

TRAFFIC IMPACT ANALYSIS For PROPOSED C-STORE DEVELOPMENT (PAUSE & GO) In Baytown, TX

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The documents herein approved were reviewed for substantial compliance with the City of Baytown Code of Ordinances and engineering standards. Any deviation, variance or substitution from COB standards shall be separately requested by the OWNER and approved, in writing, by the appropriate COB authority. This approval does not remove the OWNER's responsibility for correcting errors discovered after plan approval. OWNER shall be responsible for adequacy of design and compliance with COB standards, details and requirements.	
 Approved by: Juan Macias on 2/28/2025	
Note: Ensure that recommendations in TIA are incorporated into the construction plans. Median improvements will be required.	

PREPARED FOR
**THE CITY OF BAYTOWN
TEXAS DEPARTMENT OF TRANSPORTATION**

PREPARED BY



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February 2025

TRAFFIC IMPACT ANALYSIS

PROPOSED C-STORE DEVELOPMENT (PAUSE & GO)

CITY OF BAYTOWN, TEXAS

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EXECUTIVE SUMMARY

This report summarizes the results of analysis and findings of a Traffic Impact Analysis (TIA) that was conducted by MTS Engineering & Design, in connection with the proposed C-Store Development (Project Title: Pause & Go), to be developed in the City of Baytown, Texas. The proposed project consists of development of approximately 4,480 square feet of Convenience Store/Gas Station with 10 vehicle fueling positions and approximately 1,360 square feet of Strip Retail Plaza. The proposed project is planned to be constructed on a vacant property located at the northeast corner of the intersection SH 146 Westbound Frontage Road at N. Main Street in the City of Baytown, Texas. The purpose of this Traffic Impact Analysis was to document the traffic impacts of the proposed project on the adjacent roadway system and to ensure efficient traffic operations subsequent to the completion and operations of the project.

Access to this development is planned to be provided by means of one driveway abutting N. Main Street and one driveway abutting SH 146 Westbound Frontage Road. For study purposes, the access driveway on N. Main Street is designated as Driveway # 1. The access driveway on SH 146 Westbound Frontage Road is designated as Driveway # 2. The construction of this development is anticipated to be complete by the Year 2025.

Existing AM and PM peak hours turning movement counts were collected for the study intersections located in the vicinity of the project site. The background traffic volumes for the analysis intersections were estimated to the Year 2025 by applying a 2 percent compound annual growth rate. Anticipated AM and PM peak hour trips for the proposed project was projected based on the trip generation procedures recommended by the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* and based on the anticipated operations of the proposed project. Site generated traffic were distributed on study network based on existing traffic patterns and travel characteristics. The AM and PM peak hour trip assignments for the project were added to the background (Year 2025) traffic volumes to obtain traffic volumes representing AM and PM peak hour Project Conditions for the Year 2025.

Capacity and Level of Service (LOS) Analyses were conducted for the study intersections during AM and PM peak hours under various conditions according to Highway Capacity Manual (HCM) methodologies and by utilizing SYNCHRO traffic analysis program. Based on the analyses, the

proposed development is expected not to have any major impacts to the traffic operations in the study area.

Proposed Recommendations

- Configure Driveway # 1 and Driveway # 2 as one lane entering and one lane exiting.
- Configure Driveway # 2 as right in right out only. Driveway # 1 will serve as full access driveway.
- Provide a southbound left turn storage and a northbound left turn storage along N. Main Street at Driveway # 1 as shown in Figure 1-3. This may require modifications to existing median opening along N. Main Street.
- Install appropriate signs and pavement markings necessitated by the proposed driveways and roadway modifications. These should be in accordance with City of Baytown, TxDOT and TMUTCD guidelines and standards.

1. INTRODUCTION

This report summarizes the results of analysis and findings of a Traffic Impact Analysis (TIA) that was conducted by MTS Engineering & Design, in connection with the proposed C-Store Development (Project Title: Pause & Go), to be developed in the City of Baytown, Texas. The proposed project consists of development of approximately 4,480 square feet of Convenience Store/Gas Station with 10 vehicle fueling positions and approximately 1,360 square feet of Strip Retail Plaza. The proposed project is planned to be constructed on a vacant property located at the northeast corner of the intersection SH 146 Westbound Frontage Road at N. Main Street in the City of Baytown, Texas. The proposed site will also include the required parking facilities and access driveways. The project vicinity map is depicted in Figure 1-1.

Proposed Site Access Plan

As presented in the proposed site plan (Figure 1-2), access to this development is planned to be provided by means of one driveway abutting N. Main Street and one driveway abutting SH 146 Westbound Frontage Road. For study purposes, the access driveway on N. Main Street is designated as Driveway # 1. The access driveway on SH 146 Westbound Frontage Road is designated as Driveway # 2. Approximate locations and spacing of access driveways are shown in the proposed site plan. While Driveway # 1 abutting N. Main Street is assumed as a full access driveway, Driveway # 2 is proposed to serve as right in right out only. Both driveways will have one lane entering and one lane exiting.

Land use characteristic of the project area is mixed use (residential and commercial). No schools are presently located within one mile of the project site.

Purpose and Scope

The purpose of this Traffic Impact Analysis (TIA) study was to

- Evaluate the impact of the proposed project on the adjacent roadway system, in accordance with the requirements set forth by the City of Baytown and TxDOT.
- Identify transportation improvements which would mitigate potential adverse traffic impacts to mobility (if any) within the study area.

The construction of this development is planned in a single phase and is anticipated to be complete by the Year 2025.

The following tasks were covered in this study:

- Conduct a site investigation to establish an opinion of the existing traffic operations, patterns, road inventory, land uses and traffic controls in the vicinity of the project site;
- Conduct the necessary turning movement counts during the weekday peak traffic periods;
- Estimate site generated trips and distribute them on the roadway network;
- Assess the existing and planned roadway system and land developments in the area;
- Conduct Capacity and Level of Service (LOS) analyses for existing, background and project traffic conditions. Background conditions represent the projected roadway traffic in the expected build out year without the development in place;
- Conduct a traffic impact analysis evaluating the impact of the proposed project on the adjacent roadway system;
- Test various improvement scenarios to satisfy the projected travel demand;
- Make recommendations for improvements to traffic operations, if necessary.

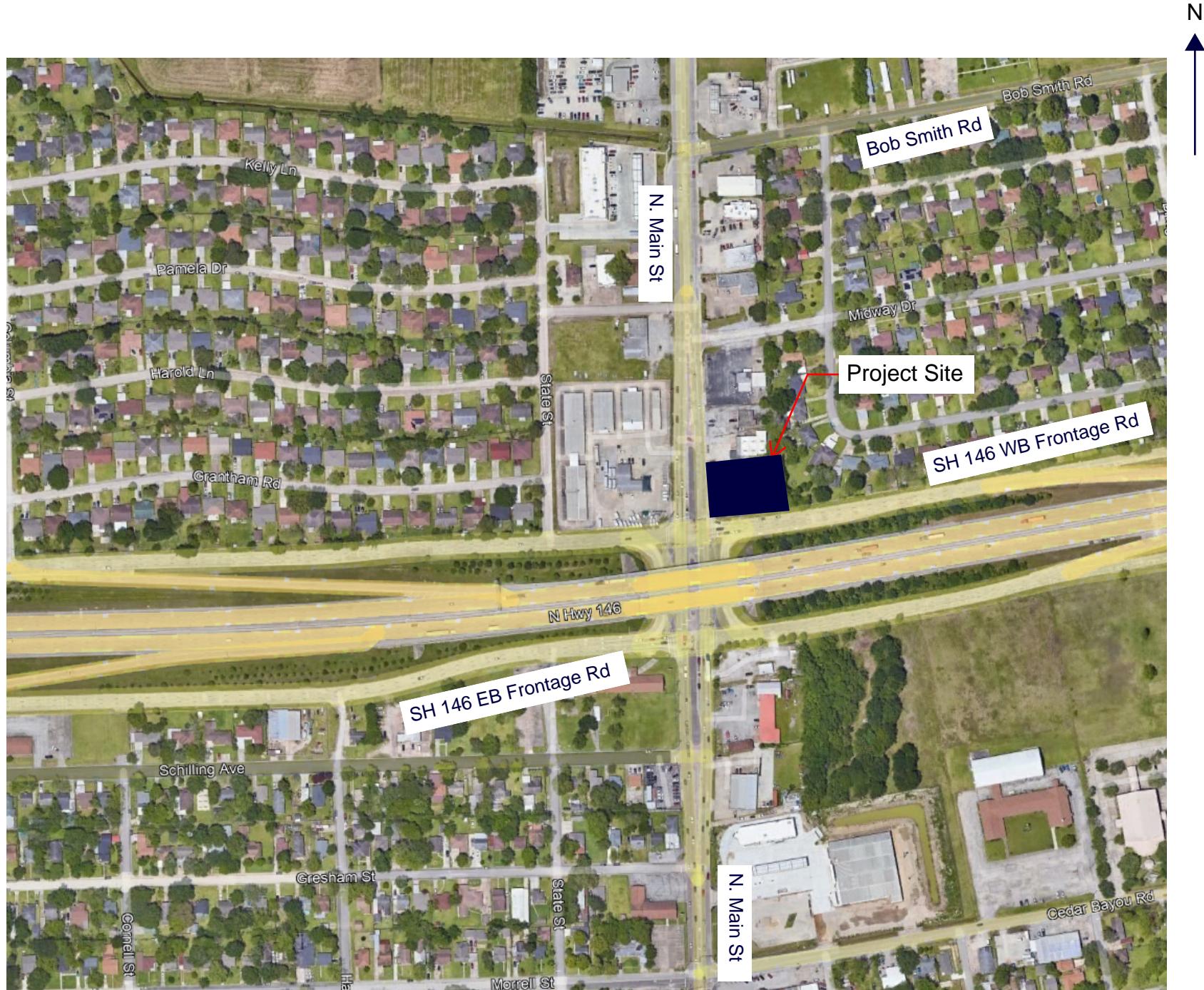


FIGURE 1-1: VICINITY MAP

BENCHMARK INFORMATION

TSARP MON
RM NO. 140035R
ELEVATION = 18.48', NAVD 1988, 2001 ADJ.

TBM "A"

CUT BOX ON INLET
ELEVATION = 22.79' NAVD 1988, 2001 ADJ.

FLOOD INFORMATION

F.I.R.M. NO. 49201C PANEL 0765M
EFFECTIVE DATE 01/06/17 ZONE "X"

LEGEND

	PROPERTY LINE
	BENCHMARK
	PROPOSED C-STORE
	PROPOSED RETAIL SPACE
	PROPOSED PARKING SPACES (9.0' X 19.0' TYP)
	PROPOSED 6'X6'X5'-3' WHEEL STOP-BOLTED INTO PAVING (SEE ARCHITECTURAL DRAWING SHEET A-004)
	PROPOSED ADA PARKING
	PROPOSED UNDERGROUND FUEL TANKS
	PROPOSED 6' MONOLITHIC CONCRETE CURB
	PROPOSED GASOLINE CANOPY
	FUEL PUMP
	U BOLLARDS
	PROPOSED DUMPSTER
	PROPOSED 34 FT WIDE DRIVEWAY-1
	PROPOSED 34 FT WIDE DRIVEWAY-2
	EXISTING SIDEWALK TO REMAIN
	PROPOSED SIDEWALK

PARKING SYNOPSIS			
OCCUPANCY TYPE	PARKING COUNT	REQUIRED	PROVIDED
C-STORE	4,480 / 1,000 X 5	22.4(22)	18
RETAIL SPACE	1,360 / 1,000 X 4	5.5(6)	
GAS CANOPY	10		10
TOTAL		28	28

SUMMARY TABLE	
PROPOSED CONDITION	
I. PERVERIOUS AREA	= 9,220.00 SQ.FT = 25.16%
II. IMPERVIOUS AREA	= 21,592.00 SQ.FT = 56.91%
III. BUILDING AREA	= 5,840.00 SQ.FT = 15.93%
TOTAL AREA	= 36652.00 SQ.FT = 100.0%

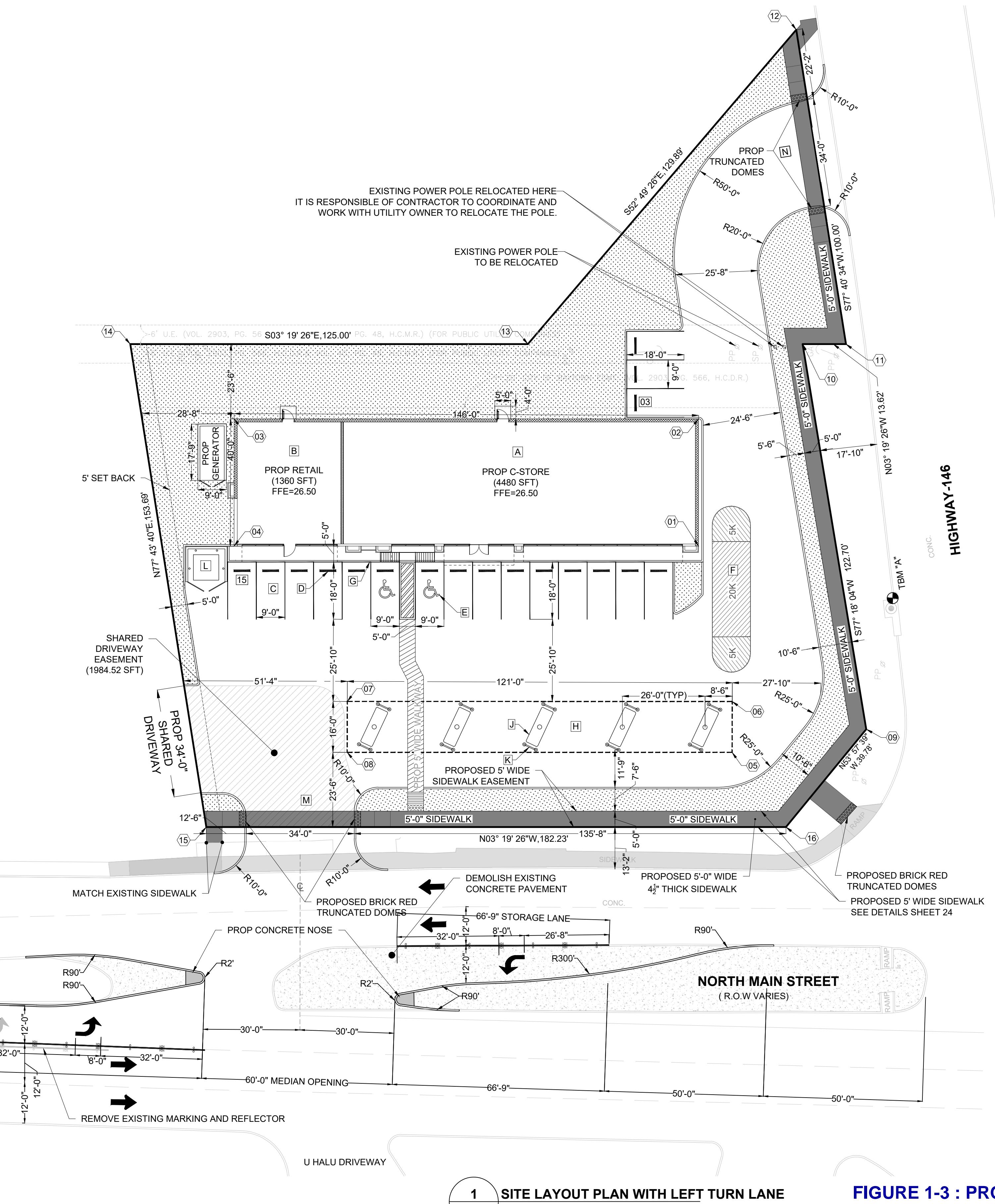
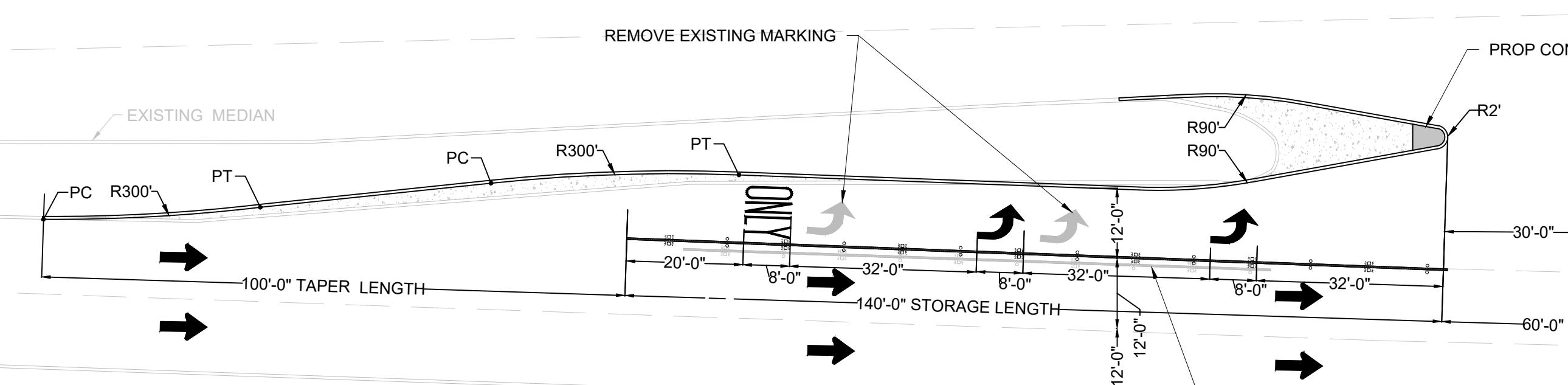
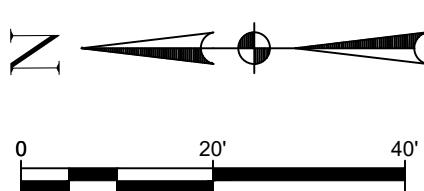


FIGURE 1-3 : PROPOSED LEFT TURN LANE

DWG #	REFERENCE DRAWINGS	REV	DATE:	DESCRIPTION	BY: MI MM GM	DRAWN BY:	CHECKED BY:	ENGINEER:	DATE:	MTS PROJECT NO.:	DRAWING NUMBER: REV.	SHEET 06	PAUSE & GO (BAYTOWN)	2700 N. MAIN STREET	BAYTOWN, TX 77521		MOBILITY TRANSPARENCY SUSTAINABILITY	MTS ENGINEERING & DESIGN
						MI	MM	GM	02/18/2025	24002								
				ISSUED FOR PERMIT														

02/18/2025
Golam Ali, Esq.
02/18/2025



2.0 EXISTING CONDITIONS

A site visit was conducted by MTS to identify the existing conditions, potential issues and type of land uses in the vicinity of the proposed development. The roadways in the vicinity of the proposed site are described in the following section.

Roadways

N. Main Street is generally aligned in a north south direction in the vicinity of the study area. It is generally a four-lane (two lanes in each direction) divided roadway with curb and gutter. The posted speed limit on this road is 40 mph. Direct access to the project site will be provided by N. Main Street. Within the study limits, N. Main Street intersects with Bob Smith Road, SH 146 Westbound Frontage Road and SH 146 Eastbound Frontage Road to form signalized intersections.

SH 146 Westbound Frontage Road is generally a three lane roadway in the westbound direction. There is no posted speed limit sign on this road near the project site. Direct access to the project site will be provided by SH 146 Westbound Frontage Road.

SH 146 Eastbound Frontage Road is generally a three lane roadway in the eastbound direction. The posted speed limit on this road is 45 mph.

Bob Smith Road is generally aligned in an east west direction in the vicinity of the study area. It is generally a two-lane (one lane in each direction) undivided roadway with open ditches. The posted speed limit on this road is 40 mph.

Traffic Counts

A traffic counting program was undertaken by MTS during the month of October 2024, by conducting AM and PM peak period turning movement counts, to obtain the existing weekday peak hour traffic data at the analysis intersections.

AM and PM peak hours turning movement counts were collected for the following study intersections located in the vicinity of the project site:

- N. Main Street at Bob Smith Road;
- N. Main Street at SH 146 Westbound Frontage Road;

- N. Main Street at SH 146 Eastbound Frontage Road.

These volumes were recorded at 15-minute intervals from 6:00 AM to 9:00 AM, 4:00 PM to 7:00 PM during a typical weekday. The existing weekday peak hour intersection traffic data are illustrated in Figure 2-1.

Detailed traffic count spread sheets are included in Appendix A. Existing Signal timing data for the intersection of N. Main Street at Bob Smith Road and the interchange of SH 146 at N. Main Street were obtained from the City of Baytown and included in Appendix B of this report.

3.0 PROJECTED TRAFFIC

Trip Generation

Anticipated AM and PM peak hour trips for the proposed project was projected based on the trip generation procedures recommended by the *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition)* and based on the anticipated operations of the proposed project.

Table 3-1 presents the trip generation summary for the proposed development. Trip generation computations are presented in Appendix C of this report.

Proposed Land Use (ITE Code)	Vehicles Fueling Positions	Gross Floor Area (Sq. feet)	Daily Traffic	AM Peak Enter	AM Peak Exit	PM Peak Enter	PM Peak Exit
Convenience Store/Gas Station (945)	10	4,480	2,651	135	135	114	114
Strip Retail Plaza (822)		1,360	74	2	1	4	5
Pass-By Trips (ITE recommended 76% during AM peak hour and 75% during PM peak hour for Land Use Code 945)				103	103	85	85
Volume added to the adjacent streets				34	33	33	34

Table 3-1: Trip generation for the proposed development

Background Traffic, Year 2025

The background traffic condition is defined as the condition of traffic at the time of project implementation, without the trips from the proposed project. The background traffic volumes for the analysis intersections were estimated to the Year 2025 by applying a 2 percent compound annual growth rate. This rate was established based on historical annual average daily traffic data near the project site. The AM and PM background traffic volumes for the study intersections are illustrated in the same Figure 2-1.

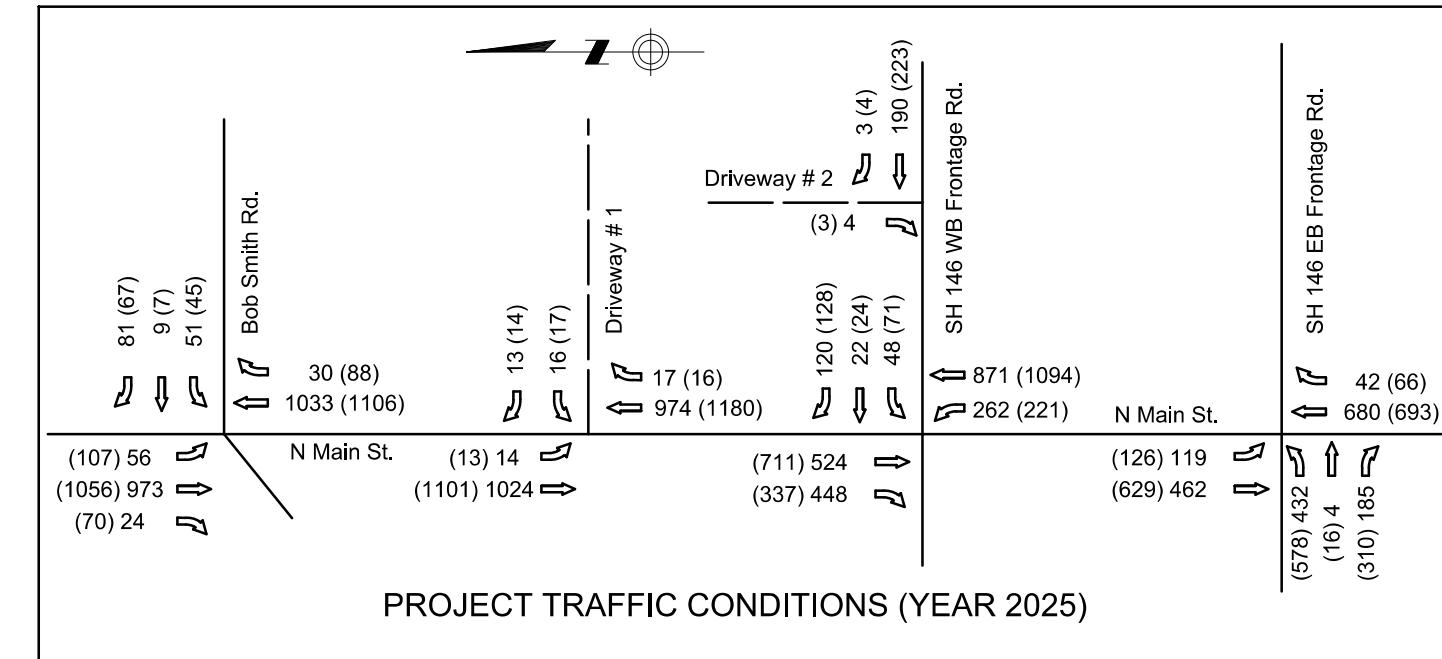
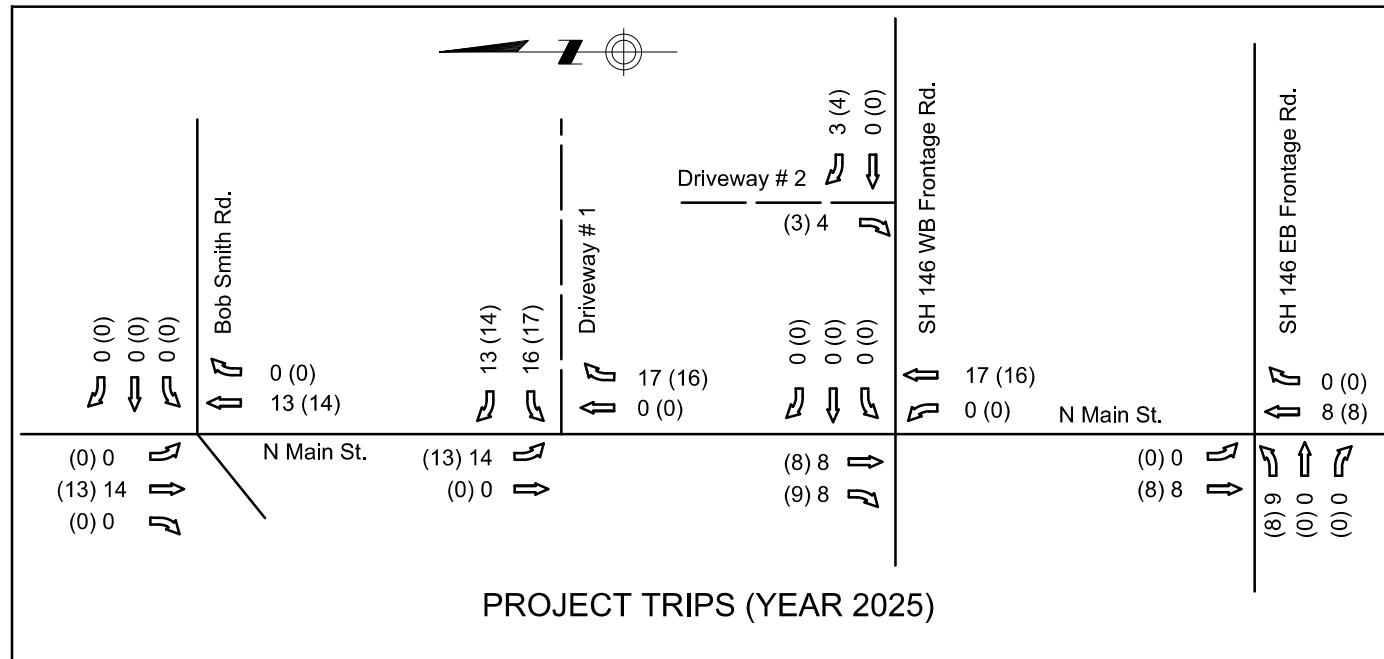
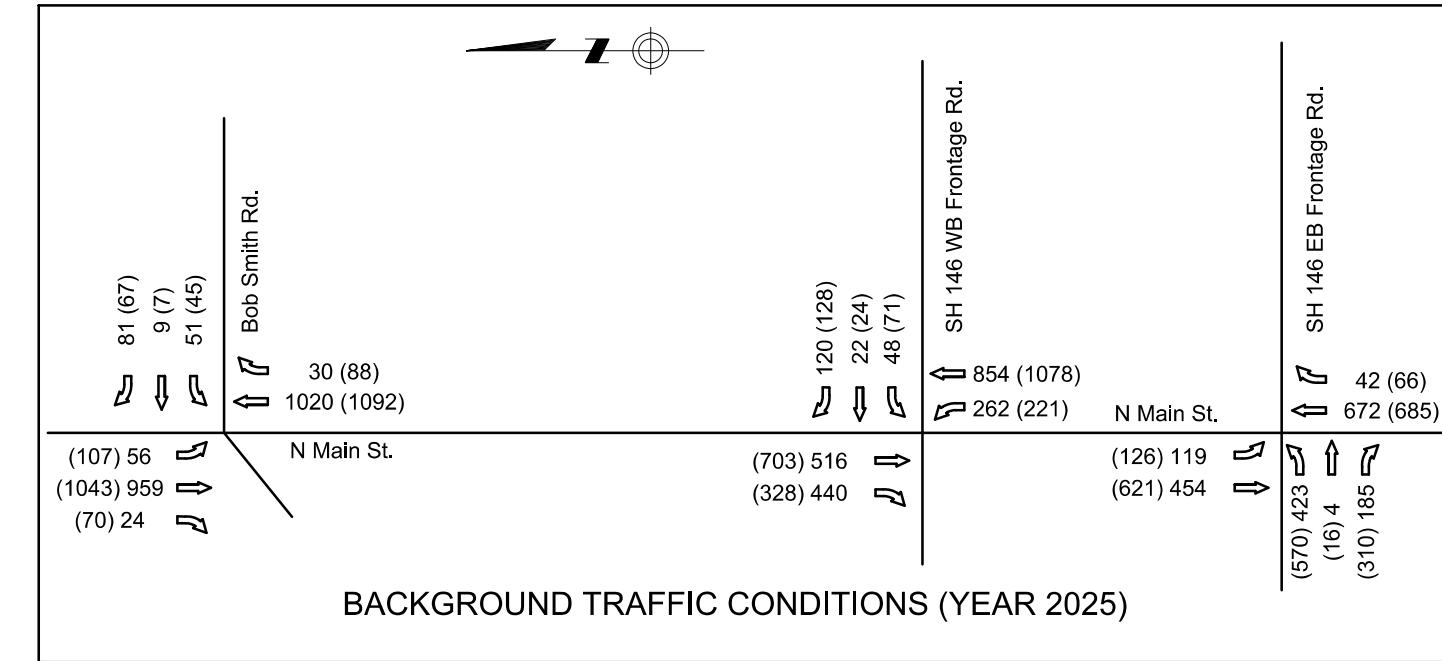
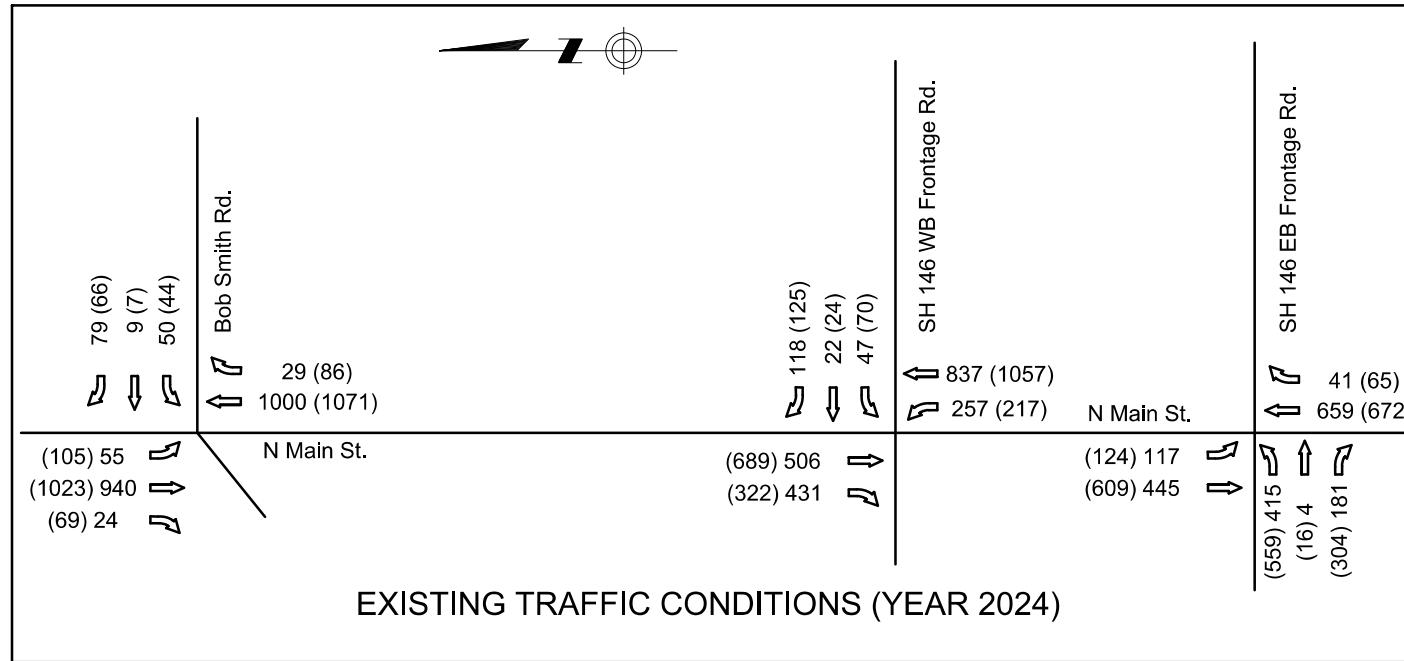
Trip Distribution and Assignment

The estimated trips generated by the proposed development were distributed to the existing and the proposed roadway network in similar proportions, as are the existing traffic patterns. Traffic distribution to and from the new development takes into consideration all possible logical routes, which drivers may take to enter and exit the proposed development.

For the project trips during AM and PM peak hours, it was assumed that 40 percent of the project trips will arrive from southbound N. Main Street, 10 percent from westbound SH 146 Westbound Frontage Road, 25 percent arrive from northbound N. Main Street and the remaining 25 percent from eastbound SH 146 Eastbound Frontage Road. It was also assumed that project traffic will be exiting from the development in a similar fashion as entering. All traffic generated by the proposed development would utilize Driveway # 1, and Driveway # 2 for entering and exiting purposes. The anticipated traffic assignments for the AM and PM peak hours are presented in the same Figure 2-1.

Project Traffic Conditions, Year 2025

The AM and PM peak-hour trip assignments for the project were added to the background (Year 2025) traffic volumes to obtain traffic volumes representing AM and PM peak hour project traffic conditions for the Year 2025. The AM and PM peak hour project condition traffic volumes, for the Year 2025, are presented in the same Figure 2-1.



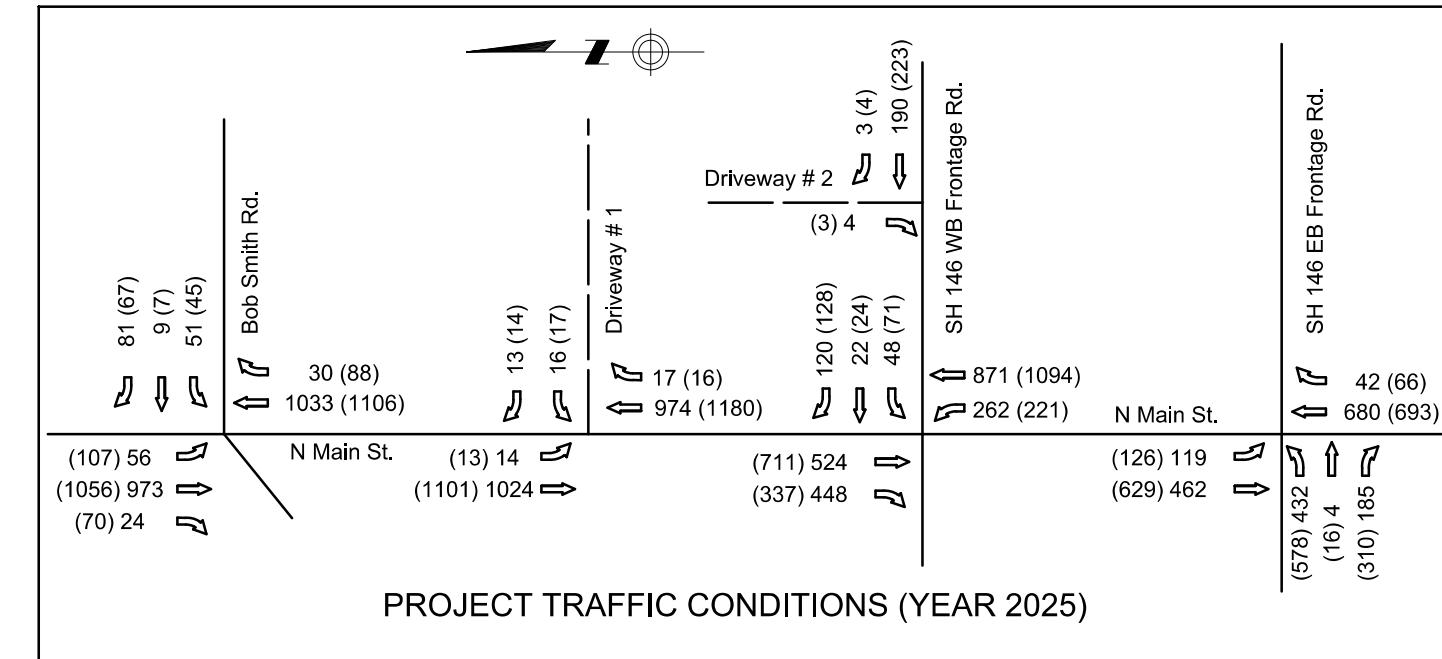
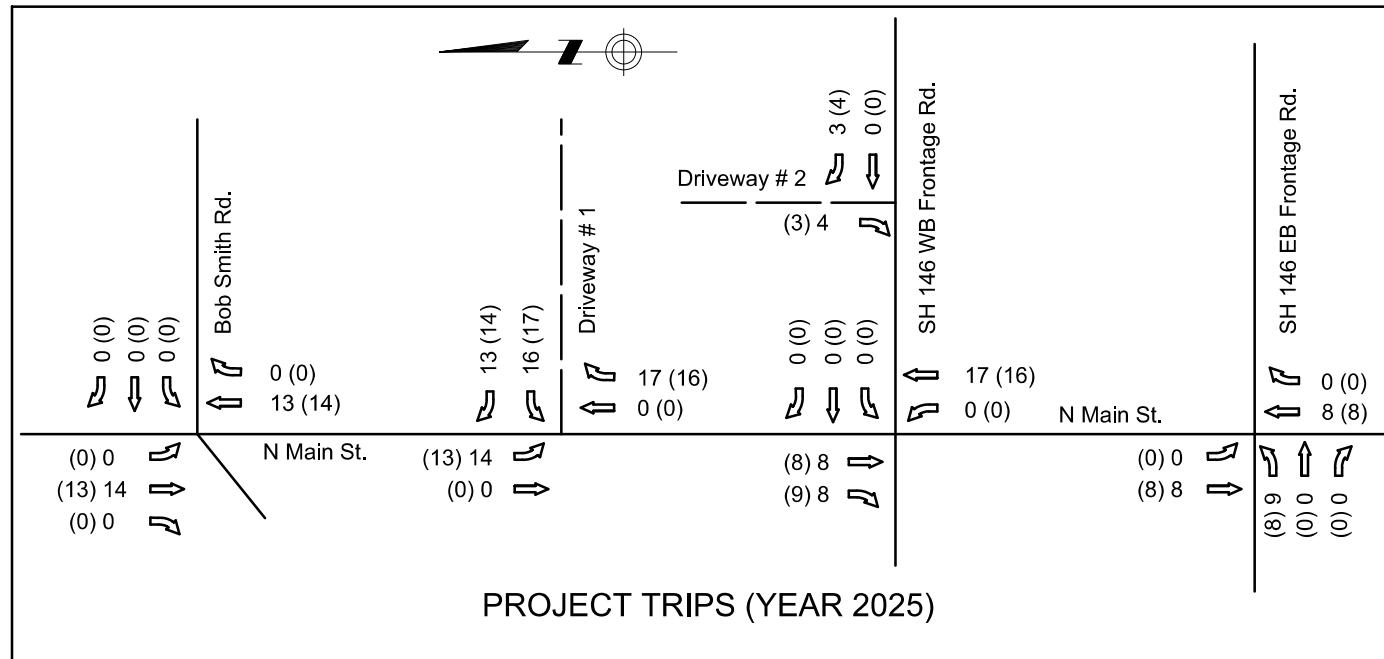
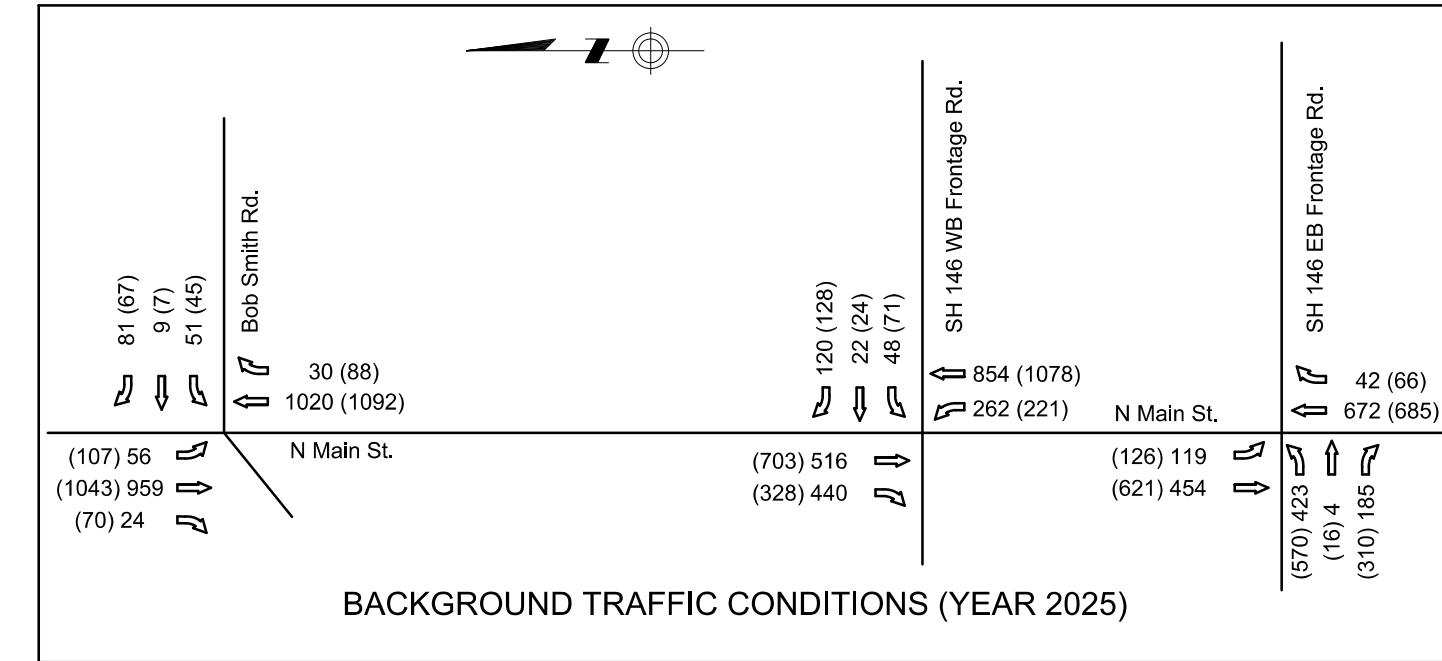
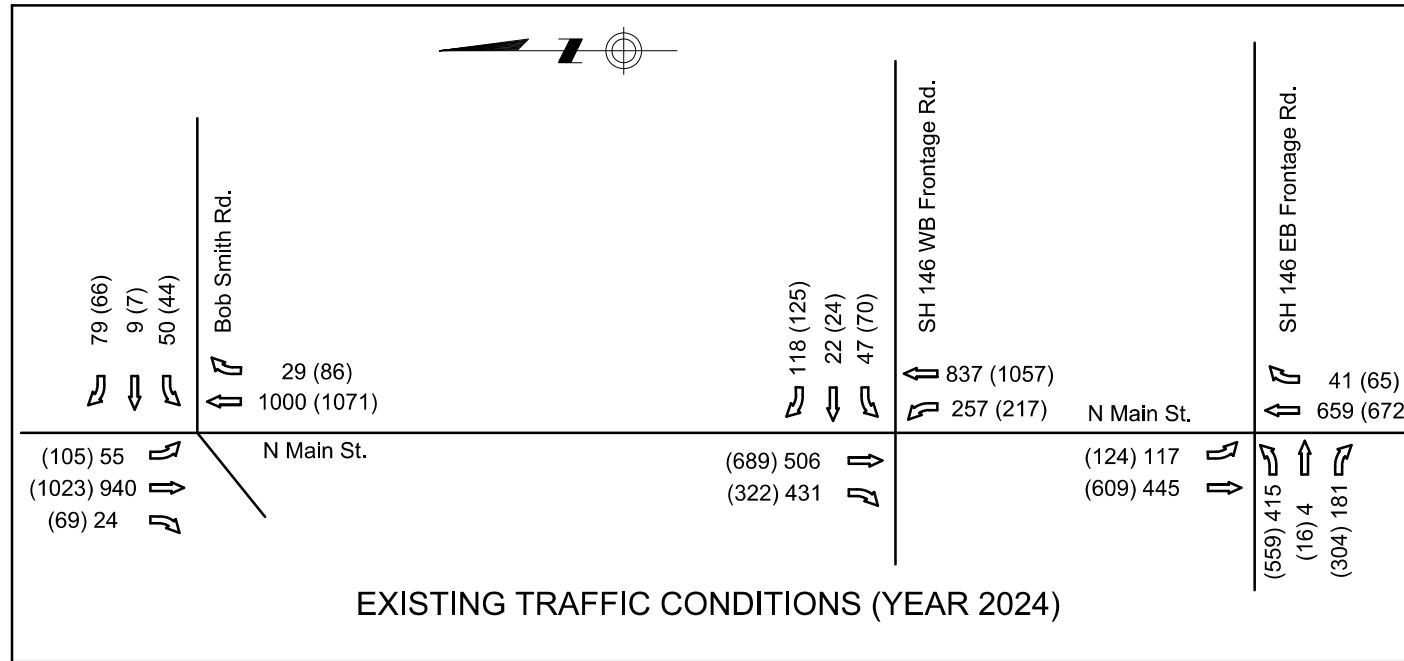
XXX - AM PEAK HOUR TRAFFIC VOLUMES

(XXX) - PM PEAK HOUR TRAFFIC VOLUMES

NOT TO SCALE

TRAFFIC IMPACT ANALYSIS STUDY - PROPOSED C-STORE DEV.

FIGURE 2-1: TRAFFIC VOLUME DATA



34*0.4 (33*0.4)
33 (34)

XXX - AM PEAK HOUR TRAFFIC VOLUMES

(XXX) - PM PEAK HOUR TRAFFIC VOLUMES

NOT TO SCALE

TRAFFIC IMPACT ANALYSIS STUDY - PROPOSED C-STORE DEV.

FIGURE 2-1: TRAFFIC VOLUME DATA

4.0 TRAFFIC ANALYSIS

Level of Service (LOS) Definitions

The concept of Level of Service (LOS) is commonly used to determine the operating conditions of an intersection or a roadway segment. Level of service (LOS), ranging from LOS A to LOS F, is a qualitative measure describing driver satisfaction with a number of factors that influence the degree of traffic congestion. These factors include speed and travel time, traffic interruption, freedom to maneuver, safety, driving comfort and convenience, and delays. Level of Service A, which is the highest level of service, describes a condition of free flow with low volumes. Under LOS A, there is little or no restriction in maneuverability due to the presence of other vehicles and drivers can maintain their desired speeds with little or no delay. LOS C and often LOS D are used for the optimal design of roadway facilities. Level of Service E is defined as the actual capacity of the roadway and involves delay to all motorists due to congestion. Level of Service F, the lowest level of service, is described as forced flow and is characterized by volumes greater than the roadway capacity, severe congestion, stop and go conditions on roadway segments and long backups on approaches to signalized intersections. Levels of service for intersections are defined in terms of average delay per vehicle. For this traffic impact analysis study, LOS D is considered the highest acceptable level of service.

Tables showing the LOS criteria in terms of delay range for signalized and unsignalized intersections are included in Appendix C.

Analysis Tool

In order to evaluate the existing quality of traffic flow and to determine if improvements are necessary, capacity and LOS analysis were performed based on the procedures contained in Highway Capacity Manual (HCM), 6th edition. The input data for these analyses included existing/proposed roadway geometric features, existing/ proposed traffic control at the intersections and peak hour traffic volumes. The analysis software tool SYNCHRO was utilized in this study. It is a macroscopic traffic signal timing tool that is widely used to optimize signal-timing parameters for signalized intersection and generate coordinated traffic signal timing plans for arterials and networks.

Analysis Results

Capacity and LOS analyses were performed for the following conditions during the weekday AM and PM peak hours:

- Existing Conditions, Year 2024- based on existing traffic volumes and existing roadway geometries.
- Background Conditions, Year 2025 - In this Condition, it was assumed that all the existing roadway geometrics and traffic controls within the study network will remain as is and no development takes place. The trip numbers used for analyses are based on the projected traffic volumes. This is the base Condition that provides the basis against which all other Conditions are compared. It gives an idea of how the background traffic will function if no development takes place.
- Project Traffic Conditions, Year 2025 - In this Condition, it was assumed that the proposed development is in place with no improvements to the existing roadway network as well as traffic controls. The trip numbers used for analyses are based on projected traffic volumes plus the project trips. All proposed access driveways are assumed as one lane entering/one lane exiting with stop sign on each driveway approach. A southbound left turn lane storage with necessary median opening modification has been assumed along N. Main Street at Driveway # 1.

A summary of all analysis results is presented in Tables 4-1 and 4-2 for weekday AM and PM peak hours, respectively. Detailed Level of Service analyses, for the study intersections, are included in Appendix D of this report.

Study Intersections	AM Peak Hour					
	2024 Existing		2025 Background		2025 Project Traffic	
	Delay	LOS	Delay	LOS	Delay	LOS
Existing Signalized Intersections						
N. Main St at Bob Smith Rd	Intersection	8.2	A	8.3	A	8.3
N. Main St at SH 146 WB Frontage Rd	Intersection	16.8	B	17.2	B	17.4
N. Main St at SH 146 EB Frontage Rd	Intersection	71.2	E	73.9	E	76.1
Proposed Unsignalized Intersections						
N. Main St at Driveway # 1	WB	N/A	N/A	N/A	N/A	19.7
N. Main St at Driveway # 2	SB	N/A	N/A	N/A	N/A	9.6

Table 4-1: Summary of analysis results for AM peak hour

Study Intersections	PM Peak Hour					
	2024 Existing		2025 Background		2025 Project Traffic	
	Delay	LOS	Delay	LOS	Delay	LOS
Existing Signalized Intersections						
N. Main St at Bob Smith Rd	Intersection	8.8	A	9.4	A	9.5
N. Main St at SH 146 WB Frontage Rd	Intersection	19.7	B	20.3	C	20.6
N. Main St at SH 146 EB Frontage Rd	Intersection	144.6	F	151.2	F	155.1
Proposed Unsignalized Intersections						
N. Main St at Driveway # 1	WB	N/A	N/A	N/A	N/A	24.2
N. Main St at Driveway # 2	SB	N/A	N/A	N/A	N/A	9.7

Table 4-2: Summary of analysis results for PM peak hour

As shown in Table 4-1, all the analysis intersections are presently operating at acceptable level of service of C or better except the intersection of SH 146 Eastbound Frontage Road at N. Main Street. The intersection of SH 146 Eastbound Frontage Road at N. Main Street is currently operating at LOS E during AM peak hour and LOS F during PM peak hour. Under 2025 Background traffic conditions, this intersection is anticipated to operate at LOS E during AM peak hour and LOS F during PM peak hour. Therefore, no mitigations are proposed under 2025 project traffic conditions at this intersection. Under 2025 project traffic conditions, all other intersections including both access driveway intersections are anticipated to operate at acceptable LOS.

Right Turn Deceleration Lane Warrant Analysis

A westbound right turn deceleration lane warrant analysis was conducted based on the anticipated right turn traffic volumes from SH 146 Westbound Frontage Road to Driveway # 2. The analysis was performed based on the guidelines specified in the TxDOT's Access Management Manual (latest edition). A westbound right turn deceleration lane is not warranted along SH 146 Westbound Frontage Road at Driveway # 2.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Field investigation, traffic data, and traffic engineering analyses assisted in developing the existing and projected roadway conditions and traffic operations in the study network. The anticipated trips generated by the proposed project were estimated and evaluated based on guidelines developed by the Institute of Transportation Engineers. Trip distribution and traffic assignments were conducted based on existing traffic patterns and travel characteristics. Capacity and LOS analyses were conducted for the study intersections under various conditions during AM and PM peak hours. Based on the analyses, the proposed development is expected not to have any major impacts to the traffic operations in the study area.

Proposed Recommendations

- Configure Driveway # 1 and Driveway # 2 as one lane entering and one lane exiting.
- Configure Driveway # 2 as right in right out only. Driveway # 1 will serve as full access driveway.
- Provide a southbound left turn storage and a northbound left turn storage along N. Main Street at Driveway # 1. This may require modifications to existing median opening along N. Main Street as shown in Figure 1-3.
- Install appropriate signs and pavement markings necessitated by the proposed driveways and roadway modifications. These should be in accordance with City of Baytown, TxDOT and TMUTCD guidelines and standards.

Appendix A
EXISTING TRAFFIC COUNTS

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					SH 146 EBFR Westbound					N Main St Northbound					SH 146 EBFR Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 6:00AM	0	22	4	0	26	0	0	0	0	0	0	0	9	55	0	0	64	0	22	1	58	7	88	0	178
6:15AM	0	43	10	0	53	0	0	0	0	1	1	0	8	83	0	0	91	0	34	2	53	5	94	0	239
6:30AM	0	52	5	0	57	0	0	0	0	1	1	1	4	106	0	0	110	0	25	0	85	6	116	0	284
6:45AM	0	79	15	0	94	0	0	0	0	0	0	0	6	157	0	0	163	0	39	4	110	1	154	0	411
Hourly Total	0	196	34	0	230	0	0	0	0	2	2	1	27	401	0	0	428	0	120	7	306	19	452	0	1112
7:00AM	0	92	26	0	118	0	0	0	0	0	0	0	9	185	0	0	194	0	29	1	120	9	159	1	471
7:15AM	0	132	39	0	171	0	0	0	0	2	2	0	12	172	0	0	184	0	37	1	81	14	133	0	490
7:30AM	0	121	23	0	144	0	0	0	0	3	3	2	8	155	0	0	163	0	58	0	101	12	171	0	481
7:45AM	0	100	29	0	129	0	0	0	0	3	3	0	12	147	0	0	159	0	57	2	113	4	176	0	467
Hourly Total	0	445	117	0	562	0	0	0	0	8	8	2	41	659	0	0	700	0	181	4	415	39	639	1	1909
8:00AM	0	93	18	0	111	0	0	0	0	3	3	0	6	116	0	0	122	0	32	1	60	12	105	1	341
8:15AM	0	96	27	0	123	0	0	0	0	5	5	1	8	99	0	0	107	0	46	1	57	10	114	0	349
8:30AM	0	94	20	0	114	0	0	0	0	1	1	0	10	111	0	0	121	0	31	0	58	9	98	3	334
8:45AM	0	102	13	0	115	0	0	0	0	1	1	0	15	120	0	0	135	0	37	2	48	6	93	0	344
Hourly Total	0	385	78	0	463	0	0	0	0	10	10	1	39	446	0	0	485	0	146	4	223	37	410	4	1368
4:00PM	0	148	22	0	170	0	0	0	0	1	1	0	5	133	0	0	138	0	92	2	123	14	231	0	540
4:15PM	0	150	38	0	188	0	0	0	0	3	3	0	10	157	0	0	167	0	80	4	122	16	222	0	580
4:30PM	0	138	35	0	173	0	0	0	0	0	0	0	17	184	0	0	201	0	71	3	134	17	225	0	599
4:45PM	0	160	22	0	182	0	0	0	0	2	2	1	10	181	0	0	191	0	66	5	113	13	197	0	572
Hourly Total	0	596	117	0	713	0	0	0	0	6	6	1	42	655	0	0	697	0	309	14	492	60	875	0	2291
5:00PM	0	159	36	0	195	0	0	0	0	2	2	1	23	193	0	0	216	0	79	6	156	25	266	0	679
5:15PM	0	152	39	0	191	0	0	0	0	1	1	0	10	161	0	0	171	0	83	5	160	22	270	0	633
5:30PM	0	135	26	0	161	0	0	0	0	2	2	0	22	158	0	0	180	0	74	3	136	19	232	0	575
5:45PM	0	163	23	0	186	0	0	0	0	4	4	0	10	160	0	0	170	0	68	2	107	24	201	0	561
Hourly Total	0	609	124	0	733	0	0	0	0	9	9	1	65	672	0	0	737	0	304	16	559	90	969	0	2448
6:00PM	0	159	40	0	199	0	0	0	0	2	2	0	16	157	0	0	173	0	76	4	130	19	229	1	603
6:15PM	0	149	17	0	166	0	0	0	0	1	1	0	15	132	0	0	147	0	70	3	110	12	195	0	509
6:30PM	0	124	18	0	142	0	0	0	0	1	1	1	14	138	0	0	152	0	54	3	111	15	183	1	478
6:45PM	0	162	20	0	182	0	0	0	0	1	1	1	6	139	0	0	145	0	60	3	80	8	151	0	479
Hourly Total	0	594	95	0	689	0	0	0	0	5	5	2	51	566	0	0	617	0	260	13	431	54	758	2	2069
Total	0	2825	565	0	3390	0	0	0	0	40	40	8	265	3399	0	0	3664	0	1320	58	2426	299	4103	7	11197
% Approach	0%	83.3%	16.7%	0%	-	-	0%	0%	0%	100%	-	-	7.2%	92.8%	0%	0%	-	-	32.2%	1.4%	59.1%	7.3%	-	-	-
% Total	0%	25.2%	5.0%	0%	30.3%	-	0%	0%	0%	0.4%	0.4%	-	2.4%	30.4%	0%	0%	32.7%	-	11.8%	0.5%	21.7%	2.7%	36.6%	-	-
Lights	0	2773	557	0	3330	-	0	0	0	40	40	-	258	3313	0	0	3571	-	1289	58	2363	293	4003	-	10944
% Lights	0%	98.2%	98.6%	0%	98.2%	-	0%	0%	0%	100%	100%	-	97.4%	97.5%	0%	0%	97.5%	-	97.7%	100%	97.4%	98.0%	97.6%	-	97.7%
Articulated Trucks	0	4	0	0	4	-	0	0	0	0	0	-	1	4	0	0	5	-	11	0	13	2	26	-	35
% Articulated Trucks	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0.4%	0.1%	0%	0%	0.1%	-	0.8%	0%	0.5%	0.7%	0.6%	-	0.3%
Buses and Single-Unit Trucks	0	48	8	0	56	-	0	0	0	0	0	-	6	82	0	0	88	-	20	0	50	4	74	-	218
% Buses and Single-Unit Trucks	0%	1.7%	1.4%	0%	1.7%	-	0%	0%	0%	0%	0%	-	2.3%	2.4%	0%	0%	2.4%	-	1.5%	0%	2.1%	1.3%	1.8%	-	1.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-25.0%	-	-	-	-	-	-	-	-	-	-	-	-100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-75.0%	-	-	-	-	-	-	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] N Main St

Total: 9215

In: 3390 Out: 5825

2825
565

[W] SH 146 EBFR
Total: 4402
In: 4103 Out: 299

299
2426
58
1320
1

[E] SH 146 EBFR
Out: 928 In: 40
Total: 968

Out: 4145 In: 3664

Total: 7809

[S] N Main St

3399
265

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					SH 146 EBFR Westbound					N Main St Northbound					SH 146 EBFR Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 7:00AM	0	92	26	0	118	0	0	0	0	0	0	0	9	185	0	0	194	0	29	1	120	9	159	1	471
7:15AM	0	132	39	0	171	0	0	0	0	2	2	0	12	172	0	0	184	0	37	1	81	14	133	0	490
7:30AM	0	121	23	0	144	0	0	0	0	3	3	2	8	155	0	0	163	0	58	0	101	12	171	0	481
7:45AM	0	100	29	0	129	0	0	0	0	3	3	0	12	147	0	0	159	0	57	2	113	4	176	0	467
Total	0	445	117	0	562	0	0	0	0	8	8	2	41	659	0	0	700	0	181	4	415	39	639	1	1909
% Approach	0%	79.2%	20.8%	0%	-	-	0%	0%	0%	100%	-	-	5.9%	94.1%	0%	0%	-	-	28.3%	0.6%	64.9%	6.1%	-	-	-
% Total	0%	23.3%	6.1%	0%	29.4%	-	0%	0%	0%	0.4%	0.4%	-	2.1%	34.5%	0%	0%	36.7%	-	9.5%	0.2%	21.7%	2.0%	33.5%	-	-
PHF	-	0.843	0.750	-	0.822	-	-	-	0.667	0.667	-	0.854	0.891	-	-	0.902	-	0.780	0.500	0.865	0.696	0.908	-	0.974	
Lights	0	436	114	0	550	-	0	0	0	8	8	-	37	627	0	0	664	-	172	4	399	38	613	-	1835
% Lights	0%	98.0%	97.4%	0%	97.9%	-	0%	0%	0%	100%	100%	-	90.2%	95.1%	0%	0%	94.9%	-	95.0%	100%	96.1%	97.4%	95.9%	-	96.1%
Articulated Trucks	0	2	0	0	2	-	0	0	0	0	0	-	1	1	0	0	2	-	4	0	4	0	8	-	12
% Articulated Trucks	0%	0.4%	0%	0%	0.4%	-	0%	0%	0%	0%	0%	-	2.4%	0.2%	0%	0%	0.3%	-	2.2%	0%	1.0%	0%	1.3%	-	0.6%
Buses and Single-Unit Trucks	0	7	3	0	10	-	0	0	0	0	0	-	3	31	0	0	34	-	5	0	12	1	18	-	62
% Buses and Single-Unit Trucks	0%	1.6%	2.6%	0%	1.8%	-	0%	0%	0%	0%	0%	-	7.3%	4.7%	0%	0%	4.9%	-	2.8%	0%	2.9%	2.6%	2.8%	-	3.2%
Pedestrians	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1		
% Pedestrians	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	100%		
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	0%		

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] N Main St

Total: 1636

In: 562

Out: 1074

445
117

[W] SH 146 EBFR
Total: 678
In: 639 Out: 39

1
39
415
4
181



Out: 626 In: 700

Total: 1326

[S] N Main St

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound				SH 146 EBFR Westbound				N Main St Northbound				SH 146 EBFR Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 4:30PM	0	138	35	0	173	0	0	0	0	0	0	0	17	184	0	0	201	0	599
4:45PM	0	160	22	0	182	0	0	0	0	2	2	1	10	181	0	0	191	0	572
5:00PM	0	159	36	0	195	0	0	0	0	2	2	1	23	193	0	0	216	0	679
5:15PM	0	152	39	0	191	0	0	0	0	1	1	0	10	161	0	0	171	0	633
Total	0	609	132	0	741	0	0	0	0	5	5	2	60	719	0	0	779	0	2483
% Approach	0%	82.2%	17.8%	0%	-	-	0%	0%	0%	100%	-	-	7.7%	92.3%	0%	0%	-	-	-
% Total	0%	24.5%	5.3%	0%	29.8%	-	0%	0%	0%	0.2%	0.2%	-	2.4%	29.0%	0%	0%	31.4%	-	-
PHF	-	0.952	0.846	-	0.950	-	-	-	-	0.625	0.625	-	0.652	0.931	-	-	0.902	-	0.914
Lights	0	605	129	0	734	-	0	0	0	5	5	-	60	707	0	0	767	-	2446
% Lights	0%	99.3%	97.7%	0%	99.1%	-	0%	0%	0%	100%	100%	-	100%	98.3%	0%	0%	98.5%	-	98.5%
Articulated Trucks	0	1	0	0	1	-	0	0	0	0	0	-	0	1	0	0	1	-	8
% Articulated Trucks	0%	0.2%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0.3%
Buses and Single-Unit Trucks	0	3	3	0	6	-	0	0	0	0	0	-	0	11	0	0	11	-	29
% Buses and Single-Unit Trucks	0%	0.5%	2.3%	0%	0.8%	-	0%	0%	0%	0%	0%	-	0%	1.5%	0%	0%	1.4%	-	1.2%
Pedestrians	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	2	-	-	-	-	-	0	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

1. N Main St at SH 146 EBFR - TMC

Wed Oct 2, 2024

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230227, Location: 29.74999, -94.963811

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

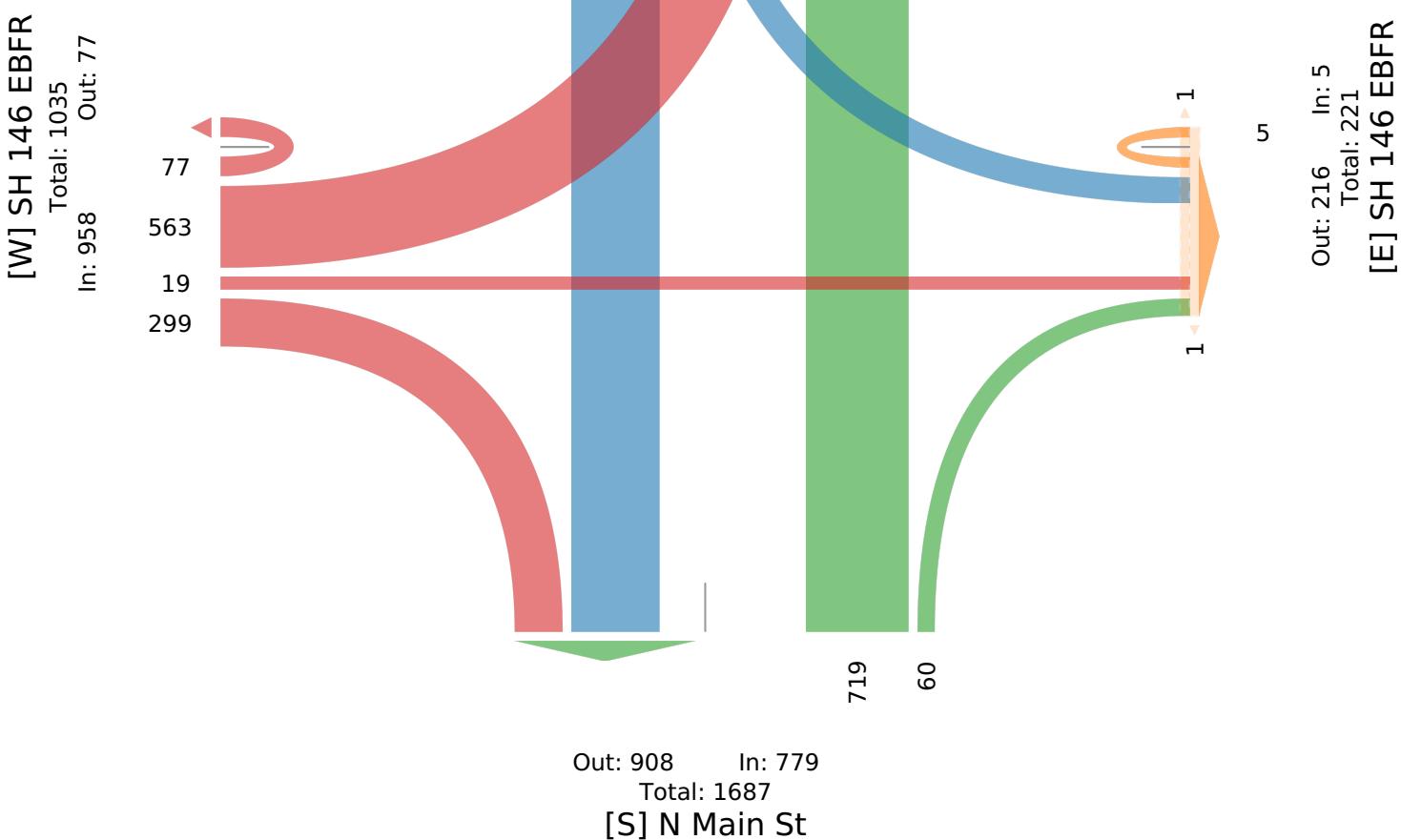
[N] N Main St

Total: 2023

In: 741 Out: 1282

609

132



2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					SH 146 WBFR Westbound					N Main St Northbound					SH 146 WBFR Eastbound										
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int	
2024-10-02 6:00AM	89	23	0	0	112	0	14	9	3	0	26	0	0	91	31	0	122	0	0	0	0	6	6	0	266	
6:15AM	99	46	0	0	145	0	16	4	5	0	25	0	0	78	53	0	131	0	0	0	0	4	4	0	305	
6:30AM	88	54	0	0	142	0	12	2	4	0	18	1	0	145	54	0	199	0	0	0	0	5	5	0	364	
6:45AM	102	83	0	0	185	0	19	7	5	0	31	0	0	211	53	0	264	0	0	0	0	1	1	0	481	
Hourly Total	378	206	0	0	584	0	61	22	17	0	100	1	0	525	191	0	716	0	0	0	0	16	16	0	1416	
7:00AM	134	106	0	0	240	0	29	6	9	0	44	0	0	232	74	0	306	0	0	0	0	9	9	1	599	
7:15AM	117	159	0	0	276	0	28	3	10	0	41	0	0	186	71	0	257	0	0	0	0	13	13	0	587	
7:30AM	83	128	0	0	211	0	21	8	15	0	44	2	0	199	65	0	264	0	0	0	0	11	11	0	530	
7:45AM	97	113	0	0	210	0	40	5	13	0	58	0	0	220	47	0	267	0	0	0	0	6	6	1	541	
Hourly Total	431	506	0	0	937	0	118	22	47	0	187	2	0	837	257	0	1094	0	0	0	0	39	39	2	2257	
8:00AM	77	107	0	0	184	0	31	8	7	0	46	0	0	131	48	0	179	0	0	0	0	11	11	0	420	
8:15AM	70	102	0	1	173	0	32	5	9	0	46	1	0	117	41	0	158	0	0	0	0	10	10	0	387	
8:30AM	68	100	0	0	168	0	26	2	10	0	38	0	0	115	44	0	159	0	0	0	0	9	9	0	374	
8:45AM	54	101	0	0	155	0	27	6	14	0	47	0	0	137	39	0	176	0	0	0	0	6	6	0	384	
Hourly Total	269	410	0	1	680	0	116	21	40	0	177	1	0	500	172	0	672	0	0	0	0	36	36	0	1565	
4:00PM	70	155	0	0	225	0	26	3	13	0	42	1	0	206	47	0	253	0	0	0	0	14	14	0	534	
4:15PM	77	174	0	0	251	0	37	5	11	0	53	0	0	239	45	0	284	0	0	0	0	16	16	0	604	
4:30PM	87	149	0	0	236	0	31	11	18	0	60	0	0	259	53	0	312	0	0	0	0	16	16	0	624	
4:45PM	76	161	0	0	237	0	30	11	18	0	59	1	0	222	53	0	275	0	0	0	0	15	15	0	586	
Hourly Total	310	639	0	0	949	0	124	30	60	0	214	2	0	926	198	0	1124	0	0	0	0	61	61	0	2348	
5:00PM	79	179	0	0	258	0	39	7	15	0	61	1	0	288	73	0	361	0	0	0	0	25	25	0	705	
5:15PM	66	174	0	0	240	0	30	3	21	0	54	0	0	280	47	0	327	0	0	0	0	21	21	0	642	
5:30PM	98	154	0	0	252	0	26	4	19	0	49	0	0	274	41	0	315	0	0	0	0	20	20	0	636	
5:45PM	79	182	0	0	261	0	30	10	15	0	55	0	0	215	56	0	271	0	0	0	0	23	23	0	610	
Hourly Total	322	689	0	0	1011	0	125	24	70	0	219	1	0	1057	217	0	1274	0	0	0	0	89	89	0	2593	
6:00PM	49	173	0	0	222	0	27	4	22	0	53	0	0	236	45	0	281	0	0	0	0	21	21	1	577	
6:15PM	61	142	0	0	203	0	32	8	22	0	62	0	0	218	35	0	253	0	0	0	0	12	12	0	530	
6:30PM	63	122	0	0	185	0	17	4	14	0	35	1	0	201	52	0	253	0	0	0	0	14	14	1	487	
6:45PM	74	162	0	0	236	0	22	6	23	0	51	1	0	189	42	0	231	0	0	0	0	7	7	0	525	
Hourly Total	247	599	0	0	846	0	98	22	81	0	201	2	0	844	174	0	1018	0	0	0	0	54	54	2	2119	
Total	1957	3049	0	1	5007	0	642	141	315	0	1098	9	0	4689	1209	0	5898	0	0	0	0	295	295	4	12298	
% Approach	39.1%	60.9%	0%	0%	-	-	58.5%	12.8%	28.7%	0%	-	-	0%	79.5%	20.5%	0%	-	-	0%	0%	0%	100%	-	-	-	-
% Total	15.9%	24.8%	0%	0%	40.7%	-	5.2%	1.1%	2.6%	0%	8.9%	-	0%	38.1%	9.8%	0%	48.0%	-	0%	0%	0%	2.4%	2.4%	-	-	
Lights	1887	2998	0	1	4886	-	630	134	309	0	1073	-	0	4572	1180	0	5752	-	0	0	0	289	289	-	12000	
% Lights	96.4%	98.3%	0%	100%	97.6%	-	98.1%	95.0%	98.1%	0%	97.7%	-	0%	97.5%	97.6%	0%	97.5%	-	0%	0%	0%	98.0%	98.0%	-	97.6%	
Articulated Trucks	13	3	0	0	16	-	1	1	0	0	2	-	0	15	5	0	20	-	0	0	0	2	2	-	40	
% Articulated Trucks	0.7%	0.1%	0%	0%	0.3%	-	0.2%	0.7%	0%	0%	0.2%	-	0%	0.3%	0.4%	0%	0.3%	-	0%	0%	0%	0.7%	0.7%	-	0.3%	
Buses and Single-Unit Trucks	57	48	0	0	105	-	11	6	6	0	23	-	0	102	24	0	126	-	0	0	0	4	4	-	258	
% Buses and Single-Unit Trucks	2.9%	1.6%	0%	0%	2.1%	-	1.7%	4.3%	1.9%	0%	2.1%	-	0%	2.2%	2.0%	0%	2.1%	-	0%	0%	0%	1.4%	1.4%	-	2.1%	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	33.3%	-	-	-	-	-	-	-	-	-	-	-	-	75.0%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	1	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	66.7%	-	-	-	-	-	-	-	-	-	-	-	-	25.0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841

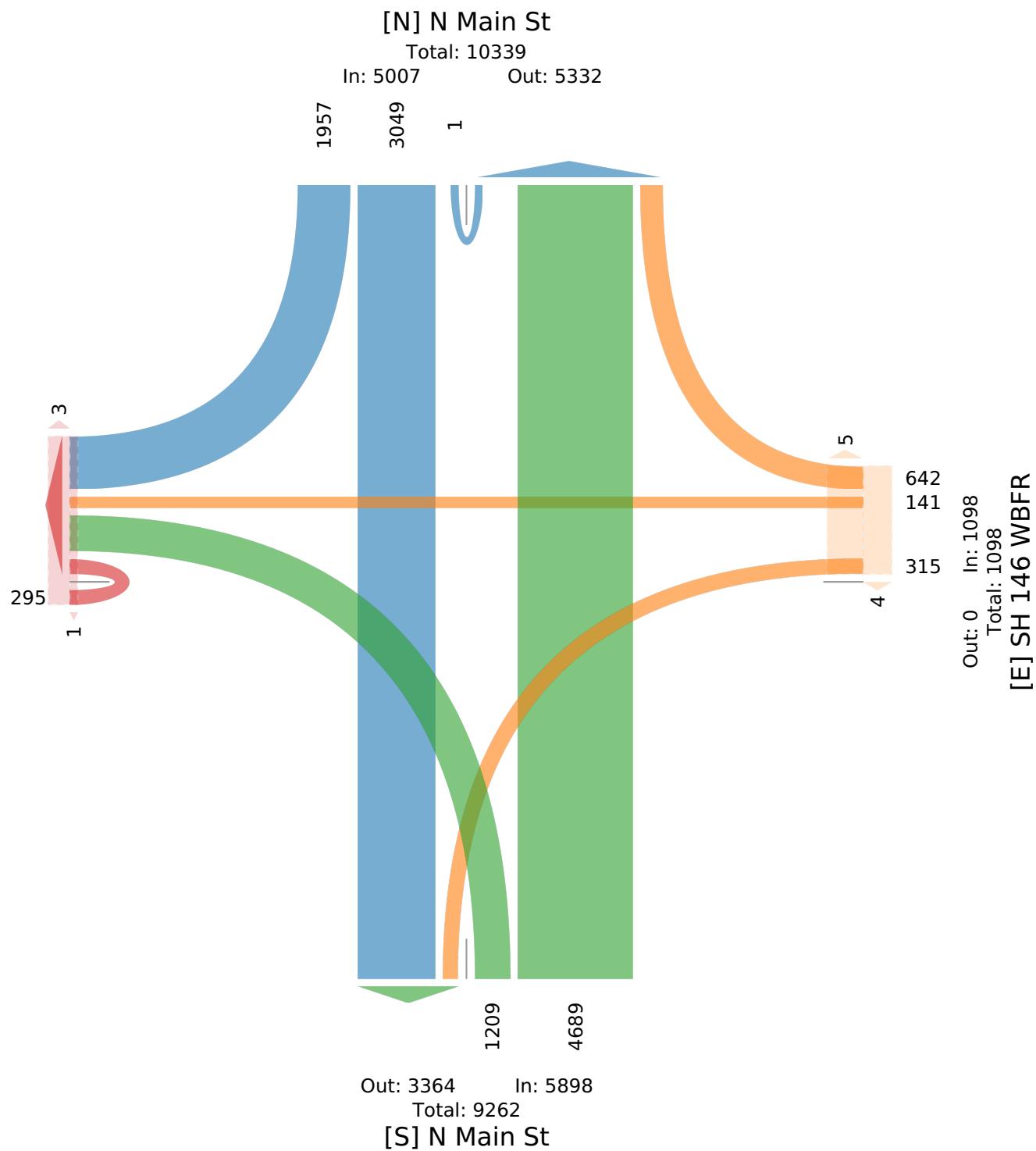
cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[W] SH 146 WBFR
Total: 3897
In: 295 Out: 3602



2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound						SH 146 WBFR Westbound						N Main St Northbound						SH 146 WBFR Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 7:00AM	134	106	0	0	240	0	29	6	9	0	44	0	0	232	74	0	306	0	0	0	0	9	9	1	599
7:15AM	117	159	0	0	276	0	28	3	10	0	41	0	0	186	71	0	257	0	0	0	0	13	13	0	587
7:30AM	83	128	0	0	211	0	21	8	15	0	44	2	0	199	65	0	264	0	0	0	0	11	11	0	530
7:45AM	97	113	0	0	210	0	40	5	13	0	58	0	0	220	47	0	267	0	0	0	0	6	6	1	541
Total	431	506	0	0	937	0	118	22	47	0	187	2	0	837	257	0	1094	0	0	0	0	39	39	2	2257
% Approach	46.0%	54.0%	0%	0%	-	-	63.1%	11.8%	25.1%	0%	-	-	0%	76.5%	23.5%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	19.1%	22.4%	0%	0%	41.5%	-	5.2%	1.0%	2.1%	0%	8.3%	-	0%	37.1%	11.4%	0%	48.5%	-	0%	0%	0%	1.7%	1.7%	-	-
PHF	0.804	0.796	-	-	0.849	-	0.738	0.688	0.783	-	0.806	-	-	0.902	0.868	-	0.894	-	-	-	-	0.750	0.750	-	0.942
Lights	412	494	0	0	906	-	113	22	47	0	182	-	0	805	248	0	1053	-	0	0	0	38	38	-	2179
% Lights	95.6%	97.6%	0%	0%	96.7%	-	95.8%	100%	100%	0%	97.3%	-	0%	96.2%	96.5%	0%	96.3%	-	0%	0%	0%	97.4%	97.4%	-	96.5%
Articulated Trucks	2	1	0	0	3	-	0	0	0	0	0	-	0	4	1	0	5	-	0	0	0	0	0	-	8
% Articulated Trucks	0.5%	0.2%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	-	0%	0.5%	0.4%	0%	0.5%	-	0%	0%	0%	0%	0%	-	0.4%
Buses and Single-Unit Trucks	17	11	0	0	28	-	5	0	0	0	5	-	0	28	8	0	36	-	0	0	0	1	1	-	70
% Buses and Single-Unit Trucks	3.9%	2.2%	0%	0%	3.0%	-	4.2%	0%	0%	0%	2.7%	-	0%	3.3%	3.1%	0%	3.3%	-	0%	0%	0%	2.6%	2.6%	-	3.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[W] SH 146 WBFR
Total: 788
In: 39 Out: 749

[N] N Main St

Total: 1892

In: 937

Out: 955

431

506

257

837

Out: 553 In: 1094

Total: 1647

[S] N Main St

118
22
47
[E] SH 146 WBFR
Out: 0 In: 187
Total: 187

2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					SH 146 WBFR Westbound					N Main St Northbound					SH 146 WBFR Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 5:00PM	79	179	0	0	258	0	39	7	15	0	61	1	0	288	73	0	361	0	0	0	0	25	25	0	705
5:15PM	66	174	0	0	240	0	30	3	21	0	54	0	0	280	47	0	327	0	0	0	0	21	21	0	642
5:30PM	98	154	0	0	252	0	26	4	19	0	49	0	0	274	41	0	315	0	0	0	0	20	20	0	636
5:45PM	79	182	0	0	261	0	30	10	15	0	55	0	0	215	56	0	271	0	0	0	0	23	23	0	610
Total	322	689	0	0	1011	0	125	24	70	0	219	1	0	1057	217	0	1274	0	0	0	0	89	89	0	2593
% Approach	31.8%	68.2%	0%	0%	-	-	57.1%	11.0%	32.0%	0%	-	-	0%	83.0%	17.0%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	12.4%	26.6%	0%	0%	39.0%	-	4.8%	0.9%	2.7%	0%	8.4%	-	0%	40.8%	8.4%	0%	49.1%	-	0%	0%	0%	3.4%	3.4%	-	-
PHF	0.821	0.946	-	-	0.968	-	0.801	0.600	0.833	-	0.898	-	-	0.918	0.743	-	0.882	-	-	-	-	0.890	0.890	-	0.920
Lights	317	688	0	0	1005	-	125	22	69	0	216	-	0	1044	213	0	1257	-	0	0	0	88	88	-	2566
% Lights	98.4%	99.9%	0%	0%	99.4%	-	100%	91.7%	98.6%	0%	98.6%	-	0%	98.8%	98.2%	0%	98.7%	-	0%	0%	0%	98.9%	98.9%	-	99.0%
Articulated Trucks	1	1	0	0	2	-	0	0	0	0	0	-	0	0	1	0	1	-	0	0	0	1	1	-	4
% Articulated Trucks	0.3%	0.1%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0.5%	0%	0.1%	-	0%	0%	0%	1.1%	1.1%	-	0.2%
Buses and Single-Unit Trucks	4	0	0	0	4	-	0	2	1	0	3	-	0	13	3	0	16	-	0	0	0	0	0	-	23
% Buses and Single-Unit Trucks	1.2%	0%	0%	0%	0.4%	-	0%	8.3%	1.4%	0%	1.4%	-	0%	1.2%	1.4%	0%	1.3%	-	0%	0%	0%	0%	0%	-	0.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

2. N Main St at SH 146 WBFR - TMC

Wed Oct 2, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230228, Location: 29.750773, -94.963841

cj hensch & associates

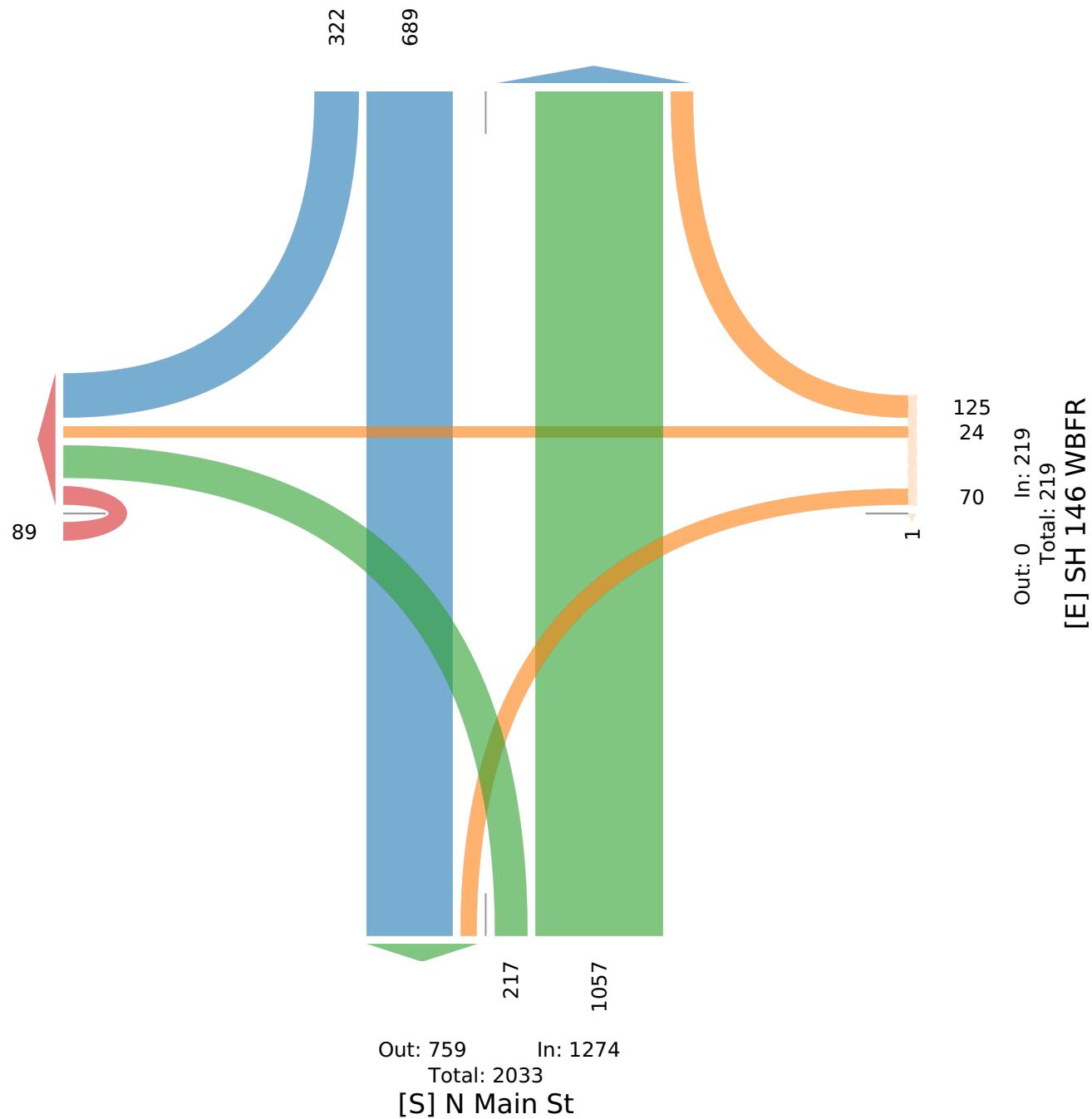
Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[W] SH 146 WBFR
Total: 741
In: 89 Out: 652

[N] N Main St
Total: 2193
In: 1011 Out: 1182



3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230229, Location: 29.753533, -94.963885



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					Bob Smith Rd Westbound					N Main St Northbound					Unknown Drwy Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 6:00AM	4	104	6	0	114	0	10	3	6	0	19	0	1	98	0	0	99	0	0	0	0	0	0	1	232
6:15AM	6	128	4	0	138	0	15	1	12	0	28	0	1	102	0	0	103	0	0	0	0	0	0	0	269
6:30AM	6	137	7	0	150	0	6	1	6	0	13	1	6	153	0	0	159	0	0	0	0	0	0	0	322
6:45AM	6	163	5	0	174	0	21	1	16	0	38	0	10	219	0	0	229	0	0	0	0	0	0	0	441
Hourly Total	22	532	22	0	576	0	52	6	40	0	98	1	18	572	0	0	590	0	0	0	0	0	0	1	1264
7:00AM	1	254	11	0	266	0	21	3	9	0	33	0	10	280	0	0	290	0	0	0	0	0	0	0	589
7:15AM	7	292	14	0	313	1	21	4	9	0	34	0	7	218	0	0	225	0	0	0	0	0	0	1	572
7:30AM	4	180	15	0	199	0	18	2	17	0	37	0	5	236	1	0	242	0	0	0	0	0	0	0	478
7:45AM	12	214	15	0	241	1	19	0	15	0	34	1	7	266	0	0	273	0	0	0	0	0	0	0	548
Hourly Total	24	940	55	0	1019	2	79	9	50	0	138	1	29	1000	1	0	1030	0	0	0	0	0	0	1	2187
8:00AM	2	171	5	0	178	0	14	1	9	0	24	0	10	162	0	0	172	0	0	0	0	0	0	0	374
8:15AM	2	162	12	0	176	0	15	2	6	0	23	0	6	151	0	0	157	0	0	0	0	0	0	0	356
8:30AM	2	175	9	0	186	0	8	4	2	0	14	1	10	139	0	0	149	0	0	0	0	0	0	0	349
8:45AM	3	147	13	0	163	0	14	0	6	0	20	0	12	159	0	0	171	0	0	0	0	0	0	4	354
Hourly Total	9	655	39	0	703	0	51	7	23	0	81	1	38	611	0	0	649	0	0	0	0	0	0	4	1433
4:00PM	8	236	21	0	265	0	21	4	9	0	34	0	9	219	0	0	228	0	0	0	0	0	0	0	527
4:15PM	9	232	28	0	269	0	10	1	14	0	25	0	24	253	1	0	278	0	0	0	0	0	0	0	572
4:30PM	8	251	15	0	274	0	17	2	10	0	29	0	20	278	0	0	298	0	0	0	0	0	0	0	601
4:45PM	11	250	28	0	289	0	29	3	7	0	39	0	22	232	0	0	254	0	0	0	0	0	0	0	582
Hourly Total	36	969	92	0	1097	0	77	10	40	0	127	0	75	982	1	0	1058	0	0	0	0	0	0	0	2282
5:00PM	13	285	23	0	321	0	17	1	12	0	30	0	18	300	1	0	319	0	0	0	0	0	0	0	670
5:15PM	12	244	24	0	280	0	15	0	15	0	30	0	32	276	2	0	310	0	0	0	0	0	0	0	620
5:30PM	17	244	31	0	292	0	19	5	9	0	33	0	16	255	0	0	271	0	0	0	0	0	0	0	596
5:45PM	27	250	27	0	304	0	15	1	8	0	24	0	20	240	3	0	263	0	0	0	0	0	0	0	591
Hourly Total	69	1023	105	0	1197	0	66	7	44	0	117	0	86	1071	6	0	1163	0	0	0	0	0	0	0	2477
6:00PM	8	197	22	0	227	0	20	2	5	0	27	0	14	250	1	0	265	0	0	0	0	0	0	0	519
6:15PM	7	203	17	0	227	0	19	3	17	0	39	0	15	225	0	0	240	0	0	0	0	0	0	0	506
6:30PM	5	184	28	0	217	0	22	2	13	0	37	0	16	213	0	0	229	0	0	0	0	0	0	0	483
6:45PM	3	217	21	0	241	0	29	4	16	0	49	1	16	178	2	0	196	0	0	0	0	0	0	0	486
Hourly Total	23	801	88	0	912	0	90	11	51	0	152	1	61	866	3	0	930	0	0	0	0	0	0	0	1994
Total	183	4920	401	0	5504	2	415	50	248	0	713	4	307	5102	11	0	5420	0	0	0	0	0	0	6	11637
% Approach	3.3%	89.4%	7.3%	0%	-	-	58.2%	7.0%	34.8%	0%	-	-	5.7%	94.1%	0.2%	0%	-	-	0%	0%	0%	0%	-	-	-
% Total	1.6%	42.3%	3.4%	0%	47.3%	-	3.6%	0.4%	2.1%	0%	6.1%	-	2.6%	43.8%	0.1%	0%	46.6%	-	0%	0%	0%	0%	0%	-	-
Lights	180	4803	393	0	5376	-	405	50	239	0	694	-	301	4974	11	0	5286	-	0	0	0	0	0	-	11356
% Lights	98.4%	97.6%	98.0%	0%	97.7%	-	97.6%	100%	96.4%	0%	97.3%	-	98.0%	97.5%	100%	0%	97.5%	-	0%	0%	0%	0%	-	-	97.6%
Articulated Trucks	0	15	0	0	15	-	0	0	0	0	0	-	0	14	0	0	14	-	0	0	0	0	0	-	29
% Articulated Trucks	0%	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	-	0%	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	-	-	0.2%
Buses and Single-Unit Trucks	3	102	8	0	113	-	10	0	9	0	19	-	6	114	0	0	120	-	0	0	0	0	0	-	252
% Buses and Single-Unit Trucks	1.6%	2.1%	2.0%	0%	2.1%	-	2.4%	0%	3.6%	0%	2.7%	-	2.0%	2.2%	0%	0%	2.2%	-	0%	0%	0%	0%	-	-	2.2%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	75.0%	-	-	-	-	-	-	-	-	-	-	-	66.7%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	25.0%	-	-	-	-	-	-	-	-	-	-	-	33.3%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

Full Length (6 AM-9 AM, 4 PM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230229, Location: 29.753533, -94.963885

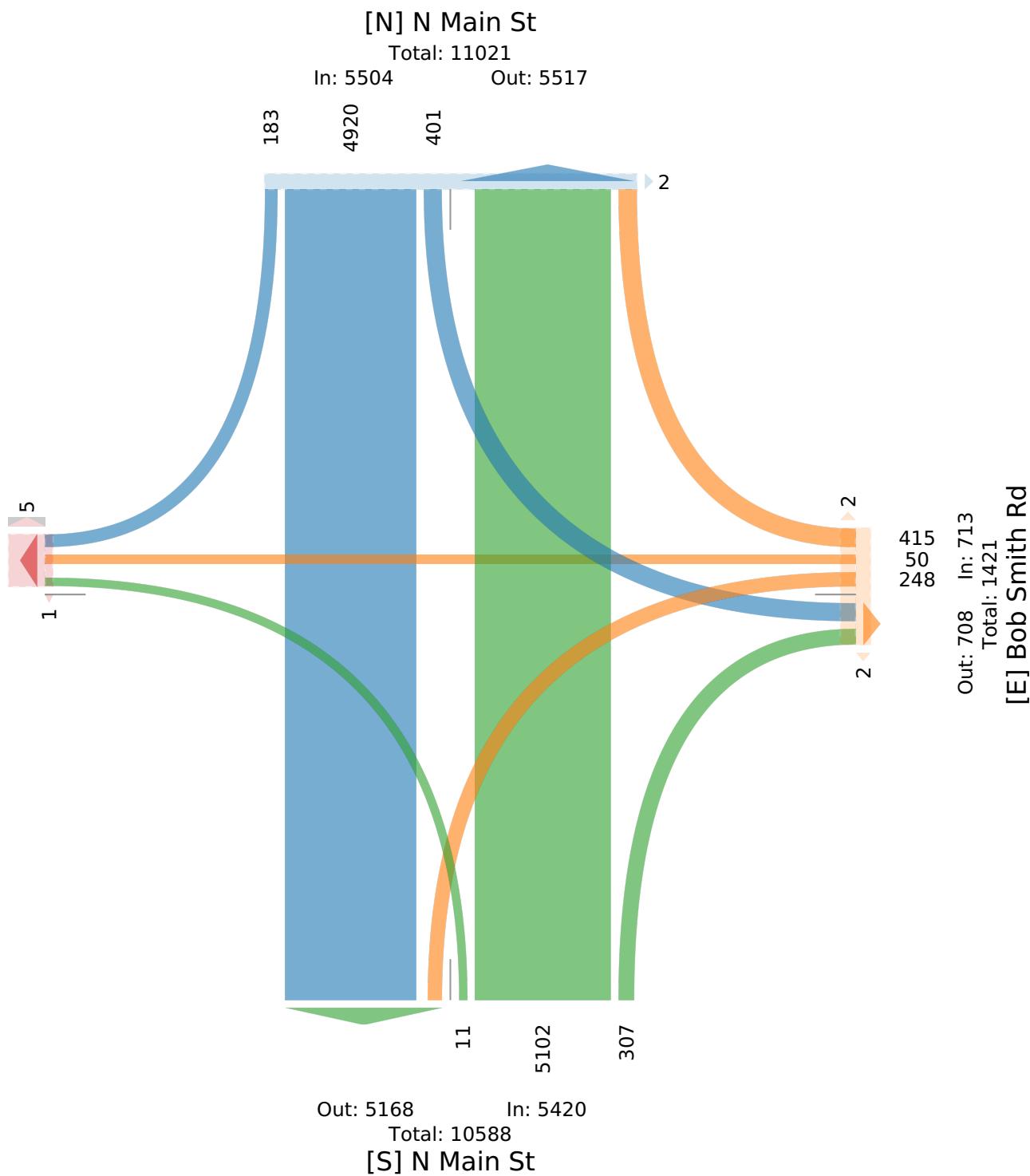
cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[W] Unknown Drwy
Total: 244
In: 0 Out: 244



3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230229, Location: 29.753533, -94.963885



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound						Bob Smith Rd Westbound						N Main St Northbound						Unknown Drwy Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 7:00AM	1	254	11	0	266	0	21	3	9	0	33	0	10	280	0	0	290	0	0	0	0	0	0	0	589
7:15AM	7	292	14	0	313	1	21	4	9	0	34	0	7	218	0	0	225	0	0	0	0	0	1	572	
7:30AM	4	180	15	0	199	0	18	2	17	0	37	0	5	236	1	0	242	0	0	0	0	0	0	0	478
7:45AM	12	214	15	0	241	1	19	0	15	0	34	1	7	266	0	0	273	0	0	0	0	0	0	0	548
Total	24	940	55	0	1019	2	79	9	50	0	138	1	29	1000	1	0	1030	0	0	0	0	0	1	2187	
% Approach	2.4%	92.2%	5.4%	0%	-	-	57.2%	6.5%	36.2%	0%	-	-	2.8%	97.1%	0.1%	0%	-	-	0%	0%	0%	0%	-	-	-
% Total	1.1%	43.0%	2.5%	0%	46.6%	-	3.6%	0.4%	2.3%	0%	6.3%	-	1.3%	45.7%	0%	0%	47.1%	-	0%	0%	0%	0%	0%	-	-
PHF	0.500	0.805	0.917	-	0.814	-	0.940	0.563	0.735	-	0.932	-	0.725	0.893	0.250	-	0.888	-	-	-	-	-	-	0.928	
Lights	24	911	52	0	987	-	77	9	47	0	133	-	27	965	1	0	993	-	0	0	0	0	-	2113	
% Lights	100%	96.9%	94.5%	0%	96.9%	-	97.5%	100%	94.0%	0%	96.4%	-	93.1%	96.5%	100%	0%	96.4%	-	0%	0%	0%	0%	-	96.6%	
Articulated Trucks	0	2	0	0	2	-	0	0	0	0	0	-	0	4	0	0	4	-	0	0	0	0	-	6	
% Articulated Trucks	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0.4%	0%	0%	0.4%	-	0%	0%	0%	0%	-	0.3%	
Buses and Single-Unit Trucks	0	27	3	0	30	-	2	0	3	0	5	-	2	31	0	0	33	-	0	0	0	0	0	-	68
% Buses and Single-Unit Trucks	0%	2.9%	5.5%	0%	2.9%	-	2.5%	0%	6.0%	0%	3.6%	-	6.9%	3.1%	0%	0%	3.2%	-	0%	0%	0%	0%	-	3.1%	
Pedestrians	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1		
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%		
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%		

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230229, Location: 29.753533, -94.963885

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

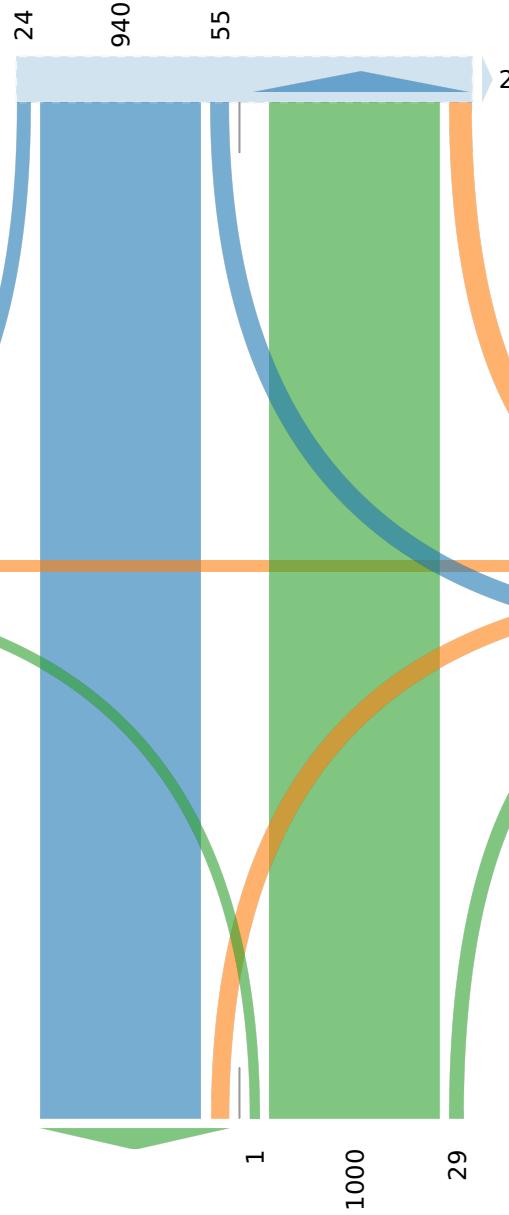
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] N Main St

Total: 2098

In: 1019

Out: 1079



[S] N Main St

Total: 2020

Out: 990

In: 1030

3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1230229, Location: 29.753533, -94.963885



Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	N Main St Southbound					Bob Smith Rd Westbound					N Main St Northbound					Unknown Drwy Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-10-02 5:00PM	13	285	23	0	321	0	17	1	12	0	30	0	18	300	1	0	319	0	0	0	0	0	0	0	670
5:15PM	12	244	24	0	280	0	15	0	15	0	30	0	32	276	2	0	310	0	0	0	0	0	0	0	620
5:30PM	17	244	31	0	292	0	19	5	9	0	33	0	16	255	0	0	271	0	0	0	0	0	0	0	596
5:45PM	27	250	27	0	304	0	15	1	8	0	24	0	20	240	3	0	263	0	0	0	0	0	0	0	591
Total	69	1023	105	0	1197	0	66	7	44	0	117	0	86	1071	6	0	1163	0	0	0	0	0	0	0	2477
% Approach	5.8%	85.5%	8.8%	0%	-	-	56.4%	6.0%	37.6%	0%	-	-	7.4%	92.1%	0.5%	0%	-	-	0%	0%	0%	0%	-	-	-
% Total	2.8%	41.3%	4.2%	0%	48.3%	-	2.7%	0.3%	1.8%	0%	4.7%	-	3.5%	43.2%	0.2%	0%	47.0%	-	0%	0%	0%	0%	0%	-	-
PHF	0.639	0.897	0.847	-	0.932	-	0.868	0.350	0.733	-	0.886	-	0.672	0.893	0.500	-	0.911	-	-	-	-	-	-	-	0.924
Lights	69	1018	105	0	1192	-	66	7	44	0	117	-	86	1060	6	0	1152	-	0	0	0	0	0	-	2461
% Lights	100%	99.5%	100%	0%	99.6%	-	100%	100%	100%	0%	100%	-	100%	99.0%	100%	0%	99.1%	-	0%	0%	0%	0%	-	-	99.4%
Articulated Trucks	0	2	0	0	2	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	2
% Articulated Trucks	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	0.1%
Buses and Single-Unit Trucks	0	3	0	0	3	-	0	0	0	0	0	-	0	11	0	0	11	-	0	0	0	0	0	-	14
% Buses and Single-Unit Trucks	0%	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	-	0%	1.0%	0%	0%	0.9%	-	0%	0%	0%	0%	-	-	0.6%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

3. N Main St at Bob Smith Rd - TMC

Wed Oct 2, 2024

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

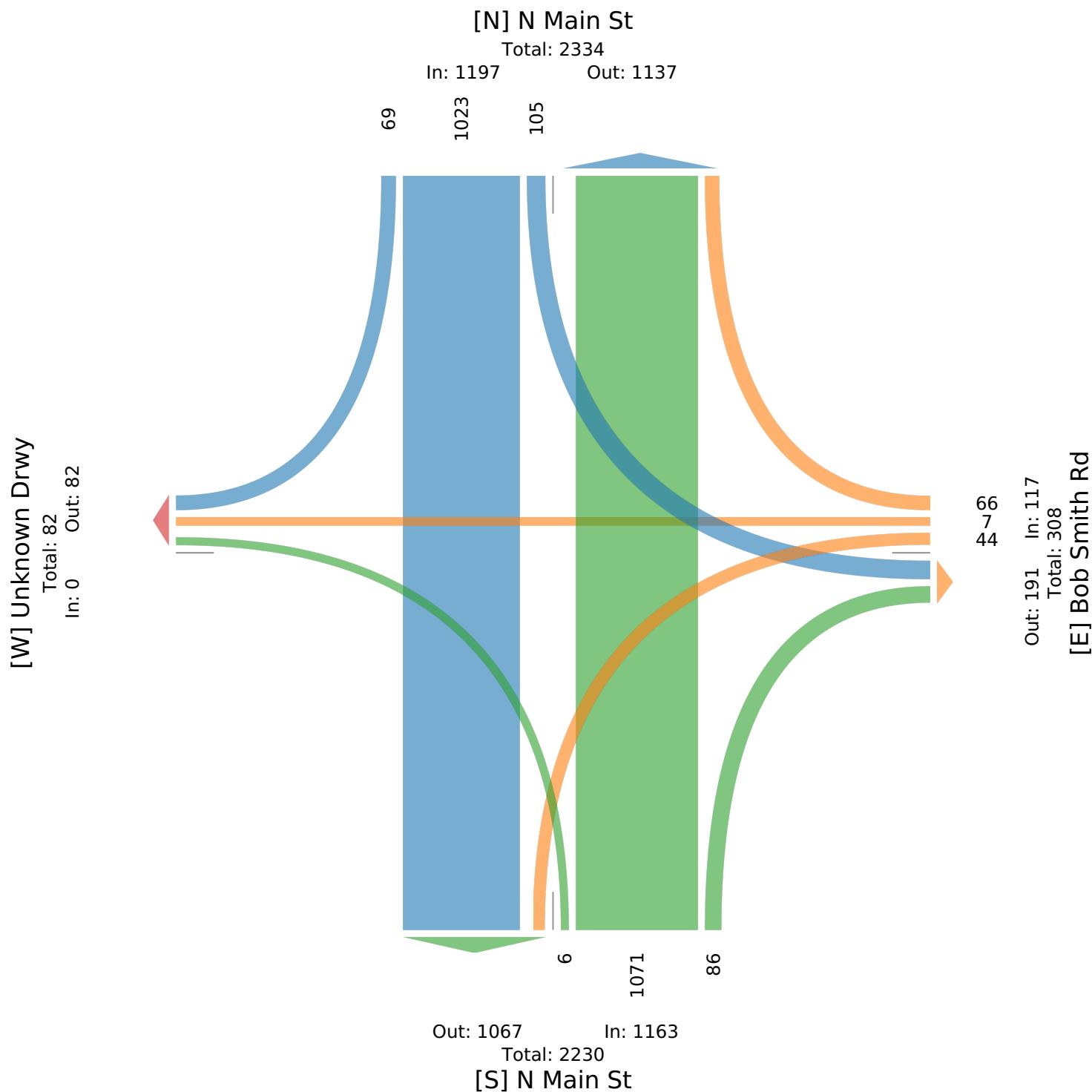
ID: 1230229, Location: 29.753533, -94.963885

cj hensch & associates

Provided by: C. J. Hensch & Associates

Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Appendix B
EXISTING SIGNAL TIMING DATA



CITY OF BAYTOWN

OFFICE OF THE CITY CLERK

2401 Market Street

P.O. Box 424

Baytown, Texas 77522-0424

(281) 420-6504, Fax (281) 420-5891

October 15, 2024

Ms. Labiba Mahmood
9950 Westpark Dr. STE 426
Houston, TX 77063

Dear Ms. Mahmood:

The City of Baytown is in receipt of your public information request, internal number 34515.

The City of Baytown, under Ordinance No. 10,739, passed by the Baytown City Council on October 25, 2007, established thirty-six (36) hours as a reasonable amount of time that personnel of the City are required to spend producing public information to a requestor without recovering its cost attributed to personnel time. This is allowed under Section 552.275 of the Government Code.

Because your request does not meet the criteria for labor charges under the law, the labor required to comply with your request will be counted against your individual 36 hour limit.

STATEMENT (Pursuant to Section 552.275 of the Texas Government Code) Year to Date Labor totals for Fiscal Year 2024-2025:	
Previous Balance:	No Previous Time
Amount of Personnel Time Spent Complying with this Request:	15 Minutes
Cumulative Amount of Time Spent Complying with Public Information Requests During the Applicable 12 Month Period:	15 Minutes

Please be advised that pursuant to Section 552.275 of the Texas Government Code and Section 2-616 of the Code of Ordinances, Baytown, Texas, if the cumulative amount of personnel time spent complying with requests for public information from the same requestor equals or exceeds 36 hours in any fiscal year of the City, the requestor will be required to pay personnel time and overhead expenses along with other costs necessary to comply with the request.

Sincerely,

Alisha M. Segovia
Open Government Specialist

N.Main SH 146

NAZTEC CONTROLLER PROGRAMMING/TIMING SHEET

INSTALL DATE: 10/15 log

N. Main Bob Smith

NAZTEC CONTROLLER PROGRAMMING/TIMING SHEET

10/15 100

Appendix C

TRIP GENERATION

Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 5

Avg. Num. of Vehicle Fueling Positions: 14

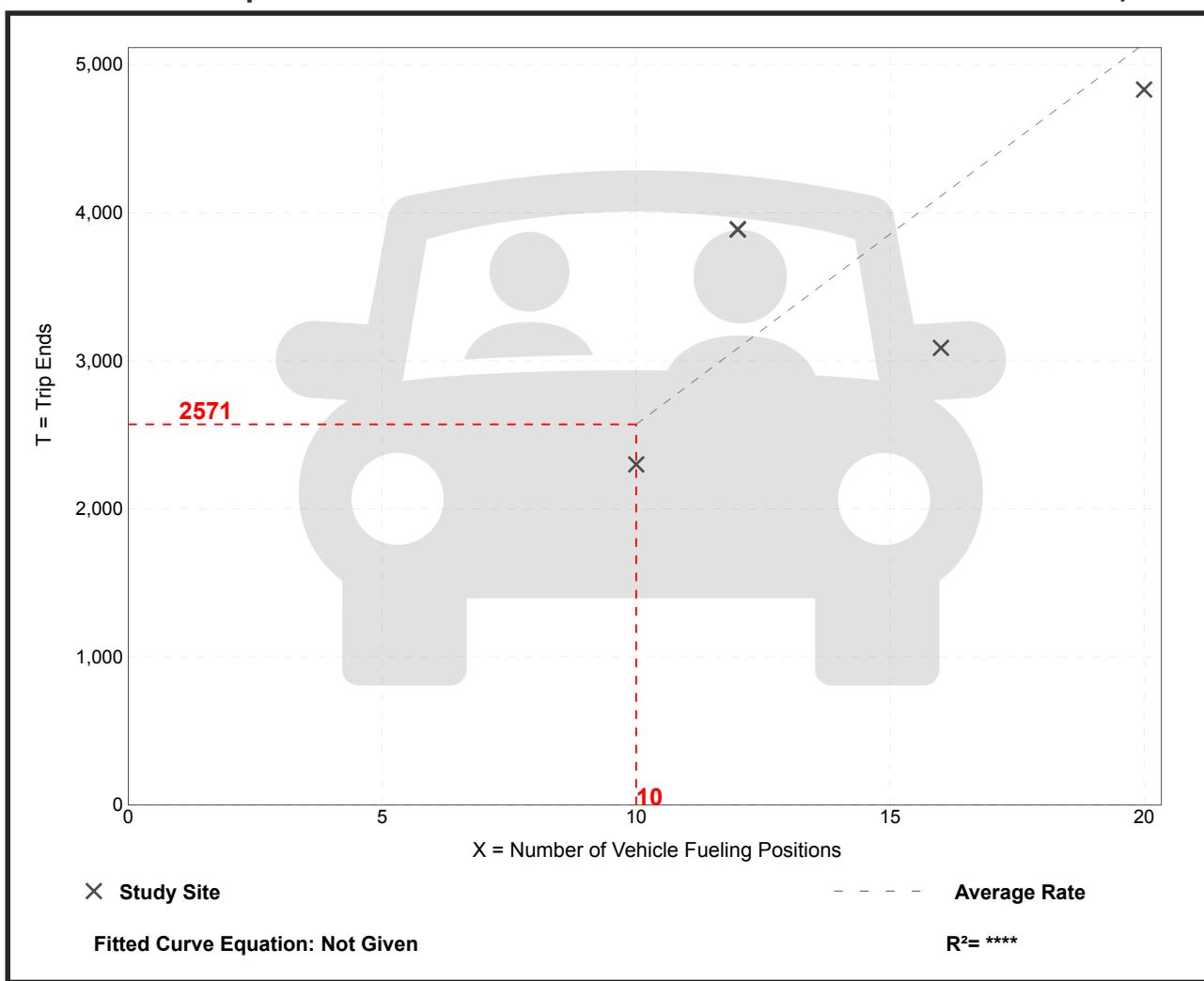
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
257.13	193.00 - 324.17	57.53

Data Plot and Equation

Caution – Small Sample Size



Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs. Vehicle Fueling Positions

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: 18

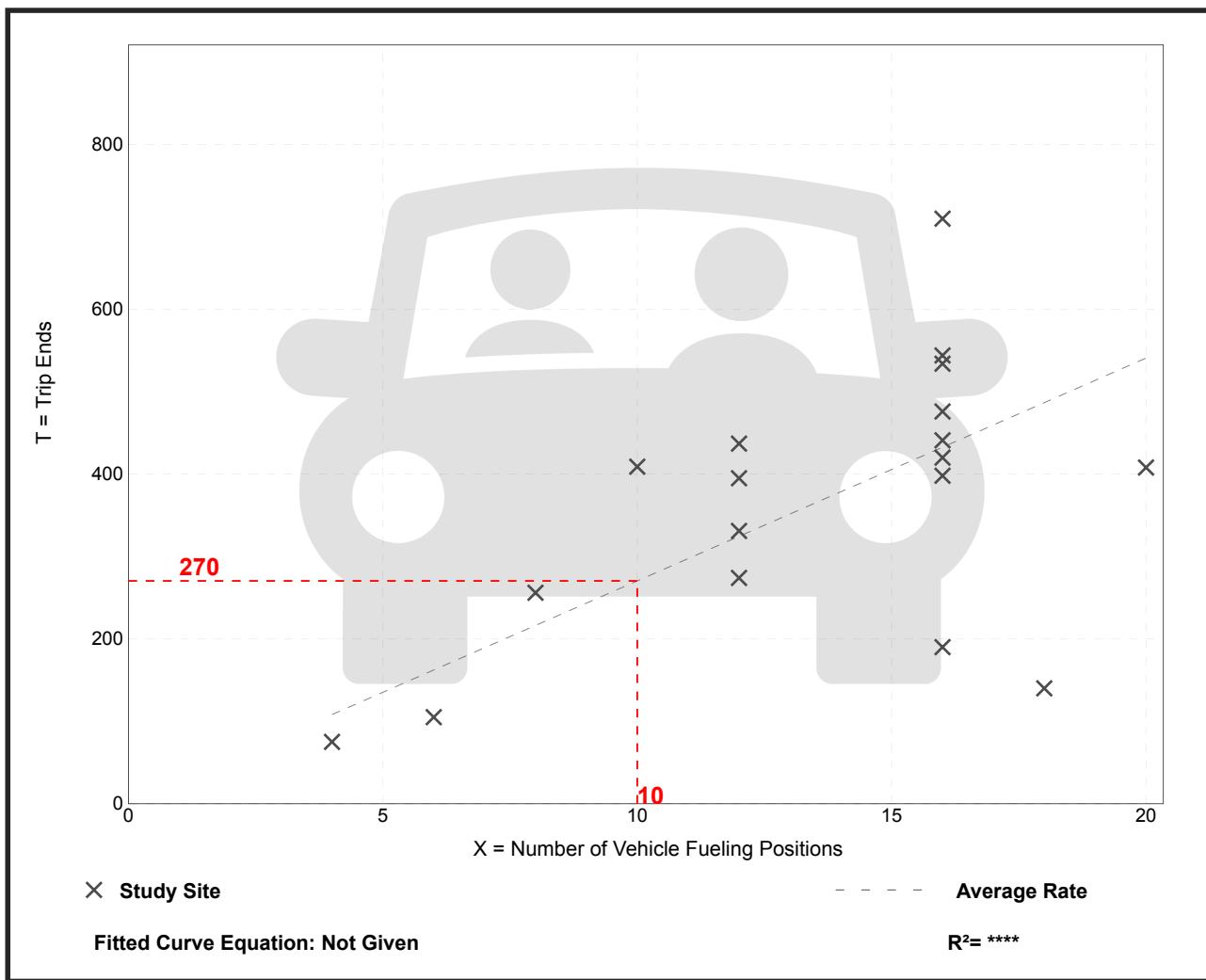
Avg. Num. of Vehicle Fueling Positions: 13

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
27.04	7.78 - 44.38	9.88

Data Plot and Equation



Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

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: 23

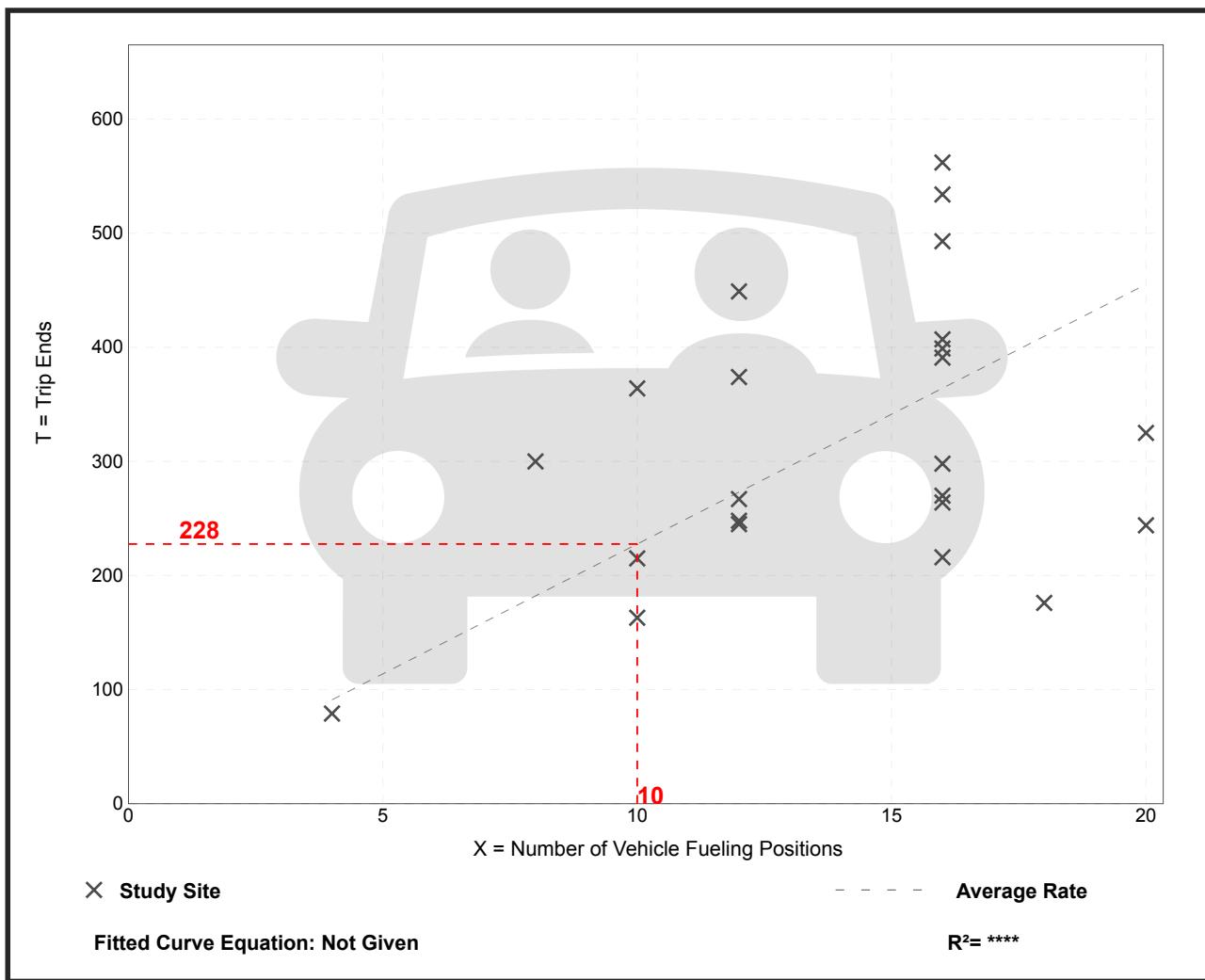
Avg. Num. of Vehicle Fueling Positions: 14

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
22.76	9.78 - 37.50	8.49

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

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

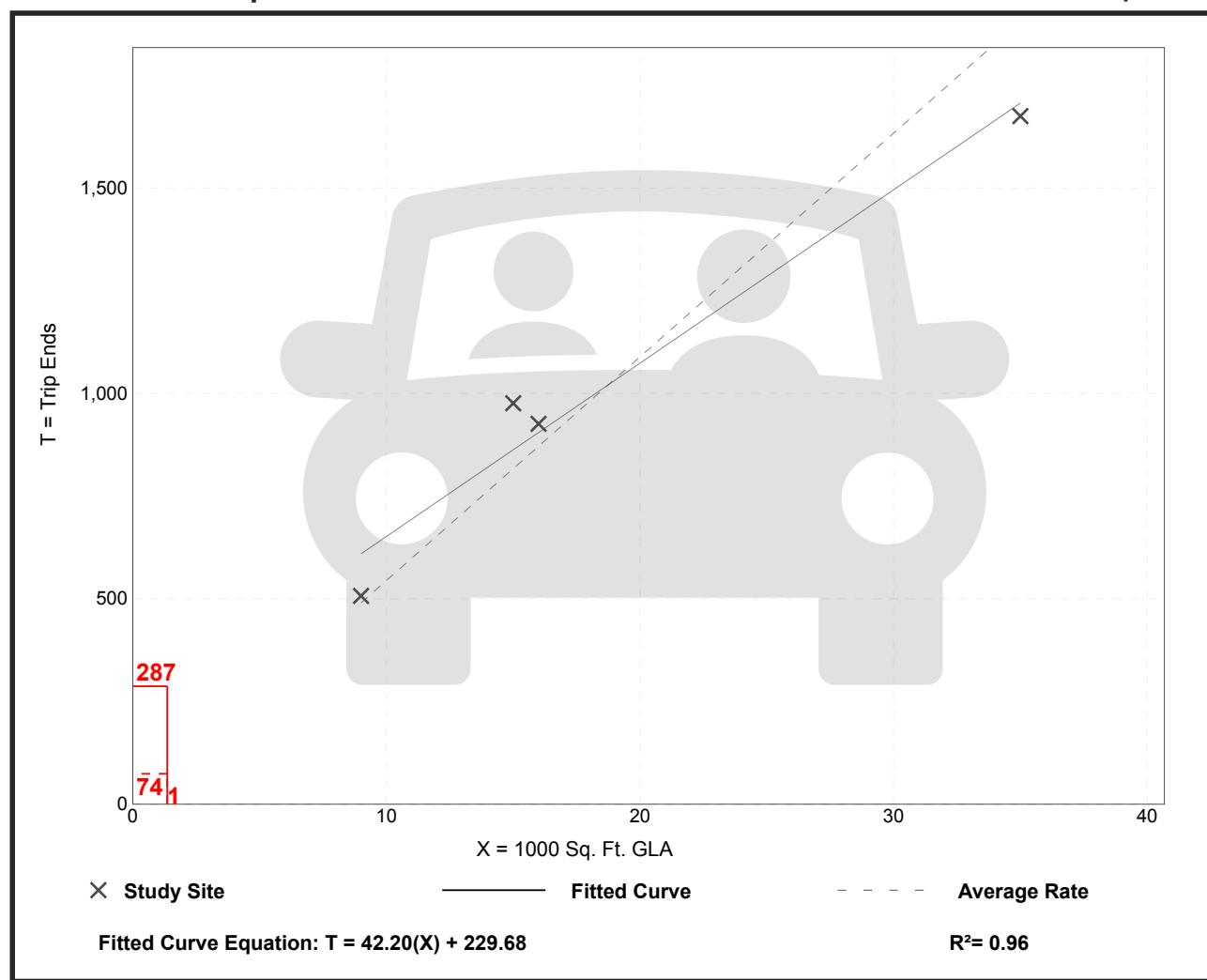
Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

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

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k) (822)

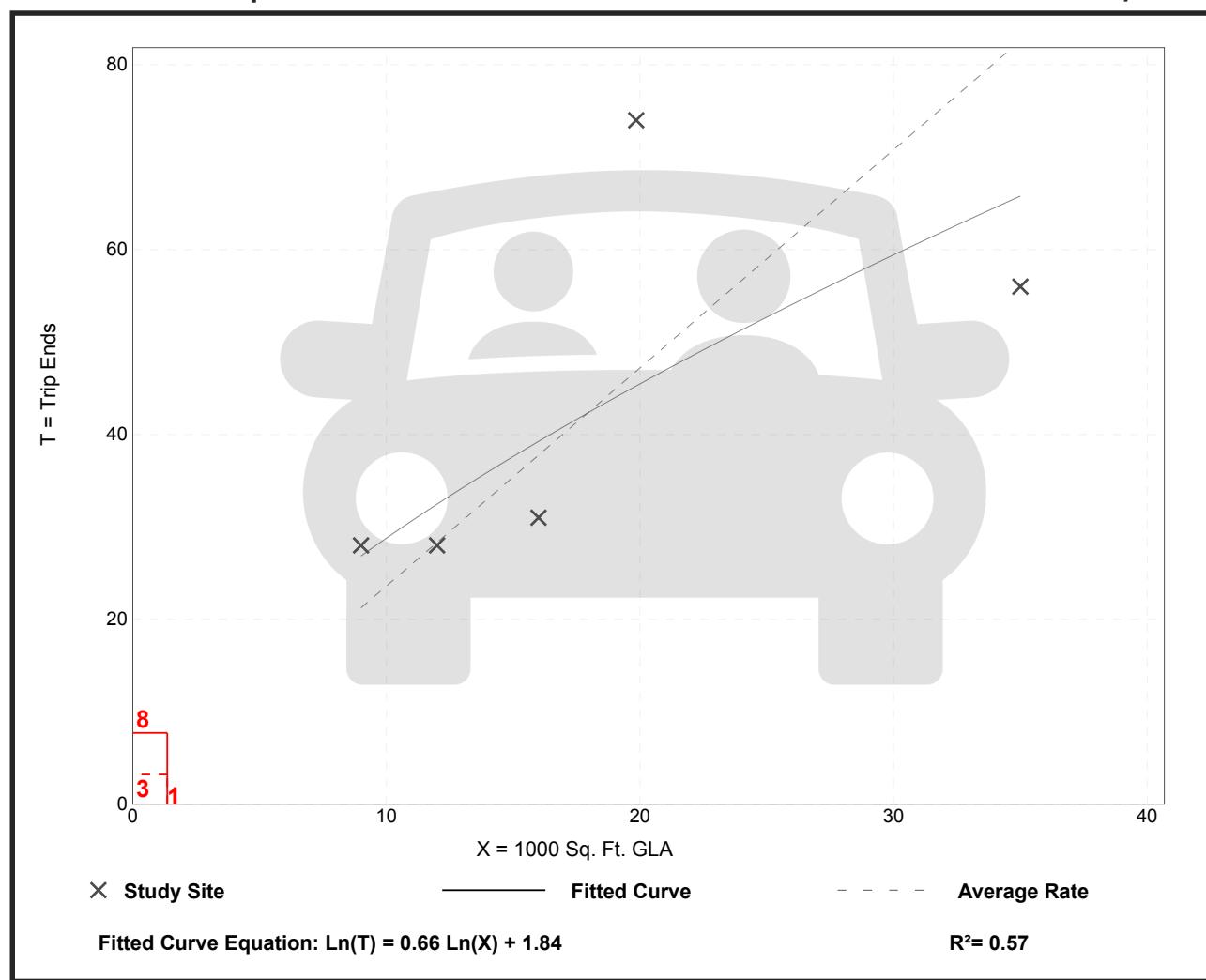
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 5
 Avg. 1000 Sq. Ft. GLA: 18
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

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

Data Plot and Equation

Caution – Small Sample Size



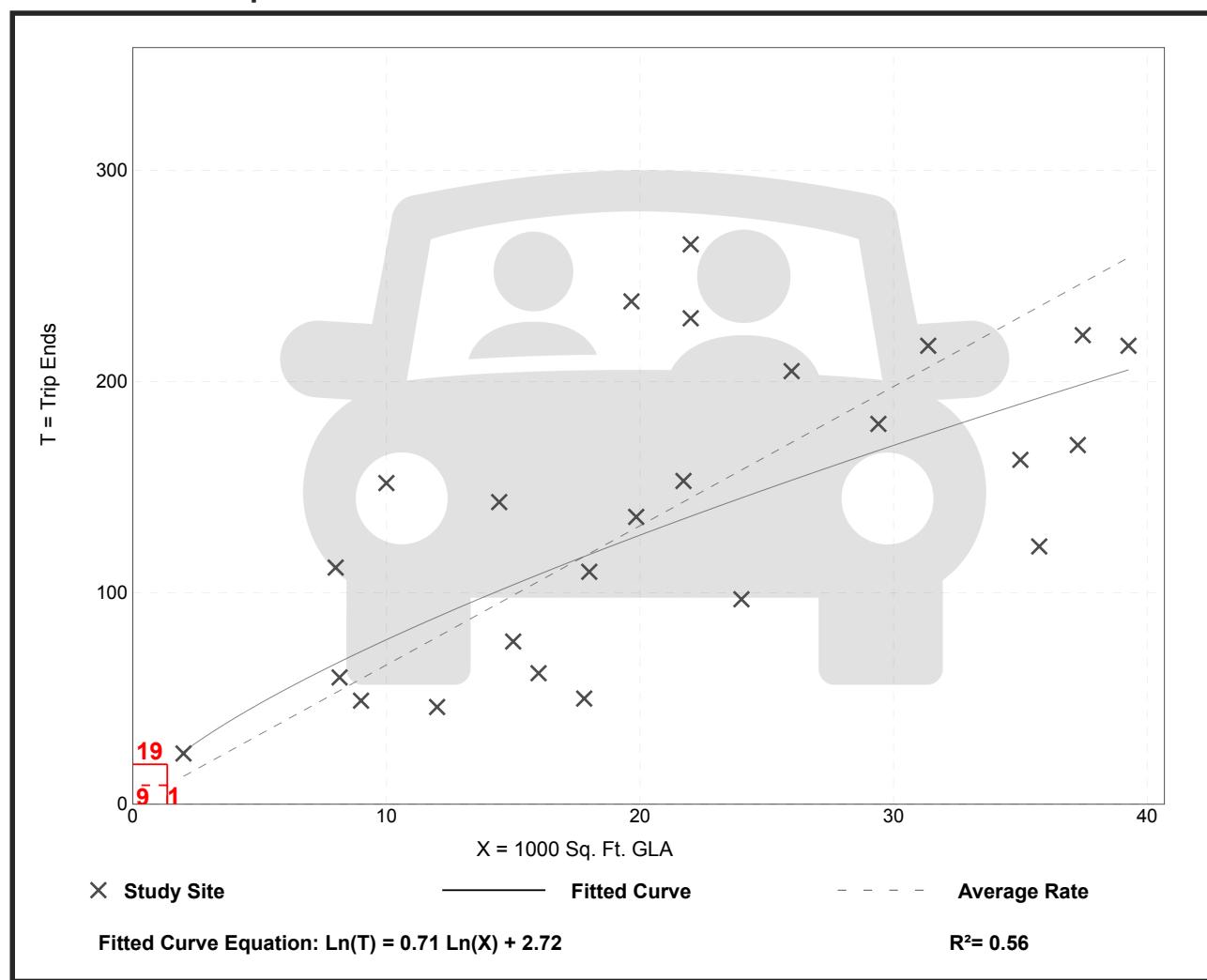
Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 25
 Avg. 1000 Sq. Ft. GLA: 21
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

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

Data Plot and Equation



Appendix D
LOS CRITERIA

Level-of-Service Criteria for Unsignalized Intersections	
Level-of-Service	Control Delay (seconds/vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Source: Highway Capacity Manual 2010, Transportation Research Board

Level-of-Service Criteria for Signalized Intersections	
Level-of-Service	Control Delay (seconds/vehicle)
A	≤ 10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

Source: Highway Capacity Manual 2010, Transportation Research Board

Appendix E

INTERSECTION LEVEL OF SERVICE ANALYSIS

Lanes, Volumes, Timings
1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024

AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	415	4	181	0	0	0	0	659	41	117	445	0
Future Volume (vph)	415	4	181	0	0	0	0	659	41	117	445	0
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%
Storage Length (ft)	0	0	0	0	0	0	140	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	1	0	0	1	0	0
Taper Length (ft)	25			25			65			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.926					0.991				
Flt Protected	0.950	0.976								0.950		
Satd. Flow (prot)	1610	3064	0	0	0	0	0	5040	0	1770	3539	0
Flt Permitted	0.950	0.976								0.164		
Satd. Flow (perm)	1610	3064	0	0	0	0	0	5040	0	305	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		102						5				
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		500			623			666			239	
Travel Time (s)		7.6			9.4			11.4			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.50	0.78	0.92	0.92	0.92	0.92	0.89	0.85	0.75	0.84	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)	483	8	232	0	0	0	0	740	48	156	530	0
Shared Lane Traffic (%)		48%										
Lane Group Flow (vph)	251	472	0	0	0	0	0	788	0	156	530	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
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
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	12	
Permitted Phases		4								12		
Detector Phase		4	4					2		1	12	
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings
1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						35.6		125.2		130.7
Actuated g/C Ratio	0.12	0.12						0.22		0.78		0.81
v/c Ratio	1.32	1.05						0.71		0.15		0.18
Control Delay	228.2	106.5						61.3		0.7		0.6
Queue Delay	0.0	0.0						0.0		0.3		0.1
Total Delay	228.2	106.5						61.3		1.0		0.7
LOS	F	F						E		A		A
Approach Delay		148.8						61.3				0.8
Approach LOS		F						E				A
Queue Length 50th (ft)	~371	~238						281		4		7
Queue Length 95th (ft)	#598	134						335		4		6
Internal Link Dist (ft)		420				543		586				159
Turn Bay Length (ft)												
Base Capacity (vph)	190	451						1711		1153		3286
Starvation Cap Reductn	0	0						0		574		1729
Spillback Cap Reductn	0	0						0		0		0
Storage Cap Reductn	0	0						0		0		0
Reduced v/c Ratio	1.32	1.05						0.46		0.27		0.34

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 161.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.32

Intersection Signal Delay: 71.2

Intersection LOS: E

Intersection Capacity Utilization 61.6%

ICU Level of Service B

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024

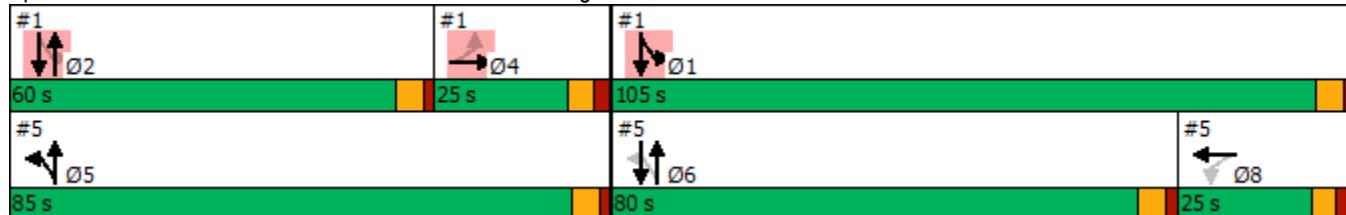
AM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Existing Conditions_Year 2024
AM Peak Hour

	→	→	→	←	←	←	↑	↑	↑	↓	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑↑		↑	↑↑	
Traffic Volume (vph)	0	0	0	50	9	79	0	1000	29	55	940	24
Future Volume (vph)	0	0	0	50	9	79	0	1000	29	55	940	24
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)	0			0	0		0	0		0	105	0
Storage Lanes	0			0	0		1	0		0	1	0
Taper Length (ft)	25			25			25			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt							0.850		0.995		0.994	
Flt Protected							0.961				0.950	
Satd. Flow (prot)	0	0	0	0	1790	1583	0	3522	0	1770	3518	0
Flt Permitted							0.961				0.181	
Satd. Flow (perm)	0	0	0	0	1790	1583	0	3522	0	337	3518	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)						98		4			8	
Link Speed (mph)	30				30			40			40	
Link Distance (ft)	154				570			1014			765	
Travel Time (s)	3.5				13.0			17.3			13.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.74	0.56	0.94	0.92	0.89	0.73	0.92	0.80	0.50
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)	0	0	0	68	16	84	0	1124	40	60	1175	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	84	84	0	1164	0	60	1223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16			15	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane							Yes				Yes	
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases					6		6				4	
Detector Phase					6	6	6		8		7	4
Switch Phase												

Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Existing Conditions_Year 2024
AM Peak Hour

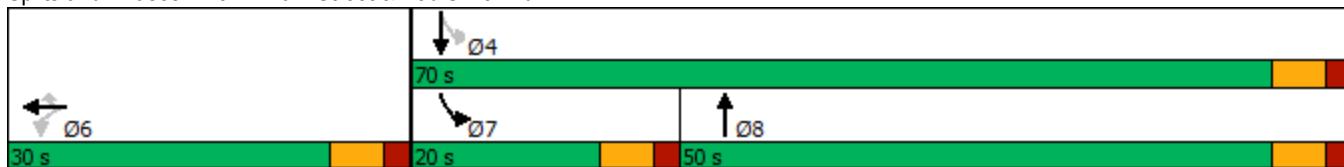


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.7	8.7	57.9		67.1	68.3			
Actuated g/C Ratio				0.10	0.10	0.68		0.79	0.80			
v/c Ratio				0.46	0.34	0.49		0.16	0.43			
Control Delay				44.1	10.0	9.9		3.9	4.2			
Queue Delay				0.0	0.0	0.0		0.0	0.0			
Total Delay				44.1	10.0	9.9		3.9	4.2			
LOS				D	A	A		A	A			
Approach Delay				27.0		9.9			4.1			
Approach LOS				C		A			A			
Queue Length 50th (ft)				43	0	172		6	97			
Queue Length 95th (ft)				52	33	247		17	128			
Internal Link Dist (ft)	74			490		934			685			
Turn Bay Length (ft)								105				
Base Capacity (vph)				504	516	2393		500	2820			
Starvation Cap Reductn				0	0	0		0	0			
Spillback Cap Reductn				0	0	0		0	0			
Storage Cap Reductn				0	0	0		0	0			
Reduced v/c Ratio				0.17	0.16	0.49		0.12	0.43			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	85.2											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.49											
Intersection Signal Delay:	8.2						Intersection LOS: A					
Intersection Capacity Utilization	55.2%						ICU Level of Service B					
Analysis Period (min)	15											

Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Existing Conditions_Year 2024
AM Peak Hour

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings
5: N Main Street & SH 146 WB Frontage Rd

Existing Conditions_Year 2024
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	47	22	118	257	837	0	0	506	431
Future Volume (vph)	0	0	0	47	22	118	257	837	0	0	506	431
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)	0					0	0			0	150	0
Storage Lanes	0					0	1			0	1	0
Taper Length (ft)	25				25		25				100	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.905					0.931	
Flt Protected						0.988		0.950				
Satd. Flow (prot)	0	0	0	0	4547	0	1770	3539	0	0	4734	0
Flt Permitted						0.988		0.163				
Satd. Flow (perm)	0	0	0	0	4547	0	304	3539	0	0	4734	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)						159					133	
Link Speed (mph)	45					30		40			40	
Link Distance (ft)	514					817		239			1014	
Travel Time (s)	7.8					18.6		4.1			17.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.78	0.69	0.74	0.87	0.90	0.92	0.92	0.80	0.80
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)	0	0	0	60	32	159	295	930	0	0	633	539
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	251	0	295	930	0	0	1172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			22	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type				Perm	NA		pm+pt	NA				NA
Protected Phases					8			5	5 6			6
Permitted Phases					8			5	5 6			6
Detector Phase					8	8		5	5 6			6
Switch Phase												

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Existing Conditions_Year 2024

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag						Lead
Lead-Lag Optimize?				Yes		Yes						Yes
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode				None	None		None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)					8.8		135.4	140.9			74.7	
Actuated g/C Ratio					0.05		0.84	0.87			0.46	
v/c Ratio					0.63		0.37	0.30			0.52	
Control Delay					35.3		1.5	0.4			28.5	
Queue Delay					0.0		0.3	1.4			0.0	
Total Delay					35.3		1.7	1.8			28.5	
LOS					D		A	A			C	
Approach Delay					35.3			1.8			28.5	
Approach LOS					D			A			C	
Queue Length 50th (ft)					34		1	6			278	
Queue Length 95th (ft)					38		m2	m3			316	
Internal Link Dist (ft)	434				737			159			934	
Turn Bay Length (ft)												
Base Capacity (vph)					677		990	3092			2264	
Starvation Cap Reductn					0		264	1878			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.37		0.41	0.77			0.52	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 161.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.32

Intersection Signal Delay: 16.8

Intersection LOS: B

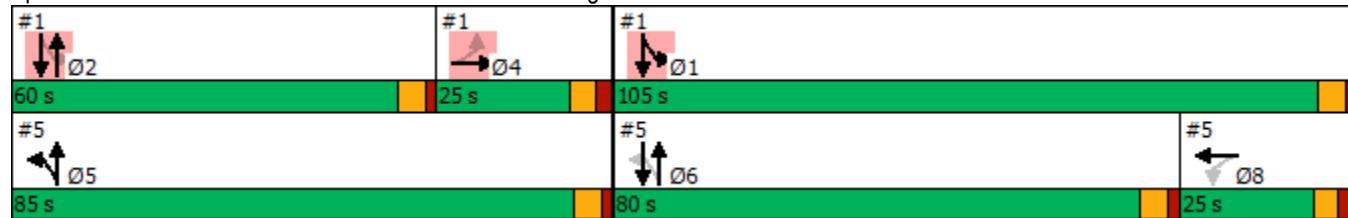
Intersection Capacity Utilization 61.6%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings
1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024

PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	559	16	304	0	0	0	0	672	65	124	609	0
Future Volume (vph)	559	16	304	0	0	0	0	672	65	124	609	0
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)	0	0	0		0	140		0	0		0	
Storage Lanes	1	0	0		0	1		0	1		0	
Taper Length (ft)	25		25			65			25			
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.924						0.984				
Flt Protected	0.950	0.978								0.950		
Satd. Flow (prot)	1610	3064	0	0	0	0	0	5004	0	1770	3539	0
Flt Permitted	0.950	0.978								0.150		
Satd. Flow (perm)	1610	3064	0	0	0	0	0	5004	0	279	3539	0
Right Turn on Red		Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		109						11				
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		500			623			666			239	
Travel Time (s)		7.6			9.4			11.4			4.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.67	0.92	0.92	0.92	0.92	0.92	0.87	0.71	0.79	0.93	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)	643	24	330	0	0	0	0	772	92	157	655	0
Shared Lane Traffic (%)		46%										
Lane Group Flow (vph)	347	650	0	0	0	0	0	864	0	157	655	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
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
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	12	
Permitted Phases		4								1	2	
Detector Phase	4	4						2		1	12	
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings
1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						41.4		133.1	138.6	
Actuated g/C Ratio	0.11	0.11						0.24		0.79	0.82	
v/c Ratio	1.92	1.47						0.70		0.15	0.23	
Control Delay	467.9	263.2						60.6		0.6	0.5	
Queue Delay	0.0	0.0						0.0		0.3	0.2	
Total Delay	467.9	263.2						60.6		0.9	0.7	
LOS	F	F						E		A	A	
Approach Delay		334.4						60.6			0.7	
Approach LOS		F						E			A	
Queue Length 50th (ft)	~643	~480						317		3	7	
Queue Length 95th (ft)	#932	#422						364		3	6	
Internal Link Dist (ft)		420			543			586			159	
Turn Bay Length (ft)												
Base Capacity (vph)	181	442						1625		1108	3171	
Starvation Cap Reductn	0	0						0		553	1579	
Spillback Cap Reductn	0	0						0		0	0	
Storage Cap Reductn	0	0						0		0	0	
Reduced v/c Ratio	1.92	1.47						0.53		0.28	0.41	
Intersection Summary												
Area Type:	Other											
Cycle Length: 190												
Actuated Cycle Length: 169.2												
Natural Cycle: 115												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.92												
Intersection Signal Delay: 144.6	Intersection LOS: F											
Intersection Capacity Utilization 69.6%	ICU Level of Service C											
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite.												

Lanes, Volumes, Timings
1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024
PM Peak Hour

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Existing Conditions_Year 2024

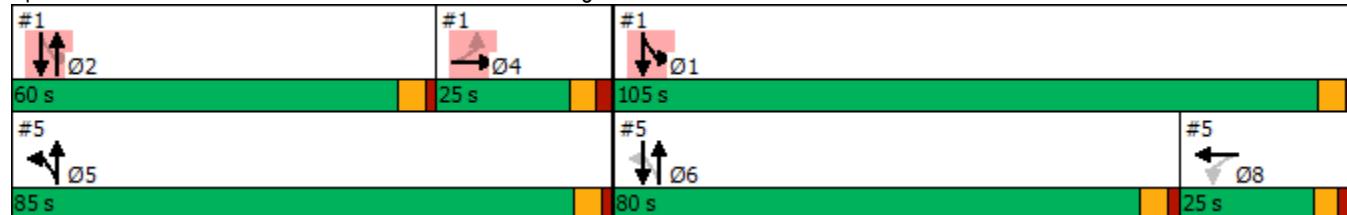
PM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Existing Conditions_Year 2024
PM Peak Hour

	→	→	→	←	←	←	↑	↑	↑	↓	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑↑		↑	↑↑	
Traffic Volume (vph)	0	0	0	44	7	66	0	1071	86	105	1023	69
Future Volume (vph)	0	0	0	44	7	66	0	1071	86	105	1023	69
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)	0		0	0		0	0		0	105		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt						0.850		0.986			0.987	
Flt Protected						0.964					0.950	
Satd. Flow (prot)	0	0	0	0	1796	1583	0	3490	0	1770	3493	0
Flt Permitted					0.964					0.138		
Satd. Flow (perm)	0	0	0	0	1796	1583	0	3490	0	257	3493	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					98			14			20	
Link Speed (mph)	30			30			40			40		
Link Distance (ft)	154			570			1014			765		
Travel Time (s)	3.5			13.0			17.3			13.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.73	0.35	0.87	0.50	0.89	0.67	0.85	0.90	0.64
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)	0	0	0	60	20	76	0	1203	128	124	1137	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	80	76	0	1331	0	124	1245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16			15	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane							Yes			Yes		
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases						6	6				4	
Detector Phase						6	6		8		7	4
Switch Phase												

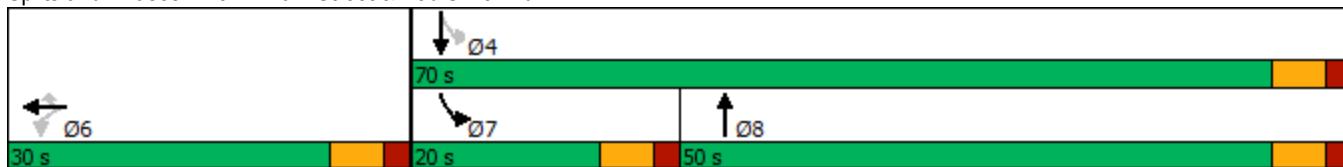
Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Existing Conditions_Year 2024
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.6	8.6	55.2		64.4		65.8		
Actuated g/C Ratio				0.10	0.10	0.67		0.79		0.80		
v/c Ratio				0.43	0.30	0.57		0.36		0.44		
Control Delay				42.9	8.3	11.4		5.9		4.1		
Queue Delay				0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay				42.9	8.3	11.4		5.9		4.1		
LOS				D	A	B		A		A		
Approach Delay				26.0		11.4				4.3		
Approach LOS				C		B				A		
Queue Length 50th (ft)				41	0	210		13		97		
Queue Length 95th (ft)				31	24	327		28		157		
Internal Link Dist (ft)	74			490		934				685		
Turn Bay Length (ft)								105				
Base Capacity (vph)				528	535	2355		461		2806		
Starvation Cap Reductn				0	0	0		0		0		
Spillback Cap Reductn				0	0	0		0		0		
Storage Cap Reductn				0	0	0		0		0		
Reduced v/c Ratio				0.15	0.14	0.57		0.27		0.44		
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	82											
Natural Cycle:	65											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	0.57											
Intersection Signal Delay:	8.8						Intersection LOS: A					
Intersection Capacity Utilization	59.0%						ICU Level of Service B					
Analysis Period (min)	15											

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings
5: N Main Street & SH 146 WB Frontage Rd

Existing Conditions_Year 2024
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↑	↑↑			↑↑↑	
Traffic Volume (vph)	0	0	0	70	24	125	217	1057	0	0	689	322
Future Volume (vph)	0	0	0	70	24	125	217	1057	0	0	689	322
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)	0			0	0	0	0	0	0	150		0
Storage Lanes	0			0	0	0	1		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.916					0.947	
Flt Protected						0.985		0.950				
Satd. Flow (prot)	0	0	0	0	4588	0	1770	3539	0	0	4816	0
Flt Permitted					0.985		0.170					
Satd. Flow (perm)	0	0	0	0	4588	0	317	3539	0	0	4816	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)					137						84	
Link Speed (mph)	45				30			40			40	
Link Distance (ft)	514				817			239			1014	
Travel Time (s)	7.8				18.6			4.1			17.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.83	0.60	0.80	0.74	0.92	0.92	0.92	0.95	0.82
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)	0	0	0	84	40	156	293	1149	0	0	725	393
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	280	0	293	1149	0	0	1118	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			22	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type					Perm	NA		pm+pt	NA			NA
Protected Phases						8		5	5 6			6
Permitted Phases						8		5	5 6			6
Detector Phase						8	8	5	5 6			6
Switch Phase												

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings
5: N Main Street & SH 146 WB Frontage Rd

Existing Conditions_Year 2024
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag					Lead	
Lead-Lag Optimize?				Yes		Yes					Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode				None	None		None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)				10.9		141.3	146.8				74.8	
Actuated g/C Ratio				0.06		0.84	0.87				0.44	
v/c Ratio				0.66		0.35	0.37				0.51	
Control Delay				47.7		1.0	1.2				33.3	
Queue Delay				0.0		0.5	3.1				0.0	
Total Delay				47.7		1.6	4.3				33.3	
LOS				D		A	A				C	
Approach Delay				47.7			3.7				33.3	
Approach LOS				D			A				C	
Queue Length 50th (ft)				57		3	34				300	
Queue Length 95th (ft)				44		m3	m20				406	
Internal Link Dist (ft)	434			737			159				934	
Turn Bay Length (ft)												
Base Capacity (vph)				638		958	3052				2176	
Starvation Cap Reductn				0		339	1762				0	
Spillback Cap Reductn				0		0	0				0	
Storage Cap Reductn				0		0	0				0	
Reduced v/c Ratio				0.44		0.47	0.89				0.51	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 169.2

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.92

Intersection Signal Delay: 19.7 Intersection LOS: B

Intersection Capacity Utilization 69.6% ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

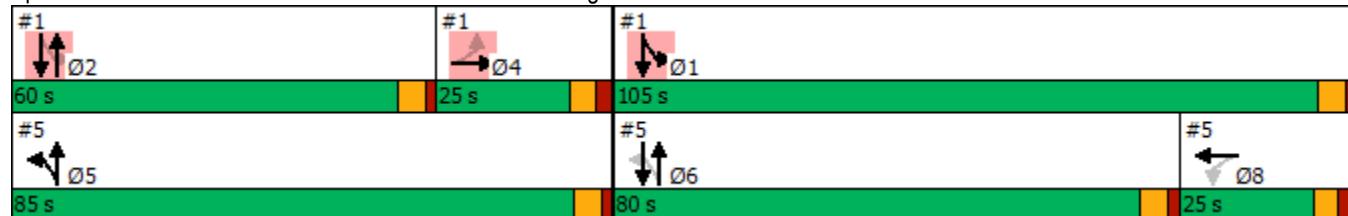
Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Existing Conditions_Year 2024

PM Peak Hour

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓↑						↑↑↓		↑	↑↑	
Traffic Volume (vph)	415	4	181	0	0	0	0	659	41	117	445	0
Future Volume (vph)	415	4	181	0	0	0	0	659	41	117	445	0
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)	0		0	0		0	140		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			65			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.926						0.991				
Flt Protected	0.950	0.976								0.950		
Satd. Flow (prot)	1610	3064	0	0	0	0	0	5040	0	1770	3539	0
Flt Permitted	0.950	0.976								0.161		
Satd. Flow (perm)	1610	3064	0	0	0	0	0	5040	0	300	3539	0
Right Turn on Red		Yes			Yes				Yes		Yes	
Satd. Flow (RTOR)		104						5				
Link Speed (mph)		45		45				40			40	
Link Distance (ft)		500		623			666			239		
Travel Time (s)		7.6		9.4			11.4			4.1		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.50	0.78	0.92	0.92	0.92	0.92	0.89	0.85	0.75	0.84	0.92
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	492	8	237	0	0	0	0	755	49	159	540	0
Shared Lane Traffic (%)		48%										
Lane Group Flow (vph)	256	481	0	0	0	0	0	804	0	159	540	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22	
Link Offset(ft)		0		0				0			0	
Crosswalk Width(ft)		16		16				16			16	
Two way Left Turn Lane								Yes				
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
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Turn Type	Perm	NA					NA		pm+pt	NA		
Protected Phases		4						2		1	12	
Permitted Phases		4								12		
Detector Phase		4	4					2		1	12	
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						36.6		126.3	131.8	
Actuated g/C Ratio	0.12	0.12						0.23		0.78	0.81	
v/c Ratio	1.36	1.07						0.71		0.15	0.19	
Control Delay	241.9	112.1						61.1		0.7	0.6	
Queue Delay	0.0	0.0						0.0		0.3	0.2	
Total Delay	241.9	112.1						61.1		1.0	0.8	
LOS	F	F						E		A	A	
Approach Delay		157.2						61.1			0.8	
Approach LOS		F						E			A	
Queue Length 50th (ft)	~390	~252						288		4	7	
Queue Length 95th (ft)	#623	138						342		4	6	
Internal Link Dist (ft)		420				543		586			159	
Turn Bay Length (ft)												
Base Capacity (vph)	188	451						1700		1147	3266	
Starvation Cap Reductn	0	0						0		570	1748	
Spillback Cap Reductn	0	0						0		0	0	
Storage Cap Reductn	0	0						0		0	0	
Reduced v/c Ratio	1.36	1.07						0.47		0.28	0.36	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 162.4

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 73.9

Intersection LOS: E

Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

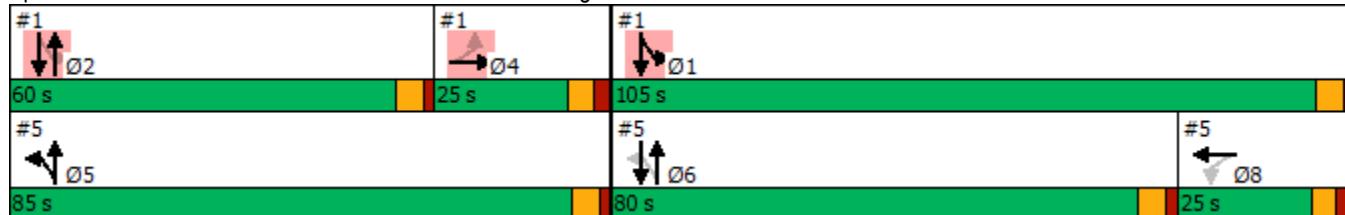
AM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Background Conditions_Year 2025
AM Peak Hour

	→	→	→	←	←	←	↑	↑	↑	↓	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	9	79	0	1000	29	55	940	24
Future Volume (vph)	0	0	0	50	9	79	0	1000	29	55	940	24
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 (%)												
Storage Length (ft)	0			0		0		0		0	105	0
Storage Lanes	0			0		0		1		0	1	0
Taper Length (ft)	25			25				25			60	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt							0.850					0.994
Flt Protected							0.961					0.950
Satd. Flow (prot)	0	0	0	0	1790	1583	0	3522	0	1770	3518	0
Flt Permitted							0.961					0.175
Satd. Flow (perm)	0	0	0	0	1790	1583	0	3522	0	326	3518	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)						98		5				8
Link Speed (mph)	30				30			40				40
Link Distance (ft)	154				570			1014				765
Travel Time (s)	3.5				13.0			17.3				13.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.74	0.56	0.94	0.92	0.89	0.73	0.92	0.80	0.50
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	0	0	0	69	16	86	0	1146	41	61	1199	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	85	86	0	1187	0	61	1248	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16				15
Link Offset(ft)	0				0			0				0
Crosswalk Width(ft)	16				16			16				16
Two way Left Turn Lane							Yes					Yes
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases					6		6				4	
Detector Phase					6	6	6		8		7	4
Switch Phase												

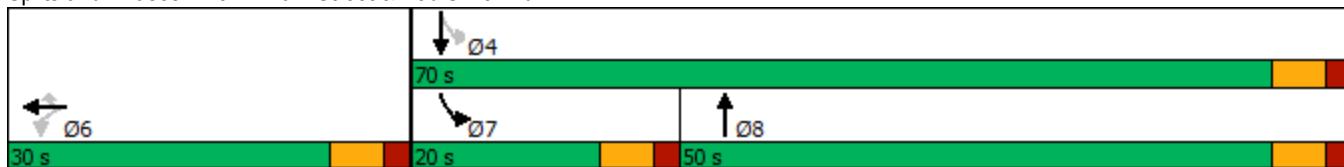
Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Background Conditions_Year 2025
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.8	8.8	57.8		67.0	68.2			
Actuated g/C Ratio				0.10	0.10	0.68		0.79	0.80			
v/c Ratio				0.46	0.34	0.50		0.16	0.44			
Control Delay				44.1	10.4	10.0		3.9	4.2			
Queue Delay				0.0	0.0	0.0		0.0	0.0			
Total Delay				44.1	10.4	10.0		3.9	4.2			
LOS				D	B	B		A	A			
Approach Delay				27.1		10.0			4.2			
Approach LOS				C		B		A				
Queue Length 50th (ft)				43	0	178		6	101			
Queue Length 95th (ft)				53	35	255		17	133			
Internal Link Dist (ft)	74			490		934			685			
Turn Bay Length (ft)								105				
Base Capacity (vph)				504	516	2392		493	2818			
Starvation Cap Reductn				0	0	0		0	0			
Spillback Cap Reductn				0	0	0		0	0			
Storage Cap Reductn				0	0	0		0	0			
Reduced v/c Ratio				0.17	0.17	0.50		0.12	0.44			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	85.2											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.50											
Intersection Signal Delay:	8.3						Intersection LOS: A					
Intersection Capacity Utilization	55.8%						ICU Level of Service B					
Analysis Period (min)	15											

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Background Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↑	↑↑			↑↑↑	
Traffic Volume (vph)	0	0	0	47	22	118	257	837	0	0	506	431
Future Volume (vph)	0	0	0	47	22	118	257	837	0	0	506	431
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)	0		0	0		0	0		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.905					0.931	
Flt Protected						0.988		0.950				
Satd. Flow (prot)	0	0	0	0	4547	0	1770	3539	0	0	4734	0
Flt Permitted					0.988		0.156					
Satd. Flow (perm)	0	0	0	0	4547	0	291	3539	0	0	4734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					163						133	
Link Speed (mph)	45				30			40			40	
Link Distance (ft)	514				817			239			1014	
Travel Time (s)	7.8				18.6			4.1			17.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.78	0.69	0.74	0.87	0.90	0.92	0.92	0.80	0.80
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	0	0	0	61	33	163	301	949	0	0	645	550
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	257	0	301	949	0	0	1195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			22	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type					Perm	NA		pm+pt	NA			NA
Protected Phases						8		5	5 6			6
Permitted Phases						8		5	5 6			6
Detector Phase						8	8		5	5 6		6
Switch Phase												

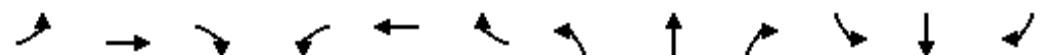
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Background Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag						Lead
Lead-Lag Optimize?				Yes		Yes						Yes
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode				None	None		None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)					8.9		136.4	141.9			74.8	
Actuated g/C Ratio					0.05		0.84	0.87			0.46	
v/c Ratio					0.64		0.37	0.31			0.53	
Control Delay					35.5		1.5	0.5			29.3	
Queue Delay					0.0		0.3	1.4			0.0	
Total Delay					35.5		1.8	1.8			29.3	
LOS					D		A	A			C	
Approach Delay					35.5			1.8			29.3	
Approach LOS					D		A				C	
Queue Length 50th (ft)					35		2	6			292	
Queue Length 95th (ft)					39		m2	m3			331	
Internal Link Dist (ft)	434				737			159			934	
Turn Bay Length (ft)												
Base Capacity (vph)					677		980	3092			2250	
Starvation Cap Reductn					0		261	1858			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.38		0.42	0.77			0.53	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 162.4

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 17.2

Intersection LOS: B

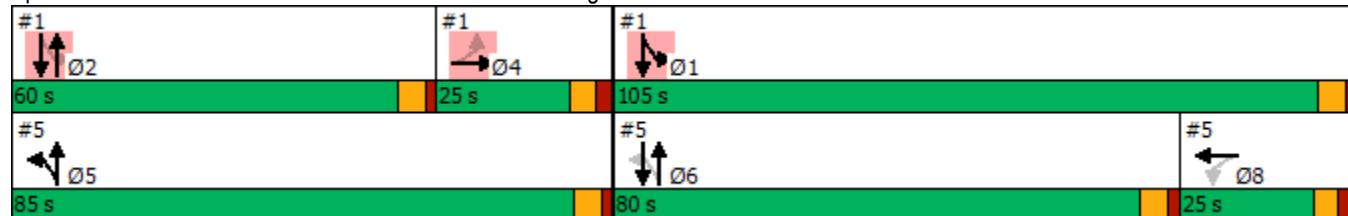
Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓↑						↑↑↓		↑	↑↑	
Traffic Volume (vph)	559	16	304	0	0	0	0	672	65	124	609	0
Future Volume (vph)	559	16	304	0	0	0	0	672	65	124	609	0
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)	0		0	0		0	140		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			65			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.924						0.984				
Flt Protected	0.950	0.978								0.950		
Satd. Flow (prot)	1610	3064	0	0	0	0	0	5004	0	1770	3539	0
Flt Permitted	0.950	0.978								0.145		
Satd. Flow (perm)	1610	3064	0	0	0	0	0	5004	0	270	3539	0
Right Turn on Red		Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		109						11				
Link Speed (mph)		45		45				40			40	
Link Distance (ft)		500		623			666			239		
Travel Time (s)		7.6		9.4			11.4			4.1		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.67	0.92	0.92	0.92	0.92	0.92	0.87	0.71	0.79	0.93	0.92
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	655	24	337	0	0	0	0	788	93	160	668	0
Shared Lane Traffic (%)		46%										
Lane Group Flow (vph)	354	662	0	0	0	0	0	881	0	160	668	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22	
Link Offset(ft)		0		0			0				0	
Crosswalk Width(ft)		16		16			16				16	
Two way Left Turn Lane							Yes					
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
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru					Thru		Left	Thru		
Leading Detector (ft)	20	100					100		20	100		
Trailing Detector (ft)	0	0					0		0	0		
Turn Type	Perm	NA					NA		pm+pt	NA		
Protected Phases		4					2		1	12		
Permitted Phases		4					2		1	12		
Detector Phase	4	4					2		1	12		
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						42.2		134.3	139.8	
Actuated g/C Ratio	0.11	0.11						0.25		0.79	0.82	
v/c Ratio	1.97	1.51						0.71		0.16	0.23	
Control Delay	489.9	278.5						60.9		0.6	0.5	
Queue Delay	0.0	0.0						0.0		0.3	0.2	
Total Delay	489.9	278.5						60.9		0.9	0.7	
LOS	F	F						E		A	A	
Approach Delay		352.1						60.9			0.7	
Approach LOS		F						E			A	
Queue Length 50th (ft)	~667	~500						326		3	7	
Queue Length 95th (ft)	#959	#438						373		3	6	
Internal Link Dist (ft)		420				543		586			159	
Turn Bay Length (ft)												
Base Capacity (vph)	180	439						1614		1099	3154	
Starvation Cap Reductn	0	0						0		553	1588	
Spillback Cap Reductn	0	0						0		0	0	
Storage Cap Reductn	0	0						0		0	0	
Reduced v/c Ratio	1.97	1.51						0.55		0.29	0.43	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 170.4

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.97

Intersection Signal Delay: 151.2

Intersection LOS: F

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Background Conditions_Year 2025

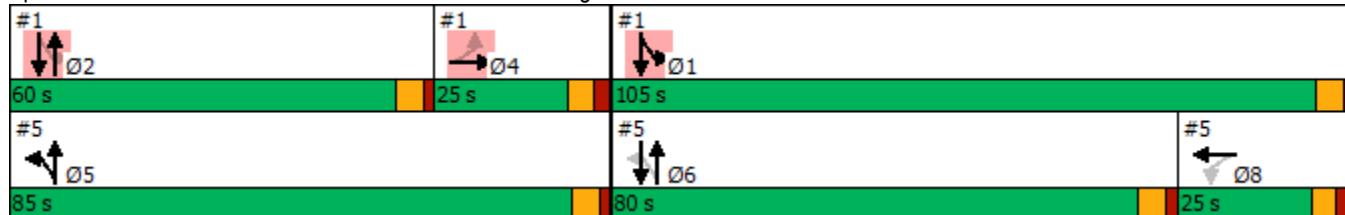
PM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Background Conditions_Year 2025
PM Peak Hour

	→	→	→	←	←	↑	↑	↑	↓	↓	←	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑↑		↑	↑↑	
Traffic Volume (vph)	0	0	0	44	7	66	0	1071	86	105	1023	69
Future Volume (vph)	0	0	0	44	7	66	0	1071	86	105	1023	69
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)	0			0	0		0	0		0	105	0
Storage Lanes	0			0	0		1	0		0	1	0
Taper Length (ft)	25			25			25			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt						0.850		0.986			0.987	
Flt Protected						0.964					0.950	
Satd. Flow (prot)	0	0	0	0	1796	1583	0	3490	0	1770	3493	0
Flt Permitted					0.964					0.125		
Satd. Flow (perm)	0	0	0	0	1796	1583	0	3490	0	233	3493	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					98		14			20		
Link Speed (mph)	30			30			40			40		
Link Distance (ft)	154			570			1014			765		
Travel Time (s)	3.5			13.0			17.3			13.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.73	0.35	0.87	0.50	0.89	0.67	0.85	0.90	0.64
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	0	0	0	61	20	77	0	1227	131	126	1159	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	81	77	0	1358	0	126	1269	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16			15	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane							Yes			Yes		
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases					6		6				4	
Detector Phase					6	6	6		8		7	4
Switch Phase												

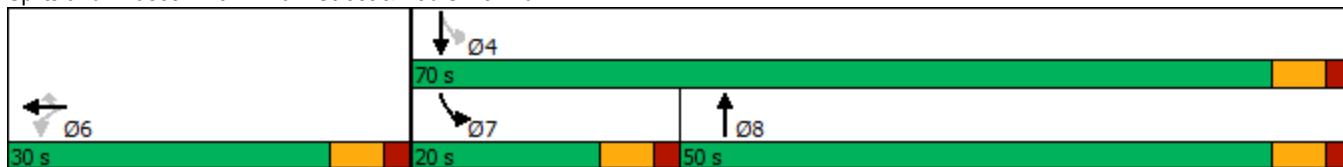
Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Background Conditions_Year 2025
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.6	8.6	50.8		64.4		65.8		
Actuated g/C Ratio				0.10	0.10	0.62		0.78		0.80		
v/c Ratio				0.43	0.30	0.63		0.39		0.45		
Control Delay				43.0	8.4	12.5		6.4		4.2		
Queue Delay				0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay				43.0	8.4	12.5		6.4		4.2		
LOS				D	A	B		A		A		
Approach Delay				26.2			12.5			4.4		
Approach LOS				C		B			A			
Queue Length 50th (ft)				41	0	218		13		101		
Queue Length 95th (ft)				31	25	340		29		163		
Internal Link Dist (ft)	74			490		934				685		
Turn Bay Length (ft)								105				
Base Capacity (vph)				528	535	2165		446		2805		
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				0.15	0.14	0.63		0.28		0.45		
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	82.1											
Natural Cycle:	70											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.63											
Intersection Signal Delay:	9.4						Intersection LOS: A					
Intersection Capacity Utilization	59.8%						ICU Level of Service B					
Analysis Period (min)	15											

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Background Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↑	↑↑			↑↑↑	
Traffic Volume (vph)	0	0	0	70	24	125	217	1057	0	0	689	322
Future Volume (vph)	0	0	0	70	24	125	217	1057	0	0	689	322
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)	0			0		0		0		0	150	0
Storage Lanes	0			0		0		1		0	1	0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.917					0.947	
Flt Protected						0.985		0.950				
Satd. Flow (prot)	0	0	0	0	4593	0	1770	3539	0	0	4816	0
Flt Permitted					0.985		0.163					
Satd. Flow (perm)	0	0	0	0	4593	0	304	3539	0	0	4816	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					134						84	
Link Speed (mph)	45				30		40				40	
Link Distance (ft)	514				817		239				1014	
Travel Time (s)	7.8				18.6		4.1				17.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.83	0.60	0.80	0.74	0.92	0.92	0.92	0.95	0.82
Growth Factor	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
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)	0	0	0	86	41	159	299	1172	0	0	740	401
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	286	0	299	1172	0	0	1141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			22	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type					Perm	NA		pm+pt	NA			NA
Protected Phases						8		5	5 6			6
Permitted Phases						8		5	5 6			6
Detector Phase						8	8		5	5 6		6
Switch Phase												

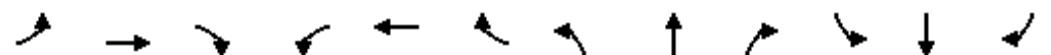
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Background Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag					Lead	
Lead-Lag Optimize?				Yes		Yes					Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode				None	None		None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)					11.2		142.1	147.6			74.8	
Actuated g/C Ratio					0.07		0.83	0.87			0.44	
v/c Ratio					0.67		0.36	0.38			0.53	
Control Delay					49.6		1.1	1.3			34.2	
Queue Delay					0.0		0.6	3.1			0.0	
Total Delay					49.6		1.7	4.4			34.2	
LOS					D		A	A			C	
Approach Delay					49.6			3.8			34.2	
Approach LOS					D			A			C	
Queue Length 50th (ft)					60		3	41			312	
Queue Length 95th (ft)					47		m3	m23			421	
Internal Link Dist (ft)	434				737			159			934	
Turn Bay Length (ft)												
Base Capacity (vph)					633		948	3066			2160	
Starvation Cap Reductn					0		334	1751			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.45		0.49	0.89			0.53	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 170.4

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.97

Intersection Signal Delay: 20.3

Intersection LOS: C

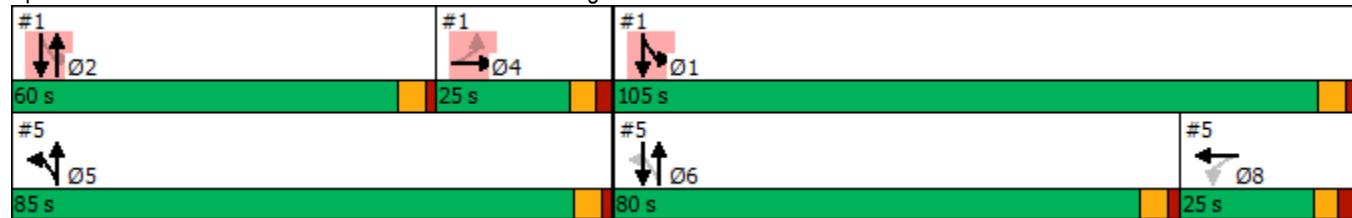
Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓↑						↑↑↓		↑	↑↑	
Traffic Volume (vph)	432	4	185	0	0	0	0	680	42	119	462	0
Future Volume (vph)	432	4	185	0	0	0	0	680	42	119	462	0
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)	0		0	0		0	140		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			65			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.928						0.991				
Flt Protected	0.950	0.976								0.950		
Satd. Flow (prot)	1610	3071	0	0	0	0	0	5040	0	1770	3539	0
Flt Permitted	0.950	0.976								0.158		
Satd. Flow (perm)	1610	3071	0	0	0	0	0	5040	0	294	3539	0
Right Turn on Red		Yes			Yes				Yes		Yes	
Satd. Flow (RTOR)	100						5					
Link Speed (mph)	45		45			40				40		
Link Distance (ft)	500		623			666				239		
Travel Time (s)	7.6		9.4			11.4				4.1		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.50	0.78	0.92	0.92	0.92	0.92	0.89	0.85	0.75	0.84	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)	502	8	237	0	0	0	0	764	49	159	550	0
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	256	491	0	0	0	0	0	813	0	159	550	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22		
Link Offset(ft)	0		0		0		0		0		0	
Crosswalk Width(ft)		16		16			16			16		
Two way Left Turn Lane							Yes					
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
Number of Detectors	1	2					2		1	2		
Detector Template	Left	Thru					Thru		Left	Thru		
Leading Detector (ft)	20	100					100		20	100		
Trailing Detector (ft)	0	0					0		0	0		
Turn Type	Perm	NA					NA		pm+pt	NA		
Protected Phases		4					2		1	12		
Permitted Phases		4							12			
Detector Phase	4	4					2		1	12		
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						37.1		126.8		132.3
Actuated g/C Ratio	0.12	0.12						0.23		0.78		0.81
v/c Ratio	1.36	1.10						0.71		0.15		0.19
Control Delay	243.8	122.2						61.0		0.7		0.6
Queue Delay	0.0	0.0						0.0		0.3		0.2
Total Delay	243.8	122.2						61.0		1.0		0.8
LOS	F	F						E		A		A
Approach Delay		163.9						61.0				0.8
Approach LOS		F						E				A
Queue Length 50th (ft)	~391	~269						292		4		7
Queue Length 95th (ft)	#625	145						346		4		6
Internal Link Dist (ft)		420				543		586				159
Turn Bay Length (ft)												
Base Capacity (vph)	188	447						1694		1143		3255
Starvation Cap Reductn	0	0						0		573		1749
Spillback Cap Reductn	0	0						0		0		0
Storage Cap Reductn	0	0						0		0		0
Reduced v/c Ratio	1.36	1.10						0.48		0.28		0.37

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 162.9

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 76.1

Intersection LOS: E

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

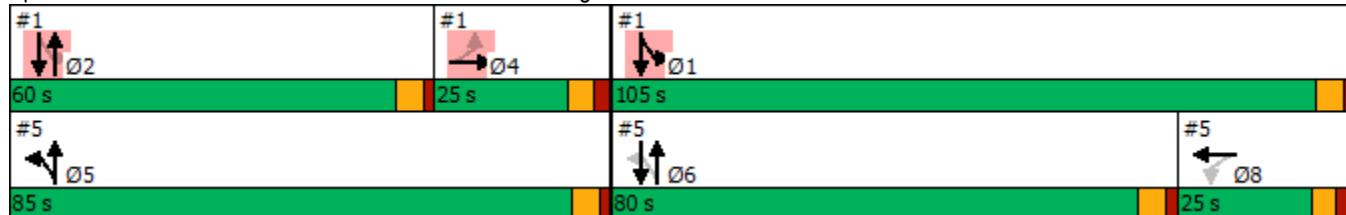
AM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Project Traffic Conditions_Year 2025
AM Peak Hour

	→	→	→	←	←	↑	↑	↑	↓	↓	←	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑↑		↑	↑↑	
Traffic Volume (vph)	0	0	0	51	9	81	0	1033	30	56	973	24
Future Volume (vph)	0	0	0	51	9	81	0	1033	30	56	973	24
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)	0			0	0		0	0		0	105	0
Storage Lanes	0			0	0		1	0		0	1	0
Taper Length (ft)	25			25			25			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt						0.850		0.995			0.994	
Flt Protected						0.961					0.950	
Satd. Flow (prot)	0	0	0	0	1790	1583	0	3522	0	1770	3518	0
Flt Permitted					0.961					0.171		
Satd. Flow (perm)	0	0	0	0	1790	1583	0	3522	0	319	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					98		4			8		
Link Speed (mph)	30			30			40			40		
Link Distance (ft)	154			570			812			765		
Travel Time (s)	3.5			13.0			13.8			13.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.74	0.56	0.94	0.92	0.89	0.73	0.92	0.80	0.50
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)	0	0	0	69	16	86	0	1161	41	61	1216	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	85	86	0	1202	0	61	1264	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16			15	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane							Yes			Yes		
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases						6	6	6			4	
Detector Phase						6	6	8		7	4	
Switch Phase												

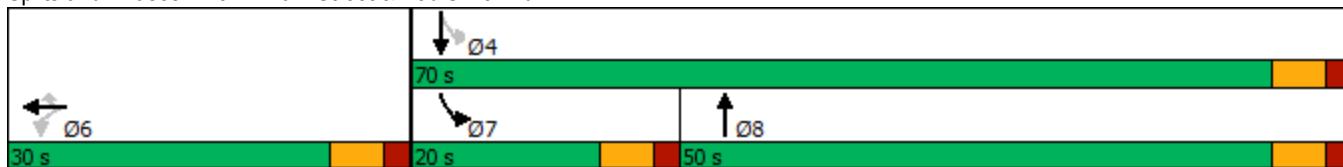
Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Project Traffic Conditions_Year 2025
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.8	8.8	57.8		67.0	68.2			
Actuated g/C Ratio				0.10	0.10	0.68		0.79	0.80			
v/c Ratio				0.46	0.34	0.50		0.16	0.45			
Control Delay				44.1	10.4	10.1		4.0	4.3			
Queue Delay				0.0	0.0	0.0		0.0	0.0			
Total Delay				44.1	10.4	10.1		4.0	4.3			
LOS				D	B	B		A	A			
Approach Delay				27.1			10.1		4.3			
Approach LOS				C		B		A				
Queue Length 50th (ft)				43	0	182		6	103			
Queue Length 95th (ft)				53	35	260		17	135			
Internal Link Dist (ft)	74			490		732			685			
Turn Bay Length (ft)								105				
Base Capacity (vph)				504	516	2391		489	2818			
Starvation Cap Reductn				0	0	0		0	0			
Spillback Cap Reductn				0	0	0		0	0			
Storage Cap Reductn				0	0	0		0	0			
Reduced v/c Ratio				0.17	0.17	0.50		0.12	0.45			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	85.2											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.50											
Intersection Signal Delay:	8.3						Intersection LOS: A					
Intersection Capacity Utilization	56.2%						ICU Level of Service B					
Analysis Period (min)	15											

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Project Traffic Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	48	22	120	262	871	0	0	524	448
Future Volume (vph)	0	0	0	48	22	120	262	871	0	0	524	448
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 (%)												
Storage Length (ft)	0			0		0		0		0	110	0
Storage Lanes	0			0		0		1		0	1	0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.905					0.931	
Flt Protected						0.988		0.950				
Satd. Flow (prot)	0	0	0	0	4547	0	1770	3539	0	0	4734	0
Flt Permitted					0.988		0.150					
Satd. Flow (perm)	0	0	0	0	4547	0	279	3539	0	0	4734	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)					162						133	
Link Speed (mph)	45				30			40			40	
Link Distance (ft)	514				251			239			202	
Travel Time (s)	7.8				5.7			4.1			3.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.78	0.69	0.74	0.87	0.90	0.92	0.92	0.80	0.80
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)	0	0	0	62	32	162	301	968	0	0	655	560
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	256	0	301	968	0	0	1215	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			10	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type					Perm	NA		pm+pt	NA			NA
Protected Phases						8		5	5 6			6
Permitted Phases						8		5	5 6			6
Detector Phase						8	8	5	5 6			6
Switch Phase												

Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Project Traffic Conditions_Year 2025

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag					Lead	
Lead-Lag Optimize?				Yes		Yes					Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode		None		None			None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)					8.9		136.9	142.4			74.7	
Actuated g/C Ratio					0.05		0.84	0.87			0.46	
v/c Ratio					0.64		0.37	0.31			0.54	
Control Delay					35.7		1.5	0.5			29.8	
Queue Delay					0.0		0.3	1.4			0.0	
Total Delay					35.7		1.8	2.0			29.8	
LOS					D		A	A			C	
Approach Delay					35.7			1.9			29.8	
Approach LOS					D		A				C	
Queue Length 50th (ft)					35		2	8			300	
Queue Length 95th (ft)					39		m2	m3			339	
Internal Link Dist (ft)	434				171			159			122	
Turn Bay Length (ft)												
Base Capacity (vph)					675		973	3094			2243	
Starvation Cap Reductn					0		265	1850			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.38		0.43	0.78			0.54	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 162.9

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 17.4

Intersection LOS: B

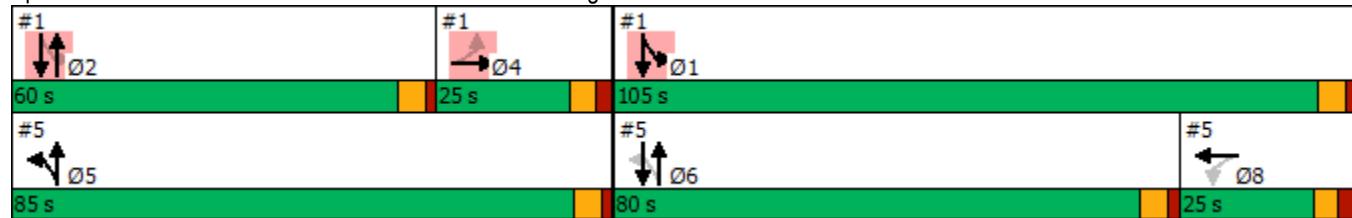
Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		↑	↑↑
Traffic Vol, veh/h	16	13	974	17	14	1024
Future Vol, veh/h	16	13	974	17	14	1024
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
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	17	14	1059	18	15	1113
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1655	539	0	0	1077	0
Stage 1	1068	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	89	487	-	-	643	-
Stage 1	291	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	87	487	-	-	643	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	291	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	19.7	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	277	643	-	
HCM Lane V/C Ratio	-	-	0.114	0.024	-	
HCM Control Delay (s)	-	-	19.7	10.7	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑↑		↑	
Traffic Vol, veh/h	0	0	190	3	0	4
Future Vol, veh/h	0	0	190	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	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	0	0	207	3	0	4
Major/Minor	Major2		Minor2			
Conflicting Flow All	-	0	-	105		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	-	-	-	7.14	
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	-	-	-	3.92	
Pot Cap-1 Maneuver	-	-	0	789		
Stage 1	-	-	0	-		
Stage 2	-	-	0	-		
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-	-	789		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		SB			
HCM Control Delay, s	0		9.6			
HCM LOS			A			
Minor Lane/Major Mvmt	WBT	WBR	SBLn1			
Capacity (veh/h)	-	-	789			
HCM Lane V/C Ratio	-	-	0.006			
HCM Control Delay (s)	-	-	9.6			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓↑						↑↑↓		↑	↑↑	
Traffic Volume (vph)	578	16	310	0	0	0	0	693	66	126	629	0
Future Volume (vph)	578	16	310	0	0	0	0	693	66	126	629	0
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)	0		0	0		0	140		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			65			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.925						0.984				
Flt Protected	0.950	0.977								0.950		
Satd. Flow (prot)	1610	3064	0	0	0	0	0	5004	0	1770	3539	0
Flt Permitted	0.950	0.977								0.145		
Satd. Flow (perm)	1610	3064	0	0	0	0	0	5004	0	270	3539	0
Right Turn on Red		Yes			Yes				Yes		Yes	
Satd. Flow (RTOR)		106						11				
Link Speed (mph)		45		45				40			40	
Link Distance (ft)		500		623			666			239		
Travel Time (s)		7.6		9.4			11.4			4.1		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.67	0.92	0.92	0.92	0.92	0.92	0.87	0.71	0.79	0.93	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)	664	24	337	0	0	0	0	797	93	159	676	0
Shared Lane Traffic (%)		47%										
Lane Group Flow (vph)	352	673	0	0	0	0	0	890	0	159	676	0
Enter Blocked Intersection	No	No	No	No	No	No	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			22	
Link Offset(ft)		0		0			0			0		
Crosswalk Width(ft)		16		16			16			16		
Two way Left Turn Lane							Yes					
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
Number of Detectors	1	2					2		1	2		
Detector Template	Left	Thru					Thru		Left	Thru		
Leading Detector (ft)	20	100					100		20	100		
Trailing Detector (ft)	0	0					0		0	0		
Turn Type	Perm	NA					NA		pm+pt	NA		
Protected Phases		4					2		1	12		
Permitted Phases		4					2		1	12		
Detector Phase	4	4					2		1	12		
Switch Phase												

Lane Group	Ø5	Ø6	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	5	6	8
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0						10.0		5.0		
Minimum Split (s)	28.0	28.0						24.5		10.5		
Total Split (s)	25.0	25.0						60.0		105.0		
Total Split (%)	13.2%	13.2%						31.6%		55.3%		
Maximum Green (s)	19.0	19.0						54.5		99.5		
Yellow Time (s)	3.5	3.5						4.0		4.0		
All-Red Time (s)	2.5	2.5						1.5		1.5		
Lost Time Adjust (s)	0.0	0.0						0.0		0.0		
Total Lost Time (s)	6.0	6.0						5.5		5.5		
Lead/Lag	Lag	Lag						Lead				
Lead-Lag Optimize?	Yes	Yes						Yes				
Vehicle Extension (s)	3.0	3.0						3.0		3.0		
Minimum Gap (s)	3.0	3.0						3.0		3.0		
Time Before Reduce (s)	0.0	0.0						0.0		0.0		
Time To Reduce (s)	0.0	0.0						0.0		0.0		
Recall Mode	None	None						None		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	15.0	15.0						12.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effect Green (s)	19.1	19.1						43.1		135.2		140.7
Actuated g/C Ratio	0.11	0.11						0.25		0.79		0.82
v/c Ratio	1.98	1.55						0.70		0.16		0.23
Control Delay	492.0	295.4						60.6		0.6		0.5
Queue Delay	0.0	0.0						0.0		0.3		0.2
Total Delay	492.0	295.4						60.6		0.9		0.7
LOS	F	F						E		A		A
Approach Delay		362.9						60.6				0.8
Approach LOS		F						E				A
Queue Length 50th (ft)	~669	~523						330		3		7
Queue Length 95th (ft)	#956	#453						377		3		6
Internal Link Dist (ft)		420				543		586				159
Turn Bay Length (ft)												
Base Capacity (vph)	178	435						1605		1095		3137
Starvation Cap Reductn	0	0						0		555		1600
Spillback Cap Reductn	0	0						0		0		0
Storage Cap Reductn	0	0						0		0		0
Reduced v/c Ratio	1.98	1.55						0.55		0.29		0.44

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 171.3

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.98

Intersection Signal Delay: 155.1

Intersection LOS: F

Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Lane Group	Ø5	Ø6	Ø8
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	85.0	80.0	25.0
Total Split (%)	45%	42%	13%
Maximum Green (s)	79.5	74.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	Max	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Lanes, Volumes, Timings

1: N Main Street & SH 146 EB Frontage Rd

Project Traffic Conditions_Year 2025

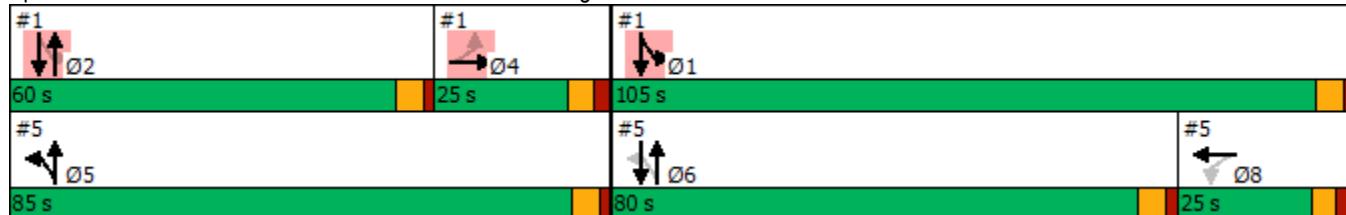
PM Peak Hour

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: N Main Street & SH 146 EB Frontage Rd



Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Project Traffic Conditions_Year 2025
PM Peak Hour

	→	→	→	←	←	↑	↑	↑	↓	↓	←	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑↑		↑	↑↑	
Traffic Volume (vph)	0	0	0	45	7	67	0	1106	88	107	1056	70
Future Volume (vph)	0	0	0	45	7	67	0	1106	88	107	1056	70
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)	0		0	0		0	0		0	105		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			60		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt						0.850		0.986			0.987	
Flt Protected						0.964					0.950	
Satd. Flow (prot)	0	0	0	0	1796	1583	0	3490	0	1770	3493	0
Flt Permitted					0.964					0.121		
Satd. Flow (perm)	0	0	0	0	1796	1583	0	3490	0	225	3493	0
Right Turn on Red		Yes				Yes			Yes			Yes
Satd. Flow (RTOR)					98			14			19	
Link Speed (mph)	30			30			40			40		
Link Distance (ft)	154			570			800			765		
Travel Time (s)	3.5			13.0			13.6			13.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.73	0.35	0.87	0.50	0.89	0.67	0.85	0.90	0.64
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)	0	0	0	62	20	77	0	1243	131	126	1173	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	82	77	0	1374	0	126	1282	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			16			15	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane							Yes			Yes		
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
Number of Detectors					1	2	1		2		1	2
Detector Template					Left	Thru	Right		Thru		Left	Thru
Leading Detector (ft)					20	100	20		100		20	100
Trailing Detector (ft)					0	0	0		0		0	0
Turn Type					Perm	NA	Perm		NA		pm+pt	NA
Protected Phases						6			8		7	4
Permitted Phases						6	6				4	
Detector Phase						6	6		8		7	4
Switch Phase												

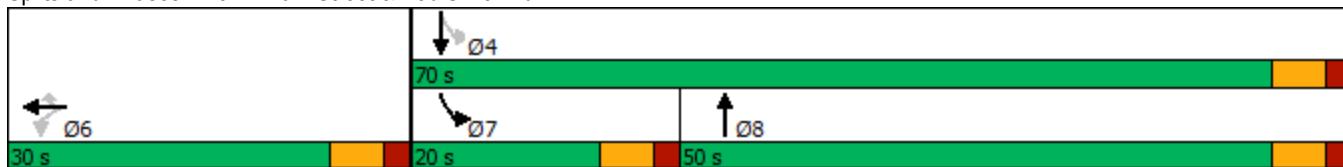
Lanes, Volumes, Timings
3: N Main Street & Bob Smith Rd

Project Traffic Conditions_Year 2025
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				7.0	7.0	7.0		20.0		7.0	20.0	
Minimum Split (s)				22.0	22.0	22.0		26.0		13.0	26.0	
Total Split (s)				30.0	30.0	30.0		50.0		20.0	70.0	
Total Split (%)				30.0%	30.0%	30.0%		50.0%		20.0%	70.0%	
Maximum Green (s)				24.0	24.0	24.0		44.0		14.0	64.0	
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	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)				2.0	2.0	2.0		3.0		2.0	3.0	
Minimum Gap (s)				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	
Time To Reduce (s)				0.0	0.0	0.0		0.0		0.0	0.0	
Recall Mode				None	None	None		Max		None	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)				8.7	8.7	50.8		64.4	65.8			
Actuated g/C Ratio				0.11	0.11	0.62		0.78	0.80			
v/c Ratio				0.43	0.30	0.64		0.39	0.46			
Control Delay				43.1	8.4	12.7		6.6	4.3			
Queue Delay				0.0	0.0	0.0		0.0	0.0			
Total Delay				43.1	8.4	12.7		6.6	4.3			
LOS				D	A	B		A	A			
Approach Delay				26.3		12.7			4.5			
Approach LOS				C		B			A			
Queue Length 50th (ft)				42	0	223		13	103			
Queue Length 95th (ft)				31	25	347		29	165			
Internal Link Dist (ft)	74			490		720			685			
Turn Bay Length (ft)								105				
Base Capacity (vph)				528	535	2163		441	2804			
Starvation Cap Reductn				0	0	0		0	0			
Spillback Cap Reductn				0	0	0		0	0			
Storage Cap Reductn				0	0	0		0	0			
Reduced v/c Ratio				0.16	0.14	0.64		0.29	0.46			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	82.1											
Natural Cycle:	70											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.64											
Intersection Signal Delay:	9.5						Intersection LOS: A					
Intersection Capacity Utilization	60.1%						ICU Level of Service B					
Analysis Period (min)	15											

Splits and Phases: 3: N Main Street & Bob Smith Rd



Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Project Traffic Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑		↑	↑↑		↑↑↑		
Traffic Volume (vph)	0	0	0	71	24	128	221	1094	0	0	711	337
Future Volume (vph)	0	0	0	71	24	128	221	1094	0	0	711	337
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)	0		0	0		0	0		0	110		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor												
Frt						0.916					0.947	
Flt Protected						0.985		0.950				
Satd. Flow (prot)	0	0	0	0	4588	0	1770	3539	0	0	4816	0
Flt Permitted					0.985		0.157					
Satd. Flow (perm)	0	0	0	0	4588	0	292	3539	0	0	4816	0
Right Turn on Red		Yes				Yes			Yes			Yes
Satd. Flow (RTOR)					135						86	
Link Speed (mph)	45				30			40			40	
Link Distance (ft)	514				212			239			214	
Travel Time (s)	7.8				4.8			4.1			3.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.83	0.60	0.80	0.74	0.92	0.92	0.92	0.95	0.82
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)	0	0	0	86	40	160	299	1189	0	0	748	411
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	286	0	299	1189	0	0	1159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			22			10	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												Yes
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
Number of Detectors					1	2		1	2			2
Detector Template					Left	Thru		Left	Thru			Thru
Leading Detector (ft)					20	100		20	100			100
Trailing Detector (ft)					0	0		0	0			0
Turn Type					Perm	NA		pm+pt	NA			NA
Protected Phases						8		5	5 6			6
Permitted Phases						8		5	5 6			6
Detector Phase						8	8	5	5 6			6
Switch Phase												

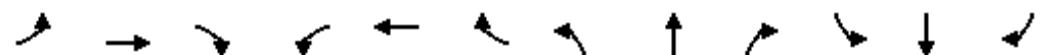
Lane Group	Ø1	Ø2	Ø4
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Turn Type			
Protected Phases	1	2	4
Permitted Phases			
Detector Phase			
Switch Phase			

Lanes, Volumes, Timings

5: N Main Street & SH 146 WB Frontage Rd

Project Traffic Conditions_Year 2025

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)				5.0	5.0		5.0				10.0	
Minimum Split (s)					28.0	28.0		10.5				24.5
Total Split (s)					25.0	25.0		85.0				80.0
Total Split (%)					13.2%	13.2%		44.7%				42.1%
Maximum Green (s)				19.0	19.0		79.5				74.5	
Yellow Time (s)				3.5	3.5		4.0				4.0	
All-Red Time (s)				2.5	2.5		1.5				1.5	
Lost Time Adjust (s)					0.0		0.0				0.0	
Total Lost Time (s)						6.0		5.5			5.5	
Lead/Lag				Lag		Lag					Lead	
Lead-Lag Optimize?				Yes		Yes					Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Minimum Gap (s)				3.0	3.0		3.0				3.0	
Time Before Reduce (s)				0.0	0.0		0.0				0.0	
Time To Reduce (s)				0.0	0.0		0.0				0.0	
Recall Mode				None	None		None				Max	
Walk Time (s)				7.0	7.0						7.0	
Flash Dont Walk (s)				15.0	15.0						12.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effect Green (s)				11.2		143.0	148.5				74.8	
Actuated g/C Ratio				0.07		0.83	0.87				0.44	
v/c Ratio				0.67		0.36	0.39				0.54	
Control Delay				49.6		1.1	1.4				34.8	
Queue Delay				0.0		0.6	3.1				0.0	
Total Delay				49.6		1.7	4.6				34.8	
LOS				D		A	A				C	
Approach Delay				49.6			4.0				34.8	
Approach LOS				D			A				C	
Queue Length 50th (ft)				61		3	48				323	
Queue Length 95th (ft)				47		m3	m26				430	
Internal Link Dist (ft)	434			132			159				134	
Turn Bay Length (ft)												
Base Capacity (vph)				630		939	3068				2150	
Starvation Cap Reductn				0		335	1739				0	
Spillback Cap Reductn				0		0	0				0	
Storage Cap Reductn				0		0	0				0	
Reduced v/c Ratio				0.45		0.50	0.89				0.54	

Intersection Summary

Area Type: Other

Cycle Length: 190

Actuated Cycle Length: 171.3

Natural Cycle: 115

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.98

Intersection Signal Delay: 20.6

Intersection LOS: C

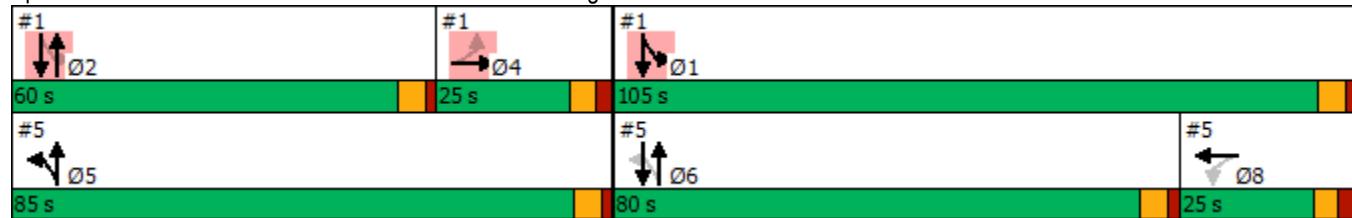
Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: N Main Street & SH 146 WB Frontage Rd



Lane Group	Ø1	Ø2	Ø4
Minimum Initial (s)	5.0	10.0	5.0
Minimum Split (s)	10.5	24.5	28.0
Total Split (s)	105.0	60.0	25.0
Total Split (%)	55%	32%	13%
Maximum Green (s)	99.5	54.5	19.0
Yellow Time (s)	4.0	4.0	3.5
All-Red Time (s)	1.5	1.5	2.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)		7.0	7.0
Flash Dont Walk (s)		12.0	15.0
Pedestrian Calls (#/hr)		0	0
Act Effect Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			
Intersection Summary			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	223	4	0	3
Future Vol, veh/h	0	0	223	4	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	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	0	0	242	4	0	3
Major/Minor						
Major2		Minor2				
Conflicting Flow All	-	0	-	123		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	-	-	7.14		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	-	-	3.92		
Pot Cap-1 Maneuver	-	-	0	769		
Stage 1	-	-	0	-		
Stage 2	-	-	0	-		
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-	-	769		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach						
WB		SB				
HCM Control Delay, s	0		9.7			
HCM LOS			A			
Minor Lane/Major Mvmt						
WBT		WBR	SBLn1			
Capacity (veh/h)	-	-	769			
HCM Lane V/C Ratio	-	-	0.004			
HCM Control Delay (s)	-	-	9.7			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↓		↑	↑↓
Traffic Vol, veh/h	17	14	1180	16	13	1101
Future Vol, veh/h	17	14	1180	16	13	1101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
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	18	15	1283	17	14	1197
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1919	650	0	0	1300	0
Stage 1	1292	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	59	412	-	-	529	-
Stage 1	221	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	57	412	-	-	529	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	221	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	24.2	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	221	529	-	
HCM Lane V/C Ratio	-	-	0.152	0.027	-	
HCM Control Delay (s)	-	-	24.2	12	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	