	4077	7730	TOTALS	0	0	6515	5902	12417						
SPLIT %	0%	0%	47%	53%	38%	SPLIT %	0%	0%	52%	48%	62%						



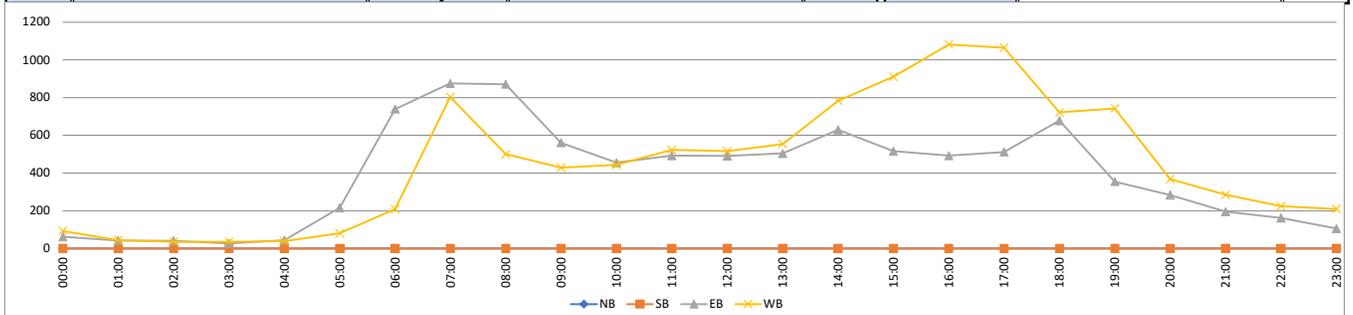
VOLUME

Johnson St Bet. N 40th Ave & Employee Parking Dwy W

Day: Wednesday
Date: 12/6/2023

City: Hollywood
Project #: FL23_140476_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS																																																																																																																																				
						0	0	9,357	10,704	20,061																																																																																																																																					
15-Minutes Interval											Hourly Intervals																																																																																																																																				
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL																																																																																																																														
0:00			25	27	52	12:00			124	133	257	00:00	01:00			63	94	157																																																																																																																													
0:15			10	35	45	12:15			117	147	264	01:00	02:00			43	44	87																																																																																																																													
0:30			15	19	34	12:30			107	122	229	02:00	03:00			41	36	77																																																																																																																													
0:45			13	13	26	12:45			143	114	257	03:00	04:00			28	36	64																																																																																																																													
1:00			16	17	33	13:00			102	123	225	04:00	05:00			45	40	85																																																																																																																													
1:15			7	8	15	13:15			121	116	237	05:00	06:00			216	81	297																																																																																																																													
1:30			11	13	24	13:30			134	160	294	06:00	07:00			740	209	949																																																																																																																													
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2:00			7	9	16	14:00			145	188	333	08:00	09:00			871	501	1372																																																																																																																													
2:15			14	13	27	14:15			145	204	349	09:00	10:00			561	428	989																																																																																																																													
2:30			9	6	15	14:30			168	192	360	10:00	11:00			455	444	899																																																																																																																													
2:45			11	8	19	14:45			172	200	372	11:00	12:00			492	523	1015																																																																																																																													
3:00			3	15	18	15:00			133	217	350	12:00	13:00			491	516	1007																																																																																																																													
3:15			9	11	20	15:15			123	214	337	13:00	14:00			504	554	1058																																																																																																																													
3:30			8	8	16	15:30			133	263	396	14:00	15:00			630	784	1414																																																																																																																													
3:45			8	2	10	15:45			127	217	344	15:00	16:00			516	911	1427																																																																																																																													
4:00			6	6	12	16:00			104	256	360	16:00	17:00			492	1082	1574																																																																																																																													
4:15			11	14	25	16:15			140	264	404	17:00	18:00			512	1065	1577																																																																																																																													
4:30			11	11	22	16:30			117	285	402	18:00	19:00			679	722	1401																																																																																																																													
4:45			17	9	26	16:45			131	277	408	19:00	20:00			355	743	1098																																																																																																																													
5:00			28	13	41	17:00			117	290	407	20:00	21:00			284	368	652																																																																																																																													
5:15			37	13	50	17:15			124	297	421	21:00	22:00			195	285	480																																																																																																																													
5:30			67	30	97	17:30			134	257	391	22:00	23:00			163	225	388																																																																																																																													
5:45			84	25	109	17:45			137	221	358	23:00	00:00			106	210	316																																																																																																																													
6:00			91	31	122	18:00			154	204	358	STATISTICS <table border="1"> <thead> <tr> <th></th> <th>NB</th> <th>SB</th> <th>EB</th> <th>WB</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Peak Period</td> <td>00:00</td> <td>to</td> <td>12:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>4430</td> <td></td> <td>3239</td> <td></td> <td>7669</td> </tr> <tr> <td>Peak Hour</td> <td>7:30</td> <td></td> <td>7:15</td> <td></td> <td>7:15</td> </tr> <tr> <td>Peak Volume</td> <td>929</td> <td></td> <td>821</td> <td></td> <td>1715</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.972</td> <td></td> <td>0.824</td> <td></td> <td>0.903</td> </tr> <tr> <td>Peak Period</td> <td>12:00</td> <td>to</td> <td>00:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>4927</td> <td></td> <td>7465</td> <td></td> <td>12392</td> </tr> <tr> <td>Peak Hour</td> <td>18:00</td> <td></td> <td>16:30</td> <td></td> <td>16:30</td> </tr> <tr> <td>Peak Volume</td> <td>679</td> <td></td> <td>1149</td> <td></td> <td>1638</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.880</td> <td></td> <td>0.967</td> <td></td> <td>0.973</td> </tr> <tr> <td>Peak Period</td> <td>07:00</td> <td>to</td> <td>09:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>1746</td> <td></td> <td>1304</td> <td></td> <td>3050</td> </tr> <tr> <td>Peak Hour</td> <td>7:30</td> <td></td> <td>7:15</td> <td></td> <td>7:15</td> </tr> <tr> <td>Peak Volume</td> <td>929</td> <td></td> <td>821</td> <td></td> <td>1715</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.972</td> <td></td> <td>0.824</td> <td></td> <td>0.903</td> </tr> <tr> <td>Peak Period</td> <td>16:00</td> <td>to</td> <td>18:00</td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>1004</td> <td></td> <td>2147</td> <td></td> <td>3151</td> </tr> <tr> <td>Peak Hour</td> <td>17:00</td> <td></td> <td>16:30</td> <td></td> <td>16:30</td> </tr> <tr> <td>Peak Volume</td> <td>512</td> <td></td> <td>1149</td> <td></td> <td>1638</td> </tr> <tr> <td>Peak Hour Factor</td> <td>0.934</td> <td></td> <td>0.967</td> <td></td> <td>0.973</td> </tr> </tbody> </table>							NB	SB	EB	WB	TOTAL	Peak Period	00:00	to	12:00			Volume	4430		3239		7669	Peak Hour	7:30		7:15		7:15	Peak Volume	929		821		1715	Peak Hour Factor	0.972		0.824		0.903	Peak Period	12:00	to	00:00			Volume	4927		7465		12392	Peak Hour	18:00		16:30		16:30	Peak Volume	679		1149		1638	Peak Hour Factor	0.880		0.967		0.973	Peak Period	07:00	to	09:00			Volume	1746		1304		3050	Peak Hour	7:30		7:15		7:15	Peak Volume	929		821		1715	Peak Hour Factor	0.972		0.824		0.903	Peak Period	16:00	to	18:00			Volume	1004		2147		3151	Peak Hour	17:00		16:30		16:30	Peak Volume	512		1149		1638	Peak Hour Factor	0.934		0.967		0.973
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6:15			186	47	233	18:15			184	182	366																																																																																																																																				
6:30			233	64	297	18:30			193	184	377																																																																																																																																				
6:45			230	67	297	18:45			148	152	300																																																																																																																																				
7:00			220	126	346	19:00			101	153	254																																																																																																																																				
7:15			204	246	450	19:15			101	237	338																																																																																																																																				
7:30			226	249	475	19:30			89	203	292																																																																																																																																				
7:45			225	182	407	19:45			64	150	214																																																																																																																																				
8:00			239	144	383	20:00			63	107	170																																																																																																																																				
8:15			239	127	366	20:15			81	99	180																																																																																																																																				
8:30			200	124	324	20:30			68	93	161																																																																																																																																				
8:45			193	106	299	20:45			72	69	141																																																																																																																																				
9:00			143	129	272	21:00			49	83	132																																																																																																																																				
9:15			133	98	231	21:15			54	81	135																																																																																																																																				
9:30			145	95	240	21:30			34	68	102																																																																																																																																				
9:45			140	106	246	21:45			58	53	111																																																																																																																																				
10:00			105	116	221	22:00			35	67	102																																																																																																																																				
10:15			117	108	225	22:15			48	64	112																																																																																																																																				
10:30			105	113	218	22:30			43	56	99																																																																																																																																				
10:45			128	107	235	22:45			37	38	75																																																																																																																																				
11:00			123	132	255	23:00			29	73	102																																																																																																																																				
11:15			102	125	227	23:15			34	55	89																																																																																																																																				
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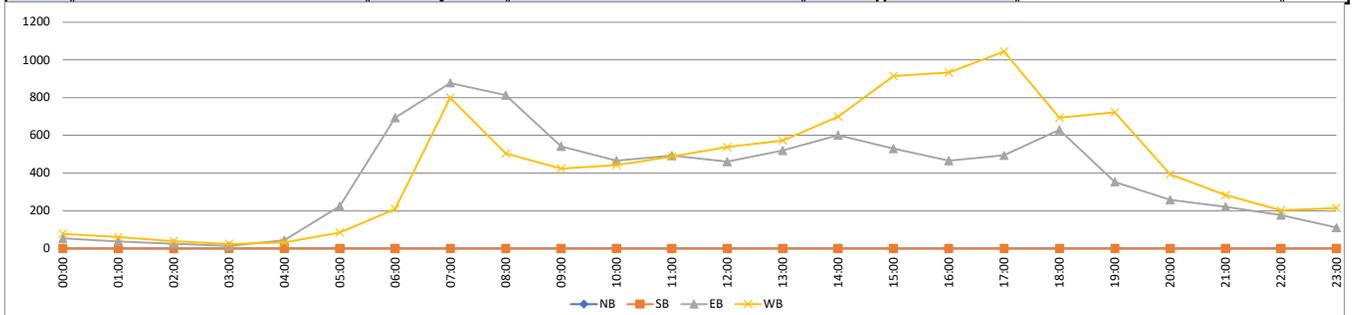
VOLUME

Johnson St Bet. N 40th Ave & Employee Parking Dwy W

Day: Thursday
Date: 12/7/2023

City: Hollywood
Project #: FL23_140476_001

DAILY TOTALS						NB	SB	EB	WB	Total	DAILY TOTALS							
						0	0	9,109	10,400	19,509								
15-Minutes Interval												Hourly Intervals						
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
0:00			15	20	35	12:00			103	147	250	00:00	01:00			54	78	132
0:15			16	25	41	12:15			111	132	243	01:00	02:00			38	60	98
0:30			10	17	27	12:30			112	136	248	02:00	03:00			26	39	65
0:45			13	16	29	12:45			135	123	258	03:00	04:00			14	24	38
1:00			14	19	33	13:00			112	135	247	04:00	05:00			45	33	78
1:15			8	18	26	13:15			131	137	268	05:00	06:00			225	85	310
1:30			9	11	20	13:30			123	156	279	06:00	07:00			693	210	903
1:45			7	12	19	13:45			154	145	299	07:00	08:00			878	799	1677
2:00			7	11	18	14:00			135	163	298	08:00	09:00			813	504	1317
2:15			9	11	20	14:15			153	151	304	09:00	10:00			542	423	965
2:30			7	10	17	14:30			164	188	352	10:00	11:00			466	443	909
2:45			3	7	10	14:45			148	197	345	11:00	12:00			493	489	982
3:00			2	2	4	15:00			137	215	352	12:00	13:00			461	538	999
3:15			1	11	12	15:15			147	229	376	13:00	14:00			520	573	1093
3:30			9	9	18	15:30			121	264	385	14:00	15:00			600	699	1299
3:45			2	2	4	15:45			125	207	332	15:00	16:00			530	915	1445
4:00			9	9	18	16:00			82	221	303	16:00	17:00			465	933	1398
4:15			12	10	22	16:15			136	184	320	17:00	18:00			494	1044	1538
4:30			11	5	16	16:30			127	228	355	18:00	19:00			630	694	1324
4:45			13	9	22	16:45			120	300	420	19:00	20:00			354	722	1076
5:00			17	10	27	17:00			106	294	400	20:00	21:00			258	394	652
5:15			44	16	60	17:15			124	292	416	21:00	22:00			222	283	505
5:30			71	25	96	17:30			135	237	372	22:00	23:00			177	203	380
5:45			93	34	127	17:45			129	221	350	23:00	00:00			111	215	326
6:00			75	31	106	18:00			127	205	332	STATISTICS						
6:15			178	44	222	18:15			174	168	342		NB	SB	EB	WB	TOTAL	
6:30			235	59	294	18:30			210	173	383	Peak Period	00:00	to	12:00			
6:45			205	76	281	18:45			119	148	267	Volume			4287	3187	7474	
7:00			194	113	307	19:00			113	144	257	Peak Hour			7:30	7:15	7:15	
7:15			205	240	445	19:15			83	233	316	Peak Volume			939	832	1758	
7:30			220	253	473	19:30			84	198	282	Peak Hour Factor			0.906	0.822	0.929	
7:45			259	193	452	19:45			74	147	221	Peak Period	12:00	to	00:00			
8:00			242	146	388	20:00			59	111	170	Volume			4822	7213	12035	
8:15			218	127	345	20:15			65	102	167	Peak Hour			17:45	16:45	16:45	
8:30			178	120	298	20:30			60	111	171	Peak Volume			640	1123	1608	
8:45			175	111	286	20:45			74	70	144	Peak Hour Factor			0.762	0.936	0.957	
9:00			141	106	247	21:00			54	89	143	Peak Period	07:00	to	09:00			
9:15			130	96	226	21:15			55	71	126	Volume			1691	1303	2994	
9:30			146	100	246	21:30			65	65	130	Peak Hour			7:30	7:15	7:15	
9:45			125	121	246	21:45			48	58	106	Peak Volume			939	832	1758	
10:00			117	105	222	22:00			47	69	116	Peak Hour Factor			0.906	0.822	0.929	
10:15			108	113	221	22:15			46	38	84	Peak Period	16:00	to	18:00			
10:30			121	110	231	22:30			45	46	91	Volume			959	1977	2936	
10:45			120	115	235	22:45			39	50	89	Peak Hour			17:00	16:45	16:45	
11:00			119	124	243	23:00			28	67	95	Peak Volume			494	1123	1608	
11:15			108	136	244	23:15			36	45	81	Peak Hour Factor			0.915	0.936	0.957	
11:30			123	109	232	23:30			28	64	92							
11:45			143	120	263	23:45			19	39	58							
TOTALS	0	0	4287	3187	7474	TOTALS	0	0	4822	7213	12035							
SPLIT %	0%	0%	57%	43%	38%	SPLIT %	0%	0%	40%	60%	62%							





APPENDIX C – Signal Timing and Phasing Diagrams





Public Works Department
TRAFFIC ENGINEERING DIVISION
2300 W. Commercial Boulevard • Fort Lauderdale, Florida 33309 • 954-847-2600

January 25, 2024

Moshiur Rahman
Calvin, Giordano and Associates
mrahman@cgasolutions.com

Re: Recent Public Records Request #345515

Dear Mr. Rahman:

Broward County acknowledges receiving your public records request on January 25, 2024, for the following public records regarding signal timing details and Standard Operating Procedures (SOPs) for the following intersection located in the City of Hollywood:

- N 35th Avenue and Hayes Street

In accordance with [Chapter 119, Florida Statutes](#), you are permitted to inspect and copy public records in the County's possession that are not exempt and/or confidential.

Your request has been reviewed and we have determined that there is no cost to compile. As such, at this time we are providing these records to you and closing out your request as complete.

Please reference the Public Records Request number above in any future correspondence about this Public Records Request.

Respectfully,

A handwritten signature in blue ink, appearing to read "Catherine M. Albert", is written over a light blue circular stamp.

Catherine Albert
Traffic Engineering Division
Public Records Request Coordinator



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3495	Initial Operation Date	07/27/00
Controller Type	2070 LN	System Number	
Modification Number	3	Modification Date	02/15/2021
Drawing/Project No		FPL Grid Number	87372926801
Intersection	N 35TH AVE and HOLLYWOOD MEMORIAL ENT.		
Municipality	HOLLYWOOD		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2,6		4				
Direction		NS		EW				
Initial Green(MIN)		15		10				
Vehicle Ext.(GAP)		2.0		2.0				
Maximum Green I		35		25				
Maximum Green II								
Yellow Clearance		4.0		4.0				
All Red Clearance		2.0		2.0				
Phase Recall		MIN		OFF				
Detector Delay				30-RT				
Walk		7		7				
Pedestrian Clearance		15		12				
Permissive								
Flash Operation		YELLOW		RED				

Attachment

NOTES:

1. FLASH OPERATION 2200-0600, 7 DAYS.
2. MOD. 3 UPDATES ALL RED CLEARANCES.

Submitted By _____

Approved By _____

Station : 3150 - Johnson St & Park 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		29		17		29		17								
Min Green	4	10	4	6	4	10	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	20	45	20	40	20	45	20	40								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON															
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON							
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

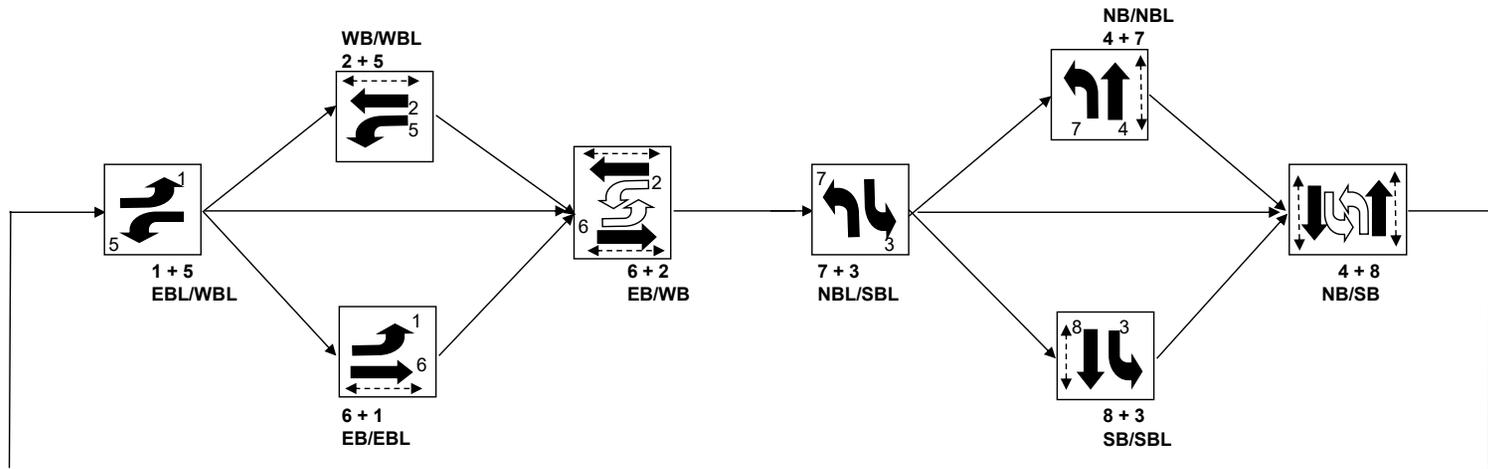
Preemption

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

Preempt LP

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

Sequence of Operation for (3150) Johnson Street and North Park Road



 Denotes Permissive Left Turn Movement
 Denotes Pedestrian Signal



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3150	Initial Operation Date	UNKNOWN
Controller Type	2070 LN	System Number	3150
Modification Number	9	Modification Date	05/13/2020
Drawing/Project No	661 - DG 3	FPL Grid Number	87472095100
Intersection	JOHNSON STREET and N PARK ROAD		
Municipality	HOLLYWOOD		

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)	4	10	4	6	4	10	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	20	45	20	40	20	45	20	40
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	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			5				5	
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		29		17		29		17
Permissive	5 SECT		5 SECT		5 SECT		5 SECT	
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN EAST/WEST: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. FLASH OPERATION: 0000-0600, 7 DAYS.
3. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
4. MOD. 9 UPDATES ALL RED CLEARANCE.

Submitted By _____

Approved By _____

Station : 3151 - Johnson St & N 35 Ave (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		18		18		18		20								
Min Green	4	12	4	6	4	12	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	15	40	15	35	15	40	15	35								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON															
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON							
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

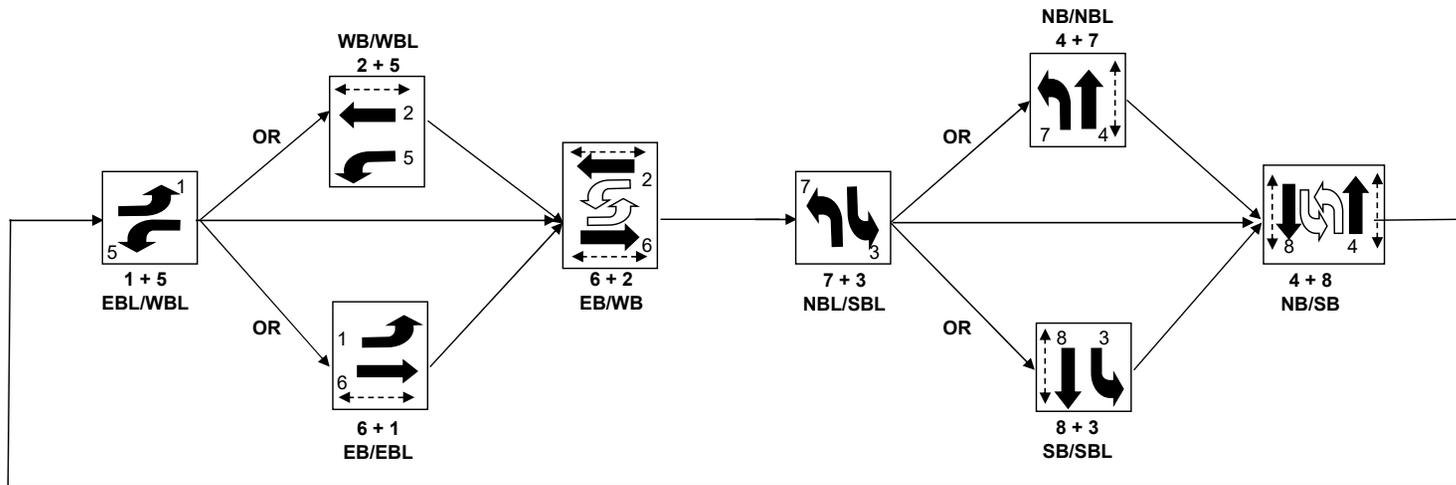
Preemption

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

Sequence of Operation for (3151), Johnson Street and N 35 Ave Hollywood



 Denotes Permissive Left Turn Movement
 Denotes Pedestrian Signal



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3151	Initial Operation Date	UNKNOWN
Controller Type	2070	System Number	3151
Modification Number	8	Modification Date	05/13/2020
Drawing/Project No	06-5705 & 06-5705.19	FPL Grid Number	87372935304
Intersection	JOHNSON STREET and N 35 AVENUE		
Municipality	HOLLYWOOD		

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)	4	12	4	6	4	12	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	15	40	15	35	15	40	15	35
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	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			5				5	
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		18		18		18		20
Permissive	YES		YES		YES		YES	
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN EAST/WEST: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED NORTH/SOUTH.
3. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
4. MOD. 8 UPDATES ALL RED CLEARANCE.

Submitted By _____

Approved By _____



APPENDIX D – Peak Season Conversion Factor



2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8600 EAST-A1A TO US1

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	1.06	1.09
2	01/02/2022 - 01/08/2022	1.05	1.08
3	01/09/2022 - 01/15/2022	1.05	1.08
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
* 6	01/30/2022 - 02/05/2022	0.99	1.02
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022	0.95	0.98
* 9	02/20/2022 - 02/26/2022	0.95	0.98
*10	02/27/2022 - 03/05/2022	0.94	0.97
*11	03/06/2022 - 03/12/2022	0.94	0.97
*12	03/13/2022 - 03/19/2022	0.93	0.96
*13	03/20/2022 - 03/26/2022	0.95	0.98
*14	03/27/2022 - 04/02/2022	0.96	0.99
*15	04/03/2022 - 04/09/2022	0.98	1.01
*16	04/10/2022 - 04/16/2022	0.99	1.02
*17	04/17/2022 - 04/23/2022	1.00	1.03
*18	04/24/2022 - 04/30/2022	1.01	1.04
19	05/01/2022 - 05/07/2022	1.02	1.05
20	05/08/2022 - 05/14/2022	1.04	1.07
21	05/15/2022 - 05/21/2022	1.05	1.08
22	05/22/2022 - 05/28/2022	1.04	1.07
23	05/29/2022 - 06/04/2022	1.03	1.06
24	06/05/2022 - 06/11/2022	1.02	1.05
25	06/12/2022 - 06/18/2022	1.02	1.05
26	06/19/2022 - 06/25/2022	1.00	1.03
27	06/26/2022 - 07/02/2022	0.98	1.01
28	07/03/2022 - 07/09/2022	0.97	1.00
29	07/10/2022 - 07/16/2022	0.95	0.98
30	07/17/2022 - 07/23/2022	0.96	0.99
31	07/24/2022 - 07/30/2022	0.97	1.00
32	07/31/2022 - 08/06/2022	0.98	1.01
33	08/07/2022 - 08/13/2022	1.00	1.03
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.05	1.08
38	09/11/2022 - 09/17/2022	1.06	1.09
39	09/18/2022 - 09/24/2022	1.05	1.08
40	09/25/2022 - 10/01/2022	1.04	1.07
41	10/02/2022 - 10/08/2022	1.03	1.06
42	10/09/2022 - 10/15/2022	1.01	1.04
43	10/16/2022 - 10/22/2022	1.03	1.06
44	10/23/2022 - 10/29/2022	1.04	1.07
45	10/30/2022 - 11/05/2022	1.05	1.08
46	11/06/2022 - 11/12/2022	1.07	1.10
47	11/13/2022 - 11/19/2022	1.08	1.11
48	11/20/2022 - 11/26/2022	1.08	1.11
49	11/27/2022 - 12/03/2022	1.07	1.10
50	12/04/2022 - 12/10/2022	1.07	1.10
51	12/11/2022 - 12/17/2022	1.06	1.09
52	12/18/2022 - 12/24/2022	1.05	1.08
53	12/25/2022 - 12/31/2022	1.05	1.08

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8601 CEN.-W OF US1 TO SR7

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	1.00	1.03
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.03	1.06
4	01/16/2022 - 01/22/2022	1.02	1.05
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.99	1.02
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
*10	02/27/2022 - 03/05/2022	0.96	0.99
*11	03/06/2022 - 03/12/2022	0.96	0.99
*12	03/13/2022 - 03/19/2022	0.96	0.99
*13	03/20/2022 - 03/26/2022	0.96	0.99
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.98	1.01
*17	04/17/2022 - 04/23/2022	0.98	1.01
*18	04/24/2022 - 04/30/2022	0.99	1.02
*19	05/01/2022 - 05/07/2022	0.99	1.02
20	05/08/2022 - 05/14/2022	1.00	1.03
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.01	1.04
24	06/05/2022 - 06/11/2022	1.02	1.05
25	06/12/2022 - 06/18/2022	1.03	1.06
26	06/19/2022 - 06/25/2022	1.02	1.05
27	06/26/2022 - 07/02/2022	1.02	1.05
28	07/03/2022 - 07/09/2022	1.02	1.05
29	07/10/2022 - 07/16/2022	1.02	1.05
30	07/17/2022 - 07/23/2022	1.02	1.05
31	07/24/2022 - 07/30/2022	1.01	1.04
32	07/31/2022 - 08/06/2022	1.01	1.04
33	08/07/2022 - 08/13/2022	1.00	1.03
34	08/14/2022 - 08/20/2022	1.00	1.03
35	08/21/2022 - 08/27/2022	1.01	1.04
36	08/28/2022 - 09/03/2022	1.02	1.05
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.03	1.06
40	09/25/2022 - 10/01/2022	1.02	1.05
41	10/02/2022 - 10/08/2022	1.01	1.04
42	10/09/2022 - 10/15/2022	1.00	1.03
43	10/16/2022 - 10/22/2022	1.00	1.03
44	10/23/2022 - 10/29/2022	1.01	1.04
45	10/30/2022 - 11/05/2022	1.01	1.04
46	11/06/2022 - 11/12/2022	1.01	1.04
47	11/13/2022 - 11/19/2022	1.02	1.05
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.01	1.04
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	1.00	1.03
52	12/18/2022 - 12/24/2022	1.01	1.04
53	12/25/2022 - 12/31/2022	1.03	1.06

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8630 WEST-W OF US441

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.02	1.05
4	01/16/2022 - 01/22/2022	1.01	1.04
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.98	1.01
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022	0.96	0.99
* 9	02/20/2022 - 02/26/2022	0.96	0.99
*10	02/27/2022 - 03/05/2022	0.96	0.99
*11	03/06/2022 - 03/12/2022	0.96	0.99
*12	03/13/2022 - 03/19/2022	0.96	0.99
*13	03/20/2022 - 03/26/2022	0.96	0.99
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.97	1.00
*17	04/17/2022 - 04/23/2022	0.97	1.00
*18	04/24/2022 - 04/30/2022	0.98	1.01
*19	05/01/2022 - 05/07/2022	0.98	1.01
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.05	1.08
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.06	1.09
30	07/17/2022 - 07/23/2022	1.05	1.08
31	07/24/2022 - 07/30/2022	1.04	1.07
32	07/31/2022 - 08/06/2022	1.03	1.06
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.02	1.05
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.03	1.06
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.01	1.04
41	10/02/2022 - 10/08/2022	0.99	1.02
42	10/09/2022 - 10/15/2022	0.98	1.01
43	10/16/2022 - 10/22/2022	0.99	1.02
44	10/23/2022 - 10/29/2022	1.00	1.03
45	10/30/2022 - 11/05/2022	1.00	1.03
46	11/06/2022 - 11/12/2022	1.01	1.04
47	11/13/2022 - 11/19/2022	1.02	1.05
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.01	1.04
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	0.99	1.02
52	12/18/2022 - 12/24/2022	1.01	1.04
53	12/25/2022 - 12/31/2022	1.02	1.05

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8659 BROWARD I595

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.02	1.05
3	01/09/2022 - 01/15/2022	1.04	1.07
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
6	01/30/2022 - 02/05/2022	1.00	1.03
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
*10	02/27/2022 - 03/05/2022	0.97	1.00
*11	03/06/2022 - 03/12/2022	0.96	0.99
*12	03/13/2022 - 03/19/2022	0.96	0.99
*13	03/20/2022 - 03/26/2022	0.96	0.99
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.97	1.00
*17	04/17/2022 - 04/23/2022	0.97	1.00
*18	04/24/2022 - 04/30/2022	0.98	1.01
*19	05/01/2022 - 05/07/2022	0.98	1.01
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	0.99	1.02
22	05/22/2022 - 05/28/2022	1.00	1.03
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.05	1.08
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.05	1.08
30	07/17/2022 - 07/23/2022	1.04	1.07
31	07/24/2022 - 07/30/2022	1.03	1.06
32	07/31/2022 - 08/06/2022	1.03	1.06
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.00	1.03
41	10/02/2022 - 10/08/2022	0.98	1.01
42	10/09/2022 - 10/15/2022	0.96	0.99
43	10/16/2022 - 10/22/2022	0.97	1.00
44	10/23/2022 - 10/29/2022	0.98	1.01
45	10/30/2022 - 11/05/2022	0.99	1.02
46	11/06/2022 - 11/12/2022	1.00	1.03
47	11/13/2022 - 11/19/2022	1.01	1.04
48	11/20/2022 - 11/26/2022	1.01	1.04
49	11/27/2022 - 12/03/2022	1.00	1.03
50	12/04/2022 - 12/10/2022	1.00	1.03
51	12/11/2022 - 12/17/2022	0.99	1.02
52	12/18/2022 - 12/24/2022	1.02	1.05
53	12/25/2022 - 12/31/2022	1.04	1.07

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8675 BROWARD I75 URBAN

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	0.98	1.01
2	01/02/2022 - 01/08/2022	1.02	1.05
3	01/09/2022 - 01/15/2022	1.05	1.08
4	01/16/2022 - 01/22/2022	1.03	1.06
5	01/23/2022 - 01/29/2022	1.01	1.04
6	01/30/2022 - 02/05/2022	1.00	1.03
* 7	02/06/2022 - 02/12/2022	0.98	1.01
* 8	02/13/2022 - 02/19/2022	0.97	1.00
* 9	02/20/2022 - 02/26/2022	0.97	1.00
*10	02/27/2022 - 03/05/2022	0.97	1.00
*11	03/06/2022 - 03/12/2022	0.97	1.00
*12	03/13/2022 - 03/19/2022	0.97	1.00
*13	03/20/2022 - 03/26/2022	0.97	1.00
*14	03/27/2022 - 04/02/2022	0.97	1.00
*15	04/03/2022 - 04/09/2022	0.97	1.00
*16	04/10/2022 - 04/16/2022	0.97	1.00
*17	04/17/2022 - 04/23/2022	0.98	1.01
*18	04/24/2022 - 04/30/2022	0.98	1.01
*19	05/01/2022 - 05/07/2022	0.99	1.02
20	05/08/2022 - 05/14/2022	0.99	1.02
21	05/15/2022 - 05/21/2022	1.00	1.03
22	05/22/2022 - 05/28/2022	1.01	1.04
23	05/29/2022 - 06/04/2022	1.02	1.05
24	06/05/2022 - 06/11/2022	1.03	1.06
25	06/12/2022 - 06/18/2022	1.04	1.07
26	06/19/2022 - 06/25/2022	1.04	1.07
27	06/26/2022 - 07/02/2022	1.04	1.07
28	07/03/2022 - 07/09/2022	1.05	1.08
29	07/10/2022 - 07/16/2022	1.05	1.08
30	07/17/2022 - 07/23/2022	1.04	1.07
31	07/24/2022 - 07/30/2022	1.03	1.06
32	07/31/2022 - 08/06/2022	1.02	1.05
33	08/07/2022 - 08/13/2022	1.02	1.05
34	08/14/2022 - 08/20/2022	1.01	1.04
35	08/21/2022 - 08/27/2022	1.02	1.05
36	08/28/2022 - 09/03/2022	1.03	1.06
37	09/04/2022 - 09/10/2022	1.03	1.06
38	09/11/2022 - 09/17/2022	1.04	1.07
39	09/18/2022 - 09/24/2022	1.02	1.05
40	09/25/2022 - 10/01/2022	1.00	1.03
41	10/02/2022 - 10/08/2022	0.98	1.01
42	10/09/2022 - 10/15/2022	0.96	0.99
43	10/16/2022 - 10/22/2022	0.97	1.00
44	10/23/2022 - 10/29/2022	0.98	1.01
45	10/30/2022 - 11/05/2022	0.99	1.02
46	11/06/2022 - 11/12/2022	0.99	1.02
47	11/13/2022 - 11/19/2022	1.00	1.03
48	11/20/2022 - 11/26/2022	1.00	1.03
49	11/27/2022 - 12/03/2022	0.99	1.02
50	12/04/2022 - 12/10/2022	0.99	1.02
51	12/11/2022 - 12/17/2022	0.98	1.01
52	12/18/2022 - 12/24/2022	1.02	1.05
53	12/25/2022 - 12/31/2022	1.05	1.08

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8676 BROWARD I75 RURAL

WEEK	DATES	SF	MOCF: 0.94 PSCF
1	01/01/2022 - 01/01/2022	1.01	1.07
2	01/02/2022 - 01/08/2022	1.01	1.07
3	01/09/2022 - 01/15/2022	1.01	1.07
4	01/16/2022 - 01/22/2022	0.99	1.05
5	01/23/2022 - 01/29/2022	0.97	1.03
* 6	01/30/2022 - 02/05/2022	0.96	1.02
* 7	02/06/2022 - 02/12/2022	0.94	1.00
* 8	02/13/2022 - 02/19/2022	0.92	0.98
* 9	02/20/2022 - 02/26/2022	0.92	0.98
*10	02/27/2022 - 03/05/2022	0.93	0.99
*11	03/06/2022 - 03/12/2022	0.93	0.99
*12	03/13/2022 - 03/19/2022	0.93	0.99
*13	03/20/2022 - 03/26/2022	0.93	0.99
*14	03/27/2022 - 04/02/2022	0.94	1.00
*15	04/03/2022 - 04/09/2022	0.94	1.00
*16	04/10/2022 - 04/16/2022	0.94	1.00
*17	04/17/2022 - 04/23/2022	0.95	1.01
*18	04/24/2022 - 04/30/2022	0.96	1.02
19	05/01/2022 - 05/07/2022	0.97	1.03
20	05/08/2022 - 05/14/2022	0.98	1.04
21	05/15/2022 - 05/21/2022	0.99	1.05
22	05/22/2022 - 05/28/2022	1.01	1.07
23	05/29/2022 - 06/04/2022	1.04	1.11
24	06/05/2022 - 06/11/2022	1.07	1.14
25	06/12/2022 - 06/18/2022	1.10	1.17
26	06/19/2022 - 06/25/2022	1.09	1.16
27	06/26/2022 - 07/02/2022	1.09	1.16
28	07/03/2022 - 07/09/2022	1.08	1.15
29	07/10/2022 - 07/16/2022	1.08	1.15
30	07/17/2022 - 07/23/2022	1.08	1.15
31	07/24/2022 - 07/30/2022	1.07	1.14
32	07/31/2022 - 08/06/2022	1.07	1.14
33	08/07/2022 - 08/13/2022	1.06	1.13
34	08/14/2022 - 08/20/2022	1.06	1.13
35	08/21/2022 - 08/27/2022	1.11	1.18
36	08/28/2022 - 09/03/2022	1.16	1.23
37	09/04/2022 - 09/10/2022	1.20	1.28
38	09/11/2022 - 09/17/2022	1.25	1.33
39	09/18/2022 - 09/24/2022	1.19	1.27
40	09/25/2022 - 10/01/2022	1.13	1.20
41	10/02/2022 - 10/08/2022	1.07	1.14
42	10/09/2022 - 10/15/2022	1.01	1.07
43	10/16/2022 - 10/22/2022	1.01	1.07
44	10/23/2022 - 10/29/2022	1.01	1.07
45	10/30/2022 - 11/05/2022	1.01	1.07
46	11/06/2022 - 11/12/2022	1.01	1.07
47	11/13/2022 - 11/19/2022	1.01	1.07
48	11/20/2022 - 11/26/2022	1.01	1.07
49	11/27/2022 - 12/03/2022	1.01	1.07
50	12/04/2022 - 12/10/2022	1.01	1.07
51	12/11/2022 - 12/17/2022	1.01	1.07
52	12/18/2022 - 12/24/2022	1.01	1.07
53	12/25/2022 - 12/31/2022	1.01	1.07

* PEAK SEASON

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2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8695 BROWARD I95

MOCF: 0.96

WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	1.03	1.07
2	01/02/2022 - 01/08/2022	1.03	1.07
3	01/09/2022 - 01/15/2022	1.02	1.06
4	01/16/2022 - 01/22/2022	1.01	1.05
5	01/23/2022 - 01/29/2022	1.00	1.04
6	01/30/2022 - 02/05/2022	0.99	1.03
7	02/06/2022 - 02/12/2022	0.98	1.02
8	02/13/2022 - 02/19/2022	0.97	1.01
* 9	02/20/2022 - 02/26/2022	0.97	1.01
*10	02/27/2022 - 03/05/2022	0.96	1.00
*11	03/06/2022 - 03/12/2022	0.96	1.00
*12	03/13/2022 - 03/19/2022	0.95	0.99
*13	03/20/2022 - 03/26/2022	0.95	0.99
*14	03/27/2022 - 04/02/2022	0.96	1.00
*15	04/03/2022 - 04/09/2022	0.96	1.00
*16	04/10/2022 - 04/16/2022	0.96	1.00
*17	04/17/2022 - 04/23/2022	0.96	1.00
*18	04/24/2022 - 04/30/2022	0.96	1.00
*19	05/01/2022 - 05/07/2022	0.97	1.01
*20	05/08/2022 - 05/14/2022	0.97	1.01
*21	05/15/2022 - 05/21/2022	0.97	1.01
22	05/22/2022 - 05/28/2022	0.99	1.03
23	05/29/2022 - 06/04/2022	1.00	1.04
24	06/05/2022 - 06/11/2022	1.02	1.06
25	06/12/2022 - 06/18/2022	1.03	1.07
26	06/19/2022 - 06/25/2022	1.02	1.06
27	06/26/2022 - 07/02/2022	1.02	1.06
28	07/03/2022 - 07/09/2022	1.01	1.05
29	07/10/2022 - 07/16/2022	1.00	1.04
30	07/17/2022 - 07/23/2022	1.00	1.04
31	07/24/2022 - 07/30/2022	1.00	1.04
32	07/31/2022 - 08/06/2022	0.99	1.03
33	08/07/2022 - 08/13/2022	0.99	1.03
34	08/14/2022 - 08/20/2022	0.99	1.03
35	08/21/2022 - 08/27/2022	1.02	1.06
36	08/28/2022 - 09/03/2022	1.04	1.08
37	09/04/2022 - 09/10/2022	1.07	1.11
38	09/11/2022 - 09/17/2022	1.09	1.14
39	09/18/2022 - 09/24/2022	1.07	1.11
40	09/25/2022 - 10/01/2022	1.04	1.08
41	10/02/2022 - 10/08/2022	1.02	1.06
42	10/09/2022 - 10/15/2022	0.99	1.03
43	10/16/2022 - 10/22/2022	1.00	1.04
44	10/23/2022 - 10/29/2022	1.01	1.05
45	10/30/2022 - 11/05/2022	1.02	1.06
46	11/06/2022 - 11/12/2022	1.03	1.07
47	11/13/2022 - 11/19/2022	1.04	1.08
48	11/20/2022 - 11/26/2022	1.04	1.08
49	11/27/2022 - 12/03/2022	1.04	1.08
50	12/04/2022 - 12/10/2022	1.03	1.07
51	12/11/2022 - 12/17/2022	1.03	1.07
52	12/18/2022 - 12/24/2022	1.03	1.07
53	12/25/2022 - 12/31/2022	1.02	1.06

* PEAK SEASON

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APPENDIX E – Volume Worksheet



Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR		
N Park Road & Johnson St	AM	Count Date	12/6/2023																		
		Count Year	2023																		
		Existing Year	2023																		
		Future Year	2030																		
		Raw Count		1	201	472	194	1	102	320	303	0	209	453	93	0	185	405	133		
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	
		Count Year Peak Season Traffic		1	207	486	200	1	105	330	312	0	215	467	96	0	191	417	137		
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
		Future Background Traffic		1	222	521	214	1	113	354	335	0	231	501	103	0	205	447	147		
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Background Traffic with Committed Dev.		1	222	521	214	1	113	354	335	0	231	501	103	0	205	447	147		
		Total Trip Generation	163																		
		Trip Generation In	109																		
		Trip Generation Out	54																		
		Project Traffic Percent In				6%					12%									22%	
		Project Traffic Percent Out												12%	22%	6%					
		Project Traffic In		0	7	0	0	0	0	0	0	13	0	0	0	0	0	0	0	24	0
		Project Traffic Out		0	0	0	0	0	0	0	0	0	0	6	12	3	0	0	0	0	
		Total Project Traffic		0	7	0	0	0	0	0	0	13	0	6	12	3	0	0	0	24	0
		Future Total Traffic		1	229	521	214	1	113	354	348	0	237	513	106	0	205	471	147		

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR		
N 35th Ave & Johnson St	AM	Count Date	12/6/2023																		
		Count Year	2023																		
		Existing Year	2023																		
		Future Year	2030																		
		Raw Count		0	229	211	112	0	224	116	52	0	56	438	47	0	115	541	257		
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	
		Count Year Peak Season Traffic		0	236	217	115	0	231	119	54	0	58	451	48	0	118	557	265		
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
		Future Background Traffic		0	253	233	123	0	248	128	58	0	62	484	51	0	127	597	284		
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Background Traffic with Committed Dev.		0	253	233	123	0	248	128	58	0	62	484	51	0	127	597	284		
		Total Trip Generation	163																		
		Trip Generation In	109																		
		Trip Generation Out	54																		
		Project Traffic Percent In				7%	8%								5%					23%	17%
		Project Traffic Percent Out								17%	8%	5%		2%	23%	5%					
		Project Traffic In		0	8	9	0	0	0	0	0	0	0	5	0	0	0	0	0	25	19
		Project Traffic Out		0	0	0	0	0	9	4	3	0	1	12	3	0	0	0	0	0	
		Total Project Traffic		0	8	9	0	0	9	4	3	0	7	12	3	0	0	0	0	25	19
		Future Total Traffic		0	261	242	123	0	257	132	61	0	69	496	54	0	127	622	303		

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
N Park Road & Garfield St.	AM	Count Date	12/6/2023																	
		Count Year	2023																	
		Existing Year	2023																	
		Future Year	2030																	
		Raw Count		0	3	820	3	0	2	738	2	0	3	0	1	0	2	1	7	
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	3	845	3	0	2	760	2	0	3	0	1	0	2	1	7	
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	3	906	3	0	2	815	2	0	3	0	1	0	2	1	8	
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Background Traffic with Committed Dev.		0	3	906	3	0	2	815	2	0	3	0	1	0	2	1	8	
		Total Trip Generation	163																	
		Trip Generation In	109																	
		Trip Generation Out	54																	
		Project Traffic Percent In								1%	11%	0.5%								
		Project Traffic Percent Out				0.50%	11%	0.50%												
		Project Traffic In		0	0	0	0	0	0	1	12	1	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	6	0	0	0	1	12	1	0	0	0	0	0	0	0	0
		Future Total Traffic		0	3	912	3	0	3	827	3	0	3	0	1	0	2	1	8	

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
N 35th Ave & Garfield St.	AM	Count Date	12/6/2023																	
		Count Year	2023																	
		Existing Year	2023																	
		Future Year	2030																	
		Raw Count		18	41	99	3	5	5	245	26	1	16	0	17	0	10	0	1	
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		19	42	102	3	5	5	252	27	1	16	0	18	0	10	0	1	
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		20	45	109	3	5	5	270	29	1	17	0	19	0	11	0	1	
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Background Traffic with Committed Dev.		20	45	109	3	5	5	270	29	1	17	0	19	0	11	0	1	
		Total Trip Generation	163																	
		Trip Generation In	109																	
		Trip Generation Out	54																	
		Project Traffic Percent In									5%									
		Project Traffic Percent Out				5.0%														
		Project Traffic In		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
		Project Traffic Out		0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total Project Traffic		0	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0
		Future Total Traffic		20	45	112	3	5	5	275	29	1	17	0	19	0	11	0	1	

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR		
N 35th Ave & MRH Office Center Driveway	AM	Count Date	12/6/2023																		
		Count Year	2023																		
		Existing Year	2023																		
		Future Year	2030																		
		Raw Count		0	337	163	0	0	0	250	42	0	22	0	132	0	0	0	0	0	
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	
		Count Year Peak Season Traffic		0	347	168	0	0	0	258	43	0	23	0	136	0	0	0	0	0	
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
		Future Background Traffic		0	372	180	0	0	0	277	46	0	25	0	146	0	0	0	0	0	
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Background Traffic with Committed Dev.		0	372	180	0	0	0	277	46	0	25	0	146	0	0	0	0	0	
		Total Trip Generation		163																	
		Trip Generation In		109																	
		Trip Generation Out		54																	
		Project Traffic Percent In				30%						5%									
		Project Traffic Percent Out												5%		30%					
		Project Traffic In			0	33	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
		Project Traffic Out			0	0	0	0	0	0	0	0	0	3	0	16	0	0	0	0	
		Total Project Traffic			0	33	0	0	0	0	0	5	0	3	0	16	0	0	0	0	
		Future Total Traffic			0	405	180	0	0	0	277	51	0	28	0	162	0	0	0	0	

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR		
Johnson St & Adult Emergency Driveway	AM	Count Date	12/6/2023																		
		Count Year	2023																		
		Existing Year	2023																		
		Future Year	2030																		
		Raw Count		0	0	0	0	0	16	0	40	0	124	514	0	0	0	718	127		
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	
		Count Year Peak Season Traffic		0	0	0	0	0	16	0	41	0	128	529	0	0	0	740	131		
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
		Future Background Traffic		0	0	0	0	0	17	0	44	0	137	567	0	0	0	793	140		
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Background Traffic with Committed Dev.		0	0	0	0	0	17	0	44	0	137	567	0	0	0	793	140		
		Total Trip Generation		163																	
		Trip Generation In		109																	
		Trip Generation Out		54																	
		Project Traffic Percent In													9%					6%	
		Project Traffic Percent Out									5%		10%								
		Project Traffic In			0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	
		Project Traffic Out			0	0	0	0	0	3	0	5	0	0	0	0	0	0	0	0	
		Total Project Traffic			0	0	0	0	0	3	0	5	0	10	0	0	0	0	0	7	
		Future Total Traffic			0	0	0	0	0	20	0	49	0	147	567	0	0	0	793	147	

Intersection	Period	Measure/ Scenario	Value/ Total	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
Johnson St & Employee Parking Garage Driveway	AM	Count Date	12/6/2023																	
		Count Year	2023																	
		Existing Year	2023																	
		Future Year	2030																	
		Raw Count		0	0	0	3	0	0	0	302	0	274	593	24	0	9	523	223	
		PSCF	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
		Count Year Peak Season Traffic		0	0	0	3	0	0	0	311	0	282	611	25	0	9	539	230	
		Annualized Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
		Future Background Traffic		0	0	0	3	0	0	0	311	0	282	655	27	0	10	578	230	
		Committed Developments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Background Traffic with Committed Dev.		0	0	0	3	0	0	0	311	0	282	655	27	0	10	578	230	
		Total Trip Generation		163																
		Trip Generation In		109																
		Trip Generation Out		54																
		Project Traffic Percent In													26%					24%
		Project Traffic Percent Out										50%								
		Project Traffic In			0	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0
Project Traffic Out			0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0		
Total Project Traffic			0	0	0	0	0	0	0	27	0	28	0	0	0	0	0	0		
Future Total Traffic			0	0	0	3	0	0	0	338	0	310	655	27	0	10	578	256		

Driveway

Background Traffic with Committed Dev.	0	2	0	62	0	0	0	0	475	0	8	524	5	1	8	769	10
Total Trip Generation	171																
Trip Generation In	60																
Trip Generation Out	111																
Project Traffic Percent In											26%						24%
Project Traffic Percent Out									50%								
Project Traffic In	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	14
Project Traffic Out	0	0	0	0	0	0	0	0	56	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	56	0	16	0	0	0	0	0	14
Future Total Traffic	0	2	0	62	0	0	0	0	531	0	24	524	5	1	8	769	24



APPENDIX F – Growth Rate



Growth Rate Calculation

Year	Johnson St #	S 35 Ave (& Johnson ST) # 9472	N Park road # 9622	Avg Growth Rate
2018	15400	9400	18100	
2019	15400	9400	18100	
2020	12000	6800	12500	
2021	12000	6800	12500	
2022	12000	6800	12300	
Growth Rate	-12.37%	-7.11%	-7.98%	-9.15%



APPENDIX G – Trip Generation excerpts from ITE Manual



Land Use: 610 Hospital

Description

A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. In this context, the term “hospital” does not refer to a medical clinic (a facility that provides diagnoses and outpatient care only) or a nursing home (a facility devoted to the care of persons unable to care for themselves), which are covered elsewhere in this report. Clinic (Land Use 630) and free-standing emergency room (Land Use 650) 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 average numbers of person trips per vehicle trip at the four general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

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

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Maryland, New Jersey, New York, Pennsylvania, Texas, and Washington.

Source Numbers

112, 186, 253, 262, 423, 429, 533, 573, 591, 601, 630, 719, 749, 878, 901, 904, 908, 909, 971, 1018

Hospital (610)

Vehicle Trip Ends vs: Beds
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

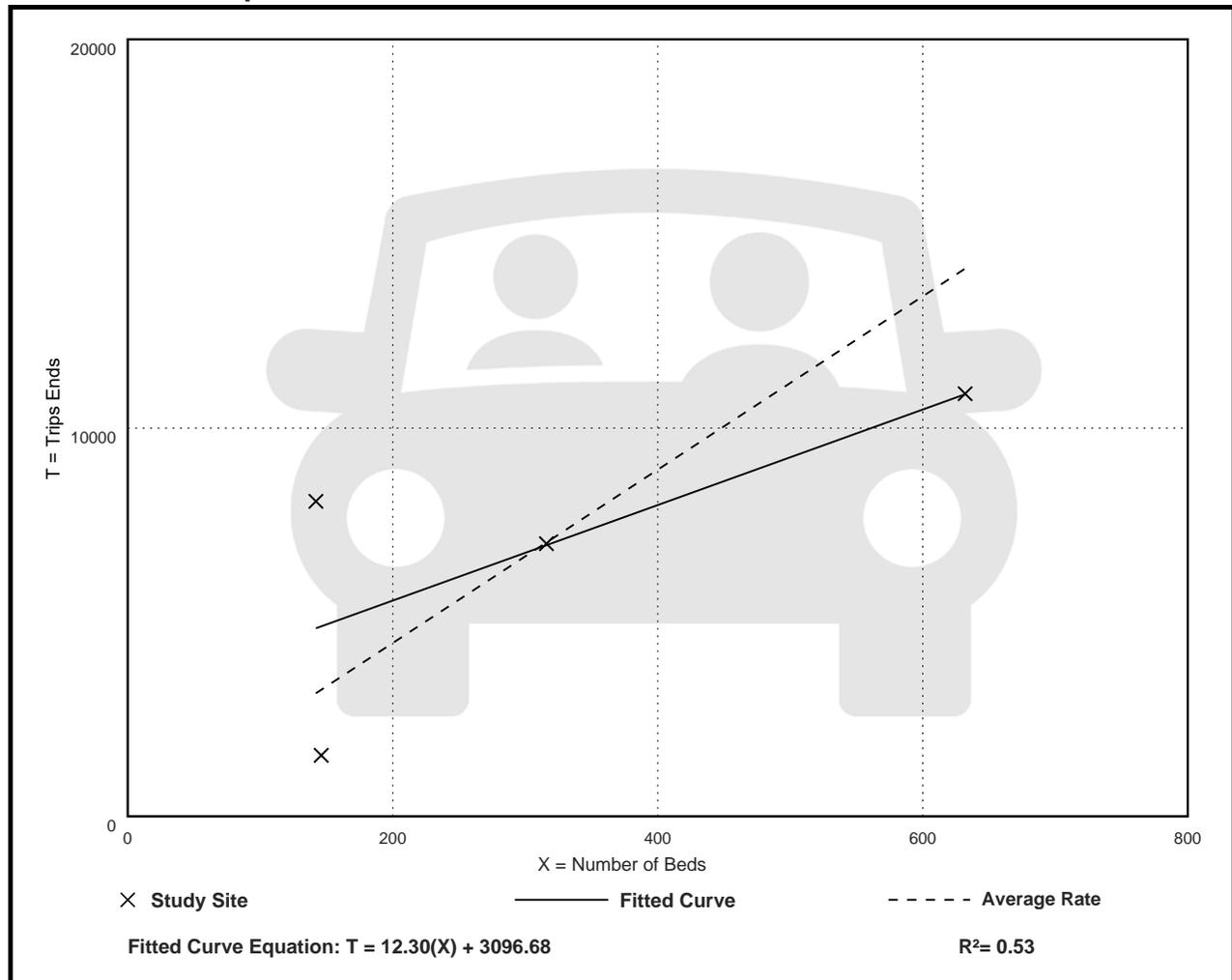
Avg. Num. of Beds: 309

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
22.32	10.77 - 57.13	14.98

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

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: 8

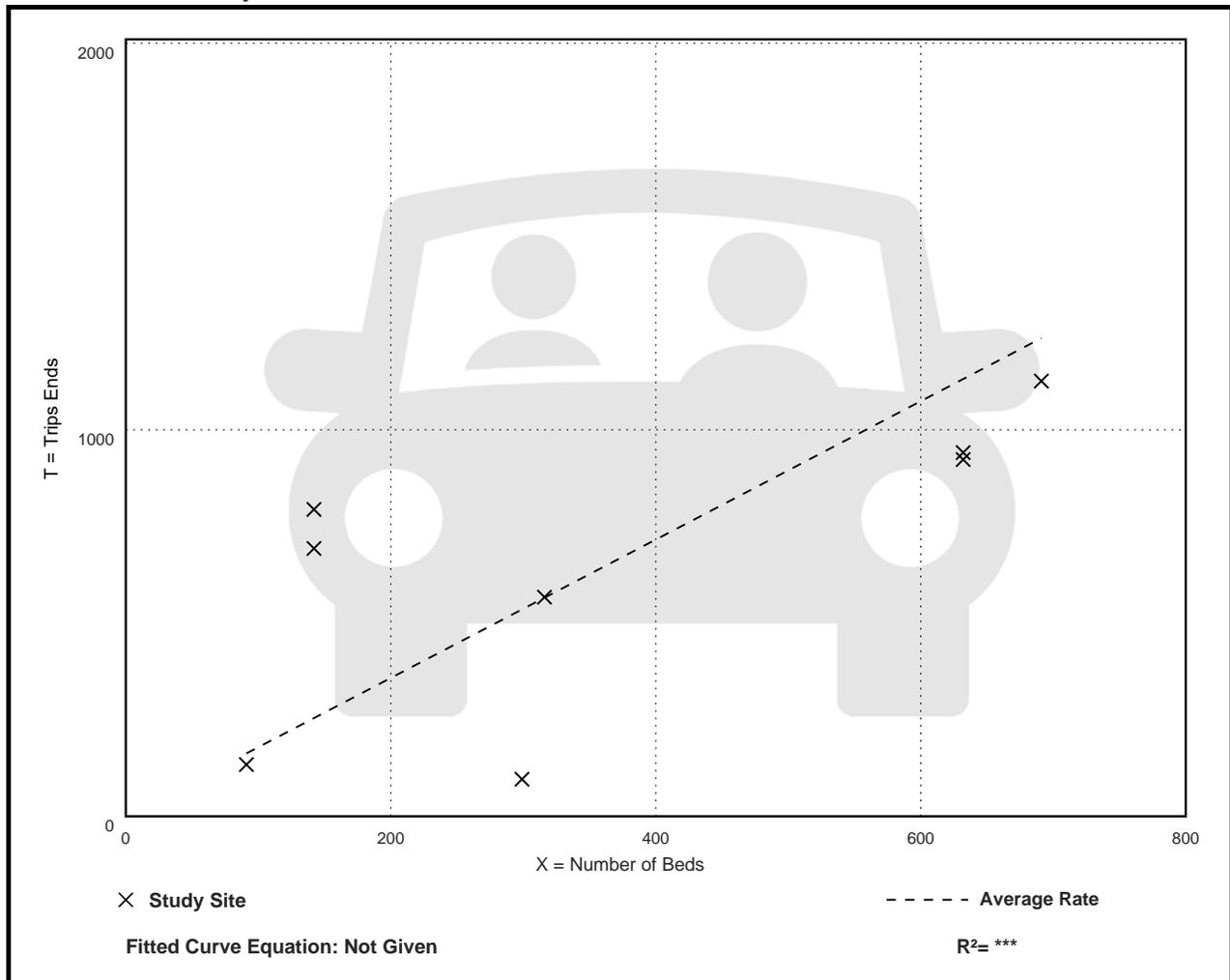
Avg. Num. of Beds: 368

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.79	0.32 - 5.59	1.28

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

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: 6

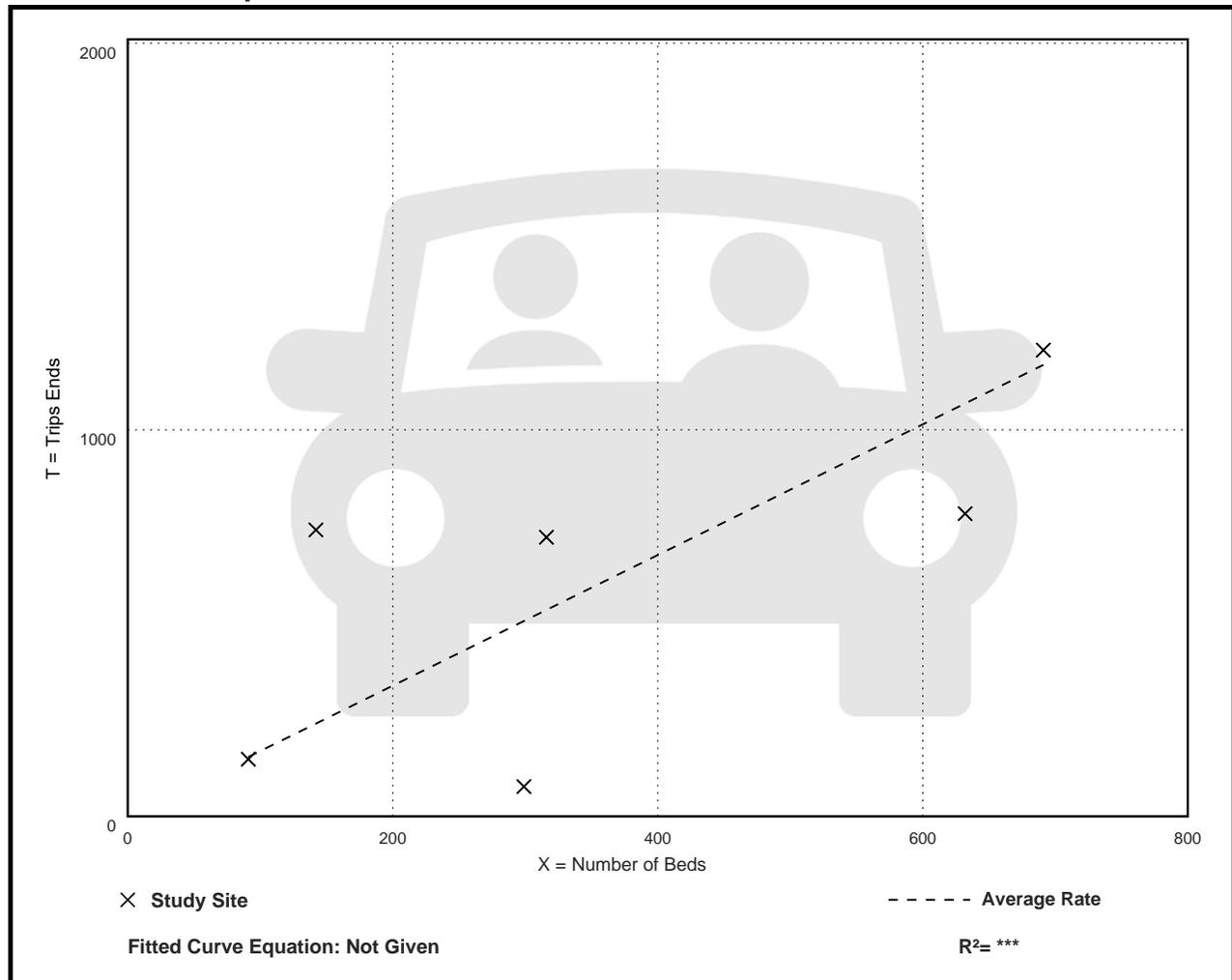
Avg. Num. of Beds: 362

Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.69	0.26 - 5.22	1.20

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

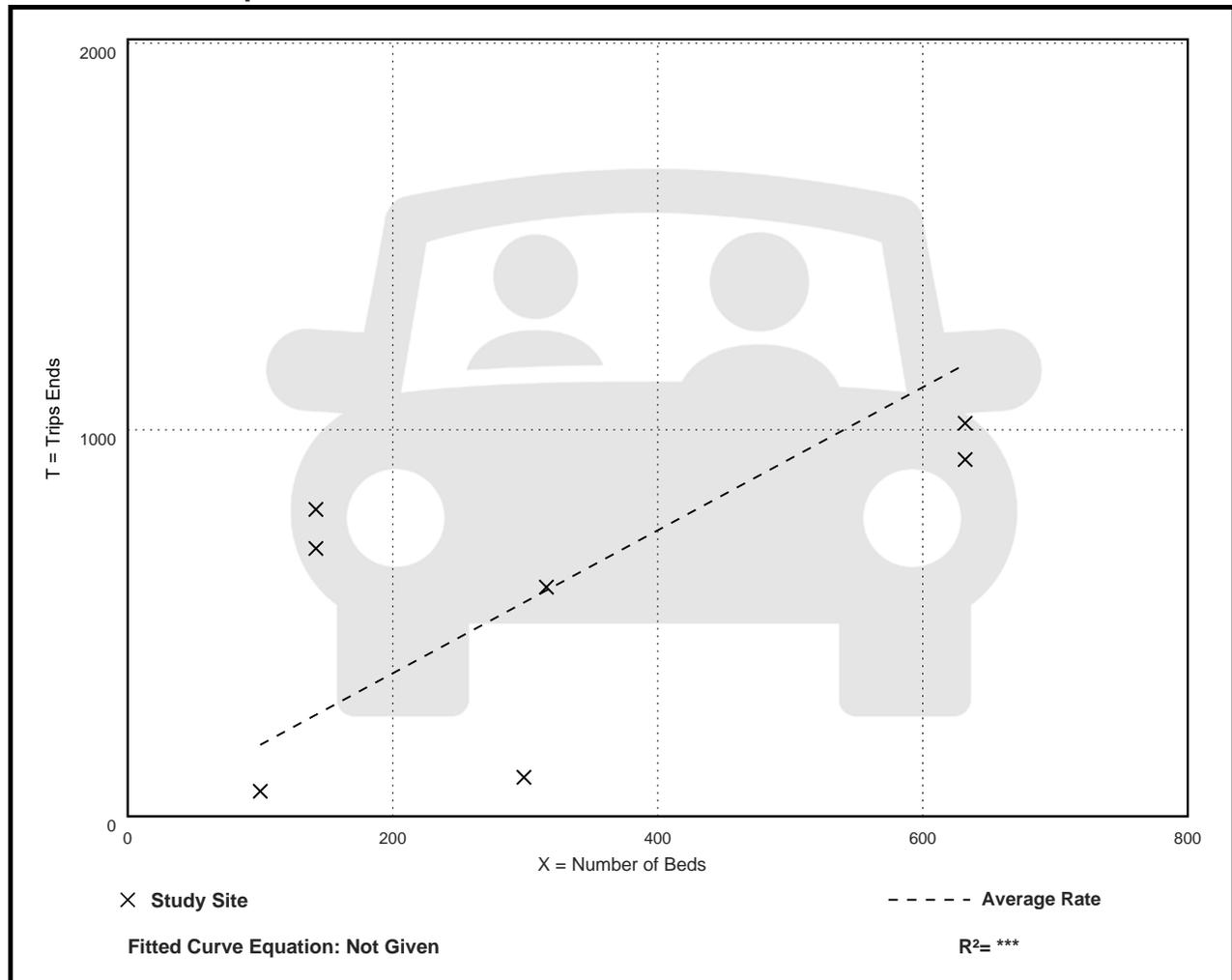
Avg. Num. of Beds: 323

Directional Distribution: 69% entering, 31% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.85	0.34 - 5.59	1.48

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 10

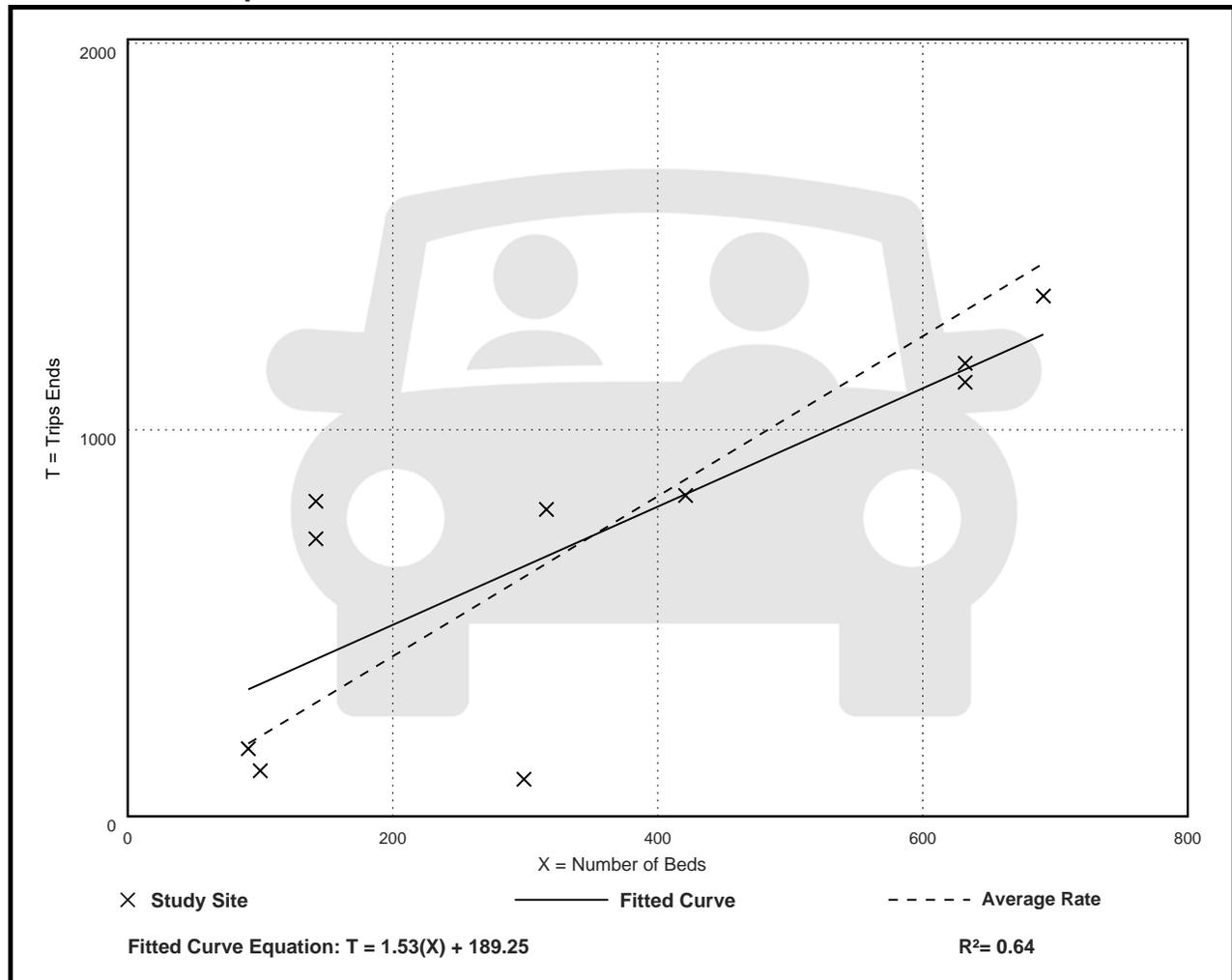
Avg. Num. of Beds: 347

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
2.07	0.32 - 5.74	1.18

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Beds
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

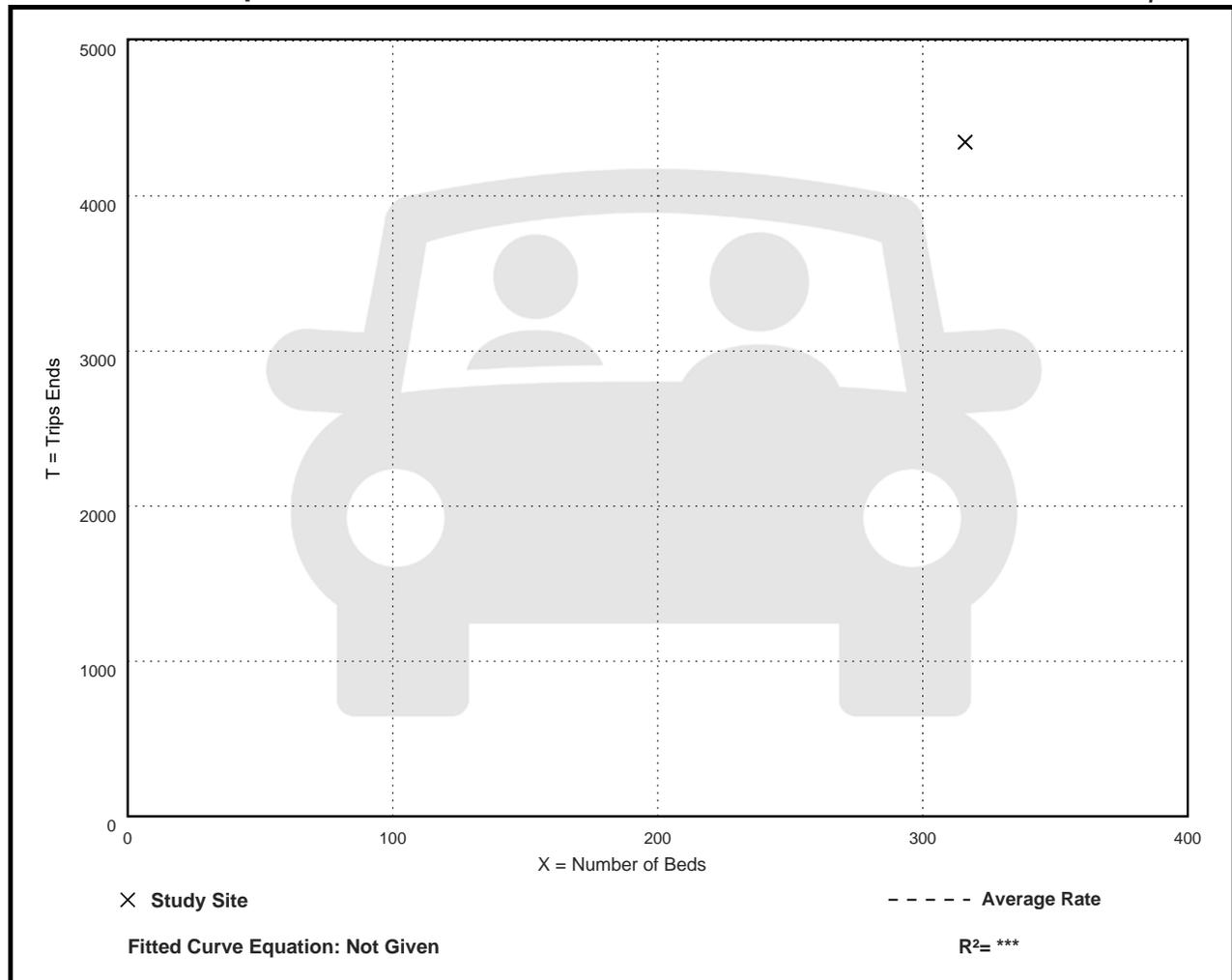
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
13.76	13.76 - 13.76	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

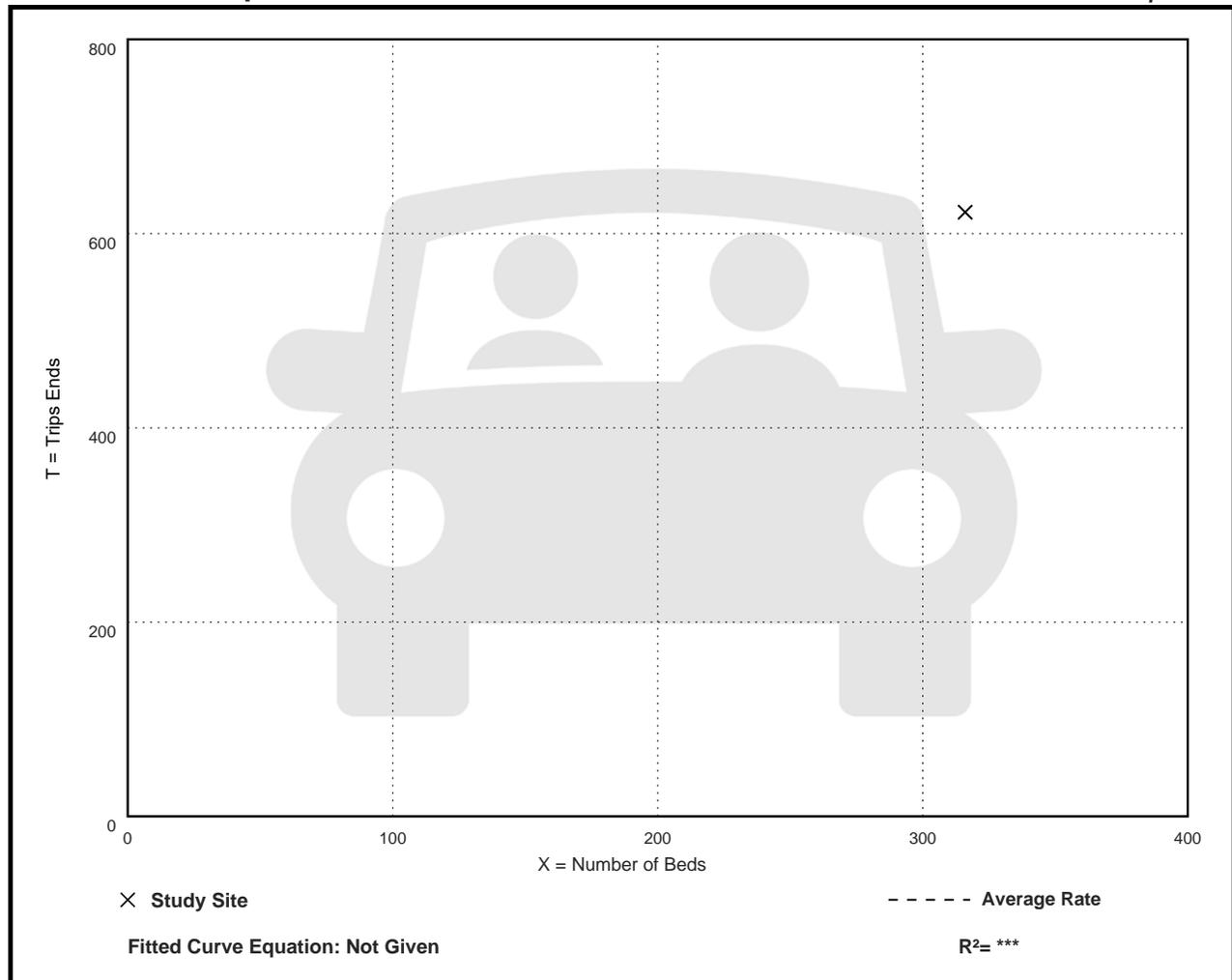
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.97	1.97 - 1.97	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

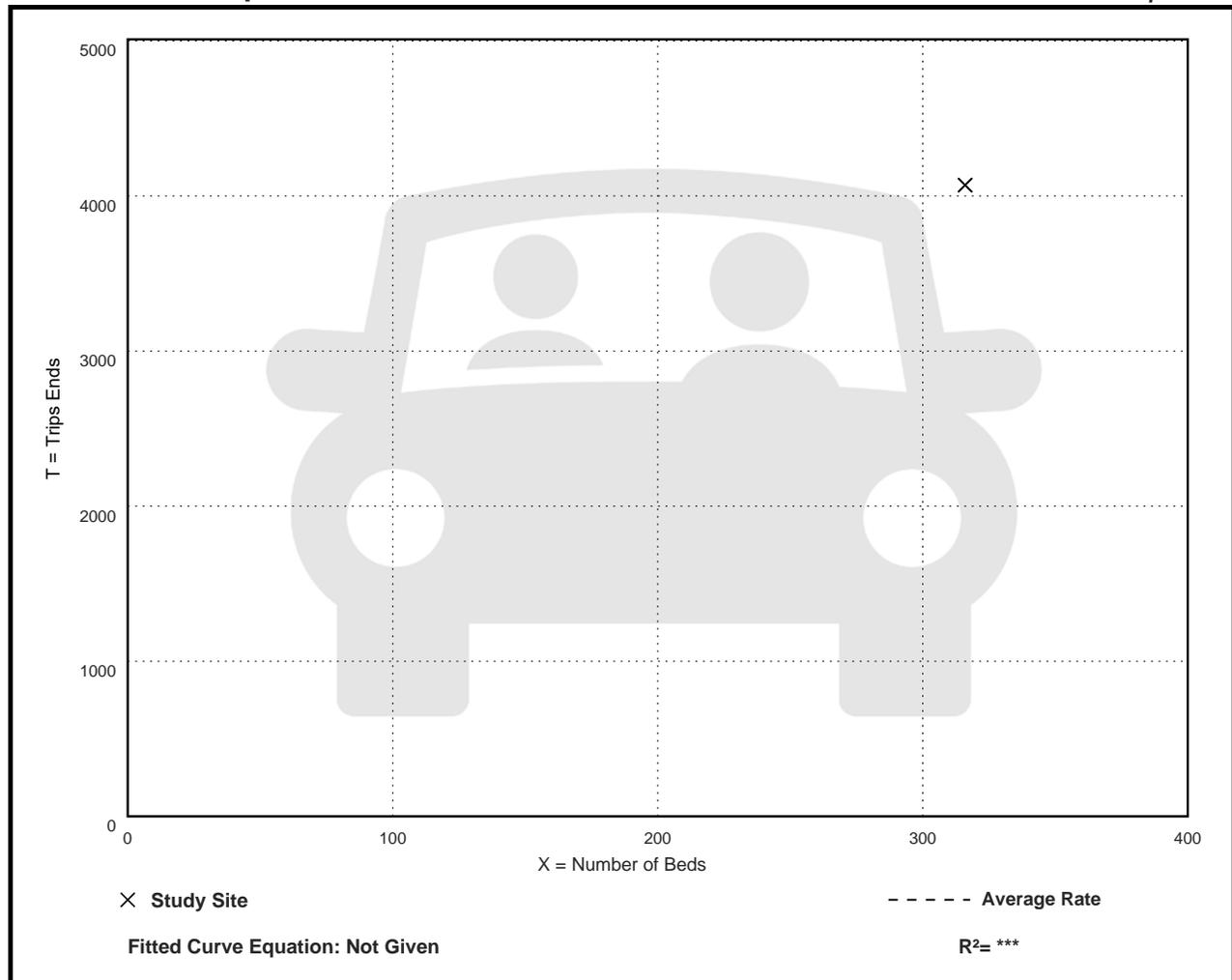
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
12.88	12.88 - 12.88	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Beds

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Beds: 316

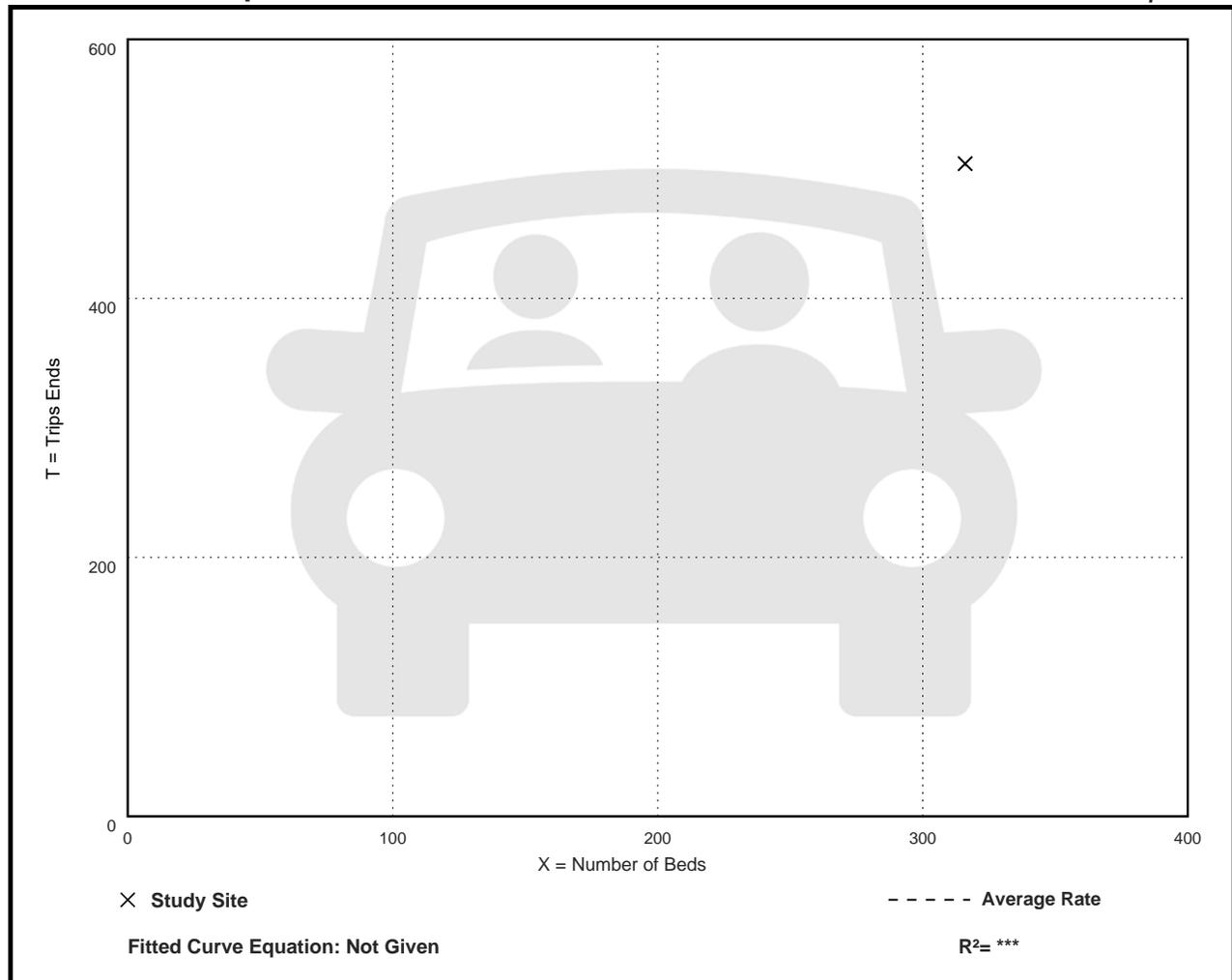
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.59	1.59 - 1.59	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

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

Setting/Location: General Urban/Suburban

Number of Studies: 7

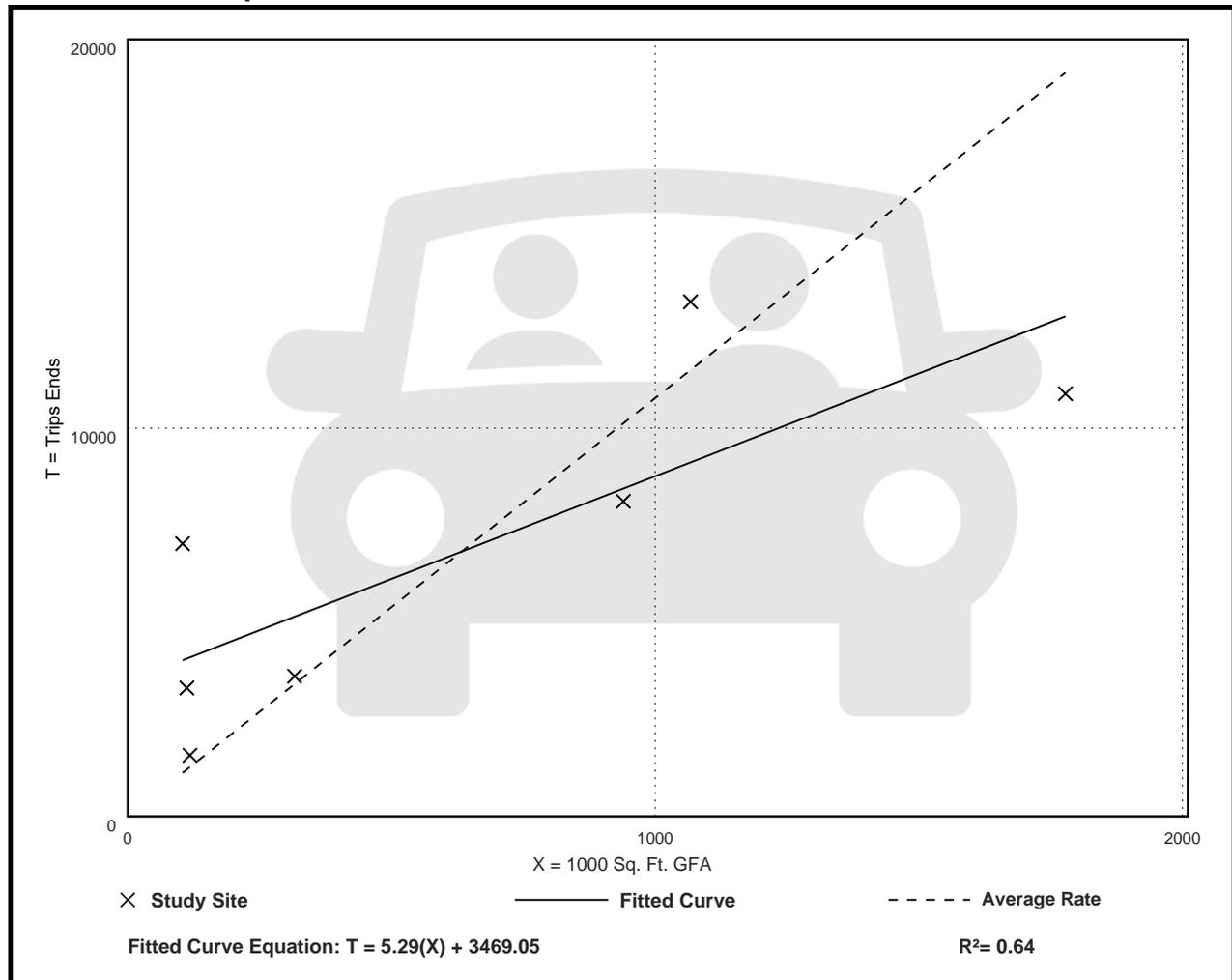
Avg. 1000 Sq. Ft. GFA: 634

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.77	6.12 - 67.52	10.52

Data Plot and Equation



Hospital (610)

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: 19

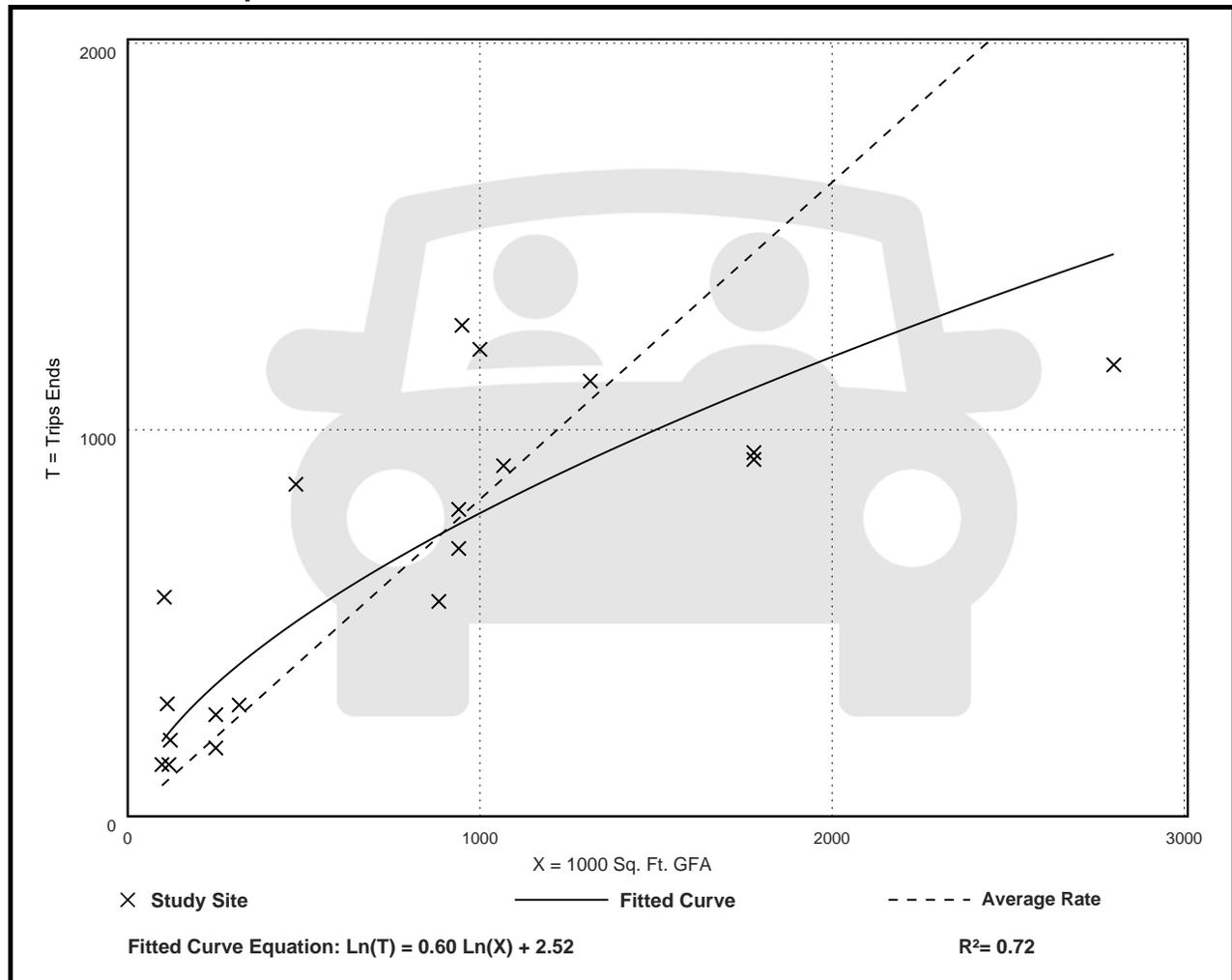
Avg. 1000 Sq. Ft. GFA: 805

Directional Distribution: 67% entering, 33% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.82	0.42 - 5.45	0.55

Data Plot and Equation



Hospital (610)

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: 19

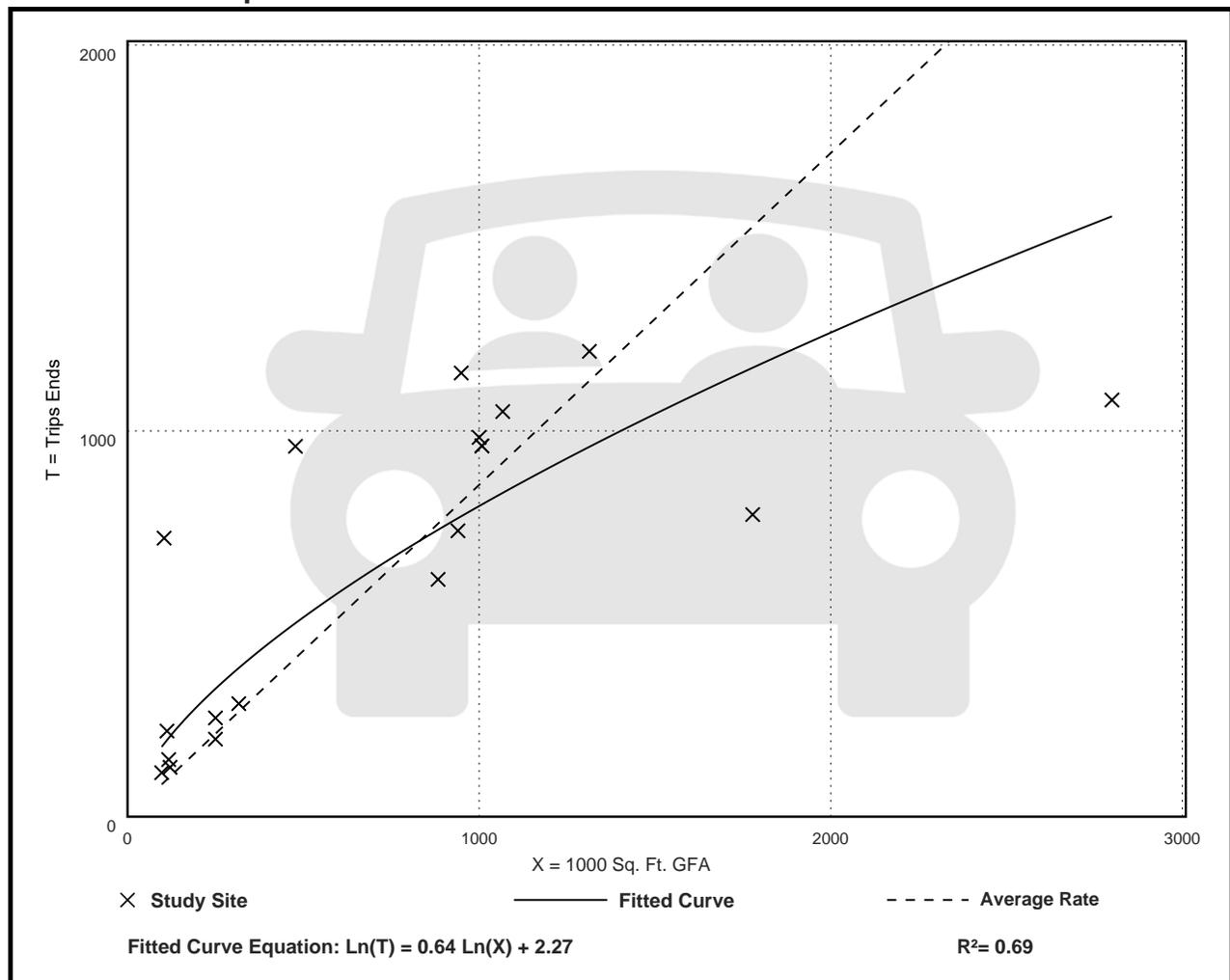
Avg. 1000 Sq. Ft. GFA: 768

Directional Distribution: 35% entering, 65% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.86	0.39 - 6.94	0.65

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

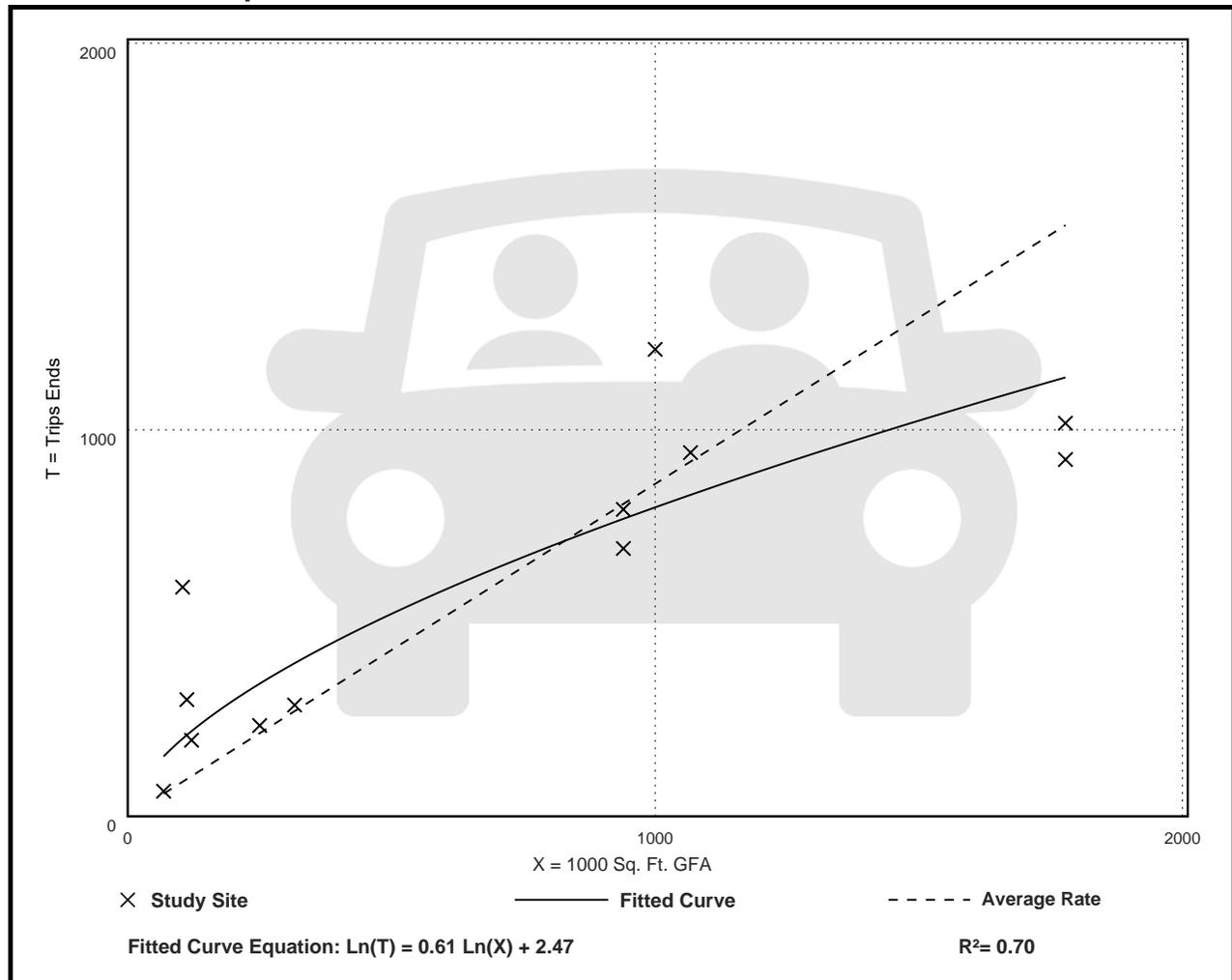
Avg. 1000 Sq. Ft. GFA: 706

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.86	0.52 - 5.70	0.66

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 15

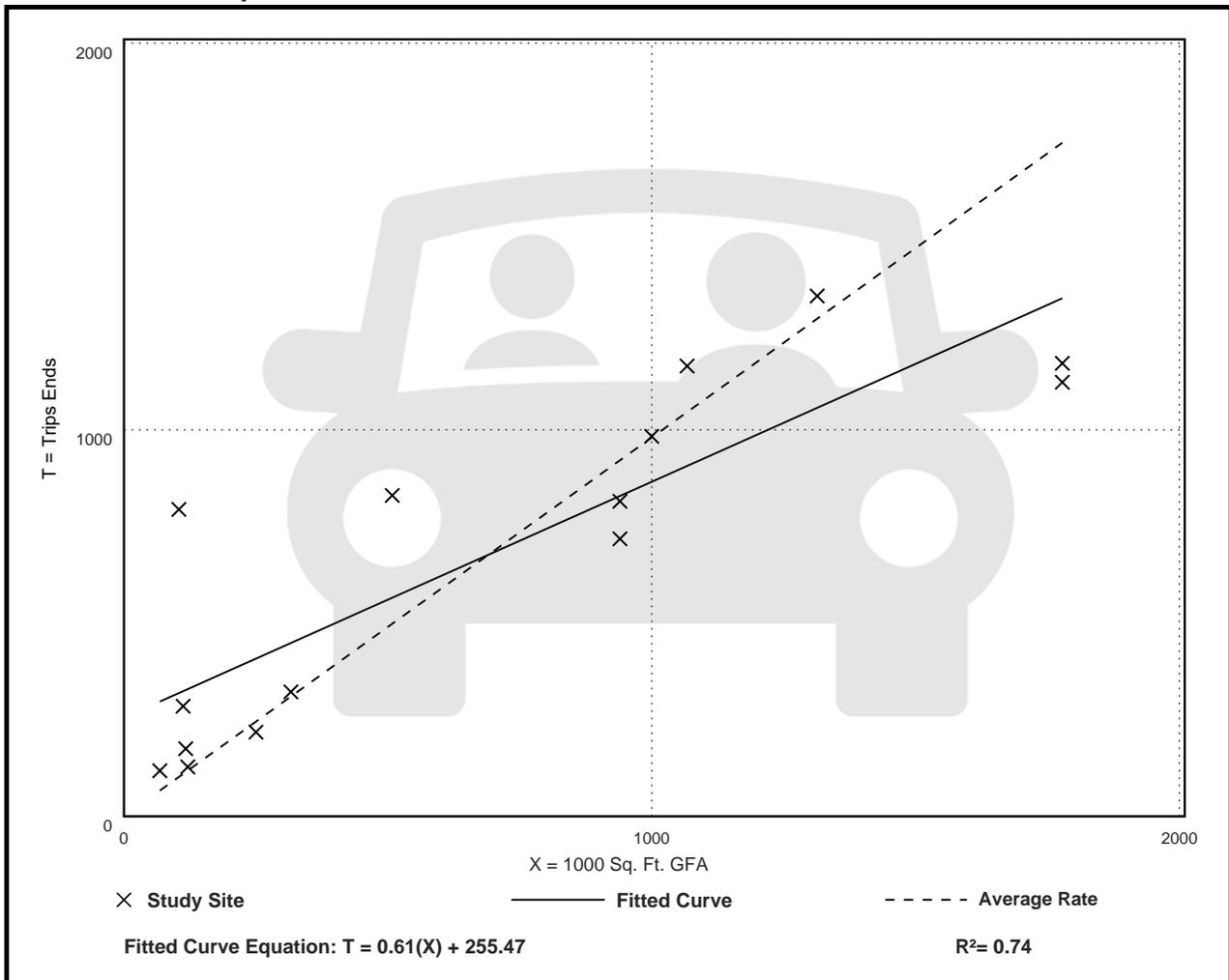
Avg. 1000 Sq. Ft. GFA: 694

Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.98	0.63 - 7.63	0.76

Data Plot and Equation



Hospital (610)

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

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 586

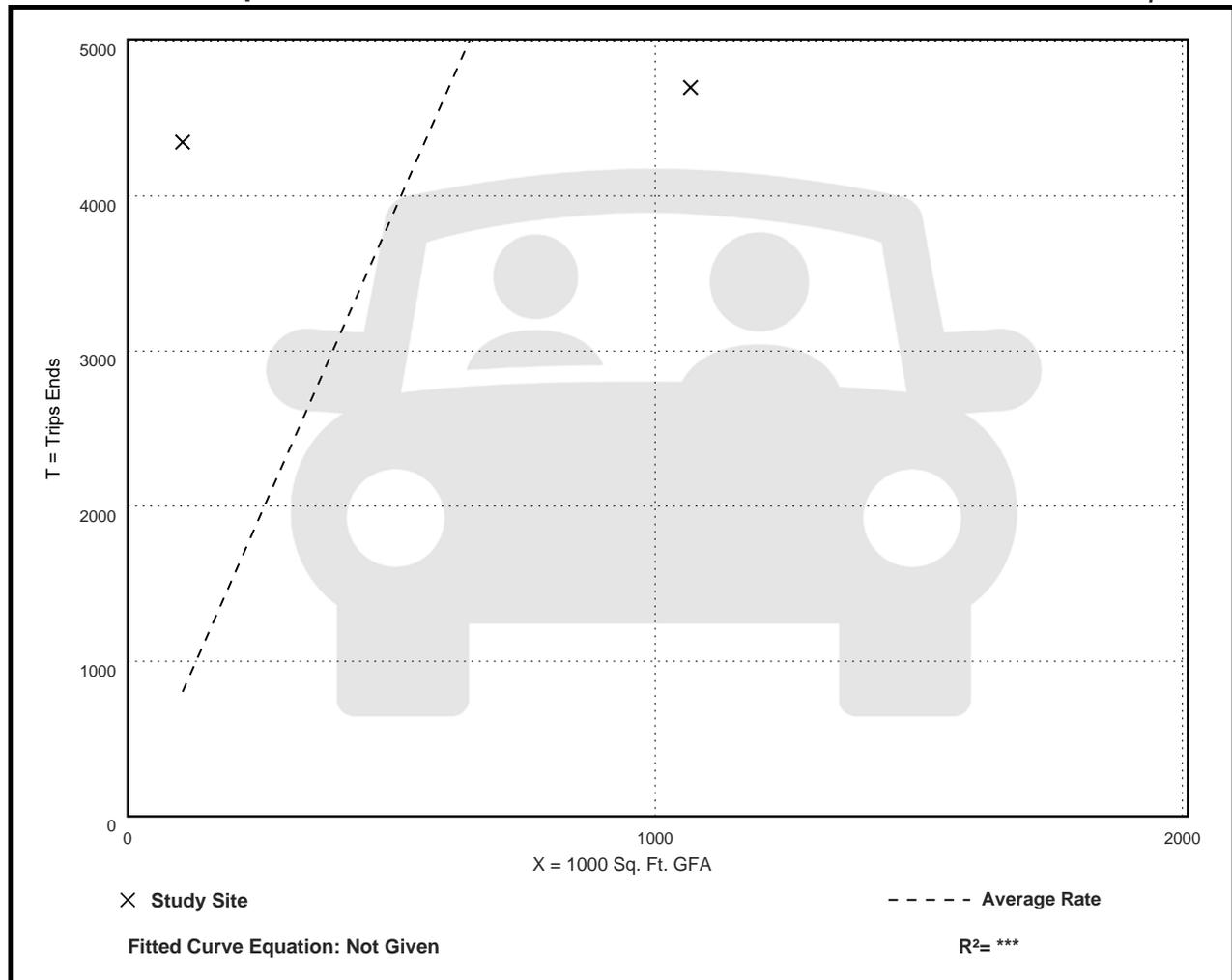
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.72	4.40 - 41.80	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 113

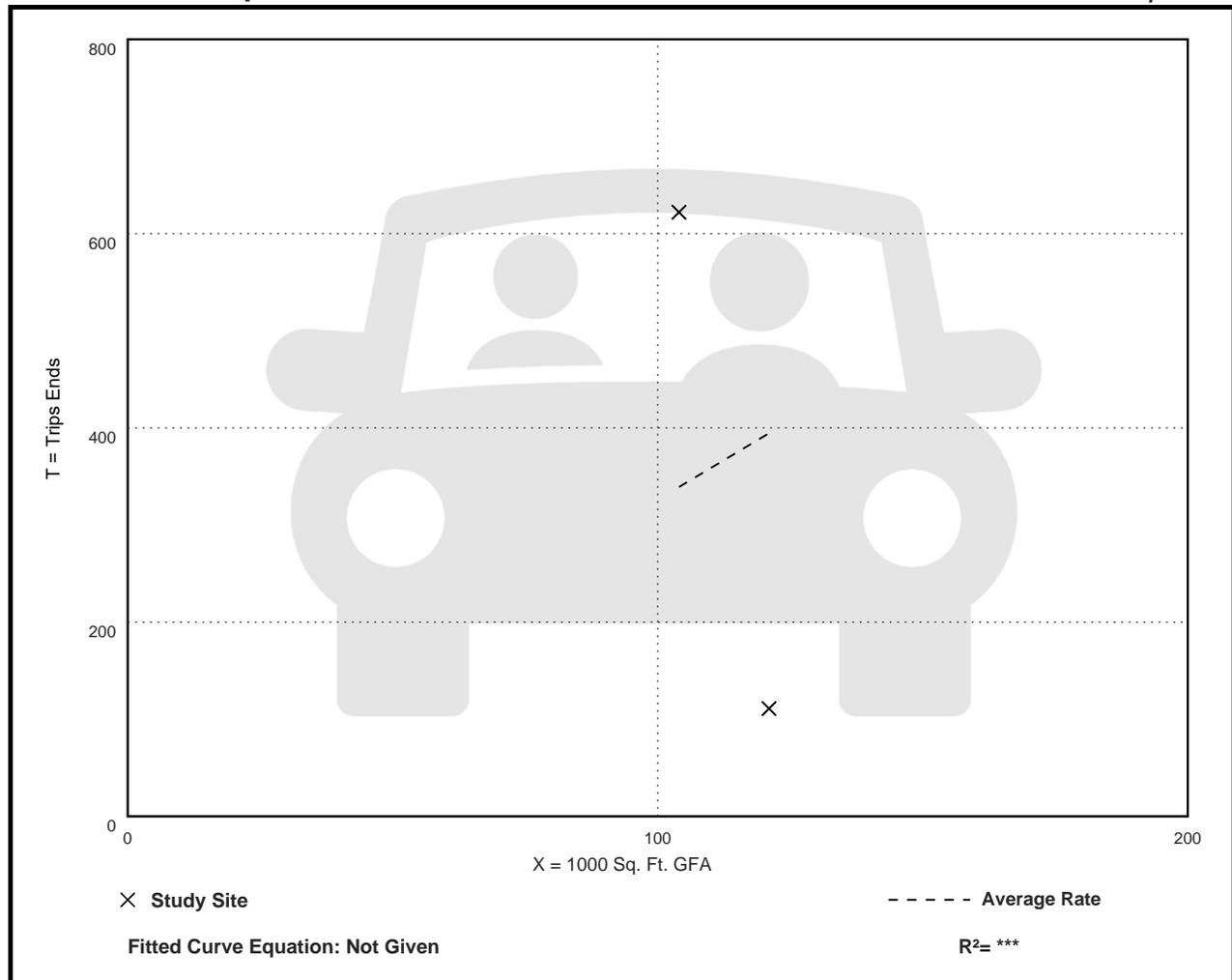
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.26	0.92 - 5.98	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

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

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 586

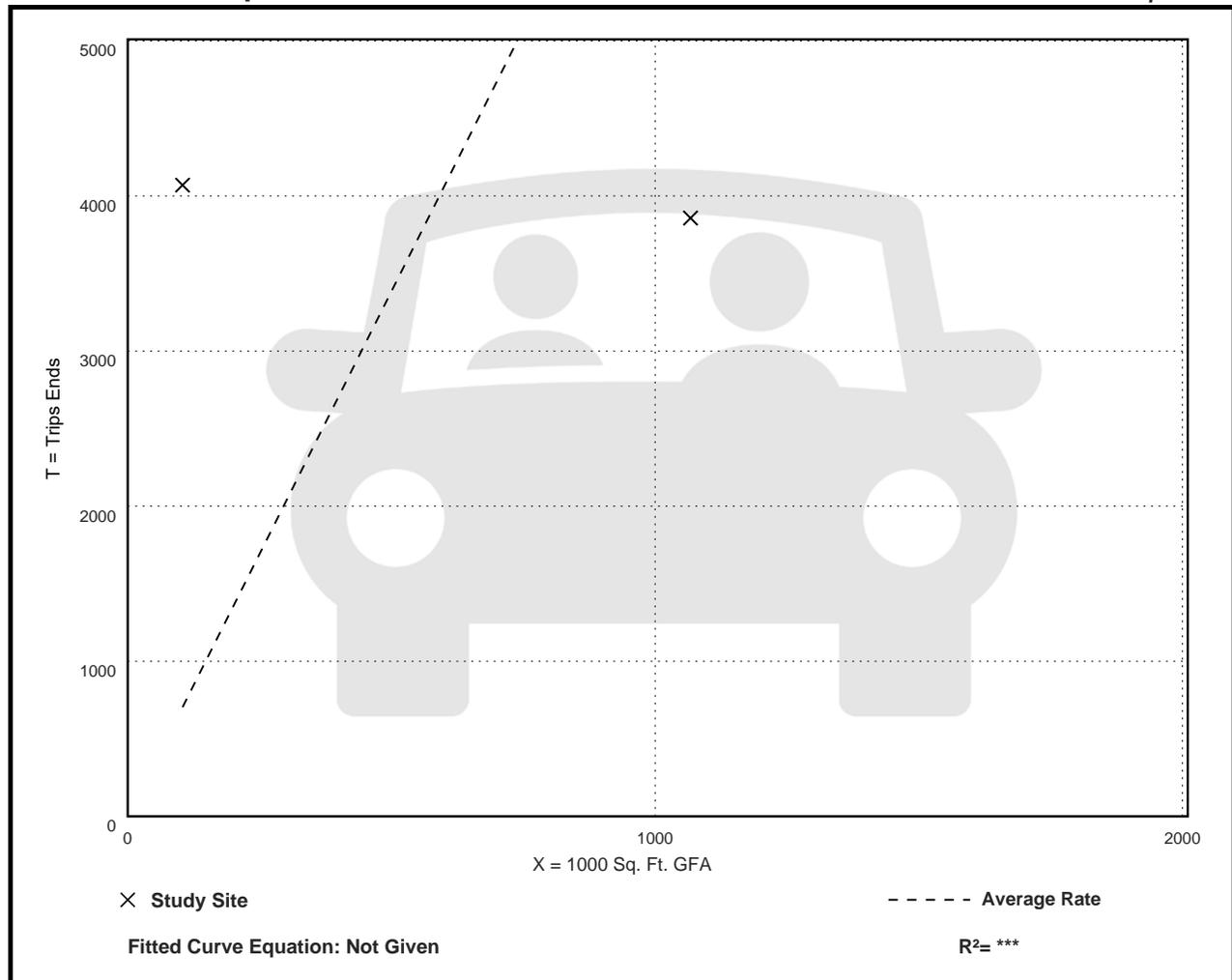
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
6.77	3.62 - 39.13	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 104

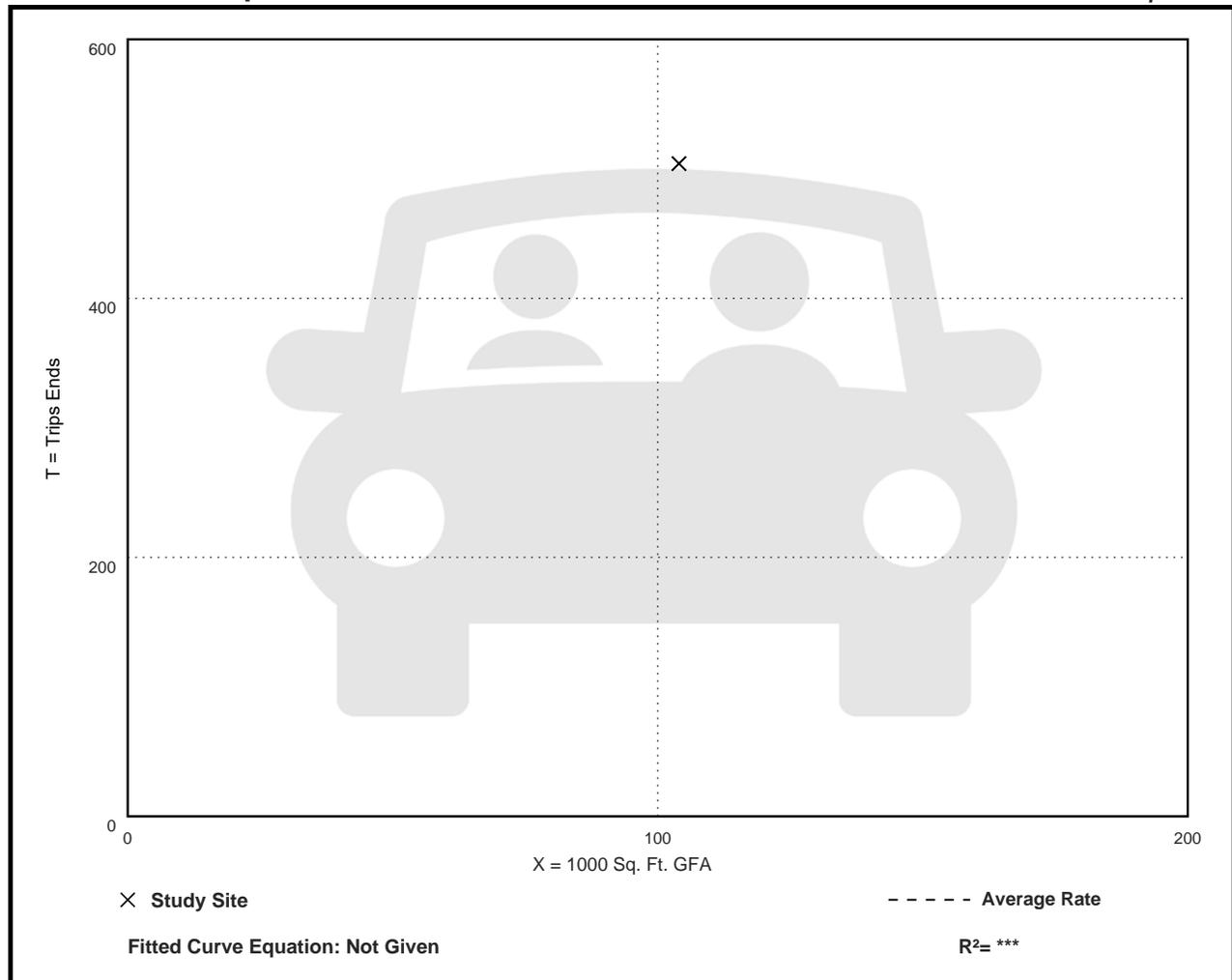
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.85	4.85 - 4.85	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 7

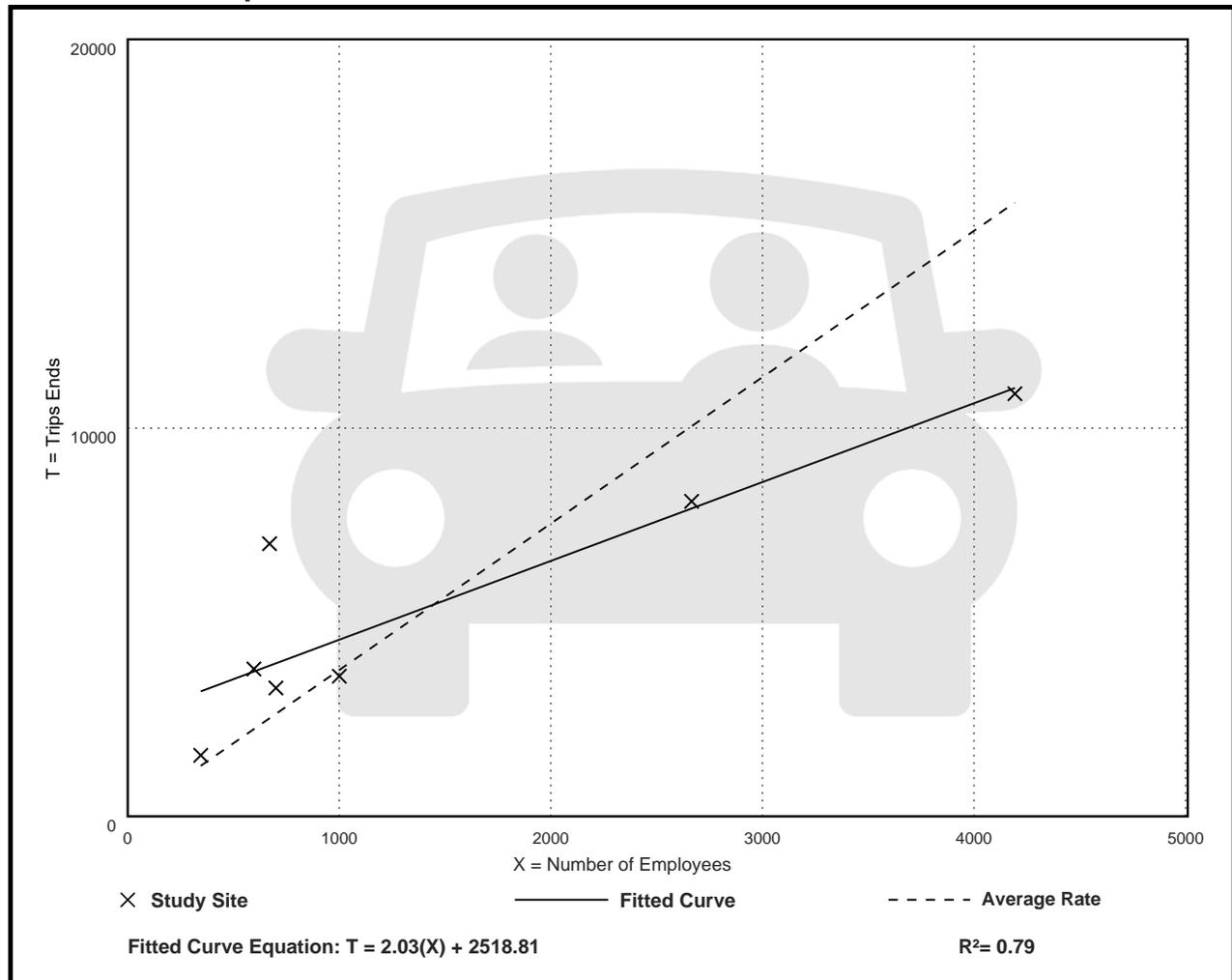
Avg. Num. of Employees: 1453

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.77	2.60 - 10.48	2.20

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

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: 16

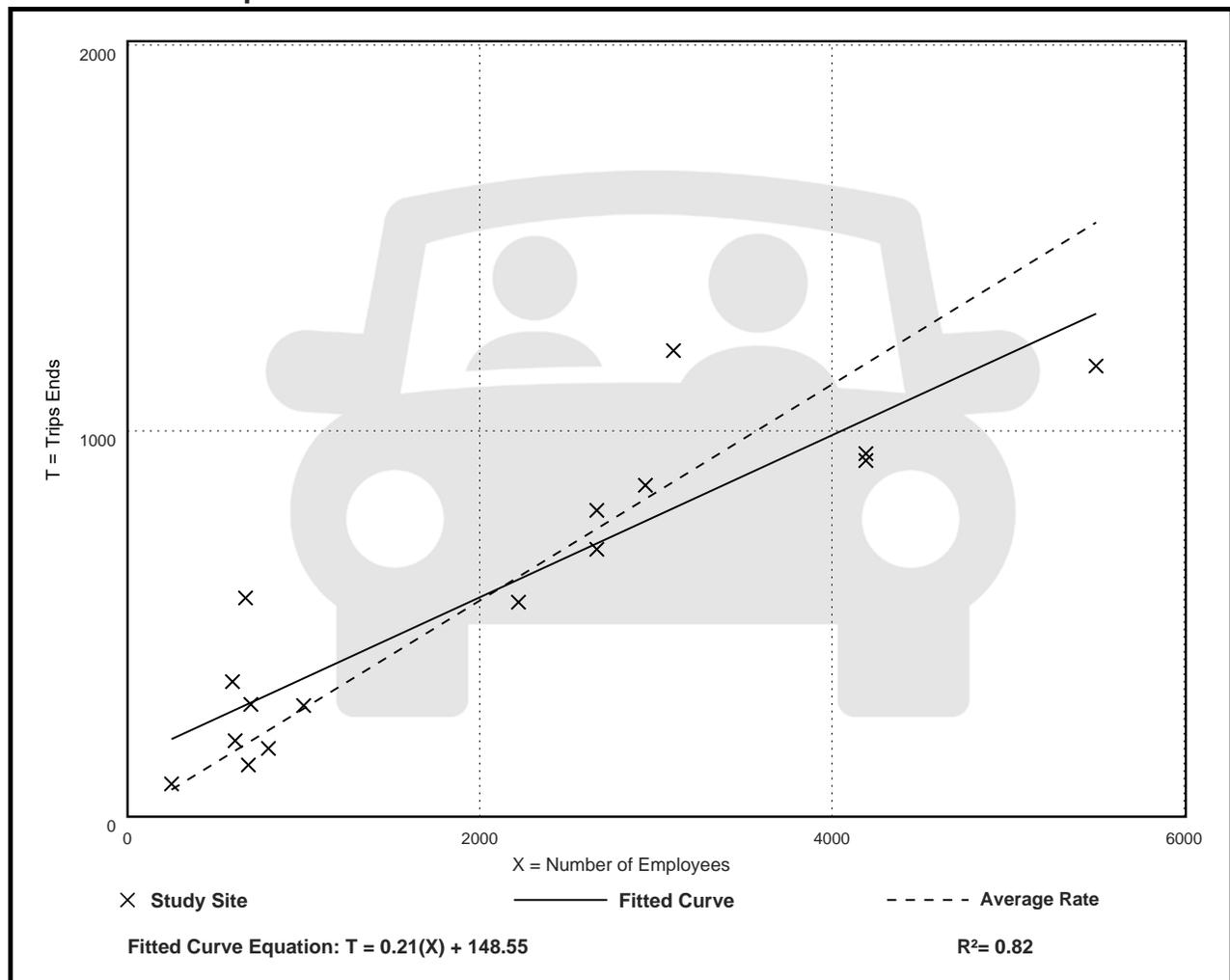
Avg. Num. of Employees: 2049

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.20 - 0.85	0.11

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

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: 13

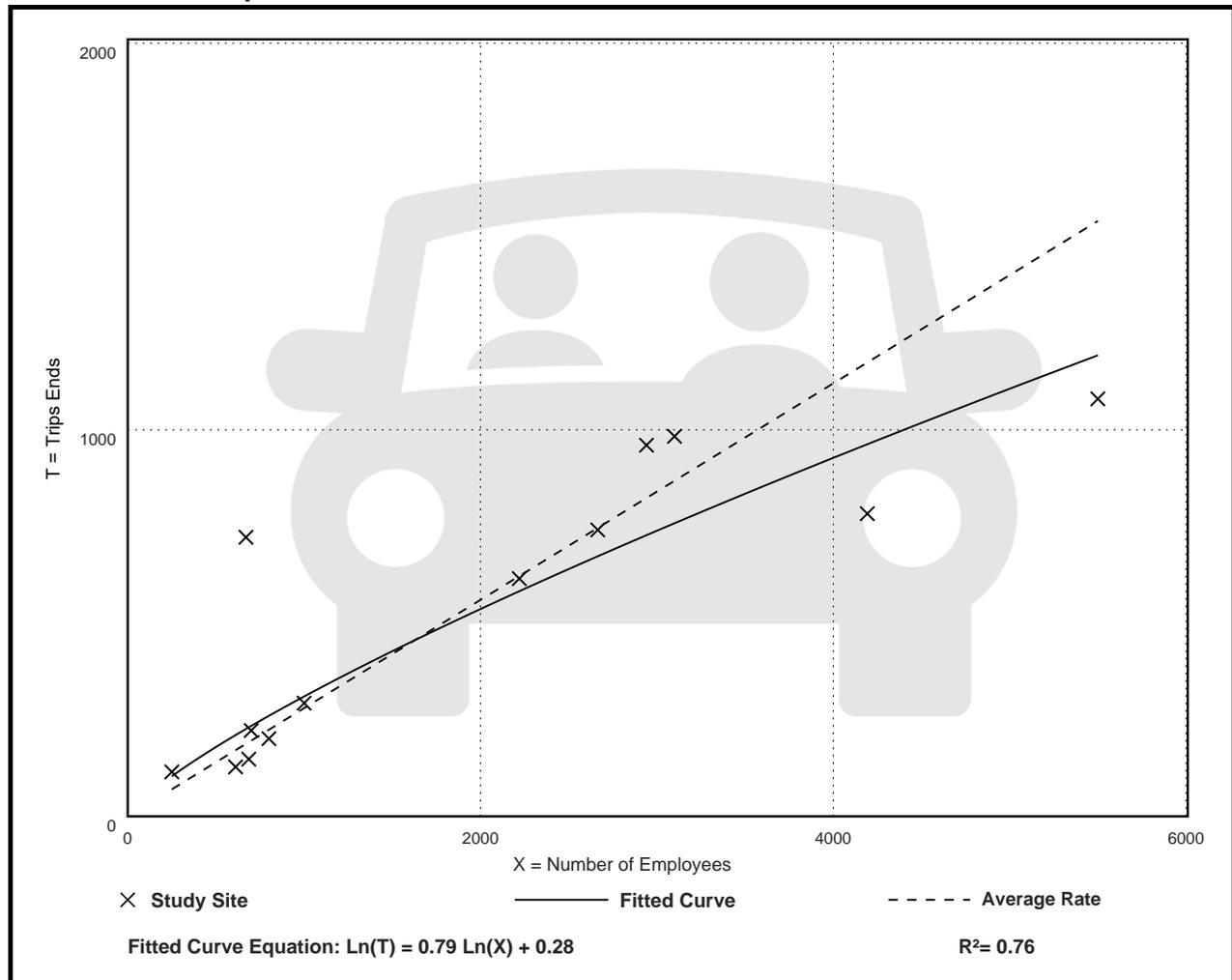
Avg. Num. of Employees: 1949

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.19 - 1.08	0.15

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

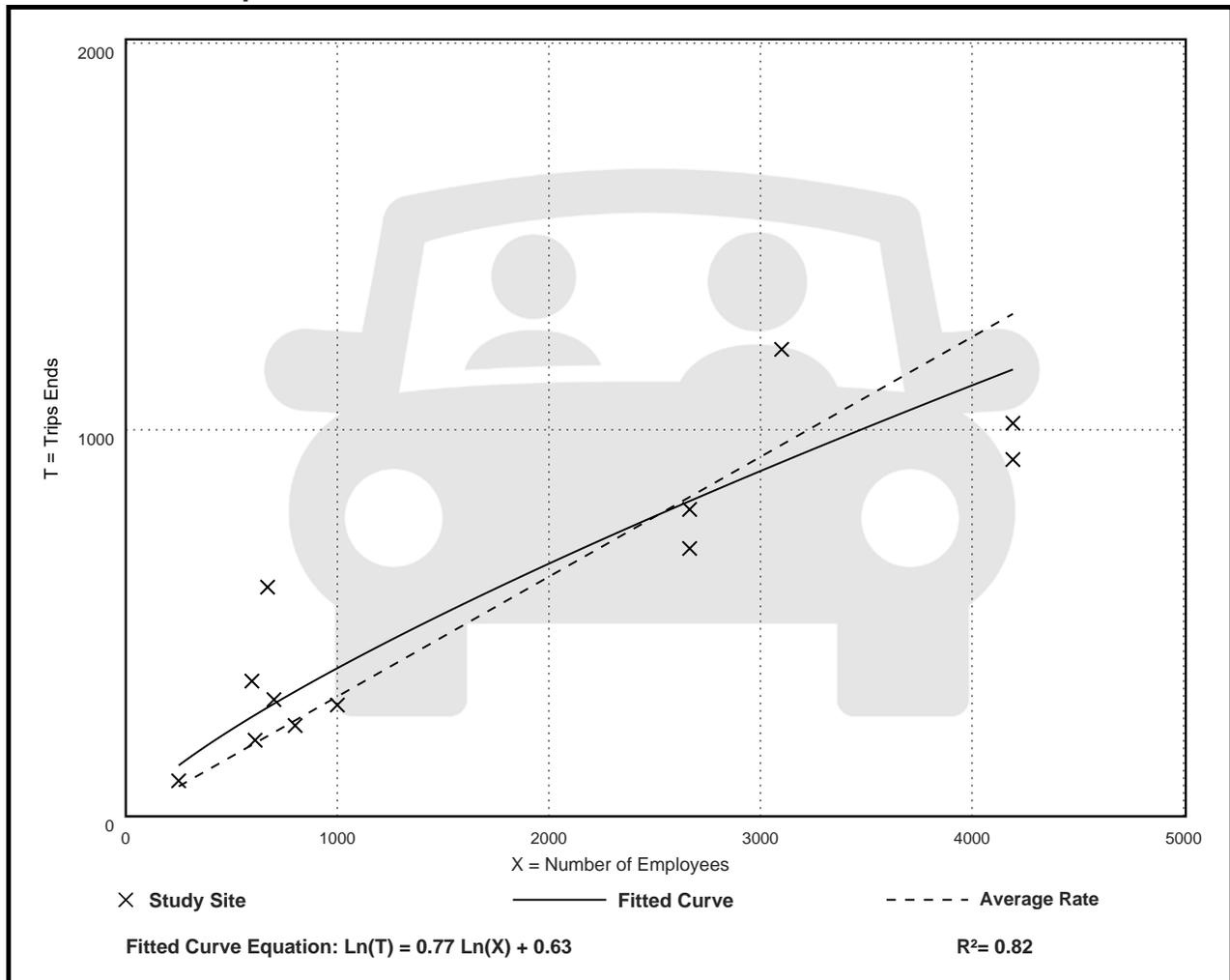
Avg. Num. of Employees: 1787

Directional Distribution: 70% entering, 30% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.31	0.22 - 0.89	0.14

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 13

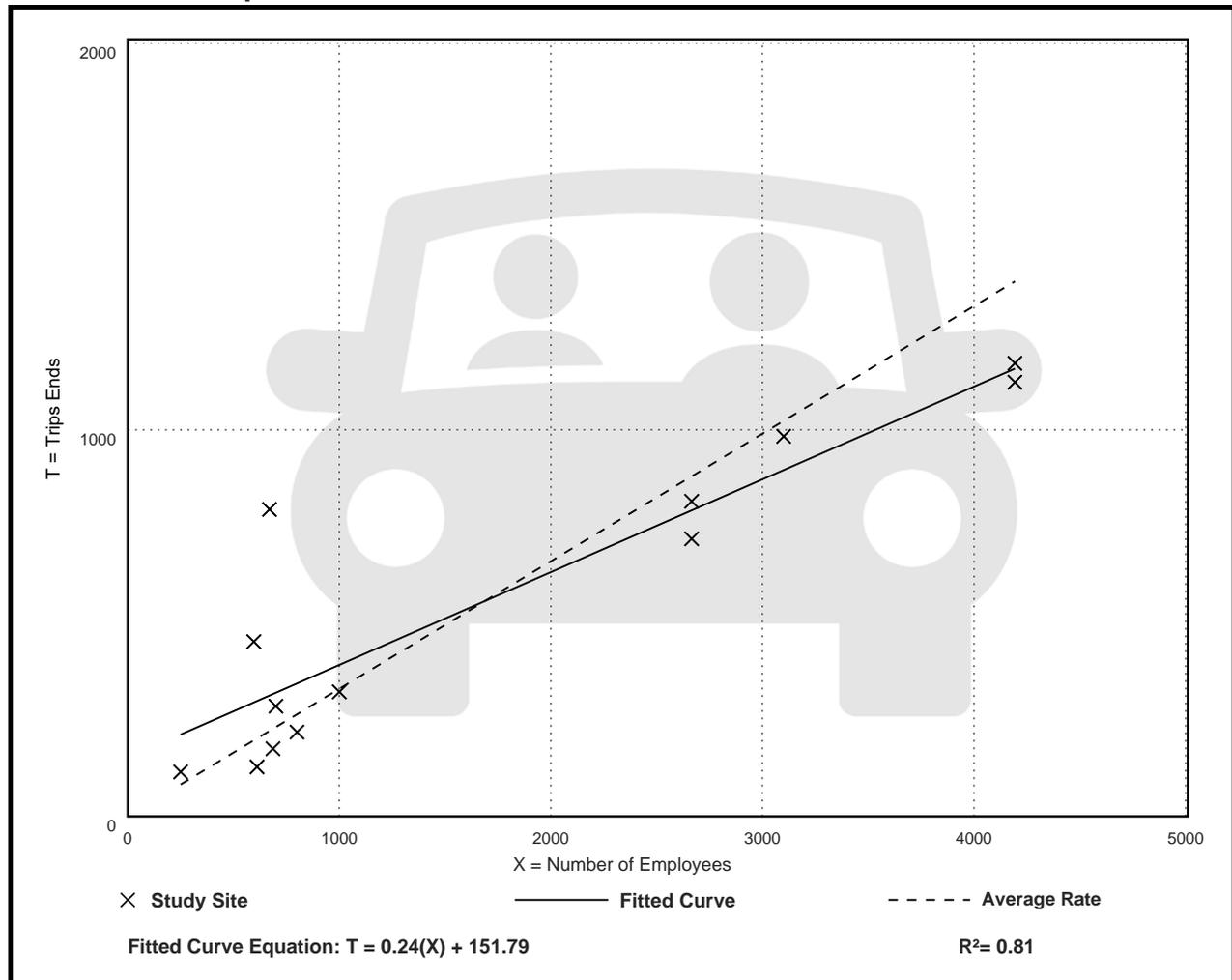
Avg. Num. of Employees: 1702

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.33	0.21 - 1.19	0.18

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 3

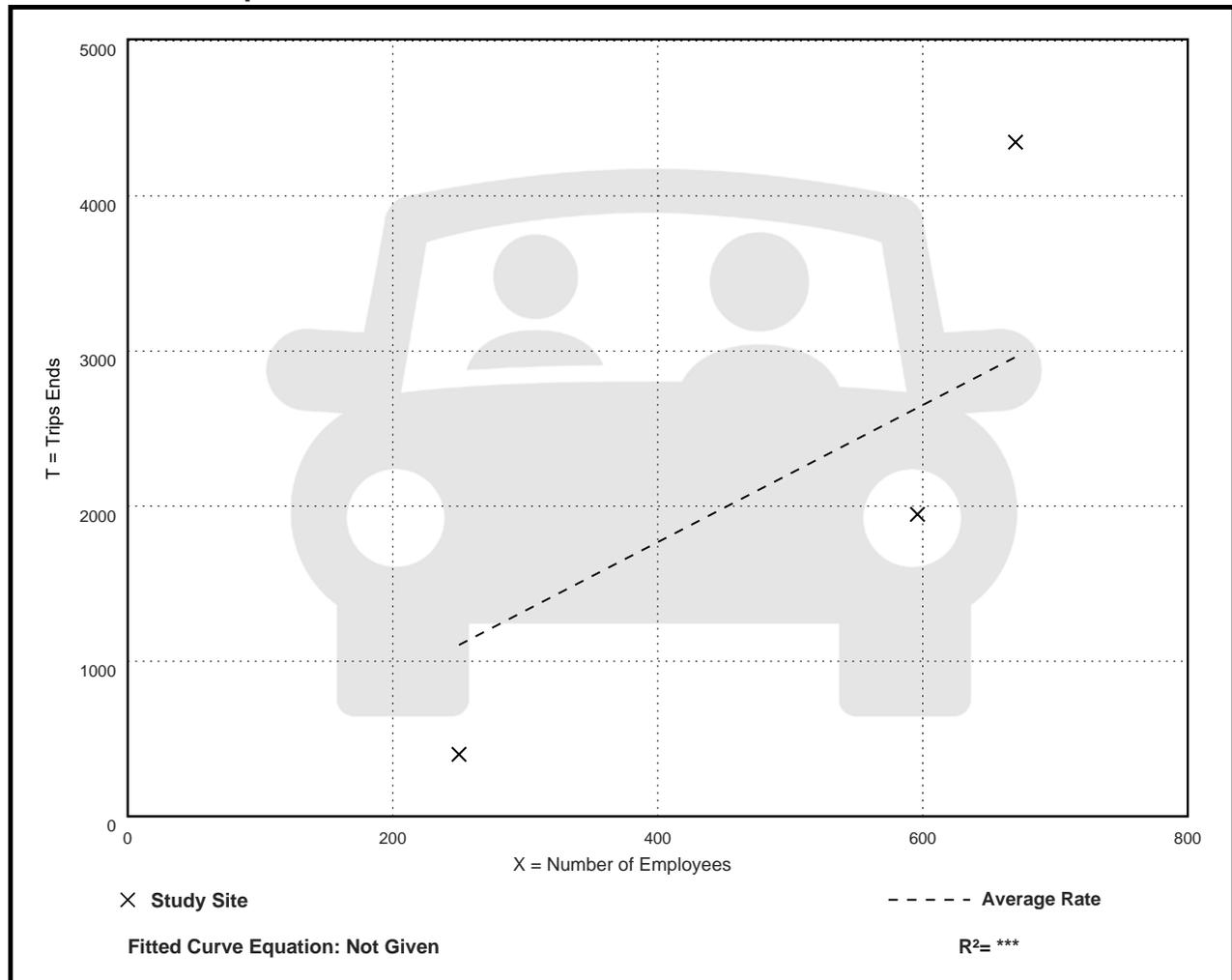
Avg. Num. of Employees: 505

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.42	1.60 - 6.49	2.36

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

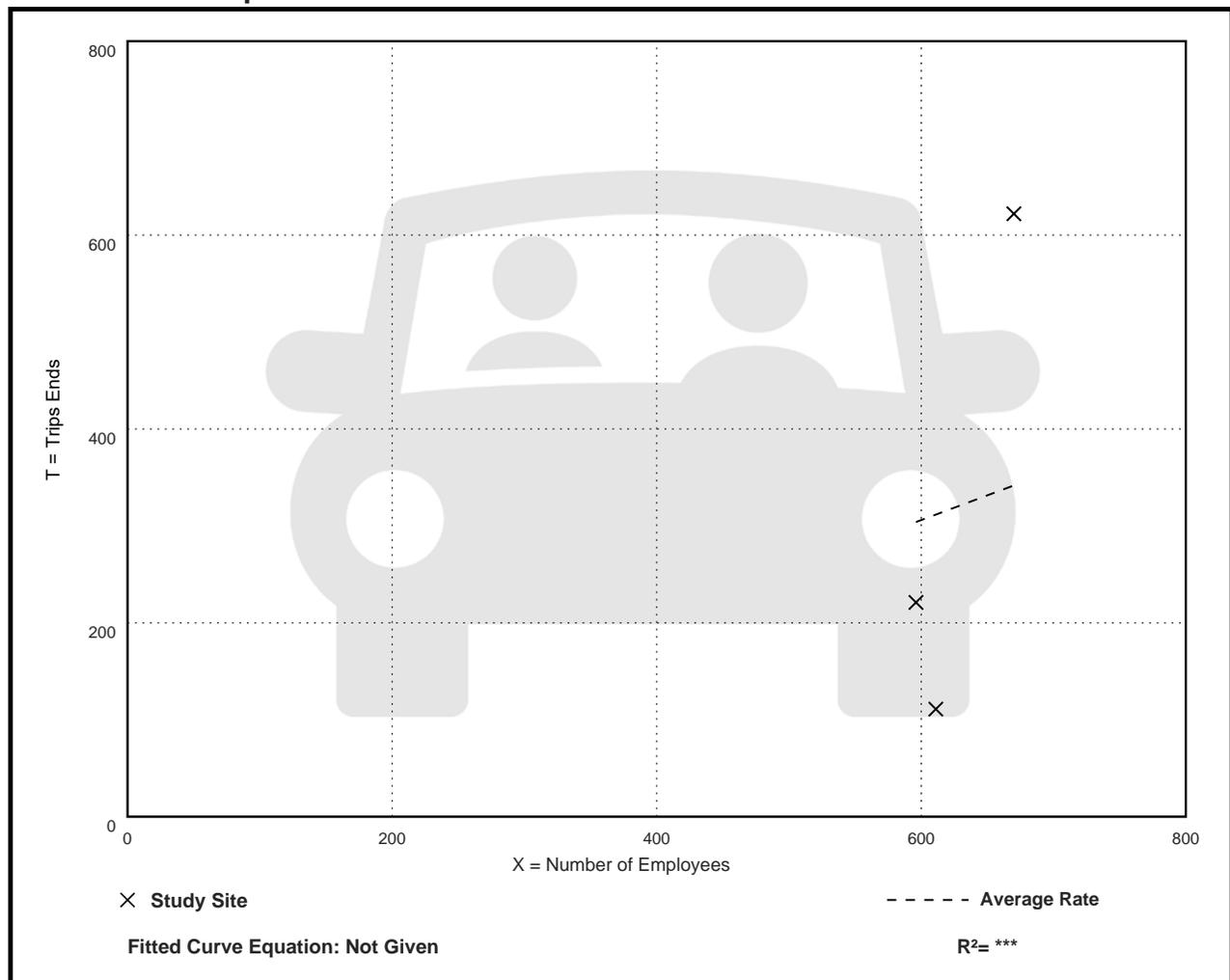
Avg. Num. of Employees: 626

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.51	0.18 - 0.93	0.39

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 460

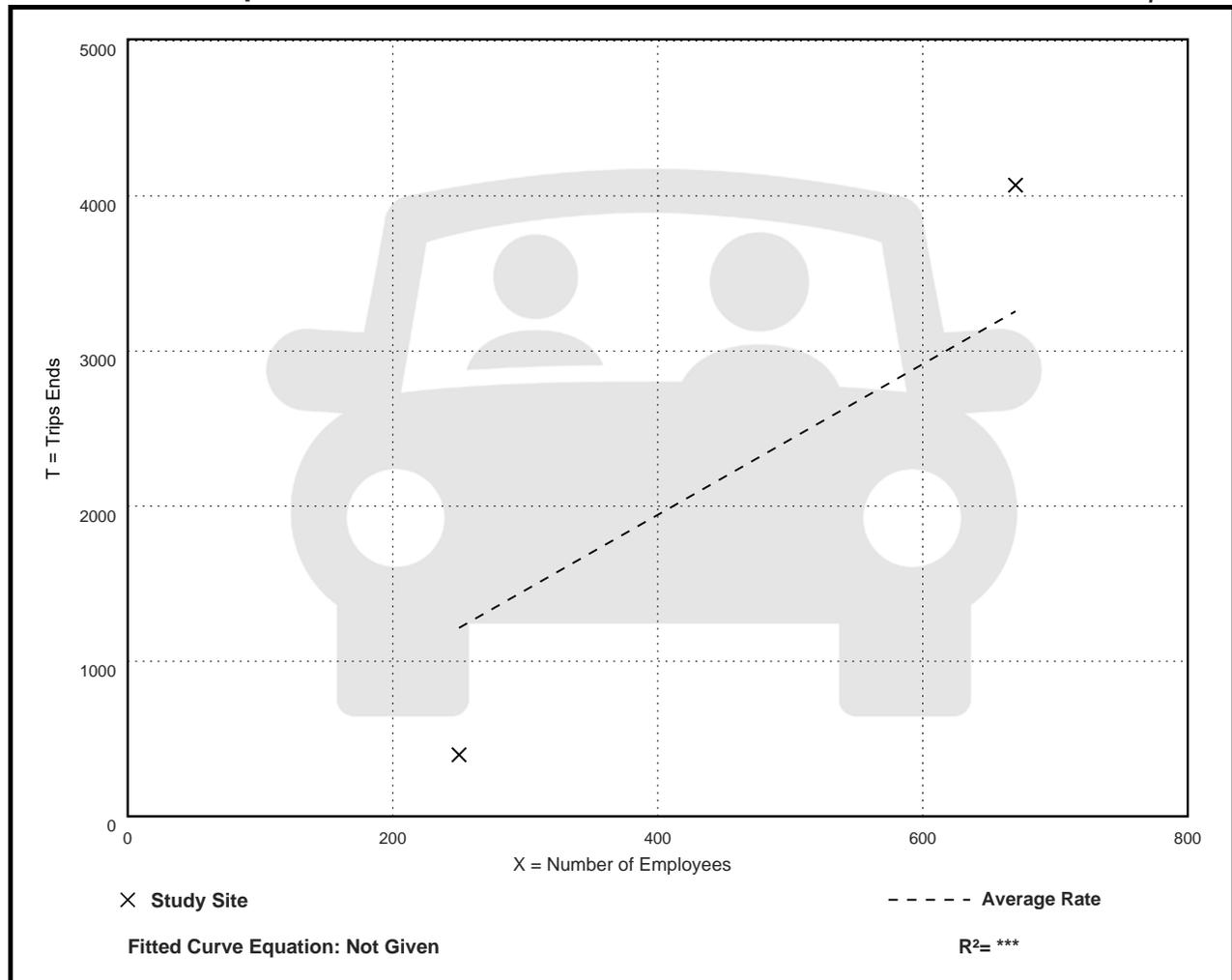
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.86	1.59 - 6.07	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 633

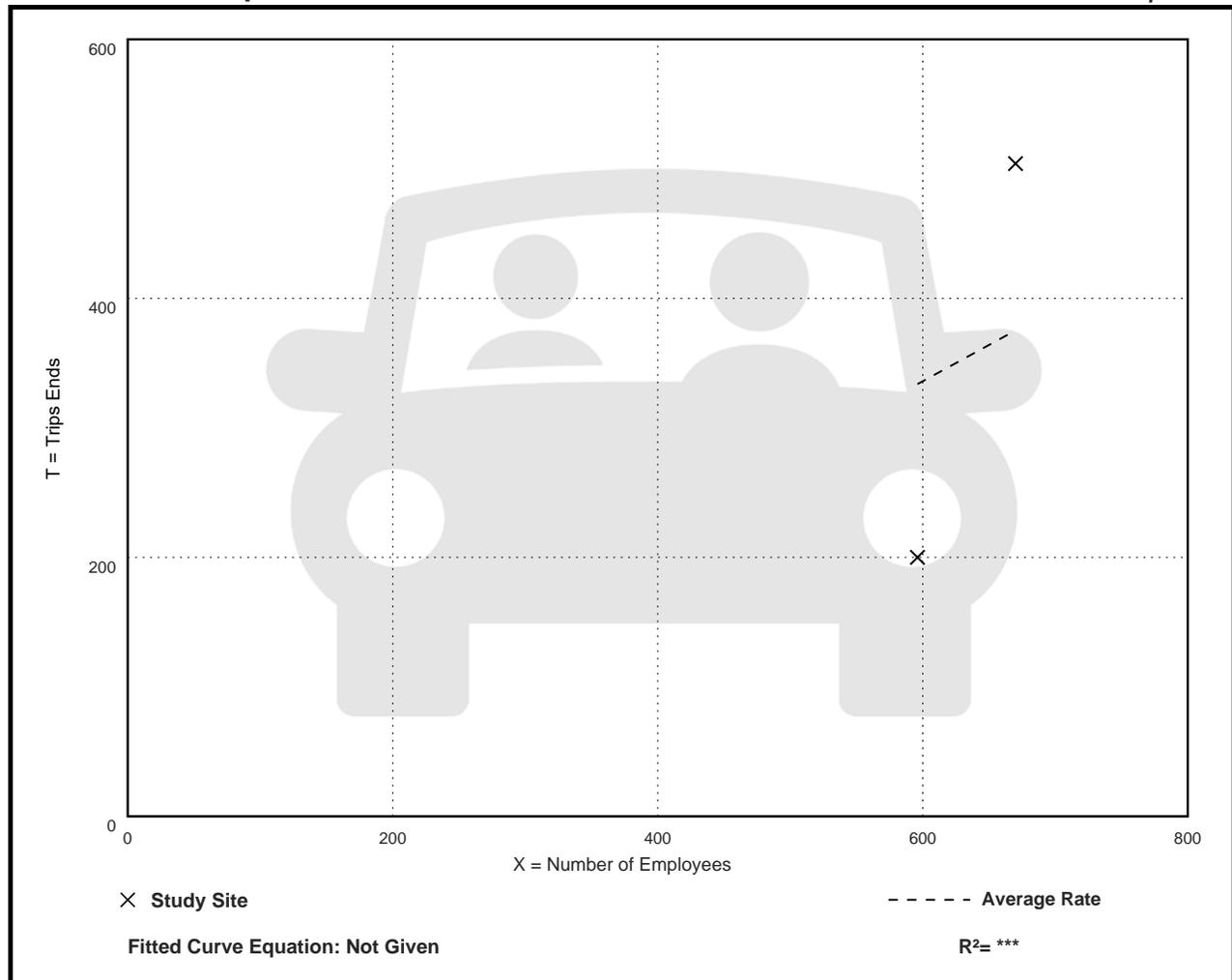
Directional Distribution: 44% entering, 56% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.56	0.34 - 0.75	***

Data Plot and Equation

Caution – Small Sample Size



Hospital (610)

Walk+Bike+Transit Trip Ends vs: Beds

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: 4

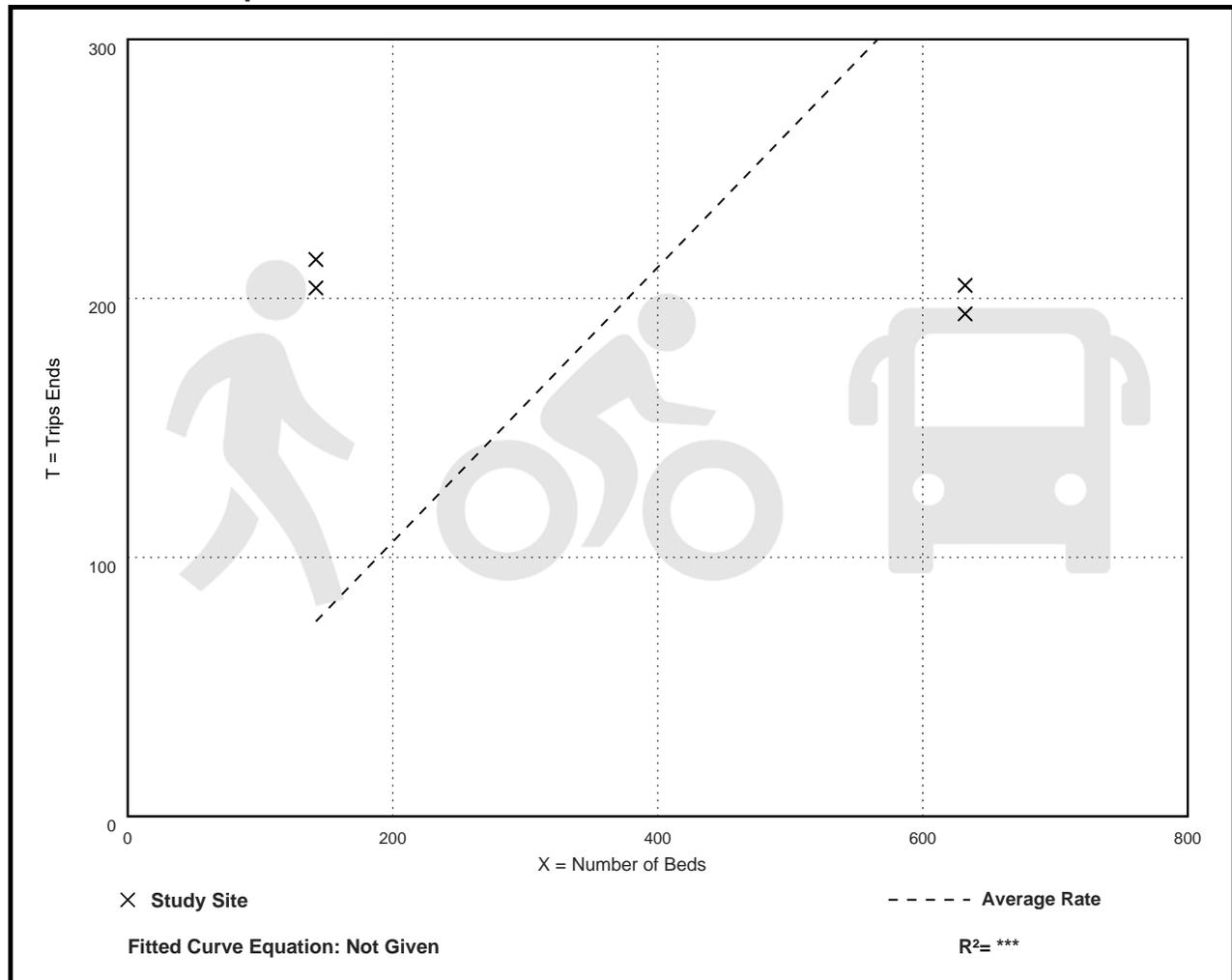
Avg. Num. of Beds: 387

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.53	0.31 - 1.51	0.52

Data Plot and Equation



Hospital (610)

Walk+Bike+Transit 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: 4

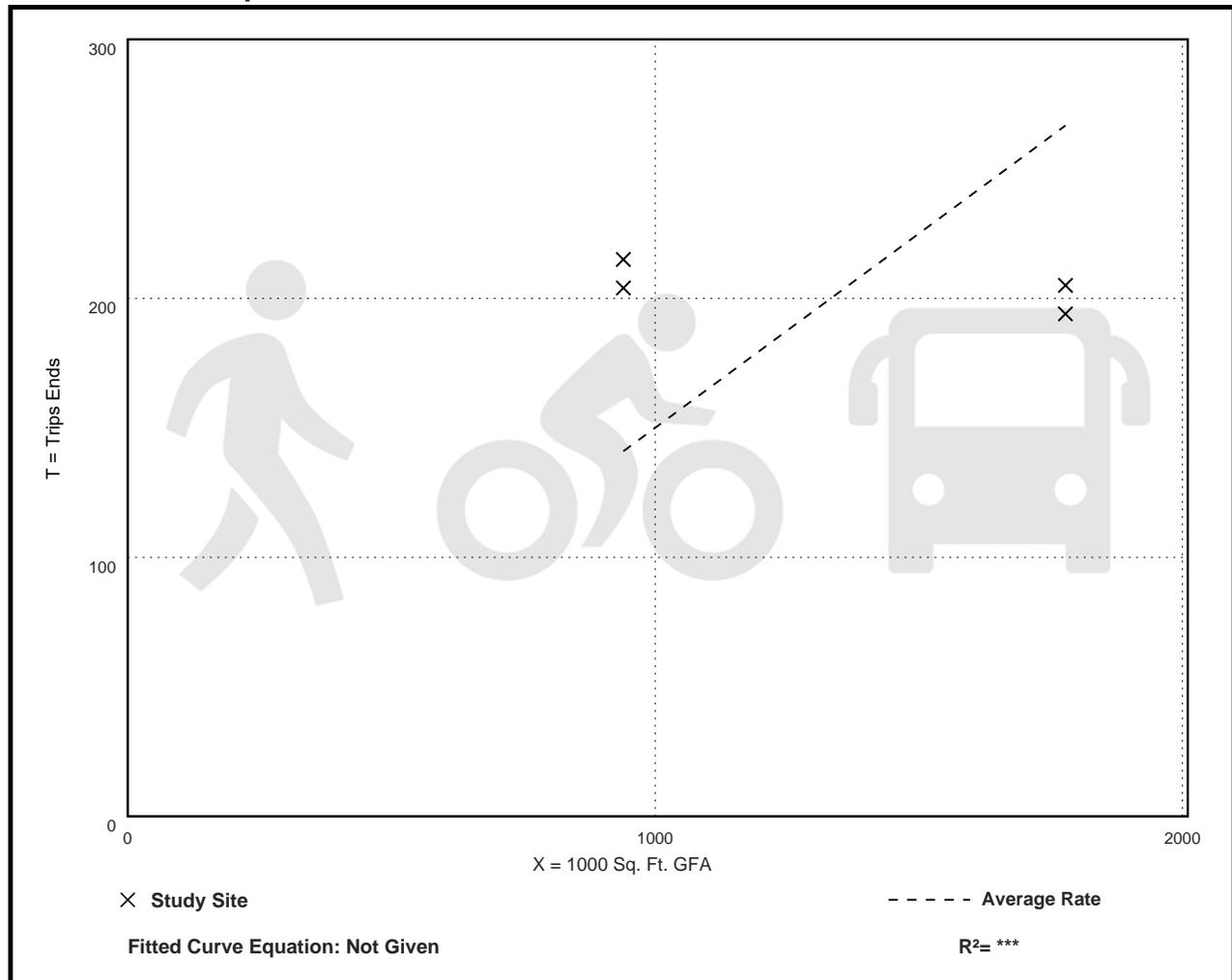
Avg. 1000 Sq. Ft. GFA: 1359

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.11 - 0.23	0.06

Data Plot and Equation



Hospital (610)

Walk+Bike+Transit Trip Ends vs: Employees

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: 2

Avg. Num. of Employees: 3429

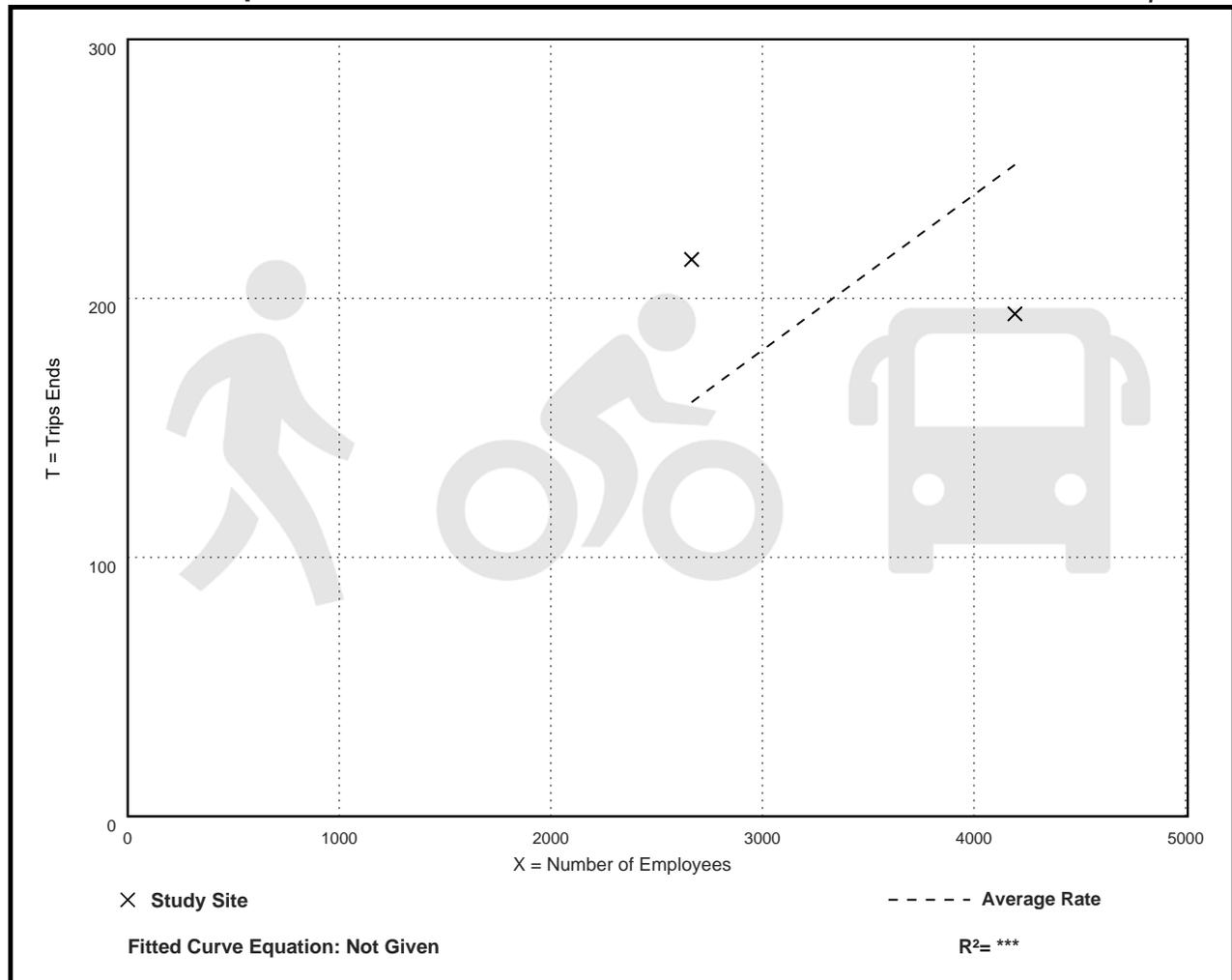
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.06	0.05 - 0.08	***

Data Plot and Equation

Caution – Small Sample Size





APPENDIX H – Synchro Results



Lanes, Volumes, Timings
N Park Road and Johnson Street

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Future Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.534			0.368		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	995	3539	1583	685	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			313
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	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						
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.01	1.06	0.18	0.90	0.95	0.26	0.59	0.58	0.37	0.38	0.39	0.53

Lanes, Volumes, Timings
N Park Road and Johnson Street

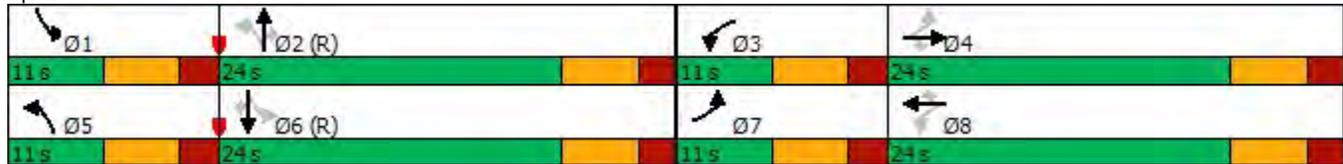
05/31/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
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	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
LOS	E	F	A	E	E	A	C	C	A	B	C	A
Approach Delay	71.8			47.9			20.4			15.6		
Approach LOS	E			D			C			B		

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	1.06
Intersection Signal Delay:	38.4
Intersection LOS:	D
Intersection Capacity Utilization	75.8%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 8: N Park Ave



Lanes and Geometrics
 N Park Road and Johnson Street

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.534			0.368		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	995	3539	1583	685	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			313
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	

Intersection Summary

Area Type: Other

Volume
N Park Road and Johnson Street

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Future Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
Intersection Summary												

Timings
N Park Road and Johnson Street

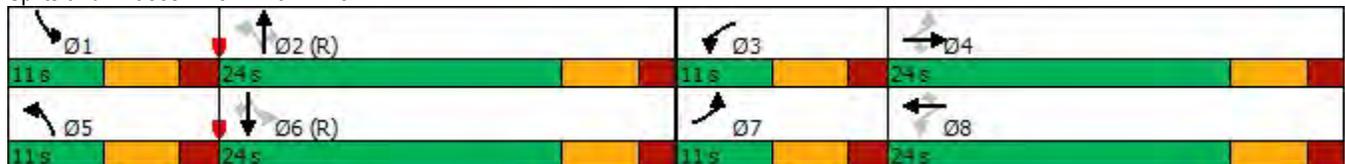
05/31/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Future Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312
Turn Type	pm+pt	NA	Perm									
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	Max											
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.01	1.06	0.18	0.90	0.95	0.26	0.59	0.58	0.37	0.38	0.39	0.53
Control Delay	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
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	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
LOS	E	F	A	E	E	A	C	C	A	B	C	A
Approach Delay		71.8			47.9			20.4			15.6	
Approach LOS		E			D			C			B	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 38.4
 Intersection LOS: D
 Intersection Capacity Utilization 75.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 8: N Park Ave



Phasings
N Park Road and Johnson Street

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (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
Time To Reduce (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
Recall Mode	Max											
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
90th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
70th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
50th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
30th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
10th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N Park Road and Johnson Street

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	508	104	208	453	149	226	528	217	115	359	339
v/c Ratio	1.01	1.06	0.18	0.90	0.95	0.26	0.59	0.58	0.37	0.38	0.39	0.53
Control Delay	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
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	75.4	84.0	4.0	58.6	58.1	1.8	23.1	25.7	4.8	17.3	23.1	7.2
Queue Length 50th (ft)	~99	~259	1	57	191	0	63	104	0	30	67	8
Queue Length 95th (ft)	m#134	m#306	m6	#151	#362	10	111	151	41	60	103	68
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	382	910	580	302	910	639
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	1.01	1.06	0.18	0.90	0.95	0.26	0.59	0.58	0.37	0.38	0.39	0.53

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N Park Road and Johnson Street

05/31/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	215	467	96	191	417	137	208	486	200	106	330	312	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	215	467	96	191	417	137	208	486	200	106	330	312	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	Yes			Yes			Yes			Yes			
Reference Time (s)	14.3	29.5	7.1	12.7	26.3	10.2	13.8	16.1	14.9	7.0	10.9	23.2	
Adj Reference Time (s)	20.3	35.5	16.0	18.7	32.3	16.2	19.8	22.1	20.9	13.0	16.9	29.2	
Permitted Option													
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809		
Reference Time A (s)	214.4	29.5		190.5	26.3		207.4	16.1		105.7	10.9		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time (s)		214.4			190.5			207.4			105.7		
Adj Reference Time (s)		220.4			196.5			213.4			111.7		
Split Option													
Ref Time Combined (s)	14.3	29.5		12.7	26.3		13.8	16.1		7.0	10.9		
Ref Time Seperate (s)	14.3	29.5		12.7	26.3		13.8	16.1		7.0	10.9		
Reference Time (s)	29.5	29.5		26.3	26.3		16.1	16.1		10.9	10.9		
Adj Reference Time (s)	35.5	35.5		32.3	32.3		22.1	22.1		16.9	16.9		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	54.2		36.8										
Permitted Option (s)	220.4		213.4										
Split Option (s)	67.8		39.1										
Minimum (s)	54.2		36.8		91.0								
Right Turns													
	EBR	WBR	NBR	SBR									
Adj Reference Time (s)	16.0	16.2	20.9	29.2									
Cross Thru Ref Time (s)	16.9	22.1	35.5	32.3									
Oncoming Left Ref Time (s)	18.7	20.3	13.0	19.8									
Combined (s)	51.6	58.6	69.4	81.3									
Intersection Summary													
Intersection Capacity Utilization			75.8%	ICU Level of Service						D			
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	529	740	131	16	41
Future Vol, veh/h	128	529	740	131	16	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	575	804	142	17	45

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	946	0	-	0	1657 804
Stage 1	-	-	-	-	804 -
Stage 2	-	-	-	-	853 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	725	-	-	-	108 383
Stage 1	-	-	-	-	440 -
Stage 2	-	-	-	-	418 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	725	-	-	-	87 383
Mov Cap-2 Maneuver	-	-	-	-	87 -
Stage 1	-	-	-	-	356 -
Stage 2	-	-	-	-	418 -

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	27.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	725	-	-	-	87	383
HCM Lane V/C Ratio	0.192	-	-	-	0.2	0.116
HCM Control Delay (s)	11.1	-	-	-	56.4	15.6
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.7	-	-	-	0.7	0.4

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↖
Traffic Vol, veh/h	282	611	25	9	539	230	0	0	3	0	0	311
Future Vol, veh/h	282	611	25	9	539	230	0	0	3	0	0	311
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	307	664	27	10	586	250	0	0	3	0	0	338

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	836	0	0	691	0	0	1605	2148	678	2024	-	418
Stage 1	-	-	-	-	-	-	1292	1292	-	731	-	-
Stage 2	-	-	-	-	-	-	313	856	-	1293	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	796	-	-	902	-	-	77	48	451	38	0	585
Stage 1	-	-	-	-	-	-	200	233	-	380	0	-
Stage 2	-	-	-	-	-	-	673	373	-	199	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	796	-	-	902	-	-	22	29	451	26	-	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	22	29	-	26	-	-
Stage 1	-	-	-	-	-	-	123	143	-	233	-	-
Stage 2	-	-	-	-	-	-	278	365	-	121	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.8			0.1			13			19.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	451	796	-	-	902	-	-	-	585
HCM Lane V/C Ratio	0.007	0.385	-	-	0.011	-	-	-	0.578
HCM Control Delay (s)	13	12.3	-	-	9	-	-	0	19.2
HCM Lane LOS	B	B	-	-	A	-	-	A	C
HCM 95th %tile Q(veh)	0	1.8	-	-	0	-	-	-	3.7

Intersection				
Intersection Delay, s/veh	5.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	38	12	180	314
Demand Flow Rate, veh/h	38	12	183	320
Vehicles Circulating, veh/h	301	198	29	78
Vehicles Exiting, veh/h	97	14	310	132
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.7	4.0	4.8	6.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	38	12	183	320
Cap Entry Lane, veh/h	836	927	1098	1045
Entry HV Adj Factor	1.000	1.000	0.982	0.980
Flow Entry, veh/h	38	12	180	314
Cap Entry, veh/h	836	927	1078	1024
V/C Ratio	0.045	0.013	0.167	0.306
Control Delay, s/veh	4.7	4.0	4.8	6.6
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	451	48	118	557	265	236	217	115	231	119	54
Future Volume (vph)	58	451	48	118	557	265	236	217	115	231	119	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.986				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.674			0.605		
Satd. Flow (perm)	414	1837	0	414	1863	1583	1255	3539	1583	1127	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				288			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	490	52	128	605	288	257	236	125	251	129	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	542	0	128	605	288	257	236	125	251	129	59
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.27	1.14		0.55	1.26	0.46	0.57	0.26	0.22	0.60	0.27	0.10

Lanes, Volumes, Timings
N 35th Ave & Johnson St

03/19/2024

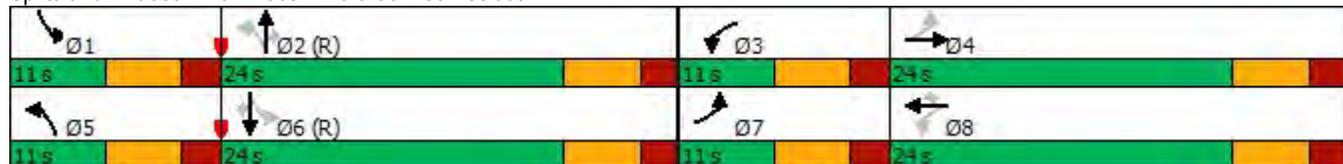


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	15.9	111.9		26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	111.9		26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
LOS	B	F		C	F	B	C	C	A	C	C	A
Approach Delay		101.9			102.6			17.6			20.0	
Approach LOS		F			F			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.26
Intersection Signal Delay:	69.4
Intersection LOS:	E
Intersection Capacity Utilization	72.5%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
N 35th Ave & Johnson St

03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.674			0.605		
Satd. Flow (perm)	414	1837	0	414	1863	1583	1255	3539	1583	1127	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				288			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

03/19/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	58	451	48	118	557	265	236	217	115	231	119	54
Future Volume (vph)	58	451	48	118	557	265	236	217	115	231	119	54
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	490	52	128	605	288	257	236	125	251	129	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	542	0	128	605	288	257	236	125	251	129	59
Intersection Summary												

Timings
N 35th Ave & Johnson St

03/19/2024

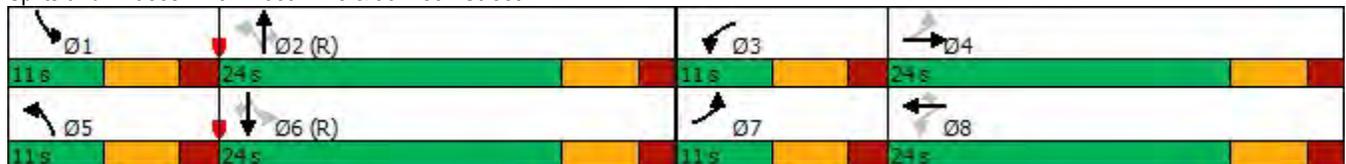


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	58	451	118	557	265	236	217	115	231	119	54
Future Volume (vph)	58	451	118	557	265	236	217	115	231	119	54
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.27	1.14	0.55	1.26	0.46	0.57	0.26	0.22	0.60	0.27	0.10
Control Delay	15.9	111.9	26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	111.9	26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
LOS	B	F	C	F	B	C	C	A	C	C	A
Approach Delay		101.9		102.6			17.6			20.0	
Approach LOS		F		F			B			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.26
 Intersection Signal Delay: 69.4
 Intersection Capacity Utilization 72.5%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service C

Splits and Phases: 3: N 35th Ave & Johnson Street



Queues

N 35th Ave & Johnson St

03/19/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	63	542	128	605	288	257	236	125	251	129	59
v/c Ratio	0.27	1.14	0.55	1.26	0.46	0.57	0.26	0.22	0.60	0.27	0.10
Control Delay	15.9	111.9	26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	111.9	26.9	161.5	12.6	22.1	21.6	0.9	23.3	22.6	0.4
Queue Length 50th (ft)	16	~277	46	~352	31	73	42	0	71	44	0
Queue Length 95th (ft)	37	#460	m58	m#475	m69	126	70	0	123	87	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	621	449	910	580	416	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.14	0.55	1.26	0.46	0.57	0.26	0.22	0.60	0.27	0.10

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N 35th Ave & Johnson St

03/19/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	58	451	48	118	557	265	236	217	115	231	119	54	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	58	499	0	118	557	265	236	217	115	231	119	54	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1873	0	1805	1900	1615	1805	3618	1615	1805	1900	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.9	32.0	0.0	7.8	35.2	19.7	15.7	7.2	8.5	15.4	7.5	4.0	
Adj Reference Time (s)	10.0	38.0	0.0	13.8	41.2	25.7	21.7	13.2	14.5	21.4	13.5	12.0	
Permitted Option													
Adj Saturation A (vph)	120	1873		120	1900		120	1809		120	1900		
Reference Time A (s)	57.8	32.0		117.7	35.2		235.3	7.2		230.4	7.5		
Adj Saturation B (vph)	NA	NA		NA	NA		0	3618		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		23.7	7.2		NA	NA		
Reference Time (s)		57.8			117.7			23.7			230.4		
Adj Reference Time (s)		63.8			123.7			29.7			236.4		
Split Option													
Ref Time Combined (s)	3.9	32.0		7.8	35.2		15.7	7.2		15.4	7.5		
Ref Time Seperate (s)	3.9	28.9		7.8	35.2		15.7	7.2		15.4	7.5		
Reference Time (s)	32.0	32.0		35.2	35.2		15.7	15.7		15.4	15.4		
Adj Reference Time (s)	38.0	38.0		41.2	41.2		21.7	21.7		21.4	21.4		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	51.8		35.2										
Permitted Option (s)	123.7		236.4										
Split Option (s)	79.2		43.0										
Minimum (s)	51.8		35.2		87.0								
Right Turns													
	WBR	NBR	SBR										
Adj Reference Time (s)	25.7	14.5	12.0										
Cross Thru Ref Time (s)	13.2	38.0	41.2										
Oncoming Left Ref Time (s)	10.0	21.4	21.7										
Combined (s)	48.9	73.9	74.9										
Intersection Summary													
Intersection Capacity Utilization			72.5%	ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.													

Lanes, Volumes, Timings
N 35th Ave & MM Office Center Dwy

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	136	347	168	258	43
Future Volume (vph)	23	136	347	168	258	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.420			
Satd. Flow (perm)	1770	1583	782	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				47
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	148	377	183	280	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	148	377	183	280	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.05	0.27	0.60	0.17	0.43	0.08

Lanes, Volumes, Timings
 N 35th Ave & MM Office Center Dwy

03/19/2024

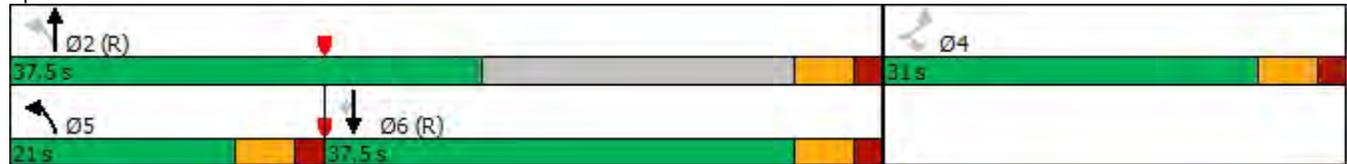


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	24.1	5.9	14.3	9.0	24.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.9	14.3	9.0	24.6	6.5
LOS	C	A	B	A	C	A
Approach Delay	8.5			12.6	22.0	
Approach LOS	A			B	C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	14.8
Intersection LOS:	B
Intersection Capacity Utilization	56.1%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MM Office Center Dwy

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.420			
Satd. Flow (perm)	1770	1583	782	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				47
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & MM Office Center Dwy

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	23	136	347	168	258	43
Future Volume (vph)	23	136	347	168	258	43
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	25	148	377	183	280	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	148	377	183	280	47
Intersection Summary						

Timings
N 35th Ave & MM Office Center Dwy

03/19/2024

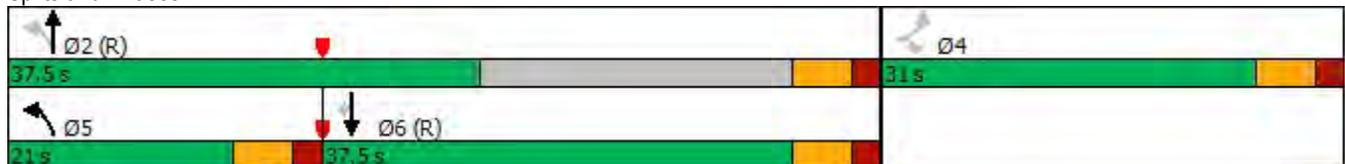


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↑	↑	↗
Traffic Volume (vph)	23	136	347	168	258	43
Future Volume (vph)	23	136	347	168	258	43
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.05	0.27	0.60	0.17	0.43	0.08
Control Delay	24.1	5.9	14.3	9.0	24.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.9	14.3	9.0	24.6	6.5
LOS	C	A	B	A	C	A
Approach Delay	8.5			12.6	22.0	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 14.8
 Intersection LOS: B
 Intersection Capacity Utilization 56.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 17:



Queues

N 35th Ave & MM Office Center Dwy

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	25	148	377	183	280	47
v/c Ratio	0.05	0.27	0.60	0.17	0.43	0.08
Control Delay	24.1	5.9	14.3	9.0	24.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.9	14.3	9.0	24.6	6.5
Queue Length 50th (ft)	10	0	103	44	119	0
Queue Length 95th (ft)	29	43	160	75	190	23
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	548	624	1092	655	587
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.27	0.60	0.17	0.43	0.08

Intersection Summary

Intersection Capacity Utilization
N 35th Ave & MM Office Center Dwy

03/19/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	23	136	347	168	258	43
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	23	136	347	168	258	43
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00	
Protected Option Allowed	No		Yes		Yes	
Reference Time (s)	10.1		23.1	10.6	16.3	3.2
Adj Reference Time (s)	16.1		29.1	21.0	22.3	21.0
Permitted Option						
Adj Saturation A (vph)	120	120		1900	1900	
Reference Time A (s)	22.9	346.0		10.6	16.3	
Adj Saturation B (vph)	NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA	
Reference Time (s)				346.0	16.3	
Adj Reference Time (s)				352.0	22.3	
Split Option						
Ref Time Combined (s)	1.5	23.1		10.6	16.3	
Ref Time Seperate (s)	1.5	23.1		10.6	16.3	
Reference Time (s)	1.5	23.1		23.1	16.3	
Adj Reference Time (s)	16.0	29.1		29.1	22.3	
Summary						
	EB	NB SB		Combined		
Protected Option (s)	NA	51.4				
Permitted Option (s)	Err	352.0				
Split Option (s)	16.0	51.4				
Minimum (s)	16.0	51.4		67.4		
Right Turns						
	EBR	SBR				
Adj Reference Time (s)	16.1	21.0				
Cross Thru Ref Time (s)	22.3	0.0				
Oncoming Left Ref Time (s)	0.0	29.1				
Combined (s)	38.4	50.1				

Intersection Summary

Intersection Capacity Utilization 56.1% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	1	2	1	7	3	845	3	2	760	2
Future Vol, veh/h	3	0	1	2	1	7	3	845	3	2	760	2
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	8	3	918	3	2	826	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1297	1758	414	1343	1758	461	828	0	0	921	0	0
Stage 1	831	831	-	926	926	-	-	-	-	-	-	-
Stage 2	466	927	-	417	832	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	119	84	587	110	84	547	799	-	-	737	-	-
Stage 1	330	383	-	289	346	-	-	-	-	-	-	-
Stage 2	546	345	-	584	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	115	83	587	109	83	547	799	-	-	737	-	-
Mov Cap-2 Maneuver	115	83	-	109	83	-	-	-	-	-	-	-
Stage 1	327	381	-	287	343	-	-	-	-	-	-	-
Stage 2	532	342	-	580	380	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	30.8		21.3		0		0	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	799	-	-	144	232	737	-
HCM Lane V/C Ratio	0.004	-	-	0.03	0.047	0.003	-
HCM Control Delay (s)	9.5	0	-	30.8	21.3	9.9	-
HCM Lane LOS	A	A	-	D	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection

Int Delay, s/veh 3.2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	62	488	686	55	46	111
Future Vol, veh/h	62	488	686	55	46	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	530	746	60	50	121

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	806	0	-	0	1410	746
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	664	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	819	-	-	-	153	413
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	819	-	-	-	140	413
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	512	-

Approach EB WB SB

HCM Control Delay, s	1.1	0	25.2
HCM LOS			D

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1 SBLn2

Capacity (veh/h)	819	-	-	-	140	413
HCM Lane V/C Ratio	0.082	-	-	-	0.357	0.292
HCM Control Delay (s)	9.8	-	-	-	44.4	17.3
HCM Lane LOS	A	-	-	-	E	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.5	1.2

HCM 2010 TWSC
 Johnson St and Employee Entrance Driveway

03/19/2024

Intersection												
Int Delay, s/veh	10.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↗
Traffic Vol, veh/h	8	489	5	8	717	10	2	0	58	0	0	475
Future Vol, veh/h	8	489	5	8	717	10	2	0	58	0	0	475
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	532	5	9	779	11	2	0	63	0	0	516

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	790	0	0	537	0	0	961	1361	535	1387	-	395
Stage 1	-	-	-	-	-	-	553	553	-	803	-	-
Stage 2	-	-	-	-	-	-	408	808	-	584	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	828	-	-	1029	-	-	223	148	544	111	0	605
Stage 1	-	-	-	-	-	-	516	513	-	344	0	-
Stage 2	-	-	-	-	-	-	592	393	-	497	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	828	-	-	1029	-	-	32	144	544	96	-	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	144	-	96	-	-
Stage 1	-	-	-	-	-	-	510	507	-	340	-	-
Stage 2	-	-	-	-	-	-	85	387	-	435	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			17.4			36		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	355	828	-	-	1029	-	-	-	605
HCM Lane V/C Ratio	0.184	0.011	-	-	0.008	-	-	-	0.853
HCM Control Delay (s)	17.4	9.4	-	-	8.5	-	-	0	36
HCM Lane LOS	C	A	-	-	A	-	-	A	E
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	-	9.4

Intersection				
Intersection Delay, s/veh	5.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	188	40	181	236
Demand Flow Rate, veh/h	192	41	185	240
Vehicles Circulating, veh/h	257	283	104	73
Vehicles Exiting, veh/h	56	6	345	251
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	4.8	5.3	5.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	192	41	185	240
Cap Entry Lane, veh/h	874	851	1018	1050
Entry HV Adj Factor	0.979	0.975	0.980	0.982
Flow Entry, veh/h	188	40	181	236
Cap Entry, veh/h	856	830	998	1031
V/C Ratio	0.220	0.048	0.182	0.228
Control Delay, s/veh	6.5	4.8	5.3	5.7
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	418	112	156	479	135	73	65	111	324	179	121
Future Volume (vph)	41	418	112	156	479	135	73	65	111	324	179	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.624			0.708		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1162	3539	1583	1319	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	454	122	170	521	147	79	71	121	352	195	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	576	0	170	521	147	79	71	121	352	195	132
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.19	1.21		0.73	1.09	0.25	0.19	0.08	0.21	0.76	0.41	0.23

Lanes, Volumes, Timings
N 35th Ave & Johnson St

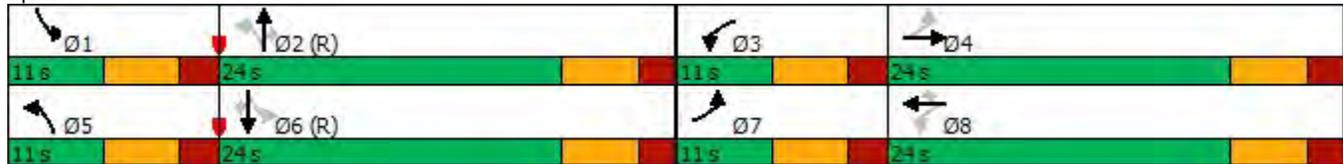
03/19/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	14.7	138.4		41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	138.4		41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
LOS	B	F		D	F	A	B	C	A	C	C	A
Approach Delay		129.4			71.0			9.7			23.4	
Approach LOS		F			E			A			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.21
Intersection Signal Delay:	65.7
Intersection LOS:	E
Intersection Capacity Utilization	80.4%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
 N 35th Ave & Johnson St

03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.624			0.708		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1162	3539	1583	1319	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

03/19/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	41	418	112	156	479	135	73	65	111	324	179	121
Future Volume (vph)	41	418	112	156	479	135	73	65	111	324	179	121
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	45	454	122	170	521	147	79	71	121	352	195	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	576	0	170	521	147	79	71	121	352	195	132
Intersection Summary												

Timings
N 35th Ave & Johnson St

03/19/2024

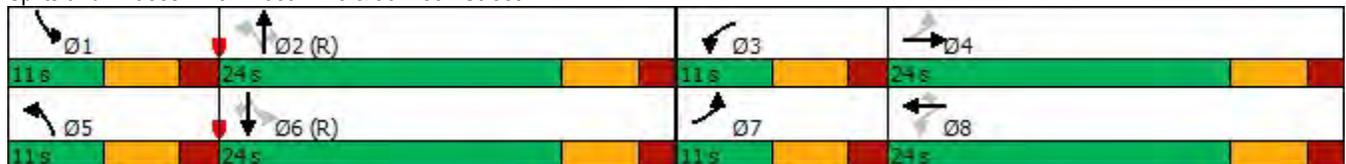


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	41	418	156	479	135	73	65	111	324	179	121
Future Volume (vph)	41	418	156	479	135	73	65	111	324	179	121
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.19	1.21	0.73	1.09	0.25	0.19	0.08	0.21	0.76	0.41	0.23
Control Delay	14.7	138.4	41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	138.4	41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
LOS	B	F	D	F	A	B	C	A	C	C	A
Approach Delay		129.4		71.0			9.7			23.4	
Approach LOS		F		E			A			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 65.7
 Intersection Capacity Utilization 80.4%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service D

Splits and Phases: 3: N 35th Ave & Johnson Street



Queues

N 35th Ave & Johnson St

03/19/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	45	576	170	521	147	79	71	121	352	195	132
v/c Ratio	0.19	1.21	0.73	1.09	0.25	0.19	0.08	0.21	0.76	0.41	0.23
Control Delay	14.7	138.4	41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	138.4	41.0	98.5	8.3	14.1	20.1	0.8	31.0	24.7	1.0
Queue Length 50th (ft)	11	~305	68	~269	11	20	12	0	107	70	0
Queue Length 95th (ft)	29	#491	m#92	m#380	m24	45	26	0	#207	125	2
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	580	425	910	580	465	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	1.21	0.73	1.09	0.25	0.19	0.08	0.21	0.76	0.41	0.23

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N 35th Ave & Johnson St

03/19/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	41	418	112	156	479	135	73	65	111	324	179	121	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	41	530	0	156	479	135	73	65	111	324	179	121	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.97	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1840	0	1805	1900	1615	1805	3618	1615	1805	1900	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	2.7	34.6	0.0	10.4	30.3	10.0	4.9	2.2	8.2	21.5	11.3	9.0	
Adj Reference Time (s)	10.0	40.6	0.0	16.4	36.3	18.0	10.9	12.0	14.2	27.5	17.3	15.0	
Permitted Option													
Adj Saturation A (vph)	120	1840		120	1900		120	1809		120	1900		
Reference Time A (s)	40.9	34.6		155.6	30.3		72.8	2.2		323.1	11.3		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1900		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		29.5	11.3		
Reference Time (s)		40.9			155.6			72.8			29.5		
Adj Reference Time (s)		46.9			161.6			78.8			35.5		
Split Option													
Ref Time Combined (s)	2.7	34.6		10.4	30.3		4.9	2.2		21.5	11.3		
Ref Time Seperate (s)	2.7	27.3		10.4	30.3		4.9	2.2		21.5	11.3		
Reference Time (s)	34.6	34.6		30.3	30.3		4.9	4.9		21.5	21.5		
Adj Reference Time (s)	40.6	40.6		36.3	36.3		12.0	12.0		27.5	27.5		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	56.9		39.5										
Permitted Option (s)	161.6		78.8										
Split Option (s)	76.8		39.5										
Minimum (s)	56.9		39.5		96.5								
Right Turns													
	WBR	NBR	SBR										
Adj Reference Time (s)	18.0	14.2	15.0										
Cross Thru Ref Time (s)	12.0	40.6	36.3										
Oncoming Left Ref Time (s)	10.0	27.5	10.9										
Combined (s)	40.0	82.4	62.1										
Intersection Summary													
Intersection Capacity Utilization	80.4%		ICU Level of Service						D				
Reference Times and Phasing Options do not represent an optimized timing plan.													

Lanes, Volumes, Timings
N 35th Ave & MRH Office Center Driveway

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	294	114	116	305	30
Future Volume (vph)	51	294	114	116	305	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.364			
Satd. Flow (perm)	1770	1583	678	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		320				33
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	320	124	126	332	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	320	124	126	332	33
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.11	0.48	0.21	0.12	0.51	0.06

Lanes, Volumes, Timings
 N 35th Ave & MRH Office Center Driveway

03/19/2024

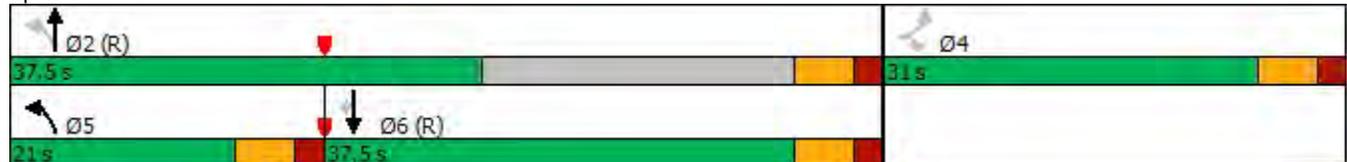


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	24.8	5.7	9.2	8.6	26.2	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	5.7	9.2	8.6	26.2	7.3
LOS	C	A	A	A	C	A
Approach Delay	8.5			8.9	24.5	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	14.5
Intersection LOS:	B
Intersection Capacity Utilization	51.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MRH Office Center Driveway

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.364			
Satd. Flow (perm)	1770	1583	678	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		320				33
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
 N 35th Ave & MRH Office Center Driveway

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	51	294	114	116	305	30
Future Volume (vph)	51	294	114	116	305	30
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	55	320	124	126	332	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	320	124	126	332	33
Intersection Summary						

Timings

N 35th Ave & MRH Office Center Driveway

03/19/2024

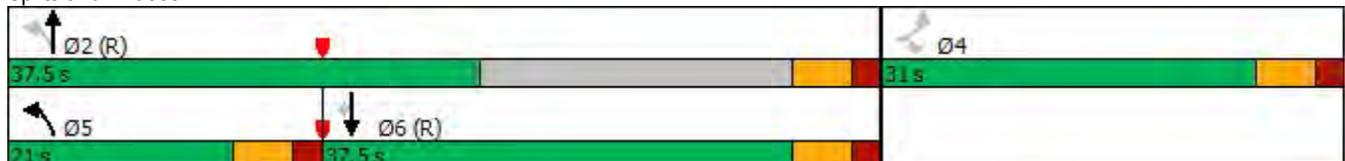


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↑	↑	↖
Traffic Volume (vph)	51	294	114	116	305	30
Future Volume (vph)	51	294	114	116	305	30
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.11	0.48	0.21	0.12	0.51	0.06
Control Delay	24.8	5.7	9.2	8.6	26.2	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	5.7	9.2	8.6	26.2	7.3
LOS	C	A	A	A	C	A
Approach Delay	8.5			8.9	24.5	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 14.5
 Intersection LOS: B
 Intersection Capacity Utilization 51.9%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 17:



Queues

N 35th Ave & MRH Office Center Driveway

03/19/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	55	320	124	126	332	33
v/c Ratio	0.11	0.48	0.21	0.12	0.51	0.06
Control Delay	24.8	5.7	9.2	8.6	26.2	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	5.7	9.2	8.6	26.2	7.3
Queue Length 50th (ft)	23	0	29	29	146	0
Queue Length 95th (ft)	52	61	53	54	227	19
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	672	580	1092	655	578
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.48	0.21	0.12	0.51	0.06

Intersection Summary

Intersection Capacity Utilization
 N 35th Ave & MRH Office Center Driveway

03/19/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	294	114	116	305	30
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	51	294	114	116	305	30
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00	
Protected Option Allowed	No		Yes		Yes	
Reference Time (s)	21.8		7.6	7.3	19.3	2.2
Adj Reference Time (s)	27.8		21.0	21.0	25.3	21.0
Permitted Option						
Adj Saturation A (vph)	120	120		1900	1900	
Reference Time A (s)	50.9	113.7		7.3	19.3	
Adj Saturation B (vph)	NA	NA		NA	1900	
Reference Time B (s)	NA	NA		NA	19.3	
Reference Time (s)				113.7	19.3	
Adj Reference Time (s)				119.7	25.3	
Split Option						
Ref Time Combined (s)	3.4	7.6		7.3	19.3	
Ref Time Seperate (s)	3.4	7.6		7.3	19.3	
Reference Time (s)	3.4	7.6		7.6	19.3	
Adj Reference Time (s)	16.0	21.0		21.0	25.3	
Summary						
	EB	NB SB		Combined		
Protected Option (s)	NA	46.3				
Permitted Option (s)	Err	119.7				
Split Option (s)	16.0	46.3				
Minimum (s)	16.0	46.3		62.3		
Right Turns						
	EBR	SBR				
Adj Reference Time (s)	27.8	21.0				
Cross Thru Ref Time (s)	25.3	0.0				
Oncoming Left Ref Time (s)	0.0	21.0				
Combined (s)	53.1	42.0				

Intersection Summary

Intersection Capacity Utilization 51.9% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	1	5	0	0	3	2	953	2	5	957	5
Future Vol, veh/h	5	1	5	0	0	3	2	953	2	5	957	5
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1036	2	5	1040	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1575	2095	523	1572	2096	519	1045	0	0	1038	0	0
Stage 1	1053	1053	-	1041	1041	-	-	-	-	-	-	-
Stage 2	522	1042	-	531	1055	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	74	52	499	74	51	502	661	-	-	665	-	-
Stage 1	242	301	-	246	305	-	-	-	-	-	-	-
Stage 2	506	305	-	500	301	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	72	51	499	71	50	502	661	-	-	665	-	-
Mov Cap-2 Maneuver	72	51	-	71	50	-	-	-	-	-	-	-
Stage 1	240	296	-	244	303	-	-	-	-	-	-	-
Stage 2	499	303	-	484	296	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	41.3		12.2		0		0.1	
HCM LOS	E		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	661	-	-	111	502	665	-	-
HCM Lane V/C Ratio	0.003	-	-	0.108	0.006	0.008	-	-
HCM Control Delay (s)	10.5	0	-	41.3	12.2	10.5	-	-
HCM Lane LOS	B	A	-	E	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Lanes, Volumes, Timings
N Park Road & Johnson St

03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Future Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.258			0.335		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	481	3539	1583	624	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			262			254
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	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						
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.25	1.01	0.27	0.96	0.92	0.32	0.49	0.62	0.44	0.48	0.72	0.43

Lanes, Volumes, Timings
N Park Road & Johnson St

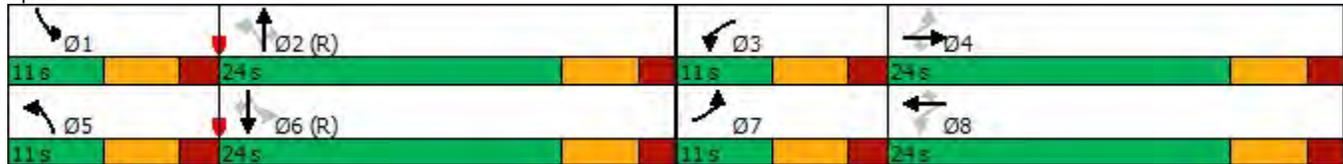
03/19/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	151.6	65.4	6.0	72.3	53.9	3.2	20.8	26.5	5.7	20.1	29.1	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	151.6	65.4	6.0	72.3	53.9	3.2	20.8	26.5	5.7	20.1	29.1	5.7
LOS	F	E	A	E	D	A	C	C	A	C	C	A
Approach Delay	82.2					47.7			20.0			
Approach LOS	F					D			C			

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	75
Control Type:	Pretimed
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	42.2
Intersection LOS:	D
Intersection Capacity Utilization	79.1%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 8: N Park Ave



Lanes and Geometrics
N Park Road & Johnson St

03/19/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		0%		0%		0%		0%		0%		
Storage Length (ft)	250		235	200		340	175		190	180		200	
Storage Lanes	1		1	1		1	1		1	1		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Ped Bike Factor	Frt			0.850	Frt			0.850	Frt			0.850	0.850
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted	0.222			0.222			0.258			0.335			
Satd. Flow (perm)	414	1863	1583	414	1863	1583	481	3539	1583	624	3539	1583	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			234			234			262			254	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		1006			728			567			462		
Travel Time (s)		22.9			16.5			12.9			10.5		

Intersection Summary

Area Type: Other

Volume
N Park Road & Johnson St

03/19/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Future Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
Intersection Summary												

Queues

N Park Road & Johnson St

03/19/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	485	157	223	442	186	122	565	262	138	659	254
v/c Ratio	1.25	1.01	0.27	0.96	0.92	0.32	0.49	0.62	0.44	0.48	0.72	0.43
Control Delay	151.6	65.4	6.0	72.3	53.9	3.2	20.8	26.5	5.7	20.1	29.1	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	151.6	65.4	6.0	72.3	53.9	3.2	20.8	26.5	5.7	20.1	29.1	5.7
Queue Length 50th (ft)	~105	~237	7	62	185	0	32	113	0	36	136	0
Queue Length 95th (ft)	m#136	m#280	m11	#168	#350	26	63	163	51	70	193	51
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	250	910	601	286	910	595
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	1.25	1.01	0.27	0.96	0.92	0.32	0.49	0.62	0.44	0.48	0.72	0.43

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N Park Road & Johnson St

03/19/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	266	446	144	205	407	171	112	520	241	127	606	234	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	266	446	144	205	407	171	112	520	241	127	606	234	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	Yes			Yes			Yes			Yes			
Reference Time (s)	17.7	28.2	10.7	13.6	25.7	12.7	7.4	17.2	17.9	8.4	20.1	17.4	
Adj Reference Time (s)	23.7	34.2	16.7	19.6	31.7	18.7	13.4	23.2	23.9	14.4	26.1	23.4	
Permitted Option													
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809		
Reference Time A (s)	265.3	28.2		204.4	25.7		111.7	17.2		126.6	20.1		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time (s)		265.3			204.4			111.7			126.6		
Adj Reference Time (s)		271.3			210.4			117.7			132.6		
Split Option													
Ref Time Combined (s)	17.7	28.2		13.6	25.7		7.4	17.2		8.4	20.1		
Ref Time Seperate (s)	17.7	28.2		13.6	25.7		7.4	17.2		8.4	20.1		
Reference Time (s)	28.2	28.2		25.7	25.7		17.2	17.2		20.1	20.1		
Adj Reference Time (s)	34.2	34.2		31.7	31.7		23.2	23.2		26.1	26.1		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	55.4		39.5										
Permitted Option (s)	271.3		132.6										
Split Option (s)	65.9		49.4										
Minimum (s)	55.4		39.5		94.9								
Right Turns													
	EBR	WBR	NBR	SBR									
Adj Reference Time (s)	16.7	18.7	23.9	23.4									
Cross Thru Ref Time (s)	26.1	23.2	34.2	31.7									
Oncoming Left Ref Time (s)	19.6	23.7	14.4	13.4									
Combined (s)	62.4	65.6	72.5	68.5									
Intersection Summary													
Intersection Capacity Utilization			79.1%	ICU Level of Service						D			
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	137	567	793	140	17	44
Future Vol, veh/h	137	567	793	140	17	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	616	862	152	18	48

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1014	0	-	0	1776 862
Stage 1	-	-	-	-	862 -
Stage 2	-	-	-	-	914 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	684	-	-	-	91 355
Stage 1	-	-	-	-	414 -
Stage 2	-	-	-	-	391 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	684	-	-	-	71 355
Mov Cap-2 Maneuver	-	-	-	-	71 -
Stage 1	-	-	-	-	324 -
Stage 2	-	-	-	-	391 -

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	32.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	684	-	-	-	71	355
HCM Lane V/C Ratio	0.218	-	-	-	0.26	0.135
HCM Control Delay (s)	11.7	-	-	-	72.7	16.7
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.8	-	-	-	0.9	0.5

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↖
Traffic Vol, veh/h	282	655	27	10	578	230	0	0	3	0	0	311
Future Vol, veh/h	282	655	27	10	578	230	0	0	3	0	0	311
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	307	712	29	11	628	250	0	0	3	0	0	338

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	878	0	0	741	0	0	1677	2241	727	2117	-	439
Stage 1	-	-	-	-	-	-	1341	1341	-	775	-	-
Stage 2	-	-	-	-	-	-	336	900	-	1342	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	767	-	-	864	-	-	68	42	423	33	0	567
Stage 1	-	-	-	-	-	-	187	220	-	358	0	-
Stage 2	-	-	-	-	-	-	652	356	-	187	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	767	-	-	864	-	-	19	25	423	22	-	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	19	25	-	22	-	-
Stage 1	-	-	-	-	-	-	112	132	-	215	-	-
Stage 2	-	-	-	-	-	-	256	347	-	111	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.7			0.1			13.6			20.3		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	423	767	-	-	864	-	-	-	567
HCM Lane V/C Ratio	0.008	0.4	-	-	0.013	-	-	-	0.596
HCM Control Delay (s)	13.6	12.8	-	-	9.2	-	-	0	20.3
HCM Lane LOS	B	B	-	-	A	-	-	A	C
HCM 95th %tile Q(veh)	0	1.9	-	-	0	-	-	-	3.9

Intersection				
Intersection Delay, s/veh	6.1			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	41	13	192	336
Demand Flow Rate, veh/h	41	13	195	343
Vehicles Circulating, veh/h	322	212	31	84
Vehicles Exiting, veh/h	105	14	332	141
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.9	4.1	5.0	6.9
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	41	13	195	343
Cap Entry Lane, veh/h	819	914	1095	1039
Entry HV Adj Factor	1.000	1.000	0.983	0.980
Flow Entry, veh/h	41	13	192	336
Cap Entry, veh/h	819	914	1077	1018
V/C Ratio	0.050	0.014	0.178	0.330
Control Delay, s/veh	4.9	4.1	5.0	6.9
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

04/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	484	51	127	597	284	253	233	123	248	128	58
Future Volume (vph)	62	484	51	127	597	284	253	233	123	248	128	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.986				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.668			0.595		
Satd. Flow (perm)	414	1837	0	414	1863	1583	1244	3539	1583	1108	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				309			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	526	55	138	649	309	275	253	134	270	139	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	581	0	138	649	309	275	253	134	270	139	63
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes								
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.29	1.22		0.59	1.35	0.49	0.62	0.28	0.23	0.66	0.29	0.11

Lanes, Volumes, Timings
N 35th Ave & Johnson St

04/29/2024

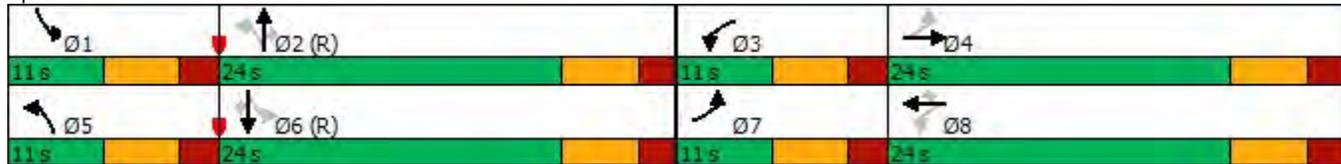


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	16.2	142.9		27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	142.9		27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
LOS	B	F		C	F	B	C	C	A	C	C	A
Approach Delay		129.8			124.3			18.4			21.5	
Approach LOS		F			F			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.35
Intersection Signal Delay:	84.3
Intersection LOS:	F
Intersection Capacity Utilization	76.4%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street/Johnson ST



Lanes and Geometrics
 N 35th Ave & Johnson St

04/29/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.668			0.595		
Satd. Flow (perm)	414	1837	0	414	1863	1583	1244	3539	1583	1108	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				309			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

04/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	62	484	51	127	597	284	253	233	123	248	128	58
Future Volume (vph)	62	484	51	127	597	284	253	233	123	248	128	58
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	67	526	55	138	649	309	275	253	134	270	139	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	581	0	138	649	309	275	253	134	270	139	63
Intersection Summary												

Timings
N 35th Ave & Johnson St

04/29/2024

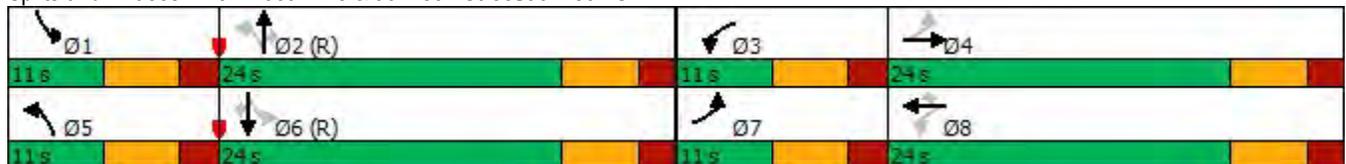


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	62	484	127	597	284	253	233	123	248	128	58
Future Volume (vph)	62	484	127	597	284	253	233	123	248	128	58
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.29	1.22	0.59	1.35	0.49	0.62	0.28	0.23	0.66	0.29	0.11
Control Delay	16.2	142.9	27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	142.9	27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
LOS	B	F	C	F	B	C	C	A	C	C	A
Approach Delay		129.8		124.3			18.4			21.5	
Approach LOS		F		F			B			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.35
 Intersection Signal Delay: 84.3
 Intersection Capacity Utilization 76.4%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service D

Splits and Phases: 3: N 35th Ave & Johnson Street/Johnson ST



Queues

N 35th Ave & Johnson St

04/29/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	581	138	649	309	275	253	134	270	139	63
v/c Ratio	0.29	1.22	0.59	1.35	0.49	0.62	0.28	0.23	0.66	0.29	0.11
Control Delay	16.2	142.9	27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	142.9	27.7	198.3	12.1	23.6	21.8	1.1	25.7	22.9	0.4
Queue Length 50th (ft)	17	~314	48	~393	32	79	45	0	78	48	0
Queue Length 95th (ft)	39	#501	m57	m#502	m67	136	75	3	#137	92	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	636	446	910	580	411	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	1.22	0.59	1.35	0.49	0.62	0.28	0.23	0.66	0.29	0.11

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N 35th Ave & Johnson St

04/29/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	484	51	127	597	284	253	233	123	248	128	58
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	62	535	0	127	597	284	253	233	123	248	128	58
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1873	0	1805	1900	1615	1805	3618	1615	1805	1900	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.1	34.3	0.0	8.4	37.7	21.1	16.8	7.7	9.1	16.5	8.1	4.3
Adj Reference Time (s)	10.1	40.3	0.0	14.4	43.7	27.1	22.8	13.7	15.1	22.5	14.1	12.0
Permitted Option												
Adj Saturation A (vph)	120	1873		120	1900		120	1809		120	1900	
Reference Time A (s)	61.8	34.3		126.6	37.7		252.3	7.7		247.3	8.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		61.8			126.6			252.3			247.3	
Adj Reference Time (s)		67.8			132.6			258.3			253.3	
Split Option												
Ref Time Combined (s)	4.1	34.3		8.4	37.7		16.8	7.7		16.5	8.1	
Ref Time Seperate (s)	4.1	31.0		8.4	37.7		16.8	7.7		16.5	8.1	
Reference Time (s)	34.3	34.3		37.7	37.7		16.8	16.8		16.5	16.5	
Adj Reference Time (s)	40.3	40.3		43.7	43.7		22.8	22.8		22.5	22.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	54.7		36.9									
Permitted Option (s)	132.6		258.3									
Split Option (s)	84.0		45.3									
Minimum (s)	54.7		36.9		91.6							
Right Turns												
	WBR	NBR	SBR									
Adj Reference Time (s)	27.1	15.1	12.0									
Cross Thru Ref Time (s)	13.7	40.3	43.7									
Oncoming Left Ref Time (s)	10.1	22.5	22.8									
Combined (s)	51.0	77.9	78.5									
Intersection Summary												
Intersection Capacity Utilization			76.4%	ICU Level of Service				D				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Lanes, Volumes, Timings
N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	146	372	180	277	46
Future Volume (vph)	25	146	372	180	277	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Fl _t Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		159				50
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	159	404	196	301	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	159	404	196	301	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.05	0.29	0.67	0.18	0.46	0.08

Lanes, Volumes, Timings
 N 35th Ave & MM Office Center Dwy

04/29/2024

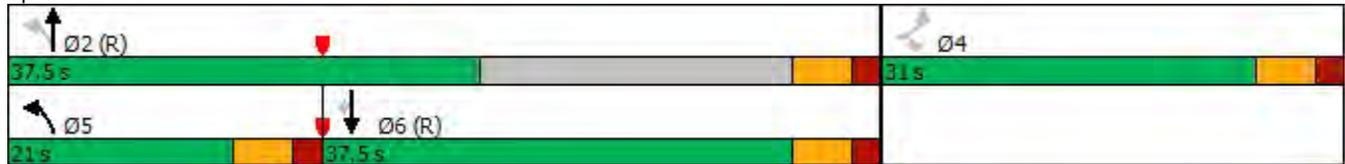


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	24.1	5.8	16.0	9.1	25.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.8	16.0	9.1	25.2	6.4
LOS	C	A	B	A	C	A
Approach Delay	8.5		13.8		22.6	
Approach LOS	A		B		C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	15.6
Intersection LOS:	B
Intersection Capacity Utilization	58.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		159				50
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	25	146	372	180	277	46
Future Volume (vph)	25	146	372	180	277	46
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	27	159	404	196	301	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	159	404	196	301	50
Intersection Summary						

Timings

N 35th Ave & MM Office Center Dwy

04/29/2024

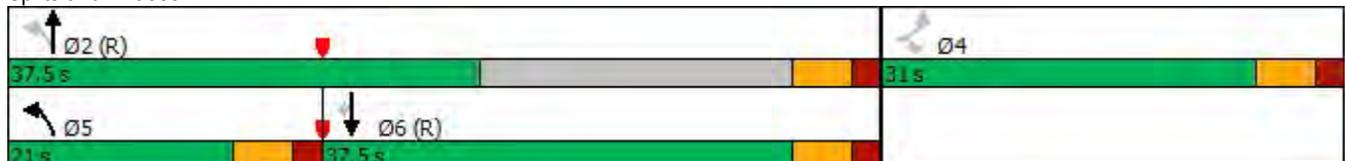


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↑	↑	↗
Traffic Volume (vph)	25	146	372	180	277	46
Future Volume (vph)	25	146	372	180	277	46
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.05	0.29	0.67	0.18	0.46	0.08
Control Delay	24.1	5.8	16.0	9.1	25.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.8	16.0	9.1	25.2	6.4
LOS	C	A	B	A	C	A
Approach Delay	8.5			13.8	22.6	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 15.6
 Intersection Capacity Utilization 58.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 17:



Queues

N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	27	159	404	196	301	50
v/c Ratio	0.05	0.29	0.67	0.18	0.46	0.08
Control Delay	24.1	5.8	16.0	9.1	25.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.8	16.0	9.1	25.2	6.4
Queue Length 50th (ft)	11	0	113	47	130	0
Queue Length 95th (ft)	31	45	173	79	205	23
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	556	606	1092	655	589
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.29	0.67	0.18	0.46	0.08

Intersection Summary

Intersection Capacity Utilization
N 35th Ave & MM Office Center Dwy

04/29/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	25	146	372	180	277	46
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	25	146	372	180	277	46
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00	
Protected Option Allowed	No		Yes		Yes	
Reference Time (s)	10.8		24.7	11.4	17.5	3.4
Adj Reference Time (s)	16.8		30.7	21.0	23.5	21.0
Permitted Option						
Adj Saturation A (vph)	120	120		1900	1900	
Reference Time A (s)	24.9	371.0		11.4	17.5	
Adj Saturation B (vph)	NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA	
Reference Time (s)				371.0	17.5	
Adj Reference Time (s)				377.0	23.5	
Split Option						
Ref Time Combined (s)	1.7	24.7		11.4	17.5	
Ref Time Seperate (s)	1.7	24.7		11.4	17.5	
Reference Time (s)	1.7	24.7		24.7	17.5	
Adj Reference Time (s)	16.0	30.7		30.7	23.5	
Summary						
	EB	NB SB		Combined		
Protected Option (s)	NA	54.2				
Permitted Option (s)	Err	377.0				
Split Option (s)	16.0	54.2				
Minimum (s)	16.0	54.2		70.2		
Right Turns						
	EBR	SBR				
Adj Reference Time (s)	16.8	21.0				
Cross Thru Ref Time (s)	23.5	0.0				
Oncoming Left Ref Time (s)	0.0	30.7				
Combined (s)	40.3	51.7				

Intersection Summary

Intersection Capacity Utilization 58.5% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
Future Vol, veh/h	3	0	1	2	1	8	3	906	3	2	815	2
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	9	3	985	3	2	886	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1390	1885	444	1440	1885	494	888	0	0	988	0	0
Stage 1	891	891	-	993	993	-	-	-	-	-	-	-
Stage 2	499	994	-	447	892	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	102	70	561	93	70	521	758	-	-	695	-	-
Stage 1	304	359	-	263	322	-	-	-	-	-	-	-
Stage 2	522	321	-	560	358	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	98	69	561	92	69	521	758	-	-	695	-	-
Mov Cap-2 Maneuver	98	69	-	92	69	-	-	-	-	-	-	-
Stage 1	301	357	-	261	319	-	-	-	-	-	-	-
Stage 2	507	318	-	556	356	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.3	22.9	0	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	758	-	-	123	213	695	-	-
HCM Lane V/C Ratio	0.004	-	-	0.035	0.056	0.003	-	-
HCM Control Delay (s)	9.8	0	-	35.3	22.9	10.2	-	-
HCM Lane LOS	A	A	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Lanes, Volumes, Timings
N Park Road & Johnson St

04/29/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Future Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.507			0.334		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	944	3539	1583	622	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			295
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	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						
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.08	1.14	0.19	0.96	1.01	0.28	0.66	0.62	0.40	0.43	0.42	0.58

Lanes, Volumes, Timings
N Park Road & Johnson St

04/29/2024

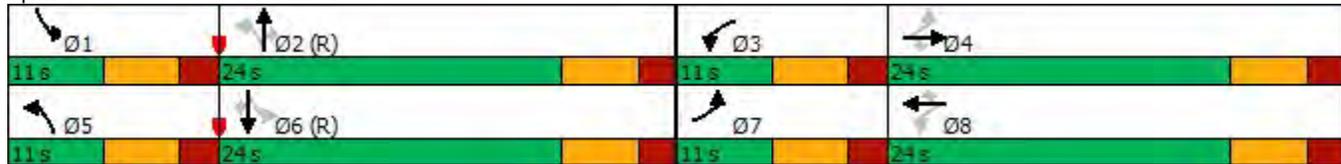


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Control Delay	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6	
LOS	F	F	A	E	E	A	C	C	A	B	C	A	
Approach Delay						60.4						21.8	17.0
Approach LOS						F						E	C

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.14
Intersection Signal Delay:	46.7
Intersection LOS:	D
Intersection Capacity Utilization	79.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 8: Johnson ST & N Park Ave



Lanes and Geometrics
 N Park Road & Johnson St

04/29/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.507			0.334		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	944	3539	1583	622	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			295
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	

Intersection Summary

Area Type: Other

Volume
N Park Road & Johnson St

04/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Future Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Shared Lane Traffic (%)												
Lane Group Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
Intersection Summary												

Timings

N Park Road & Johnson St

04/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Future Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Turn Type	pm+pt	NA	Perm									
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	Max											
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.08	1.14	0.19	0.96	1.01	0.28	0.66	0.62	0.40	0.43	0.42	0.58
Control Delay	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6
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	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6
LOS	F	F	A	E	E	A	C	C	A	B	C	A
Approach Delay		90.7			60.4			21.8			17.0	
Approach LOS		F			E			C			B	

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 46.7

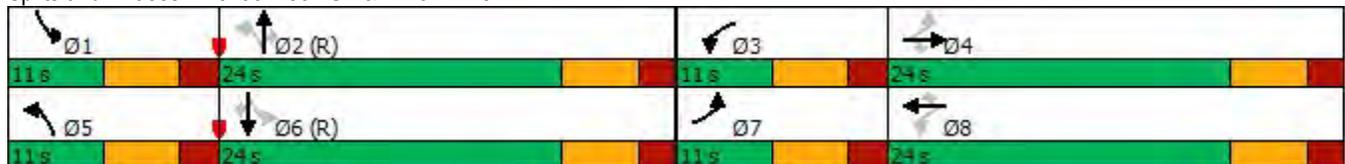
Intersection LOS: D

Intersection Capacity Utilization 79.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Johnson ST & N Park Ave



Queues

N Park Road & Johnson St

04/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	251	545	112	223	486	160	242	566	233	124	385	364
v/c Ratio	1.08	1.14	0.19	0.96	1.01	0.28	0.66	0.62	0.40	0.43	0.42	0.58
Control Delay	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6
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	91.5	108.1	4.6	72.3	74.1	2.2	26.2	26.5	5.6	18.7	23.4	9.6
Queue Length 50th (ft)	~115	~296	2	62	~214	0	68	113	0	32	72	23
Queue Length 95th (ft)	m#139	m#324	m7	#168	#396	15	#126	163	48	64	110	95
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	369	910	580	286	910	626
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	1.08	1.14	0.19	0.96	1.01	0.28	0.66	0.62	0.40	0.43	0.42	0.58

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N Park Road & Johnson St

04/29/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	231	501	103	205	447	147	223	521	214	114	354	335
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	15.4	31.6	7.7	13.6	28.2	10.9	14.8	17.3	15.9	7.6	11.7	24.9
Adj Reference Time (s)	21.4	37.6	16.0	19.6	34.2	16.9	20.8	23.3	21.9	13.6	17.7	30.9
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809	
Reference Time A (s)	230.4	31.6		204.4	28.2		222.4	17.3		113.7	11.7	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		230.4			204.4			222.4			113.7	
Adj Reference Time (s)		236.4			210.4			228.4			119.7	
Split Option												
Ref Time Combined (s)	15.4	31.6		13.6	28.2		14.8	17.3		7.6	11.7	
Ref Time Seperate (s)	15.4	31.6		13.6	28.2		14.8	17.3		7.6	11.7	
Reference Time (s)	31.6	31.6		28.2	28.2		17.3	17.3		11.7	11.7	
Adj Reference Time (s)	37.6	37.6		34.2	34.2		23.3	23.3		17.7	17.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	57.3		38.6									
Permitted Option (s)	236.4		228.4									
Split Option (s)	71.9		41.0									
Minimum (s)	57.3		38.6		95.8							
Right Turns												
	EBR	WBR	NBR	SBR								
Adj Reference Time (s)	16.0	16.9	21.9	30.9								
Cross Thru Ref Time (s)	17.7	23.3	37.6	34.2								
Oncoming Left Ref Time (s)	19.6	21.4	13.6	20.8								
Combined (s)	53.4	61.6	73.1	85.9								
Intersection Summary												
Intersection Capacity Utilization			79.9%		ICU Level of Service		D					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	523	735	59	49	119
Future Vol, veh/h	66	523	735	59	49	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	568	799	64	53	129

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	863	0	-	0	1511 799
Stage 1	-	-	-	-	799 -
Stage 2	-	-	-	-	712 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	779	-	-	-	132 386
Stage 1	-	-	-	-	443 -
Stage 2	-	-	-	-	486 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	779	-	-	-	120 386
Mov Cap-2 Maneuver	-	-	-	-	120 -
Stage 1	-	-	-	-	402 -
Stage 2	-	-	-	-	486 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	30.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	779	-	-	-	120	386
HCM Lane V/C Ratio	0.092	-	-	-	0.444	0.335
HCM Control Delay (s)	10.1	-	-	-	57	19
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.9	1.4

Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↖
Traffic Vol, veh/h	8	524	5	9	769	10	2	0	62	0	0	475
Future Vol, veh/h	8	524	5	9	769	10	2	0	62	0	0	475
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	570	5	10	836	11	2	0	67	0	0	516

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	847	0	0	575	0	0	1029	1458	573	1486	-	424
Stage 1	-	-	-	-	-	-	591	591	-	862	-	-
Stage 2	-	-	-	-	-	-	438	867	-	624	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	788	-	-	996	-	-	200	129	518	94	0	579
Stage 1	-	-	-	-	-	-	492	494	-	317	0	-
Stage 2	-	-	-	-	-	-	568	369	-	472	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	996	-	-	21	125	518	80	-	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	125	-	80	-	-
Stage 1	-	-	-	-	-	-	487	489	-	314	-	-
Stage 2	-	-	-	-	-	-	60	362	-	406	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			20.7			42.4		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	298	788	-	-	996	-	-	-	579
HCM Lane V/C Ratio	0.233	0.011	-	-	0.01	-	-	-	0.892
HCM Control Delay (s)	20.7	9.6	-	-	8.7	-	-	0	42.4
HCM Lane LOS	C	A	-	-	A	-	-	A	E
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	-	10.5

Intersection				
Intersection Delay, s/veh	6.0			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	201	43	194	253
Demand Flow Rate, veh/h	205	44	198	258
Vehicles Circulating, veh/h	276	302	110	78
Vehicles Exiting, veh/h	60	6	371	268
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.8	4.9	5.5	5.9
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	205	44	198	258
Cap Entry Lane, veh/h	857	835	1012	1045
Entry HV Adj Factor	0.980	0.976	0.980	0.982
Flow Entry, veh/h	201	43	194	253
Cap Entry, veh/h	841	816	992	1026
V/C Ratio	0.239	0.053	0.196	0.247
Control Delay, s/veh	6.8	4.9	5.5	5.9
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	448	120	167	514	145	78	70	119	347	192	130
Future Volume (vph)	44	448	120	167	514	145	78	70	119	347	192	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.598			0.705		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1114	3539	1583	1313	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	487	130	182	559	158	85	76	129	377	209	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	617	0	182	559	158	85	76	129	377	209	141
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.21	1.29		0.78	1.17	0.27	0.21	0.08	0.22	0.81	0.44	0.24

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/21/2024

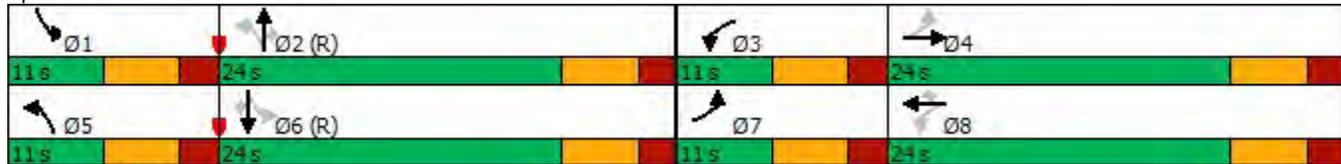


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	14.9	173.1		43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	1.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	173.1		43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	1.4
LOS	B	F		D	F	A	B	C	A	D	C	A
Approach Delay		161.7			88.1			9.9			25.9	
Approach LOS		F			F			A			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.29
Intersection Signal Delay:	80.7
Intersection LOS:	F
Intersection Capacity Utilization	84.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
 N 35th Ave & Johnson St

05/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.598			0.705		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1114	3539	1583	1313	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

05/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	44	448	120	167	514	145	78	70	119	347	192	130
Future Volume (vph)	44	448	120	167	514	145	78	70	119	347	192	130
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	48	487	130	182	559	158	85	76	129	377	209	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	617	0	182	559	158	85	76	129	377	209	141

Intersection Summary

Timings
N 35th Ave & Johnson St

05/21/2024

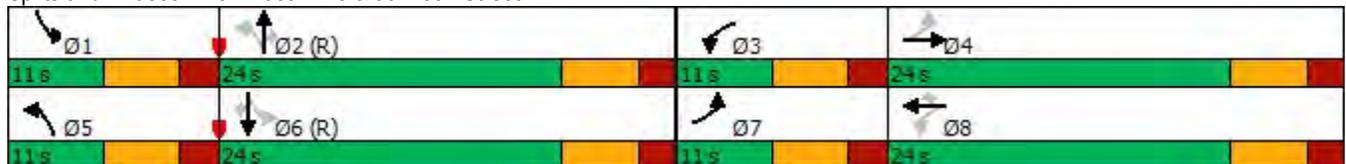


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	44	448	167	514	145	78	70	119	347	192	130
Future Volume (vph)	44	448	167	514	145	78	70	119	347	192	130
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.21	1.29	0.78	1.17	0.27	0.21	0.08	0.22	0.81	0.44	0.24
Control Delay	14.9	173.1	43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	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
Total Delay	14.9	173.1	43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	1.4
LOS	B	F	D	F	A	B	C	A	D	C	A
Approach Delay		161.7		88.1			9.9			25.9	
Approach LOS		F		F			A			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 80.7
 Intersection Capacity Utilization 84.3%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service E

Splits and Phases: 3: N 35th Ave & Johnson Street



Phasings
N 35th Ave & Johnson St

05/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max										
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
90th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
70th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
70th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
50th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
50th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
30th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
30th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
10th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
10th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N 35th Ave & Johnson St

05/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	48	617	182	559	158	85	76	129	377	209	141
v/c Ratio	0.21	1.29	0.78	1.17	0.27	0.21	0.08	0.22	0.81	0.44	0.24
Control Delay	14.9	173.1	43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	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
Total Delay	14.9	173.1	43.7	124.9	9.0	14.3	20.1	0.9	35.4	25.2	1.4
Queue Length 50th (ft)	12	~345	72	~307	13	22	13	0	117	75	0
Queue Length 95th (ft)	31	#535	m#98	m#400	m25	47	28	1	#240	134	6
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	580	412	910	580	464	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	1.29	0.78	1.17	0.27	0.21	0.08	0.22	0.81	0.44	0.24

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N 35th Ave & Johnson St

05/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	448	120	167	514	145	78	70	119	347	192	130
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	44	568	0	167	514	145	78	70	119	347	192	130
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1840	0	1805	1900	1615	1805	3618	1615	1805	1900	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	2.9	37.0	0.0	11.1	32.5	10.8	5.2	2.3	8.8	23.1	12.1	9.7
Adj Reference Time (s)	10.0	43.0	0.0	17.1	38.5	18.0	11.2	12.0	14.8	29.1	18.1	15.7
Permitted Option												
Adj Saturation A (vph)	120	1840		120	1900		120	1809		120	1900	
Reference Time A (s)	43.9	37.0		166.5	32.5		77.8	2.3		346.0	12.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1900	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		31.1	12.1	
Reference Time (s)		43.9			166.5			77.8			31.1	
Adj Reference Time (s)		49.9			172.5			83.8			37.1	
Split Option												
Ref Time Combined (s)	2.9	37.0		11.1	32.5		5.2	2.3		23.1	12.1	
Ref Time Seperate (s)	2.9	29.2		11.1	32.5		5.2	2.3		23.1	12.1	
Reference Time (s)	37.0	37.0		32.5	32.5		5.2	5.2		23.1	23.1	
Adj Reference Time (s)	43.0	43.0		38.5	38.5		12.0	12.0		29.1	29.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	60.2		41.1									
Permitted Option (s)	172.5		83.8									
Split Option (s)	81.5		41.1									
Minimum (s)	60.2		41.1		101.2							
Right Turns												
	WBR	NBR	SBR									
Adj Reference Time (s)	18.0	14.8	15.7									
Cross Thru Ref Time (s)	12.0	43.0	38.5									
Oncoming Left Ref Time (s)	10.0	29.1	11.2									
Combined (s)	40.0	87.0	65.3									
Intersection Summary												
Intersection Capacity Utilization			84.3%		ICU Level of Service				E			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Lanes, Volumes, Timings
N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	315	122	124	327	32
Future Volume (vph)	55	315	122	124	327	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.340			
Satd. Flow (perm)	1770	1583	633	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		342				35
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	342	133	135	355	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	342	133	135	355	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.12	0.50	0.24	0.12	0.54	0.06

Lanes, Volumes, Timings
 N 35th Ave & MM Office Center Dwy

04/29/2024

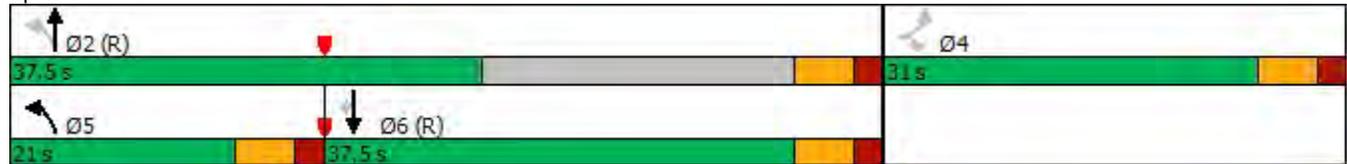


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	25.0	5.8	9.4	8.6	27.0	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	5.8	9.4	8.6	27.0	7.2
LOS	C	A	A	A	C	A
Approach Delay	8.6			9.0	25.2	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	14.8
Intersection LOS:	B
Intersection Capacity Utilization	53.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.340			
Satd. Flow (perm)	1770	1583	633	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		342				35
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	55	315	122	124	327	32
Future Volume (vph)	55	315	122	124	327	32
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	60	342	133	135	355	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	342	133	135	355	35
Intersection Summary						

Timings
N 35th Ave & MM Office Center Dwy

04/29/2024

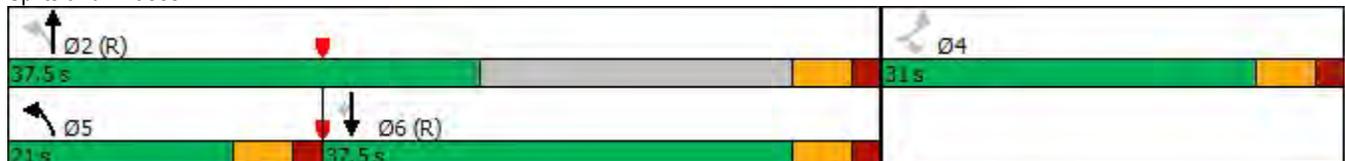


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↑	↑	↖
Traffic Volume (vph)	55	315	122	124	327	32
Future Volume (vph)	55	315	122	124	327	32
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.12	0.50	0.24	0.12	0.54	0.06
Control Delay	25.0	5.8	9.4	8.6	27.0	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	5.8	9.4	8.6	27.0	7.2
LOS	C	A	A	A	C	A
Approach Delay	8.6			9.0	25.2	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 14.8
 Intersection LOS: B
 Intersection Capacity Utilization 53.0%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 17:



Queues

N 35th Ave & MM Office Center Dwy

04/29/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	60	342	133	135	355	35
v/c Ratio	0.12	0.50	0.24	0.12	0.54	0.06
Control Delay	25.0	5.8	9.4	8.6	27.0	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	5.8	9.4	8.6	27.0	7.2
Queue Length 50th (ft)	25	0	31	31	158	0
Queue Length 95th (ft)	56	63	56	57	245	20
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	688	561	1092	655	579
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.50	0.24	0.12	0.54	0.06

Intersection Summary

Intersection Capacity Utilization
N 35th Ave & MM Office Center Dwy

04/29/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	315	122	124	327	32
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	55	315	122	124	327	32
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			Yes	Yes	
Reference Time (s)		23.4	8.1	7.8	20.7	2.4
Adj Reference Time (s)		29.4	21.0	21.0	26.7	21.0
Permitted Option						
Adj Saturation A (vph)	120		120	1900	1900	
Reference Time A (s)	54.8		121.7	7.8	20.7	
Adj Saturation B (vph)	NA		NA	NA	NA	
Reference Time B (s)	NA		NA	NA	NA	
Reference Time (s)				121.7	20.7	
Adj Reference Time (s)				127.7	26.7	
Split Option						
Ref Time Combined (s)	3.7		8.1	7.8	20.7	
Ref Time Seperate (s)	3.7		8.1	7.8	20.7	
Reference Time (s)	3.7		8.1	8.1	20.7	
Adj Reference Time (s)	16.0		21.0	21.0	26.7	
Summary	EB		NB SB	Combined		
Protected Option (s)	NA		47.7			
Permitted Option (s)	Err		127.7			
Split Option (s)	16.0		47.7			
Minimum (s)	16.0		47.7	63.7		
Right Turns	EBR	SBR				
Adj Reference Time (s)	29.4	21.0				
Cross Thru Ref Time (s)	26.7	0.0				
Oncoming Left Ref Time (s)	0.0	21.0				
Combined (s)	56.1	42.0				

Intersection Summary

Intersection Capacity Utilization 53.0% ICU Level of Service A
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1111	2	7	1115	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1692	2249	560	1688	2250	557	1120	0	0	1113	0	0
Stage 1	1132	1132	-	1116	1116	-	-	-	-	-	-	-
Stage 2	560	1117	-	572	1134	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	41	472	61	41	474	619	-	-	623	-	-
Stage 1	216	276	-	221	281	-	-	-	-	-	-	-
Stage 2	480	281	-	472	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	58	39	472	57	39	474	619	-	-	623	-	-
Mov Cap-2 Maneuver	58	39	-	57	39	-	-	-	-	-	-	-
Stage 1	214	268	-	219	279	-	-	-	-	-	-	-
Stage 2	473	279	-	451	268	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	51		12.6		0		0.1	
HCM LOS	F		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	619	-	-	90	474	623	-	-
HCM Lane V/C Ratio	0.004	-	-	0.133	0.007	0.01	-	-
HCM Control Delay (s)	10.8	0	-	51	12.6	10.8	-	-
HCM Lane LOS	B	A	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Lanes, Volumes, Timings
N Park Road & Johnson St

04/29/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Future Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.222			0.300		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	414	3539	1583	559	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			280			273
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	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						
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.34	1.09	0.29	1.03	0.99	0.34	0.56	0.67	0.46	0.55	0.78	0.45

Lanes, Volumes, Timings
N Park Road & Johnson St

04/29/2024

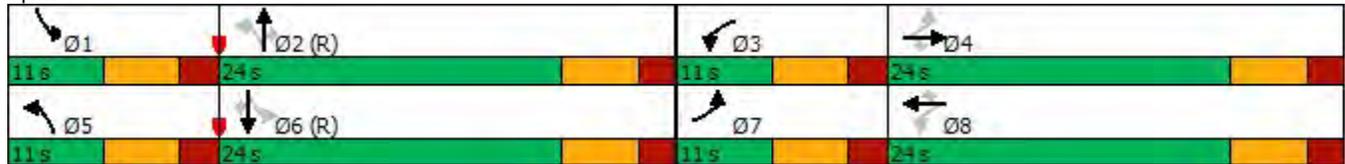


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	5.7
LOS	F	F	A	F	E	A	C	C	A	C	C	A
Approach Delay	102.4			59.8			21.1			24.0		
Approach LOS	F			E			C			C		

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.34
Intersection Signal Delay:	50.6
Intersection LOS:	D
Intersection Capacity Utilization	83.4%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 8: N Park Ave



Lanes and Geometrics
N Park Road & Johnson St

04/29/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.222			0.300		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	414	3539	1583	559	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			280			273
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	

Intersection Summary

Area Type: Other

Volume
N Park Road & Johnson St

04/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Future Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
Intersection Summary												

Timings

N Park Road & Johnson St

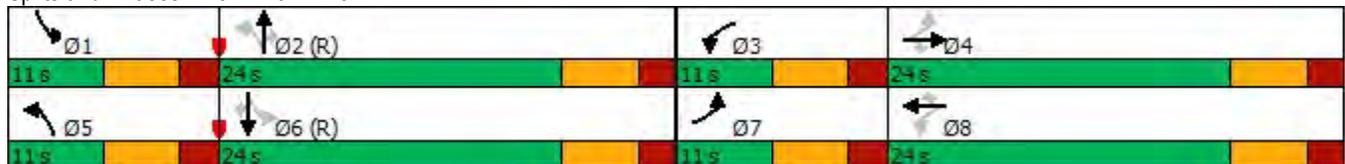
04/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Future Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Turn Type	pm+pt	NA	Perm									
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	Max											
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.34	1.09	0.29	1.03	0.99	0.34	0.56	0.67	0.46	0.55	0.78	0.45
Control Delay	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	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	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	5.7
LOS	F	F	A	F	E	A	C	C	A	C	C	A
Approach Delay		102.4			59.8			21.1			24.0	
Approach LOS		F			E			C			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 50.6
 Intersection Capacity Utilization 83.4%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 8: N Park Ave



Queues

N Park Road & Johnson St

04/29/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	310	520	167	239	474	199	130	607	280	148	707	273
v/c Ratio	1.34	1.09	0.29	1.03	0.99	0.34	0.56	0.67	0.46	0.55	0.78	0.45
Control Delay	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	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	185.5	83.6	6.5	90.3	67.8	3.9	24.1	27.5	5.7	22.6	31.3	5.7
Queue Length 50th (ft)	~124	~271	9	~70	203	0	34	123	0	39	148	0
Queue Length 95th (ft)	m#138	m#284	m11	#186	#384	32	#70	176	53	75	#211	52
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	232	910	615	270	910	609
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	1.34	1.09	0.29	1.03	0.99	0.34	0.56	0.67	0.46	0.55	0.78	0.45

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N Park Road & Johnson St

04/29/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	285	478	154	220	436	183	120	558	258	136	650	251
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	18.9	30.2	11.4	14.6	27.5	13.6	8.0	18.5	19.2	9.0	21.6	18.7
Adj Reference Time (s)	24.9	36.2	17.4	20.6	33.5	19.6	14.0	24.5	25.2	15.0	27.6	24.7
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809	
Reference Time A (s)	284.2	30.2		219.4	27.5		119.7	18.5		135.6	21.6	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		284.2			219.4			119.7			135.6	
Adj Reference Time (s)		290.2			225.4			125.7			141.6	
Split Option												
Ref Time Combined (s)	18.9	30.2		14.6	27.5		8.0	18.5		9.0	21.6	
Ref Time Seperate (s)	18.9	30.2		14.6	27.5		8.0	18.5		9.0	21.6	
Reference Time (s)	30.2	30.2		27.5	27.5		18.5	18.5		21.6	21.6	
Adj Reference Time (s)	36.2	36.2		33.5	33.5		24.5	24.5		27.6	27.6	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	58.5		41.5									
Permitted Option (s)	290.2		141.6									
Split Option (s)	69.7		52.1									
Minimum (s)	58.5		41.5		100.0							
Right Turns												
	EBR	WBR	NBR	SBR								
Adj Reference Time (s)	17.4	19.6	25.2	24.7								
Cross Thru Ref Time (s)	27.6	24.5	36.2	33.5								
Oncoming Left Ref Time (s)	20.6	24.9	15.0	14.0								
Combined (s)	65.6	69.1	76.4	72.2								
Intersection Summary												
Intersection Capacity Utilization			83.4%	ICU Level of Service				E				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	147	567	793	147	20	49
Future Vol, veh/h	147	567	793	147	20	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	160	616	862	160	22	53

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1022	0	-	0	1798 862
Stage 1	-	-	-	-	862 -
Stage 2	-	-	-	-	936 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	679	-	-	-	88 355
Stage 1	-	-	-	-	414 -
Stage 2	-	-	-	-	382 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	679	-	-	-	67 355
Mov Cap-2 Maneuver	-	-	-	-	67 -
Stage 1	-	-	-	-	316 -
Stage 2	-	-	-	-	382 -

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	36
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	679	-	-	-	67	355
HCM Lane V/C Ratio	0.235	-	-	-	0.324	0.15
HCM Control Delay (s)	11.9	-	-	-	82.7	16.9
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.9	-	-	-	1.2	0.5

HCM 2010 TWSC
Johnson ST and Employee Entrance Driveway

05/31/2024

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↖
Traffic Vol, veh/h	310	655	27	10	578	256	0	0	3	0	0	338
Future Vol, veh/h	310	655	27	10	578	256	0	0	3	0	0	338
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	337	712	29	11	628	278	0	0	3	0	0	367

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	906	0	0	741	0	0	1737	2329	727	2191	-	453
Stage 1	-	-	-	-	-	-	1401	1401	-	789	-	-
Stage 2	-	-	-	-	-	-	336	928	-	1402	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	749	-	-	864	-	-	62	37	423	29	0	555
Stage 1	-	-	-	-	-	-	173	206	-	351	0	-
Stage 2	-	-	-	-	-	-	652	346	-	173	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	749	-	-	864	-	-	13	20	423	18	-	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	13	20	-	18	-	-
Stage 1	-	-	-	-	-	-	95	113	-	193	-	-
Stage 2	-	-	-	-	-	-	214	337	-	94	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			0.1			13.6			23.3		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	423	749	-	-	864	-	-	-	555	
HCM Lane V/C Ratio	0.008	0.45	-	-	0.013	-	-	-	0.662	
HCM Control Delay (s)	13.6	13.7	-	-	9.2	-	-	0	23.3	
HCM Lane LOS		B	B	-	-	A	-	-	A	C
HCM 95th %tile Q(veh)		0	2.3	-	-	0	-	-	-	4.9

Intersection				
Intersection Delay, s/veh	6.1			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	41	13	196	342
Demand Flow Rate, veh/h	41	13	199	349
Vehicles Circulating, veh/h	328	216	31	84
Vehicles Exiting, veh/h	105	14	338	145
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.9	4.1	5.0	7.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	41	13	199	349
Cap Entry Lane, veh/h	814	910	1095	1039
Entry HV Adj Factor	1.000	1.000	0.983	0.980
Flow Entry, veh/h	41	13	196	342
Cap Entry, veh/h	814	910	1077	1018
V/C Ratio	0.050	0.014	0.182	0.336
Control Delay, s/veh	4.9	4.1	5.0	7.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.985				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1835	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.666			0.589		
Satd. Flow (perm)	414	1835	0	414	1863	1583	1241	3539	1583	1097	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				329			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	539	59	138	676	329	284	263	134	279	143	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	598	0	138	676	329	284	263	134	279	143	66
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.32	1.25		0.59	1.41	0.51	0.64	0.29	0.23	0.68	0.30	0.11

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

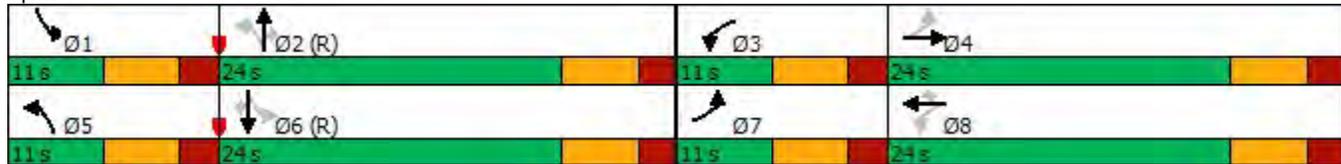


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	16.8	157.2		26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	157.2		26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
LOS	B	F		C	F	B	C	C	A	C	C	A
Approach Delay		141.5			137.6			18.9			22.4	
Approach LOS		F			F			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.41
Intersection Signal Delay:	92.6
Intersection LOS:	F
Intersection Capacity Utilization	78.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
 N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.985				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1835	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.666			0.589		
Satd. Flow (perm)	414	1835	0	414	1863	1583	1241	3539	1583	1097	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				329			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	75	539	59	138	676	329	284	263	134	279	143	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	598	0	138	676	329	284	263	134	279	143	66
Intersection Summary												

Timings
N 35th Ave & Johnson St

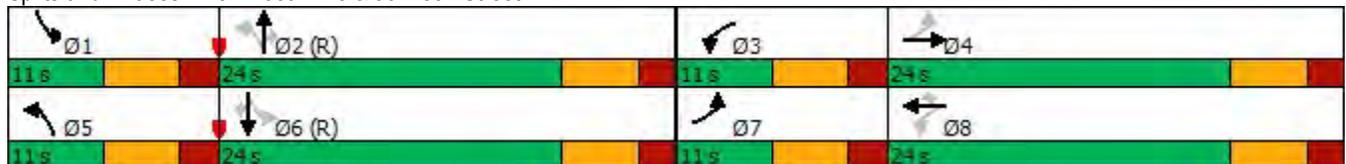
05/31/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	69	496	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	127	622	303	261	242	123	257	132	61
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.32	1.25	0.59	1.41	0.51	0.64	0.29	0.23	0.68	0.30	0.11
Control Delay	16.8	157.2	26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	157.2	26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
LOS	B	F	C	F	B	C	C	A	C	C	A
Approach Delay		141.5		137.6			18.9			22.4	
Approach LOS		F		F			B			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.41
 Intersection Signal Delay: 92.6
 Intersection Capacity Utilization 78.0%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service D

Splits and Phases: 3: N 35th Ave & Johnson Street



Queues

N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	598	138	676	329	284	263	134	279	143	66
v/c Ratio	0.32	1.25	0.59	1.41	0.51	0.64	0.29	0.23	0.68	0.30	0.11
Control Delay	16.8	157.2	26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	157.2	26.9	221.3	11.9	24.5	21.9	1.1	27.3	23.0	0.4
Queue Length 50th (ft)	19	~330	47	~420	35	82	47	0	81	50	0
Queue Length 95th (ft)	42	#518	m54	m#514	m63	140	77	3	#148	95	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	651	445	910	580	408	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	1.25	0.59	1.41	0.51	0.64	0.29	0.23	0.68	0.30	0.11

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization
N 35th Ave & Johnson St

05/31/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	69	550	0	127	622	303	261	242	123	257	132	61
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1872	0	1805	1900	1615	1805	3618	1615	1805	1900	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.6	35.3	0.0	8.4	39.3	22.5	17.4	8.0	9.1	17.1	8.3	4.5
Adj Reference Time (s)	10.6	41.3	0.0	14.4	45.3	28.5	23.4	14.0	15.1	23.1	14.3	12.0
Permitted Option												
Adj Saturation A (vph)	120	1872		120	1900		120	1809		120	1900	
Reference Time A (s)	68.8	35.3		126.6	39.3		260.3	8.0		256.3	8.3	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		68.8			126.6			260.3			256.3	
Adj Reference Time (s)		74.8			132.6			266.3			262.3	
Split Option												
Ref Time Combined (s)	4.6	35.3		8.4	39.3		17.4	8.0		17.1	8.3	
Ref Time Seperate (s)	4.6	31.8		8.4	39.3		17.4	8.0		17.1	8.3	
Reference Time (s)	35.3	35.3		39.3	39.3		17.4	17.4		17.1	17.1	
Adj Reference Time (s)	41.3	41.3		45.3	45.3		23.4	23.4		23.1	23.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	55.9		37.7									
Permitted Option (s)	132.6		266.3									
Split Option (s)	86.5		46.4									
Minimum (s)	55.9		37.7		93.6							
Right Turns												
	WBR	NBR	SBR									
Adj Reference Time (s)	28.5	15.1	12.0									
Cross Thru Ref Time (s)	14.0	41.3	45.3									
Oncoming Left Ref Time (s)	10.6	23.1	23.4									
Combined (s)	53.1	79.5	80.6									
Intersection Summary												
Intersection Capacity Utilization			78.0%	ICU Level of Service						D		
Reference Times and Phasing Options do not represent an optimized timing plan.												

Lanes, Volumes, Timings
N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	162	405	180	277	51
Future Volume (vph)	28	162	405	180	277	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		176				55
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	176	440	196	301	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	176	440	196	301	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.06	0.31	0.73	0.18	0.46	0.09

Lanes, Volumes, Timings
 N 35th Ave & MM Office Center Dwy

05/31/2024

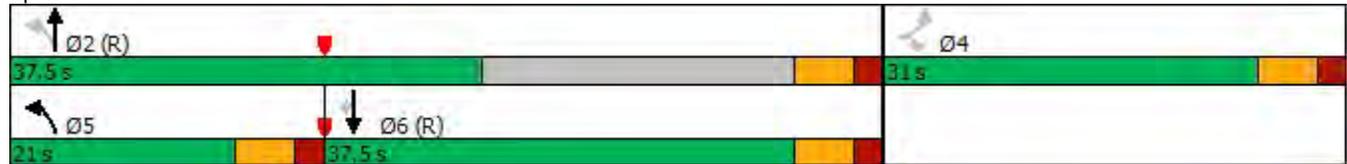


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	24.2	5.7	18.4	9.1	25.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	5.7	18.4	9.1	25.2	6.2
LOS	C	A	B	A	C	A
Approach Delay	8.4			15.5	22.3	
Approach LOS	A			B	C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	16.3
Intersection LOS:	B
Intersection Capacity Utilization	60.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		176				55
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	28	162	405	180	277	51
Future Volume (vph)	28	162	405	180	277	51
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	30	176	440	196	301	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	176	440	196	301	55
Intersection Summary						

Timings
N 35th Ave & MM Office Center Dwy

05/31/2024

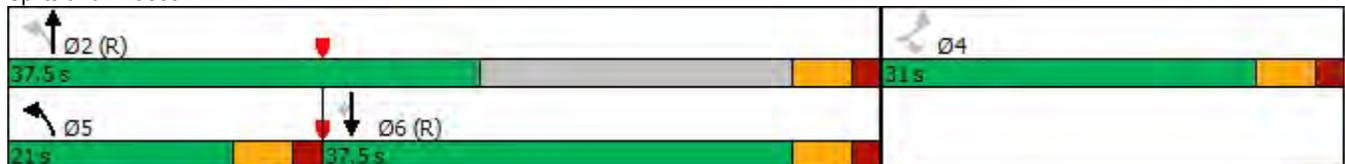


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↑	↑	↖
Traffic Volume (vph)	28	162	405	180	277	51
Future Volume (vph)	28	162	405	180	277	51
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.06	0.31	0.73	0.18	0.46	0.09
Control Delay	24.2	5.7	18.4	9.1	25.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	5.7	18.4	9.1	25.2	6.2
LOS	C	A	B	A	C	A
Approach Delay	8.4			15.5	22.3	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 16.3
 Intersection LOS: B
 Intersection Capacity Utilization 60.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 17:



Queues

N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	30	176	440	196	301	55
v/c Ratio	0.06	0.31	0.73	0.18	0.46	0.09
Control Delay	24.2	5.7	18.4	9.1	25.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	5.7	18.4	9.1	25.2	6.2
Queue Length 50th (ft)	12	0	126	47	130	0
Queue Length 95th (ft)	33	47	193	79	205	24
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	569	606	1092	655	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.31	0.73	0.18	0.46	0.09

Intersection Summary

Intersection Capacity Utilization
N 35th Ave & MM Office Center Dwy

05/31/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	28	162	405	180	277	51
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	28	162	405	180	277	51
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			Yes	Yes	
Reference Time (s)		12.0	26.9	11.4	17.5	3.8
Adj Reference Time (s)		18.0	32.9	21.0	23.5	21.0
Permitted Option						
Adj Saturation A (vph)	120		120	1900	1900	
Reference Time A (s)	27.9		403.9	11.4	17.5	
Adj Saturation B (vph)	NA		NA	NA	NA	
Reference Time B (s)	NA		NA	NA	NA	
Reference Time (s)				403.9	17.5	
Adj Reference Time (s)				409.9	23.5	
Split Option						
Ref Time Combined (s)	1.9		26.9	11.4	17.5	
Ref Time Seperate (s)	1.9		26.9	11.4	17.5	
Reference Time (s)	1.9		26.9	26.9	17.5	
Adj Reference Time (s)	16.0		32.9	32.9	23.5	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		56.4			
Permitted Option (s)	Err		409.9			
Split Option (s)	16.0		56.4			
Minimum (s)	16.0		56.4		72.4	
Right Turns						
	EBR	SBR				
Adj Reference Time (s)	18.0	21.0				
Cross Thru Ref Time (s)	23.5	0.0				
Oncoming Left Ref Time (s)	0.0	32.9				
Combined (s)	41.5	53.9				

Intersection Summary

Intersection Capacity Utilization 60.3% ICU Level of Service B
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	1	2	1	8	3	912	3	3	827	3
Future Vol, veh/h	3	0	1	2	1	8	3	912	3	3	827	3
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	2	1	9	3	991	3	3	899	3

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1409	1907	451	1455	1907	497	902	0	0	994	0	0
Stage 1	907	907	-	999	999	-	-	-	-	-	-	-
Stage 2	502	1000	-	456	908	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	99	68	556	91	68	519	749	-	-	692	-	-
Stage 1	297	353	-	261	319	-	-	-	-	-	-	-
Stage 2	520	319	-	554	352	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	95	67	556	90	67	519	749	-	-	692	-	-
Mov Cap-2 Maneuver	95	67	-	90	67	-	-	-	-	-	-	-
Stage 1	294	350	-	259	316	-	-	-	-	-	-	-
Stage 2	505	316	-	548	349	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	36.1		23.3		0		0	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	749	-	-	120	209	692	-	-
HCM Lane V/C Ratio	0.004	-	-	0.036	0.057	0.005	-	-
HCM Control Delay (s)	9.8	0	-	36.1	23.3	10.2	-	-
HCM Lane LOS	A	A	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Lanes, Volumes, Timings
N Park Road & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Future Volume (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.507			0.334		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	944	3539	1583	622	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			285
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	258	558	115	223	512	160	250	566	233	124	385	378
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	558	115	223	512	160	250	566	233	124	385	378
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	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						
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.11	1.16	0.20	0.96	1.07	0.28	0.68	0.62	0.40	0.43	0.42	0.61

Lanes, Volumes, Timings
N Park Road & Johnson St

05/31/2024

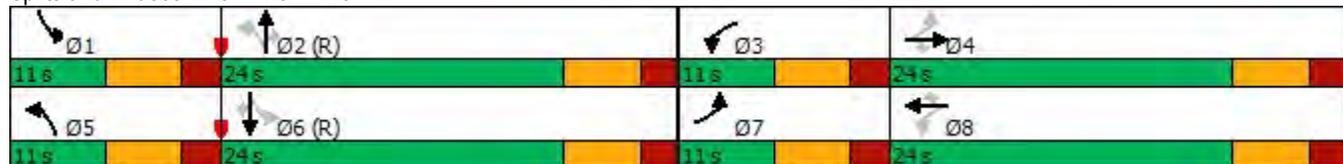


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	99.3	117.4	4.8	72.3	89.5	2.2	27.5	26.5	5.6	18.7	23.4	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.3	117.4	4.8	72.3	89.5	2.2	27.5	26.5	5.6	18.7	23.4	11.2
LOS	F	F	A	E	F	A	C	C	A	B	C	B
Approach Delay	98.5					69.6			22.1		17.5	
Approach LOS	F					E			C		B	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.16
Intersection Signal Delay:	51.2
Intersection LOS:	D
Intersection Capacity Utilization	80.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 8: N Park Ave



Lanes and Geometrics
 N Park Road & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.507			0.334		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	944	3539	1583	622	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			234			285
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	

Intersection Summary

Area Type: Other

Volume
N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Future Volume (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	258	558	115	223	512	160	250	566	233	124	385	378
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	558	115	223	512	160	250	566	233	124	385	378
Intersection Summary												

Queues

N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	258	558	115	223	512	160	250	566	233	124	385	378
v/c Ratio	1.11	1.16	0.20	0.96	1.07	0.28	0.68	0.62	0.40	0.43	0.42	0.61
Control Delay	99.3	117.4	4.8	72.3	89.5	2.2	27.5	26.5	5.6	18.7	23.4	11.2
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	99.3	117.4	4.8	72.3	89.5	2.2	27.5	26.5	5.6	18.7	23.4	11.2
Queue Length 50th (ft)	~121	~308	3	62	~250	0	71	113	0	32	72	32
Queue Length 95th (ft)	m#139	m#330	m6	#168	#423	15	#136	163	48	64	110	109
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	369	910	580	286	910	618
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	1.11	1.16	0.20	0.96	1.07	0.28	0.68	0.62	0.40	0.43	0.42	0.61

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N Park Road & Johnson St

05/31/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	237	513	106	205	471	147	230	521	214	114	354	348
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615
Ped Intf Time (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
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	Yes			Yes			Yes			Yes		
Reference Time (s)	15.8	32.4	7.9	13.6	29.7	10.9	15.3	17.3	15.9	7.6	11.7	25.9
Adj Reference Time (s)	21.8	38.4	16.0	19.6	35.7	16.9	21.3	23.3	21.9	13.6	17.7	31.9
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809	
Reference Time A (s)	236.3	32.4		204.4	29.7		229.4	17.3		113.7	11.7	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		236.3			204.4			229.4			113.7	
Adj Reference Time (s)		242.3			210.4			235.4			119.7	
Split Option												
Ref Time Combined (s)	15.8	32.4		13.6	29.7		15.3	17.3		7.6	11.7	
Ref Time Seperate (s)	15.8	32.4		13.6	29.7		15.3	17.3		7.6	11.7	
Reference Time (s)	32.4	32.4		29.7	29.7		17.3	17.3		11.7	11.7	
Adj Reference Time (s)	38.4	38.4		35.7	35.7		23.3	23.3		17.7	17.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	58.0		39.0									
Permitted Option (s)	242.3		235.4									
Split Option (s)	74.1		41.0									
Minimum (s)	58.0		39.0		97.1							
Right Turns												
	EBR	WBR	NBR	SBR								
Adj Reference Time (s)	16.0	16.9	21.9	31.9								
Cross Thru Ref Time (s)	17.7	23.3	38.4	35.7								
Oncoming Left Ref Time (s)	19.6	21.8	13.6	21.3								
Combined (s)	53.4	62.0	73.9	88.9								
Intersection Summary												
Intersection Capacity Utilization	80.9%		ICU Level of Service				D					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Vol, veh/h	71	523	736	63	55	130
Future Vol, veh/h	71	523	736	63	55	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	220	52	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	568	800	68	60	141

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	868	0	-	0	1522 800
Stage 1	-	-	-	-	800 -
Stage 2	-	-	-	-	722 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	776	-	-	-	130 385
Stage 1	-	-	-	-	442 -
Stage 2	-	-	-	-	481 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	776	-	-	-	117 385
Mov Cap-2 Maneuver	-	-	-	-	117 -
Stage 1	-	-	-	-	398 -
Stage 2	-	-	-	-	481 -

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	32.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	776	-	-	-	117	385
HCM Lane V/C Ratio	0.099	-	-	-	0.511	0.367
HCM Control Delay (s)	10.2	-	-	-	64.2	19.7
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	2.4	1.6

HCM 2010 TWSC
Johnson ST and Employee Entrance Driveway

05/31/2024

Intersection												
Int Delay, s/veh	18.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖↗			↔		↖		↖
Traffic Vol, veh/h	24	524	5	9	769	24	2	0	62	0	0	531
Future Vol, veh/h	24	524	5	9	769	24	2	0	62	0	0	531
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									
Storage Length	270	-	-	-	-	120	-	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	570	5	10	836	26	2	0	67	0	0	577

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	862	0	0	575	0	0	1063	1507	573	1527	-	431
Stage 1	-	-	-	-	-	-	625	625	-	869	-	-
Stage 2	-	-	-	-	-	-	438	882	-	658	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	7.33	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.53	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	6.13	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	-	3.319
Pot Cap-1 Maneuver	778	-	-	996	-	-	189	120	518	88	0	~ 573
Stage 1	-	-	-	-	-	-	472	476	-	314	0	-
Stage 2	-	-	-	-	-	-	568	363	-	452	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	778	-	-	996	-	-	114	518	73	-	~ 573	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	-	73	-	-	-
Stage 1	-	-	-	-	-	-	456	460	-	304	-	-
Stage 2	-	-	-	-	-	-	-	356	-	380	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.1						66.3		
HCM LOS							-			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	778	-	-	996	-	-	-	573
HCM Lane V/C Ratio	-	0.034	-	-	0.01	-	-	-	1.007
HCM Control Delay (s)	-	9.8	-	-	8.7	-	-	0	66.3
HCM Lane LOS	-	A	-	-	A	-	-	A	F
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	-	15

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

Intersection				
Intersection Delay, s/veh	6.0			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	201	43	200	256
Demand Flow Rate, veh/h	205	44	204	261
Vehicles Circulating, veh/h	279	308	110	78
Vehicles Exiting, veh/h	60	6	374	274
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.8	5.0	5.5	5.9
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	205	44	204	261
Cap Entry Lane, veh/h	855	830	1012	1045
Entry HV Adj Factor	0.980	0.976	0.980	0.982
Flow Entry, veh/h	201	43	200	256
Cap Entry, veh/h	838	811	992	1026
V/C Ratio	0.240	0.053	0.202	0.250
Control Delay, s/veh	6.8	5.0	5.5	5.9
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.582			0.701		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1084	3539	1583	1306	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	515	137	182	574	168	89	82	129	398	218	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	652	0	182	574	168	89	82	129	398	218	148
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%		15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0		5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0		23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26		0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.23	1.37		0.78	1.20	0.29	0.22	0.09	0.22	0.86	0.46	0.26

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

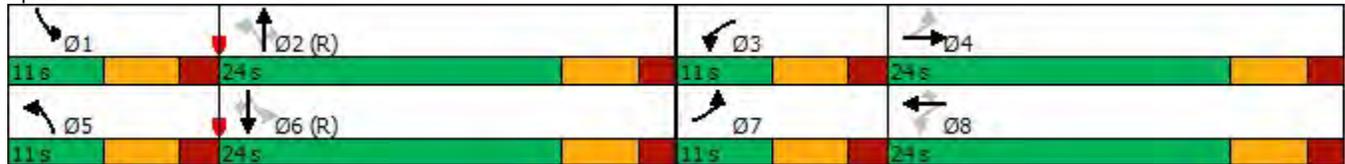


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	15.2	203.7		43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	203.7		43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
LOS	B	F		D	F	A	B	C	A	D	C	A
Approach Delay		189.5			95.0			10.2			28.8	
Approach LOS		F			F			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.37
Intersection Signal Delay:	91.5
Intersection LOS:	F
Intersection Capacity Utilization	87.1%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.222			0.222			0.582			0.701		
Satd. Flow (perm)	414	1803	0	414	1863	1583	1084	3539	1583	1306	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				234			234			234
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	53	515	137	182	574	168	89	82	129	398	218	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	652	0	182	574	168	89	82	129	398	218	148
Intersection Summary												

Timings
N 35th Ave & Johnson St

05/31/2024

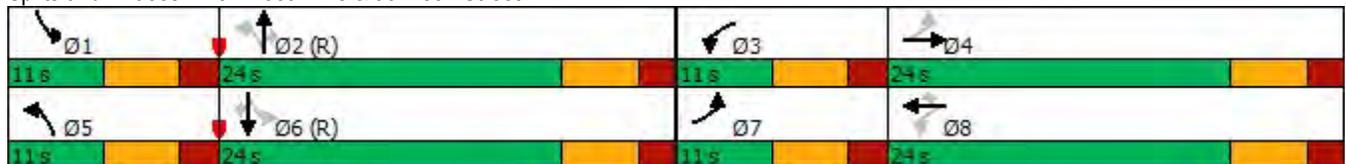
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	49	474	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	167	528	155	82	75	119	366	201	136
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	23.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	0.23	1.37	0.78	1.20	0.29	0.22	0.09	0.22	0.86	0.46	0.26
Control Delay	15.2	203.7	43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	203.7	43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
LOS	B	F	D	F	A	B	C	A	D	C	A
Approach Delay		189.5		95.0			10.2			28.8	
Approach LOS		F		F			B			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 91.5
 Intersection Capacity Utilization 87.1%
 Analysis Period (min) 15

Intersection LOS: F
 ICU Level of Service E

Splits and Phases: 3: N 35th Ave & Johnson Street



Phasings
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max										
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
90th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
70th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
70th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
50th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
50th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
30th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
30th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
10th %ile Green (s)	5.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
10th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	652	182	574	168	89	82	129	398	218	148
v/c Ratio	0.23	1.37	0.78	1.20	0.29	0.22	0.09	0.22	0.86	0.46	0.26
Control Delay	15.2	203.7	43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	203.7	43.0	136.4	9.8	14.5	20.2	0.9	40.7	25.5	1.8
Queue Length 50th (ft)	13	~378	73	~321	16	23	14	0	125	79	0
Queue Length 95th (ft)	33	#572	m#94	m#408	m28	49	30	1	#271	139	9
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	232	477	232	479	580	405	910	580	462	479	580
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	1.37	0.78	1.20	0.29	0.22	0.09	0.22	0.86	0.46	0.26

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N 35th Ave & Johnson St

05/31/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	49	600	0	167	528	155	82	75	119	366	201	136	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.97	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1840	0	1805	1900	1615	1805	3618	1615	1805	1900	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	Yes			Yes			Yes			Yes			
Reference Time (s)	3.3	39.1	0.0	11.1	33.3	11.5	5.5	2.5	8.8	24.3	12.7	10.1	
Adj Reference Time (s)	10.0	45.1	0.0	17.1	39.3	18.0	11.5	12.0	14.8	30.3	18.7	16.1	
Permitted Option													
Adj Saturation A (vph)	120	1840		120	1900		120	1809		120	1900		
Reference Time A (s)	48.9	39.1		166.5	33.3		81.8	2.5		365.0	12.7		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1900		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		32.3	12.7		
Reference Time (s)		48.9			166.5			81.8			32.3		
Adj Reference Time (s)		54.9			172.5			87.8			38.3		
Split Option													
Ref Time Combined (s)	3.3	39.1		11.1	33.3		5.5	2.5		24.3	12.7		
Ref Time Seperate (s)	3.3	30.9		11.1	33.3		5.5	2.5		24.3	12.7		
Reference Time (s)	39.1	39.1		33.3	33.3		5.5	5.5		24.3	24.3		
Adj Reference Time (s)	45.1	45.1		39.3	39.3		12.0	12.0		30.3	30.3		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	62.2		42.3										
Permitted Option (s)	172.5		87.8										
Split Option (s)	84.5		42.3										
Minimum (s)	62.2		42.3		104.6								
Right Turns													
	WBR	NBR	SBR										
Adj Reference Time (s)	18.0	14.8	16.1										
Cross Thru Ref Time (s)	12.0	45.1	39.3										
Oncoming Left Ref Time (s)	10.0	30.3	11.5										
Combined (s)	40.0	90.3	66.9										
Intersection Summary													
Intersection Capacity Utilization	87.1%		ICU Level of Service						E				
Reference Times and Phasing Options do not represent an optimized timing plan.													

Lanes, Volumes, Timings
N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	61	348	140	124	327	35
Future Volume (vph)	61	348	140	124	327	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.340			
Satd. Flow (perm)	1770	1583	633	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		378				38
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	378	152	135	355	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	378	152	135	355	38
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Maximum Green (s)	25.0	25.0	15.0	31.5	31.5	31.5
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.13	0.53	0.27	0.12	0.54	0.07

Lanes, Volumes, Timings
 N 35th Ave & MM Office Center Dwy

05/31/2024

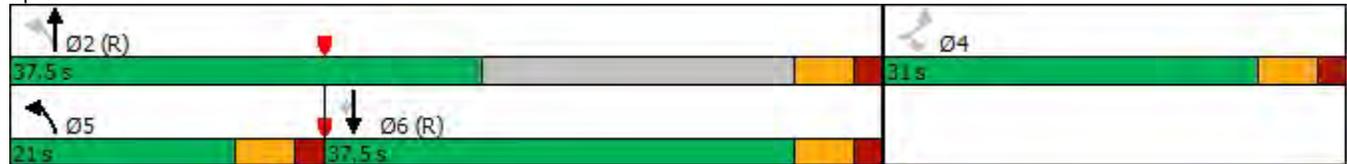


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	25.1	5.9	9.7	8.6	27.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	5.9	9.7	8.6	27.0	7.0
LOS	C	A	A	A	C	A
Approach Delay	8.7			9.2	25.1	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	89.5
Actuated Cycle Length:	89.5
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	14.6
Intersection LOS:	B
Intersection Capacity Utilization	53.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 17:



Lanes and Geometrics
 N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	140	140	220			120
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.340			
Satd. Flow (perm)	1770	1583	633	1863	1863	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		378				38
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			387	249	
Travel Time (s)	8.1			8.8	5.7	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	61	348	140	124	327	35
Future Volume (vph)	61	348	140	124	327	35
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	66	378	152	135	355	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	378	152	135	355	38
Intersection Summary						

Timings
N 35th Ave & MM Office Center Dwy

05/31/2024



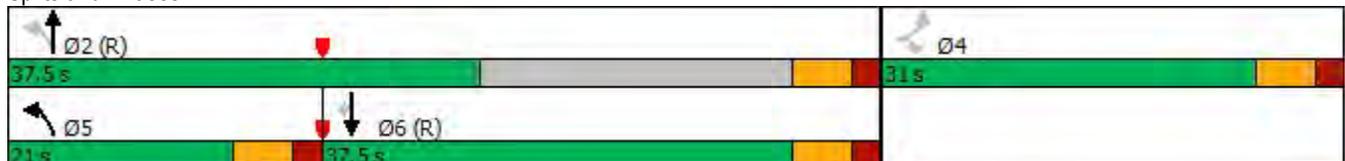
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↑	↑	↗
Traffic Volume (vph)	61	348	140	124	327	35
Future Volume (vph)	61	348	140	124	327	35
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	15.0	15.0	15.0	15.0
Minimum Split (s)	31.0	31.0	21.0	24.0	24.0	24.0
Total Split (s)	31.0	31.0	21.0	37.5	37.5	37.5
Total Split (%)	34.6%	34.6%	23.5%	41.9%	41.9%	41.9%
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	25.0	52.5	52.5	31.5	31.5
Actuated g/C Ratio	0.28	0.28	0.59	0.59	0.35	0.35
v/c Ratio	0.13	0.53	0.27	0.12	0.54	0.07
Control Delay	25.1	5.9	9.7	8.6	27.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	5.9	9.7	8.6	27.0	7.0
LOS	C	A	A	A	C	A
Approach Delay	8.7			9.2	25.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 89.5
 Actuated Cycle Length: 89.5
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 14.6
 Intersection Capacity Utilization 53.0%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 17:



Queues

N 35th Ave & MM Office Center Dwy

05/31/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	66	378	152	135	355	38
v/c Ratio	0.13	0.53	0.27	0.12	0.54	0.07
Control Delay	25.1	5.9	9.7	8.6	27.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	5.9	9.7	8.6	27.0	7.0
Queue Length 50th (ft)	28	0	36	31	158	0
Queue Length 95th (ft)	60	65	64	57	245	20
Internal Link Dist (ft)	276			307	169	
Turn Bay Length (ft)	140	140	220			120
Base Capacity (vph)	494	714	561	1092	655	581
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.53	0.27	0.12	0.54	0.07

Intersection Summary

Intersection Capacity Utilization
N 35th Ave & MM Office Center Dwy

05/31/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	61	348	140	124	327	35
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	10.0	10.0	15.0	15.0	15.0	15.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	61	348	140	124	327	35
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	1.00	1.00	0.85
Saturated Flow (vph)	1805	1615	1805	1900	1900	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No		Yes		Yes	
Reference Time (s)	25.9		9.3	7.8	20.7	2.6
Adj Reference Time (s)	31.9		21.0	21.0	26.7	21.0
Permitted Option						
Adj Saturation A (vph)	120	120		1900	1900	
Reference Time A (s)	60.8	139.6		7.8	20.7	
Adj Saturation B (vph)	NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA	
Reference Time (s)				139.6	20.7	
Adj Reference Time (s)				145.6	26.7	
Split Option						
Ref Time Combined (s)	4.1	9.3		7.8	20.7	
Ref Time Seperate (s)	4.1	9.3		7.8	20.7	
Reference Time (s)	4.1	9.3		9.3	20.7	
Adj Reference Time (s)	16.0	21.0		21.0	26.7	
Summary	EB	NB SB		Combined		
Protected Option (s)	NA	47.7				
Permitted Option (s)	Err	145.6				
Split Option (s)	16.0	47.7				
Minimum (s)	16.0	47.7		63.7		
Right Turns	EBR	SBR				
Adj Reference Time (s)	31.9	21.0				
Cross Thru Ref Time (s)	26.7	0.0				
Oncoming Left Ref Time (s)	0.0	21.0				
Combined (s)	58.5	42.0				

Intersection Summary

Intersection Capacity Utilization 53.0% ICU Level of Service A
Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Traffic Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
Future Vol, veh/h	5	1	5	0	0	3	2	1022	2	6	1026	5
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	5	0	0	3	2	1111	2	7	1115	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1692	2249	560	1688	2250	557	1120	0	0	1113	0	0
Stage 1	1132	1132	-	1116	1116	-	-	-	-	-	-	-
Stage 2	560	1117	-	572	1134	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	41	472	61	41	474	619	-	-	623	-	-
Stage 1	216	276	-	221	281	-	-	-	-	-	-	-
Stage 2	480	281	-	472	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	58	39	472	57	39	474	619	-	-	623	-	-
Mov Cap-2 Maneuver	58	39	-	57	39	-	-	-	-	-	-	-
Stage 1	214	268	-	219	279	-	-	-	-	-	-	-
Stage 2	473	279	-	451	268	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	51	12.6	0	0.1
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	619	-	-	90	474	623	-
HCM Lane V/C Ratio	0.004	-	-	0.133	0.007	0.01	-
HCM Control Delay (s)	10.8	0	-	51	12.6	10.8	-
HCM Lane LOS	B	A	-	F	B	B	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-

Lanes, Volumes, Timings
N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Future Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		235	200		340	175		190	180		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.222			0.222			0.222			0.300		
Satd. Flow (perm)	414	1863	1583	414	1863	1583	414	3539	1583	559	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234			234			280			280
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1006			728			567			462	
Travel Time (s)		22.9			16.5			12.9			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	324	546	175	239	488	199	135	607	280	148	707	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	546	175	239	488	199	135	607	280	148	707	280
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm									
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.40	1.14	0.30	1.03	1.02	0.34	0.58	0.67	0.46	0.55	0.78	0.46

Lanes, Volumes, Timings
N Park Road & Johnson St

05/31/2024

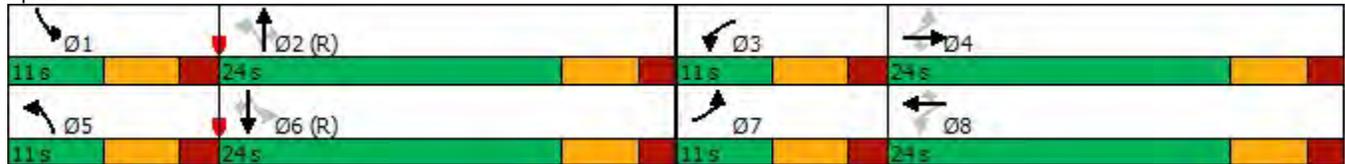


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	5.7
LOS	F	F	A	F	E	A	C	C	A	C	C	A
Approach Delay	116.7			63.7			21.3			23.8		
Approach LOS	F			E			C			C		

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	55.7
Intersection LOS:	E
Intersection Capacity Utilization	85.0%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 8: N Park Ave



Lanes and Geometrics
N Park Road & Johnson St

05/31/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		0%		0%		0%		0%		0%		
Storage Length (ft)	250		235	200		340	175		190	180		200	
Storage Lanes	1		1	1		1	1		1	1		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Ped Bike Factor	Frt			0.850	Frt			0.850	Frt			0.850	0.850
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted	0.222			0.222			0.222			0.300			
Satd. Flow (perm)	414	1863	1583	414	1863	1583	414	3539	1583	559	3539	1583	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			234			234			280			280	
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		1006			728			567			462		
Travel Time (s)		22.9			16.5			12.9			10.5		

Intersection Summary

Area Type: Other

Volume
N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Future Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	324	546	175	239	488	199	135	607	280	148	707	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	546	175	239	488	199	135	607	280	148	707	280
Intersection Summary												

Timings

N Park Road & Johnson St

05/31/2024

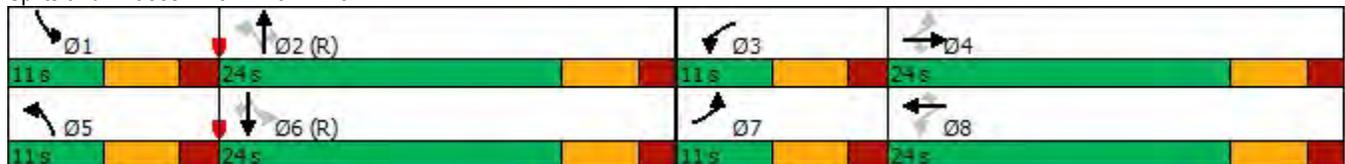
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Future Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Turn Type	pm+pt	NA	Perm									
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	Max											
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0	23.0	18.0	18.0
Actuated g/C Ratio	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26	0.33	0.26	0.26
v/c Ratio	1.40	1.14	0.30	1.03	1.02	0.34	0.58	0.67	0.46	0.55	0.78	0.46
Control Delay	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	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	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	5.7
LOS	F	F	A	F	E	A	C	C	A	C	C	A
Approach Delay		116.7			63.7			21.3			23.8	
Approach LOS		F			E			C			C	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.40
 Intersection Signal Delay: 55.7
 Intersection Capacity Utilization 85.0%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service E

Splits and Phases: 8: N Park Ave



Phasings
N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (%)	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%	15.7%	34.3%	34.3%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (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
Time To Reduce (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
Recall Mode	Max											
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
90th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
70th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
50th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
30th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						
10th %ile Green (s)	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0	5.0	18.0	18.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	Coord	Coord						

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 57.5 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N Park Road & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	324	546	175	239	488	199	135	607	280	148	707	280
v/c Ratio	1.40	1.14	0.30	1.03	1.02	0.34	0.58	0.67	0.46	0.55	0.78	0.46
Control Delay	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	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	206.1	98.9	6.8	90.3	75.1	3.9	25.4	27.5	5.7	22.6	31.3	5.7
Queue Length 50th (ft)	~138	~296	10	~70	~217	0	35	123	0	39	148	0
Queue Length 95th (ft)	m#135	m#283	m11	#186	#399	32	#75	176	53	75	#211	53
Internal Link Dist (ft)		926			648			487			382	
Turn Bay Length (ft)	250		235	200		340	175		190	180		200
Base Capacity (vph)	232	479	580	232	479	580	232	910	615	270	910	615
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	1.40	1.14	0.30	1.03	1.02	0.34	0.58	0.67	0.46	0.55	0.78	0.46

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Intersection Capacity Utilization

N Park Road & Johnson St

05/31/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	298	502	161	220	449	183	124	558	258	136	650	258
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	1805	3618	1615	1805	3618	1615
Ped Intf Time (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
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	Yes			Yes			Yes			Yes		
Reference Time (s)	19.8	31.7	12.0	14.6	28.4	13.6	8.2	18.5	19.2	9.0	21.6	19.2
Adj Reference Time (s)	25.8	37.7	18.0	20.6	34.4	19.6	14.2	24.5	25.2	15.0	27.6	25.2
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		120	1809		120	1809	
Reference Time A (s)	297.2	31.7		219.4	28.4		123.7	18.5		135.6	21.6	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		297.2			219.4			123.7			135.6	
Adj Reference Time (s)		303.2			225.4			129.7			141.6	
Split Option												
Ref Time Combined (s)	19.8	31.7		14.6	28.4		8.2	18.5		9.0	21.6	
Ref Time Seperate (s)	19.8	31.7		14.6	28.4		8.2	18.5		9.0	21.6	
Reference Time (s)	31.7	31.7		28.4	28.4		18.5	18.5		21.6	21.6	
Adj Reference Time (s)	37.7	37.7		34.4	34.4		24.5	24.5		27.6	27.6	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	60.2		41.8									
Permitted Option (s)	303.2		141.6									
Split Option (s)	72.1		52.1									
Minimum (s)	60.2		41.8		102.0							
Right Turns												
	EBR	WBR	NBR	SBR								
Adj Reference Time (s)	18.0	19.6	25.2	25.2								
Cross Thru Ref Time (s)	27.6	24.5	37.7	34.4								
Oncoming Left Ref Time (s)	20.6	25.8	15.0	14.2								
Combined (s)	66.2	69.9	77.9	73.8								
Intersection Summary												
Intersection Capacity Utilization			85.0%	ICU Level of Service						E		
Reference Times and Phasing Options do not represent an optimized timing plan.												

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.985				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1835	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.138			0.133			0.666			0.440		
Satd. Flow (perm)	257	1835	0	248	1863	1583	1241	3539	1583	820	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				329			241			172
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	539	59	138	676	329	284	263	134	279	143	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	598	0	138	676	329	284	263	134	279	143	66
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0		12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%		12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Maximum Green (s)	5.0	29.0		6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	34.0	29.0		36.0	30.0	30.0	27.0	19.0	19.0	42.0	28.0	28.0
Actuated g/C Ratio	0.36	0.31		0.38	0.32	0.32	0.28	0.20	0.20	0.44	0.29	0.29
v/c Ratio	0.44	1.06		0.73	1.15	0.45	0.72	0.37	0.26	0.52	0.26	0.11

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

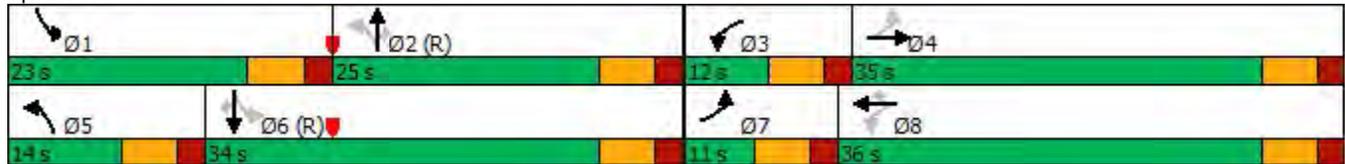


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	24.7	88.2		41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	88.2		41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
LOS	C	F		D	F	A	C	C	A	C	C	A
Approach Delay		81.1			76.1			27.8			20.4	
Approach LOS		F			E			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	95
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	1.15
Intersection Signal Delay:	57.1
Intersection LOS:	E
Intersection Capacity Utilization	78.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
 N 35th Ave & Johnson St

05/31/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	240		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.985				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1835	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.138			0.133			0.666			0.440		
Satd. Flow (perm)	257	1835	0	248	1863	1583	1241	3539	1583	820	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				329			241			172
Link Speed (mph)		30			30			30				30
Link Distance (ft)		685			1006			695				349
Travel Time (s)		15.6			22.9			15.8				7.9

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	75	539	59	138	676	329	284	263	134	279	143	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	598	0	138	676	329	284	263	134	279	143	66
Intersection Summary												

Timings
N 35th Ave & Johnson St

05/31/2024

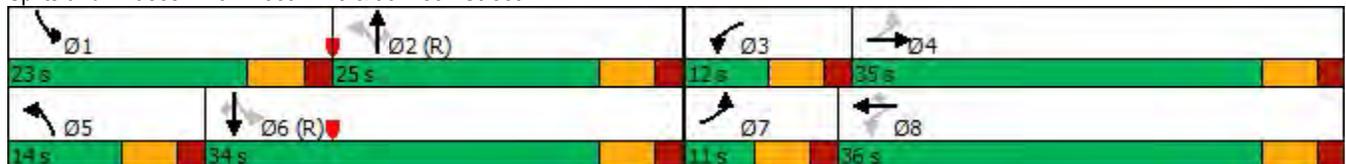


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	69	496	127	622	303	261	242	123	257	132	61
Future Volume (vph)	69	496	127	622	303	261	242	123	257	132	61
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0	12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%	12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	34.0	29.0	36.0	30.0	30.0	27.0	19.0	19.0	42.0	28.0	28.0
Actuated g/C Ratio	0.36	0.31	0.38	0.32	0.32	0.28	0.20	0.20	0.44	0.29	0.29
v/c Ratio	0.44	1.06	0.73	1.15	0.45	0.72	0.37	0.26	0.52	0.26	0.11
Control Delay	24.7	88.2	41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	88.2	41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
LOS	C	F	D	F	A	C	C	A	C	C	A
Approach Delay		81.1		76.1			27.8			20.4	
Approach LOS		F		E			C			C	

Intersection Summary

Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 57.1
 Intersection LOS: E
 Intersection Capacity Utilization 78.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: N 35th Ave & Johnson Street



Phasings
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0	12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%	12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Maximum Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max										
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
90th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
70th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
70th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
50th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
50th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
30th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
30th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
10th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
10th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	75	598	138	676	329	284	263	134	279	143	66
v/c Ratio	0.44	1.06	0.73	1.15	0.45	0.72	0.37	0.26	0.52	0.26	0.11
Control Delay	24.7	88.2	41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	88.2	41.5	117.7	5.1	33.9	34.6	1.3	21.6	27.2	0.4
Queue Length 50th (ft)	26	~398	50	~483	0	111	72	0	108	66	0
Queue Length 95th (ft)	53	#608	#119	#697	60	#184	110	0	171	116	0
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	240		500
Base Capacity (vph)	171	564	190	588	725	397	707	509	532	549	587
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	1.06	0.73	1.15	0.45	0.72	0.37	0.26	0.52	0.26	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Intersection Capacity Utilization
N 35th Ave & Johnson St

05/31/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	496	54	127	622	303	261	242	123	257	132	61
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	69	550	0	127	622	303	261	242	123	257	132	61
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1805	1872	0	1805	1900	1615	1805	3618	1615	1805	1900	1615
Ped Intf Time (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
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.6	35.3	0.0	8.4	39.3	22.5	17.4	8.0	9.1	17.1	8.3	4.5
Adj Reference Time (s)	10.6	41.3	0.0	14.4	45.3	28.5	23.4	14.0	15.1	23.1	14.3	12.0
Permitted Option												
Adj Saturation A (vph)	120	1872		120	1900		120	1809		120	1900	
Reference Time A (s)	68.8	35.3		126.6	39.3		260.3	8.0		256.3	8.3	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		68.8			126.6			260.3			256.3	
Adj Reference Time (s)		74.8			132.6			266.3			262.3	
Split Option												
Ref Time Combined (s)	4.6	35.3		8.4	39.3		17.4	8.0		17.1	8.3	
Ref Time Seperate (s)	4.6	31.8		8.4	39.3		17.4	8.0		17.1	8.3	
Reference Time (s)	35.3	35.3		39.3	39.3		17.4	17.4		17.1	17.1	
Adj Reference Time (s)	41.3	41.3		45.3	45.3		23.4	23.4		23.1	23.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	55.9		37.7									
Permitted Option (s)	132.6		266.3									
Split Option (s)	86.5		46.4									
Minimum (s)	55.9		37.7		93.6							
Right Turns												
	WBR	NBR	SBR									
Adj Reference Time (s)	28.5	15.1	12.0									
Cross Thru Ref Time (s)	14.0	41.3	45.3									
Oncoming Left Ref Time (s)	10.6	23.1	23.4									
Combined (s)	53.1	79.5	80.6									
Intersection Summary												
Intersection Capacity Utilization			78.0%	ICU Level of Service				D				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	140		0	220		300	160		150	270		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.138			0.133			0.622			0.533		
Satd. Flow (perm)	257	1803	0	248	1863	1583	1159	3539	1583	993	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				241			241			172
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	515	137	182	574	168	89	82	129	398	218	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	652	0	182	574	168	89	82	129	398	218	148
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Minimum Split (s)	11.0	24.0		11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0		12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%		12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Maximum Green (s)	5.0	29.0		6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0	0		0	0
Act Effct Green (s)	34.0	29.0		36.0	30.0	30.0	27.0	19.0	19.0	42.0	28.0	28.0
Actuated g/C Ratio	0.36	0.31		0.38	0.32	0.32	0.28	0.20	0.20	0.44	0.29	0.29
v/c Ratio	0.31	1.16		0.96	0.98	0.25	0.23	0.12	0.25	0.69	0.40	0.25

Lanes, Volumes, Timings
N 35th Ave & Johnson St

05/31/2024

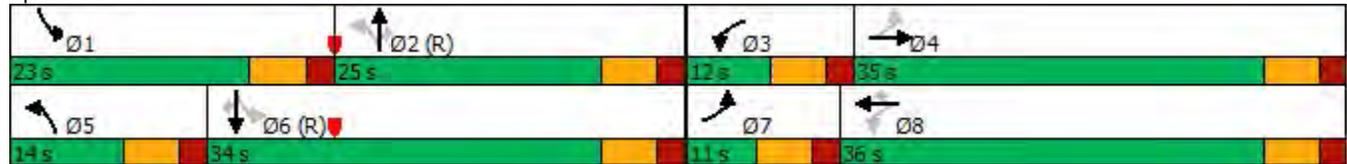


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.1	123.6		79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	123.6		79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
LOS	C	F		E	E	A	B	C	A	C	C	A
Approach Delay		115.9			56.6			14.7			23.0	
Approach LOS		F			E			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	95
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Pretimed
Maximum v/c Ratio:	1.16
Intersection Signal Delay:	57.9
Intersection LOS:	E
Intersection Capacity Utilization	87.1%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: N 35th Ave & Johnson Street



Lanes and Geometrics
 N 35th Ave & Johnson St

05/31/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	220		300	160		150	270		500
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.138			0.133			0.622			0.533		
Satd. Flow (perm)	257	1803	0	248	1863	1583	1159	3539	1583	993	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				241			241			172
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		685			1006			695			349	
Travel Time (s)		15.6			22.9			15.8			7.9	

Intersection Summary

Area Type: Other

Volume
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	53	515	137	182	574	168	89	82	129	398	218	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	652	0	182	574	168	89	82	129	398	218	148
Intersection Summary												

Timings
N 35th Ave & Johnson St

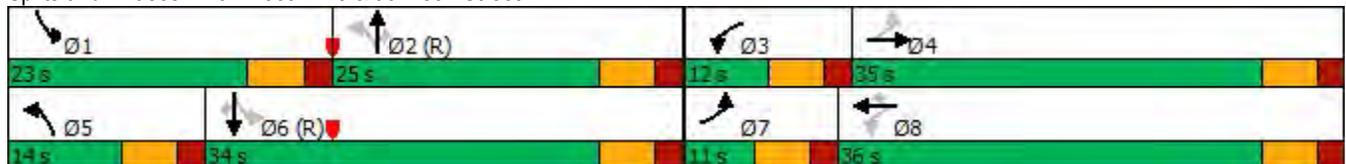
05/31/2024

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	49	474	167	528	155	82	75	119	366	201	136
Future Volume (vph)	49	474	167	528	155	82	75	119	366	201	136
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0	12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%	12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	Max										
Act Effct Green (s)	34.0	29.0	36.0	30.0	30.0	27.0	19.0	19.0	42.0	28.0	28.0
Actuated g/C Ratio	0.36	0.31	0.38	0.32	0.32	0.28	0.20	0.20	0.44	0.29	0.29
v/c Ratio	0.31	1.16	0.96	0.98	0.25	0.23	0.12	0.25	0.69	0.40	0.25
Control Delay	21.1	123.6	79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	123.6	79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
LOS	C	F	E	E	A	B	C	A	C	C	A
Approach Delay		115.9		56.6			14.7			23.0	
Approach LOS		F		E			B			C	

Intersection Summary

Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 57.9
 Intersection Capacity Utilization 87.1%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service E

Splits and Phases: 3: N 35th Ave & Johnson Street



Phasings
N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Minimum Initial (s)	4.0	12.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	11.0	35.0	12.0	36.0	36.0	14.0	25.0	25.0	23.0	34.0	34.0
Total Split (%)	11.6%	36.8%	12.6%	37.9%	37.9%	14.7%	26.3%	26.3%	24.2%	35.8%	35.8%
Maximum Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	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
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes										
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max										
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
90th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
70th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
70th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
50th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
50th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
30th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
30th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord
10th %ile Green (s)	5.0	29.0	6.0	30.0	30.0	8.0	19.0	19.0	17.0	28.0	28.0
10th %ile Term Code	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	Coord	Coord	MaxR	Coord	Coord

Intersection Summary

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed

Queues

N 35th Ave & Johnson St

05/31/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	652	182	574	168	89	82	129	398	218	148
v/c Ratio	0.31	1.16	0.96	0.98	0.25	0.23	0.12	0.25	0.69	0.40	0.25
Control Delay	21.1	123.6	79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	123.6	79.4	65.4	1.7	18.6	31.7	1.2	26.5	29.4	3.9
Queue Length 50th (ft)	18	~466	68	340	0	31	21	0	168	105	0
Queue Length 95th (ft)	41	#683	#194	#558	12	60	42	0	254	171	32
Internal Link Dist (ft)		605		926			615			269	
Turn Bay Length (ft)	140		220		300	160		150	270		500
Base Capacity (vph)	171	560	190	588	664	380	707	509	578	549	587
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.16	0.96	0.98	0.25	0.23	0.12	0.25	0.69	0.40	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Intersection Capacity Utilization

N 35th Ave & Johnson St

05/31/2024

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	49	474	126	167	528	155	82	75	119	366	201	136	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right			No			No			No			No	
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Minimum Green (s)	4.0	12.0	4.0	4.0	12.0	12.0	4.0	6.0	6.0	4.0	6.0	6.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	49	600	0	167	528	155	82	75	119	366	201	136	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.97	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1805	1840	0	1805	1900	1615	1805	3618	1615	1805	1900	1615	
Ped Intf Time (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	
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00		
Protected Option Allowed		Yes			Yes			Yes			Yes		
Reference Time (s)	3.3	39.1	0.0	11.1	33.3	11.5	5.5	2.5	8.8	24.3	12.7	10.1	
Adj Reference Time (s)	10.0	45.1	0.0	17.1	39.3	18.0	11.5	12.0	14.8	30.3	18.7	16.1	
Permitted Option													
Adj Saturation A (vph)	120	1840		120	1900		120	1809		120	1900		
Reference Time A (s)	48.9	39.1		166.5	33.3		81.8	2.5		365.0	12.7		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1900		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		32.3	12.7		
Reference Time (s)		48.9			166.5			81.8			32.3		
Adj Reference Time (s)		54.9			172.5			87.8			38.3		
Split Option													
Ref Time Combined (s)	3.3	39.1		11.1	33.3		5.5	2.5		24.3	12.7		
Ref Time Seperate (s)	3.3	30.9		11.1	33.3		5.5	2.5		24.3	12.7		
Reference Time (s)	39.1	39.1		33.3	33.3		5.5	5.5		24.3	24.3		
Adj Reference Time (s)	45.1	45.1		39.3	39.3		12.0	12.0		30.3	30.3		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	62.2		42.3										
Permitted Option (s)	172.5		87.8										
Split Option (s)	84.5		42.3										
Minimum (s)	62.2		42.3		104.6								
Right Turns													
	WBR	NBR	SBR										
Adj Reference Time (s)	18.0	14.8	16.1										
Cross Thru Ref Time (s)	12.0	45.1	39.3										
Oncoming Left Ref Time (s)	10.0	30.3	11.5										
Combined (s)	40.0	90.3	66.9										
Intersection Summary													
Intersection Capacity Utilization			87.1%	ICU Level of Service						E			
Reference Times and Phasing Options do not represent an optimized timing plan.													