

CORRIDOR STUDY MEMO

DATE: December 23rd, 2025

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SUBJECT: 164th Avenue NE Safe Streets Corridor Study

Project #25315-000

INTRODUCTION

This memorandum evaluates multimodal safety needs along 164th Ave NE between NE 30th St and Northup Way, aiming to improve roadway safety for all users along the corridor.

BACKGROUND AND CONTEXT

In 2020, the Bellevue City Council adopted a Safe Systems resolution to eliminate traffic deaths and serious-injury crashes on city streets by 2030. In Bellevue, 83% of all fatal and serious injury crashes occur on 8% of the city's total street network (as measured by length). These street segments make up what is now called Bellevue's High Injury Network (HIN). In 2022, a team of city staff and consultants conducted a Road Safety Assessment (RSA) along 164th Avenue NE to identify safety improvements for all road users, especially vulnerable road users walking and biking. That RSA spanned 164th Ave NE from NE 26th St to NE 19th St and NE 24th St from 161st Ave NE to 167th Ave NE. Sherwood Forest Elementary School and Interlake High School are located within this RSA area.

The team identified numerous safety improvements through the RSA process. In this phase of the report, the City recommended a list of near-term and long-term design alternatives along the 164th Ave NE corridor between NE 30th St and Northup Way. This transportation study evaluates the feasibility of these design alternatives.

PROJECT ELEMENTS AND DESIGN RECOMMENDATIONS

DESIGN ALTERNATIVE RECOMMENDATIONS

The 164th Ave NE Safe Street Corridor Study Design Alternative Recommendation Memo prepared by DKS for the City of Bellevue in June 2025 includes a list of design elements along the corridor from NE 30th St to Northup Way. Plan views for these design alternatives can be found in the accompanying near-term and long-term design layouts. The location-specific design recommendations for this transportation study are:

Near-Term Alternative

- **164th Ave NE –**
 - Add northbound and southbound bicycle lanes on 164th Ave NE from Northup Way to NE 24th St. Add green skip striping through intersections and along major driveways where striped bike lanes are added.
 - Add bicycle sharrows between NE 24th St and NE 30th St.
 - Add speed cushions on 164th Ave NE at south of NE 29th St, north of NE 25th St, south of Interlake Saints Ct, north of NE 20th St, and north of NE 16th Pl.
 - Evaluate implementing a 20 mph speed limit between NE 24th St and NE 30th St.
 - Add crosswalks and update curb ramps at all intersections between Northup Way and NE 24th St.
- **NE 30th St Intersection –** Convert intersection from a two-way-stop to an all-way-stop. The details of the all-way-stop at NE 30th Street are being evaluated as part of a separate City of Bellevue project. Coordination between the two projects will need to be made as the design progresses.
- **NE 24th St Intersection –**
 - Remove the left-turn lane at the northbound and southbound approaches and modify signal phasing.
 - Add northbound and southbound bike lanes.
 - Consider signal timing modifications, including changes to all-red clearance time, pedestrian recall, flashing don't walk, and left-turn phasing.
 - Add northbound, southbound, and eastbound bike boxes and bike crossings. Install No Turn On Red signs in the northbound, southbound, and eastbound directions.
- **Sherwood Forest Elementary School North Driveway –** Remove the two-way left-turn lane south of the driveway which acts as a receiving lane for westbound left-turning vehicles.
- **Sherwood Forest Elementary School South Driveway –** Remove the left-turn lane into the Sherwood Forest Staff entrance.
- **NE 18th St Intersection –** Install a new marked crosswalk on the north leg of NE 18th St near house 16404.
- **Northup Way Intersection –** Add wayfinding signage for cyclists towards East Bellevue Greenway. Add southbound bike box and install No Turn On Red sign in the eastbound direction.

Long-Term Alternative

- **All near-term improvements.**
- **164th Ave NE from NE 24th St to NE 30th St–**
 - Install a planter, asphalt shared-use path, and ADA-compliant curb ramps on the east side of 164th Ave NE.
 - Narrow 164th Ave by moving the east curb into the existing pavement to build the shared-use path within the right of way.
 - Add crosswalks and upgrade curb ramps on the crossing streets.

- Rebuild all driveways on the east side of 164th Ave.
- **NE 29th St Intersection** – Add crosswalk markings on the south leg across 164th Ave NE.
- **NE 28th St Intersection** – Add crosswalk markings on the north and south legs across 164th Ave NE.
- **NE 26th St Intersection** – Add crosswalk markings on the north leg across 164th Ave NE.
- **NE 24th St Intersection** – Install protected corners on the southeast and southwest corners of the intersection.
- **Interlake Saints Ct Intersection** – Add a raised crosswalk to the existing RRFB crossing, rebuild the median island on the crosswalk.
- **NE 21st Pl Intersection** – Install a raised crosswalk and RRFB on the north leg across 164th Ave NE. City to complete RRFB warrant analysis on the north leg at later design stage. If it meets the warrant, install RRFB across 164th Ave NE.

TRAFFIC ANALYSIS

The City identified six intersections and driveways for traffic analysis to evaluate potential roadway recommendations for the near-term and long-term alternatives with potential operational impacts:

- 164th Ave NE / NE 24th St
- 164th Ave NE / Northup Way
- 164th Ave NE / Sherwood Forest Elementary School Northern Driveway
- 164th Ave NE / Interlake Saints CT
- 164th Ave NE / Sherwood Forest Elementary School Southern Driveway
- 164th Ave NE / Interlake Student Parking Lot Driveway

TRAFFIC DATA

The City of Bellevue provided existing traffic counts and signal timings for use in the traffic analysis. The traffic counts were collected on Wednesday, April 30, 2025 during the AM and PM peak hours at the six study intersections. The City also collected speed and volume studies along 164th Ave NE, north of NE 26th St, from April 25 to May 4, 2025 and south of NE 24th St, from November 13 to November 19, 2024. Appendix Section 1 shows the collected traffic count data used in this analysis and Appendix Section 2 shows the provided signal timing data.

The City also provided forecast 2044 traffic volumes at the two signalized study intersections during the AM and PM peak hours. These volumes are shown in Appendix Section 3. The growth rate for the corridor between 2025 and 2044 has negative growth or minimal growth for the following reasons:

- No significant land use changes are anticipated in the area near the study corridor between the base year and future 2044 model
- System tolling is assumed in the 2044 model
- Sound Transit 2 Line light rail is assumed to operate in the 2044 model, but not in the base year model, leading to mode shift

Volumes for the four study driveways were balanced with the provided future 2044 volumes at the two signalized intersections for consistency in the analysis.

ANALYSIS METHODOLOGY

The traffic modeling program Synchro 12 was used to determine intersection operations. Results were reported based on HCM 7 methodologies for delay and level of service (LOS) where possible, and HCM 2000 methodology was used where HCM 7 could not be applied. For two-way stop-controlled intersections, intersection delay is calculated by the movement with the highest delay. Results were reported based on Synchro methodology for queue lengths.

MODELING RESULTS

The traffic analysis evaluated AM and PM peak hour operations at three segments along the 164th Ave NE corridor. Each location was analyzed under at least four conditions:

- 2025 Existing Conditions
- 2025 Build Alternatives
- 2044 No Build
- 2044 Build Alternatives

The three segments are:

- 164th Ave NE and NE 24th St
- School driveways along 164th Ave NE between NE 24th St and NE 21st Pl
- 164th Ave NE and Northup Way

Results for each segment are provided in the sections below.

164TH AVE NE AND NE 24TH ST

The signalized intersection at 164th Ave NE and NE 24th St currently has a northbound and southbound left-turn pocket and a shared through/right lane for each direction. The near-term alternative proposes installing northbound and southbound bike boxes and considering several options:

- Build 1 – Remove northbound and southbound left-turn lanes in favor of a bike lane with **permissive only** left-turn movements
- Build 2 – Remove northbound and southbound left-turn lanes in favor of a bike lane with **protected only** left-turn movements (split phasing) to reduce pedestrian conflicts
- Build 3 – Install No Right Turn on Red (RTOR) on all approaches, building off of the Build 1 or Build 2 alternative (based on performance)
- Build 4 – Install signal timing modifications during before-school and after-school times, building on the Build 3 alternative

Build 1 and Build 2

Table 1 provides the AM and PM movement delays and level of service (LOS), and Table 2 provides the 95th percentile queue lengths for Build 1 and Build 2. Full per-movement Synchro output results can be found in Appendix Section 4.

TABLE 1: 164TH AVE NE AND NE 24TH ST DELAY AND LOS (BUILD 1 AND BUILD 2)

INTERSECTION	MOVEMENT	EXISTITNG 2025	2025 BUILD 1	2025 BUILD 2	2044 NO BUILD	2044 BUILD 1	2044 BUILD 2
AM							
164TH AVE / NE 24TH ST	EBL	10.7/B	9.6/A	20.3/C	9.4/A	8.3/A	17.6/B
	EBTR	15.1/B	13.8/B	28.3/C	13.2/B	11.9/B	24.2/C
	WBL	10.9/B	9.7/A	20.6/C	9.6/A	8.4/A	18.0/B
	WBTR	15.2/B	13.8/B	29.4/C	12.6/B	11.3/B	23.6/C
	NBL	29.4/C	-	-	29.3/C	-	-
	NBTR	33.8/C	-	-	34.5/C	-	-
	NBLTR	-	27.8/C	46.3/D	-	27.2/C	37.5/D
	SBL	26.7/C	-	-	27.1/C	-	-
	SBTR	44.1/D	-	-	39.5/D	-	-
	SBLTR	-	24.0/C	45.8/D	-	23.6/C	39.3/D
	Intersection	24.4/C	19.0/B	36.0/D	23.3/C	18.2/B	30.3/C
PM							
164TH AVE / NE 24TH ST	EBL	8.5/A	6.6/A	14.3/B	8.4/A	6.1/A	13.1/B
	EBTR	18.8/B	14.8/B	28.5/C	15.7/B	11.7/B	22.5/C
	WBL	10.8/B	8.4/A	17.9/B	9.7/A	7.0/A	14.9/B
	WBTR	11.3/B	8.9/A	18.3/B	11.0/B	8.1/A	16.6/B
	NBL	24.0/C	-	-	24.0/C	-	-
	NBTR	29.1/C	-	-	27.5/C	-	-
	NBLTR	-	24.8/C	50.1/D	-	24.6/C	46.6/D
	SBL	22.9/C	-	-	22.6/C	-	-
	SBTR	32.0/C	-	-	31.9/C	-	-
	SBLTR	-	22.8/C	50.0/D	-	23.2/C	46.1/D
	Intersection	20.6/C	16.6/B	33.7/C	19.1/B	15.2/B	29.7/C

Build 1 results in comparable or slightly improved intersection operations relative to existing conditions due to optimized signal timings. All movements operate at LOS C or better. In

comparison, Build 2's protected-only northbound and southbound left-turn phasing (split phasing) significantly increases delay for the northbound and southbound approaches. Intersection LOS degrades from B to D during the 2025 AM peak, and from B to C in all other scenarios.

TABLE 2: 164TH AVE NE AND NE 24TH ST 95TH PERCENTILE QUEUE LENGTH (BUILD 1 & BUILD 2)

INTERSECTION	MOVEMENT	EXISTING 2025	2025 BUILD 1	2025 BUILD 2	2044 NO BUILD	2044 BUILD 1	2044 BUILD 2
AM							
164TH AVE / NE 24TH ST	EBL	24	21	33	24	22	35
	EBTR	165	152	223	146	136	208
	WBL	56	50	78	47	43	69
	WBTR	251	233	335	191	181	266
	NBL	97	-	-	93	-	-
	NBTR	175	-	-	188	-	-
	NBLTR	-	262	325	-	260	324
	SBL	38	-	-	34	-	-
	SBTR	224	-	-	196	-	-
	SBLTR	-	183	272	-	159	238
PM							
164TH AVE / NE 24TH ST	EBL	21	17	28	19	14	25
	EBTR	#446	#357	#554	305	246	397
	WBL	40	32	54	36	27	49
	WBTR	154	131	197	151	122	194
	NBL	59	-	-	57	-	-
	NBTR	145	-	-	123	-	-
	NBLTR	-	188	291	-	165	258
	SBL	24	-	-	22	-	-
	SBTR	159	-	-	153	-	-
	SBLTR	-	139	241	-	133	227

- Indicates that the volume for the 95th percentile cycle exceeds capacity

Build 1 generally reduces queue lengths compared to existing conditions except for the shared northbound movement, which would increase 95th percentile queue lengths from 175 feet to 262 feet. The Build 2 queue lengths increase significantly compared to Build 1 for all through movements.

The Build 2 alternative with northbound and southbound split phasing was analyzed as a way to reduce conflicts with pedestrians at crosswalks, but the tradeoff is significant delay compared to the permissive left-turn phasing. Therefore, Build 1 is recommended over Build 2 due to improved operations while still accommodating bike lanes.

Build 3 and Build 4

Table 3 provides the AM and PM movement delays and level of service (LOS), and Table 4 provides the 95th percentile queue lengths for Build 3 and Build 4. Full per-movement Synchro output results can be found in Appendix Section 4.

Build 3

As demonstrated in Table 3 and Table 4, installing No Right Turn On Red (RTOR) for all approaches using the Build 1 layout has minimal impact on intersection operations. Average delays remain the same as Build 1, and queue lengths increase slightly. The only notable queue difference is approximately 50 feet increase for the eastbound through/right movement during the 2025 PM peak.

The installation of No RTOR restrictions is required by MUTCD in order to install the two-stage left turn bike boxes and/or bike boxes proposed at this intersection. Removing RTOR at the intersection removes the pedestrian and bicyclist conflict points and improves safety while adding minimal operational impact on the intersection. Therefore, No RTOR is recommended as part of the design.

Installing No RTOR at this location is appropriate because there are no exclusive right-turn lanes on any approach. Right-turning vehicles share lanes with through traffic or left-turning traffic, limiting their ability to utilize right-turn-on-red effectively. Right-turn volumes are low, meaning few vehicles would benefit from RTOR if permitted. Drivers typically encroach into crosswalks to find gaps, creating conflict with pedestrians when RTOR is permitted. Lastly, drivers may also enter the bike boxes in the northbound and southbound directions where bicyclists are waiting ahead of vehicles waiting for a green signal when RTOR is permitted.

Build 4

Build 4 includes signal timing modification for the before-school and after-school hours based on the Build 3 configuration to further improve safety for pedestrians and bicyclists. The AM and PM models were used to represent before-school and after-school hour operations. Signal timing modifications include:

- Extended all-red clearance time to accommodate vehicles clearing the intersection (assuming three seconds).
- Added pedestrian recall during before-school and after-school periods.
- Extended flashing don't walk phase during before-school and after-school to accommodate slower pedestrians and larger groups, elementary school students and

their families (calculated using crosswalk length and a walking speed of 3.5 feet per second).

- Protected-only left-turn phasing for eastbound and westbound movements.

Although these changes result in increases in delay and queue lengths for all through movements, and a significant increase for eastbound and westbound left-turn movements (LOS increases from A to C), overall intersection remains acceptable (see Table 3 and Table 4). The safety benefits for pedestrians and bicyclists justify the operational trade-offs. Therefore, these school period signal timings adjustments are recommended.

TABLE 3: 164TH AVE NE AND NE 24TH ST DELAY AND LOS (BUILD 3 AND BUILD 4)

INTERSECTI ON	MOVEMENT	2025 BUILD 3	2025 BUILD 4	2044 BUILD 3	2044 BUILD 4
AM					
164TH AVE / NE 24TH ST	EBL	9.6/A	30.7/C	8.3/A	27.9/C
	EBTR	13.8/B	19.5/B	11.9/B	19.3/B
	WBL	9.7/A	32.1/C	8.4/A	26.7/C
	WBTR	13.8/B	19.5/B	11.3/B	18.0/B
	NBLTR	27.8/C	17.6/B	27.2/C	15.7/B
	SBLTR	24.0/C	16.2/B	23.6/C	14.1/B
	Intersection	19.0/B	19.5/B	18.2/B	17.6/B
PM					
164TH AVE / NE 24TH ST	EBL	6.6/A	34.7/C	6.1/A	30.8/C
	EBTR	14.8/B	19.5/B	11.7/B	17.8/B
	WBL	8.4/A	34.3/C	7.0/A	28.7/C
	WBTR	8.9/A	12.6/B	8.1/A	12.5/B
	NBLTR	24.8/C	23.0/C	24.6/C	19.7/B
	SBLTR	22.8/C	21.2/C	23.2/C	18.7/B
	Intersection	16.6/B	20.3/C	15.2/B	18.1/B

TABLE 4: 164TH AVE NE AND NE 24TH ST 95TH PERCENTILE QUEUE LENGTH (BUILD 3 AND BUILD 4)

INTERSECTI ON	MOVEMENT	2025 BUILD 3	2025 BUILD 4	2044 BUILD 3	2044 BUILD 4
AM					
164TH AVE / NE 24TH ST	EBL	21	49	22	46
	EBTR	166	218	151	186
	WBL	50	112	43	85
	WBTR	234	311	182	219
	NBL	-	-	-	-
	NBTR	-	-	-	-
	NBLTR	#283	271	272	253
	SBL	-	-	-	-
	SBTR	-	-	-	-
	SBLTR	189	195	164	159
PM					
164TH AVE / NE 24TH ST	EBL	18	45	14	35
	EBTR	#406	410	268	311
	WBL	33	83	28	68
	WBTR	136	156	126	151
	NBL	-	-	-	-
	NBTR	-	-	-	-
	NBLTR	198	236	174	181
	SBL	-	-	-	-
	SBTR	-	-	-	-
	SBLTR	141	170	134	143

- Indicates that the volume for the 95th percentile cycle exceeds capacity

SCHOOL DRIVEWAYS ALONG 164TH AVE NE

The school driveways along 164th Ave NE currently have a two-way left-turn lane south of the Sherwood Forest Elementary School North Driveway which acts as a receiving lane for westbound left-turning vehicles. These driveways are used for school bus operations and staff parking. The main parking lot for the school is accessed from NE 24th St. This lane extends to just north of the Interlake Saints CT driveway, where it ends at the RRFB median island. Additionally, a southbound left-turn pocket is provided at the Sherwood Forest Elementary School South Driveway. The North Driveway at Sherwood Forest Elementary School is for exiting only, while the South Driveway is for entering only.

The near-term alternative proposes to remove both the two-way left-turn lane and the southbound left-turn pocket for one through lane in each direction along 164th Ave NE.

Table 5 provides the AM and PM key movement delays and level of service (LOS), and Table 6 provides the 95th percentile queue lengths.

TABLE 5: SCHOOL DRIVEWAYS DELAY AND LOS

INTERSECTION	MOVEMENT	EXISTING 2025	2025 BUILD	2044 NO BUILD	2044 BUILD
AM					
164TH AVE / SHERWOOD FOREST ELEMENTARY NORTH DRIVEWAY	WBL	12.7/B	14.9/B	13.0/B	15.7/C
	WBR	10.3/B	10.3/B	10.7/B	10.7/B
164TH AVE / INTERLAKE SAINTS CT	EBLR	12.2/B	12.2/B	12.4/B	12.4/B
164TH AVE / SHERWOOD FOREST ELEMENTARY SOUTH DRIVEWAY	SBL	7.9/A	-	8.1/A	-
	SBT	0.0/A	-	0.0/A	-
	SBLT	-	7.9/A	-	8.1/A
164TH AVE / INTERLAKE STUDENT PARKING LOT	EBLR	21.0/C	21.0/C	23.1/C	23.1/C
	NBLT	9.5/A	9.5/A	9.6/A	9.6/A
PM					
164TH AVE / SHERWOOD FOREST ELEMENTARY NORTH DRIVEWAY	WBL	11.6/B	13.0/B	11.6/B	12.8/B
	WBR	9.6/A	9.6/A	9.5/A	9.5/A
164TH AVE / INTERLAKE SAINTS CT	EBLR	11/B	11/B	10.9/B	10.9/B
164TH AVE / SHERWOOD FOREST ELEMENTARY SOUTH DRIVEWAY	SBL	7.8/A	-	7.8/A	-
	SBT	0.0/A	-	0.0/A	-
	SBLT	-	7.8/A	-	7.8/A
164TH AVE / INTERLAKE STUDENT PARKING LOT	EBLR	13.3/B	13.3/B	13.1/B	13.1/B
	NBLT	8.2/A	8.2/A	8.2/A	8.2/A

All driveways operate at LOS C or better during the AM and PM peak periods. Delay and LOS values remain essentially unchanged between existing and build conditions, except at the Sherwood Forest Elementary North Driveway, where delay increases slightly in 2044 AM, resulting in a change from LOS B to C.

TABLE 6: SCHOOL DRIVEWAYS 95TH PERCENTILE QUEUE LENGTH

INTERSECTION	MOVEMENT	EXISTING 2025	2025 BUILD	2044 NO BUILD	2044 BUILD
AM					
164TH AVE / SHERWOOD FOREST ELEMENTARY NORTH DRIVEWAY	WBL	3	3	3	3
	WBR	5	5	5	5
164TH AVE / INTERLAKE SAINTS CT	EBLR	15	15	15	15
164TH AVE / SHERWOOD FOREST ELEMENTARY SOUTH DRIVEWAY	SBL	3	-	3	3
	SBTR	-	3	-	-
164TH AVE / INTERLAKE STUDENT PARKING LOT	EBLR	33	33	38	38
	NBLT	20	20	20	20
PM					
164TH AVE / SHERWOOD FOREST ELEMENTARY NORTH DRIVEWAY	WBL	0	0	0	0
	WBR	0	0	0	0
164TH AVE / INTERLAKE SAINTS CT	EBLR	5	5	5	5
164TH AVE / SHERWOOD FOREST ELEMENTARY SOUTH DRIVEWAY	SBL	0	-	0	0
	SBTR	-	0	-	-
164TH AVE / INTERLAKE STUDENT PARKING LOT	EBLR	10	10	10	10
	NBLT	0	0	0	0

All driveway intersections along 164th Ave NE experience minimal queueing in both peak periods. Queue lengths remain similar between existing and build conditions. Therefore, removing the two-way left-turn lane south of the Sherwood Forest Elementary School North Driveway and the southbound left-turn pocket at the South Driveway will not hurt operations. As a result, the near-term design alternative is recommended.

164TH AVE NE AND NORTHUP WAY

The signalized intersection at 164th Ave NE and Northup Way currently has northbound and southbound left-turn pockets and shared through/right lanes on both approaches. The near-term alternative proposes installing a southbound to eastbound two-stage left turn bike box.

In the 2025 and 2044 models, the intersection operates at LOS C during both AM and PM peak periods. The highest individual movement delays are for the northbound through/right movement

in the AM peak and the southbound through/right movements in both peaks, all operating at LOS D.

The overall intersection has acceptable delay and queue lengths, and the addition of the left-turn bike box is not expected to negatively affect operations. Therefore, the installation of the left-turn bike box is recommended.

Full movement and queue length output results can be found in Appendix Section 4.

DESIGN RECOMMENDATIONS

Based on the traffic analysis, the following recommendations are made:

- At the 164th Ave NE and NE 24th St intersection, remove the northbound and southbound left-turn lanes to install bike lanes with permissive-only left-turn phasing.
- At the 164th Ave NE and NE 24th St intersection, install no RTOR for all approaches to reduce pedestrian and bicyclist conflict points.
- At the 164th Ave NE and NE 24th St intersection, add northbound and southbound bike boxes.
- At the 164th Ave NE and NE 24th St intersection, implement signal timing modifications during before and after school periods including changes to all-red clearance time, pedestrian recall on all approaches, flashing don't walk, and protected-only eastbound and westbound left-turns.
- At the Sherwood Forest Elementary School North Driveway, remove the two-way left-turn lane south of the driveway.
- At the Sherwood Forest Elementary School South Driveway, remove the southbound left-turn lane into the staff entrance.
- At the 164th Ave NE and Northup Way intersection, add a southbound to eastbound two-stage left turn bike box.

MULTIMODAL EVALUATION

MOBILITY IMPLEMENTATION PLAN

The City of Bellevue's Mobility Implementation Plan (MIP), adopted April 18, 2022, was developed to achieve a multimodal transportation system that supports all users. The plan sets performance targets for the quality of experience for people walking and bicycling along arterial streets in Bellevue based on roadway characteristics, context, and facility type. The focus of the bicycle and pedestrian networks is to improve access and connectivity.

BICYCLE NETWORK

The MIP uses Level of Traffic Stress (LTS) as the performance metric for the bicycle network. LTS describes how comfortable and safe a bicycle route feels to its users and is rated on a scale of 1 to 4. It rates LTS 1 as being for all ages and abilities, LTS 2 as being less comfortable, but representative of a typical adult, LTS 3 as being tolerable for confident, experienced bicyclists, and LTS 4 as being uncomfortable for most people biking.

The MIP classifies 164th Ave NE as a priority bicycle network and targets an LTS 2 for the corridor. Corridor LTS is based on the posted speed limit multiplied by 1.2, arterial traffic volume, and bicycle facility components.

There are currently no bicycle facilities along the corridor, the posted speed limit is 25 mph, and the traffic volume along the corridor is between 3,000 to 7,000 vehicles per day. The existing LTS for the length of the 164th Avenue NE corridor is LTS 3, which does not meet the City's bicycle performance standard.

Near-term planned project improvements on 164th Ave NE from Northup Way to NE 24th St include installing northbound and southbound buffered bicycle lanes with green skip striping through intersections and major driveways and adding bike boxes for northbound and southbound lanes at the NE 24th St intersection and adding bike boxes for southbound lanes at Northup Way. These improvements will result in a corridor LTS of 2, meeting the MIP's performance target for bicycle facilities.

Near-term planned project improvements on 164th Ave NE from NE 24th St to NE 30th St include installing northbound and southbound shared lane markings. This will result in maintaining the current condition of LTS 3, and will not meet the MIP's performance target for bicycle facilities.

Long-term planned project improvements on 164th Ave NE from Northup Way to NE 24th St include the near-term planned project improvements. These improvements will result in a corridor LTS of 1, meeting the MIP's performance target for bicycle facilities.

Long-term planned project improvements on 164th Ave NE from NE 24th St to NE 30th St include installing a shared use path. These improvements will result in a corridor LTS of 1, meeting the MIP's performance target for bicycle facilities on this segment.

A significant amount of on-street parking will need to be repurposed in order to implement the bike lanes in this design. The City of Bellevue will perform a parking analysis and create a public outreach plan surrounding this repurposing of the on-street parking.

PEDESTRIAN NETWORK

The MIP has pedestrian performance targets that include having sidewalks on both sides of arterial roadways.

- From NE 24th St to Northup Way, sidewalks exist on both sides of 164th Ave NE, meeting the pedestrian performance target.
- From NE 30th St to NE 24th St, there is no existing sidewalk on the east side of the roadway. The existing west side sidewalk is only 5 feet wide, which meets the minimum ADA compliant width of 4 feet but does not meet the current City of Bellevue design standard of an 8-foot wide sidewalk with a 5-foot-wide landscape planter.

In the long-term alternative, a shared use path will be added to the east side of 164th Ave NE between NE 30th St and NE 24th St, meeting the MIP standard.

CONNECTIVITY ANALYSIS

To meaningfully improve connectivity, adding bicycle facilities along 164th Ave NE in the near-term and long-term alternatives will create a continuous north-south bicycle connection between NE 30th St and Northup Way along a designated priority bike corridor.

Additionally, the proposed bike lanes will connect with the existing East Bellevue Greenway on 165th Ave NE, which runs from Northup Way to SE 14th Street, to form an almost continuous north-south corridor extending from NE 30th Street to SE 14th Street. The only gap in this corridor will be a short, unprotected segment along Northup Way between 164th Ave NE and 165th Ave NE. As part of the near-term improvements, wayfinding signage will be added to guide cyclists toward East Bellevue Greenway.

For pedestrians, the long-term alternative includes installing a shared use path on the east side of 164th Ave NE from NE 24th St to NE 30th St. This will create an arterial-to-arterial connection for pedestrians between NE 30th St and Northup Way.

Additionally, 164th Ave NE from NE 24th St to Northup Way is classified as a transit route corridor in the MIP. Improving bicycle and pedestrian connectivity encourages transit use by improving safe and convenient access to transit stops.

CROSSWALK EVALUATIONS

The City of Bellevue reviewed video recordings and completed site visits along 164th Ave NE with DKS staff to determine locations for new or modified pedestrian crossings. Based on this assessment, the City provided DKS with six mid-block crossing locations. This list excludes locations where existing crosswalks are being upgraded to high-visibility markings. The crosswalk locations that will be added in the near-term and long-term alternatives are:

- **NE 18th St (east leg)** – Add a crosswalk on the north leg of the intersection as part of the City of Bellevue’s Crosswalk Program (near-term alternative)
- **NE 18th St (west leg)** – Install RRFB on the north leg of the intersection to improve pedestrian visibility and driver compliance at the crosswalk (long-term alternative)
- **NE 29th St** – Add a crosswalk on the south leg of the intersection, requested by the City of Bellevue (long-term alternative)
- **NE 28th St** – Install a crosswalk on the south leg, as part of the City of Bellevue’s Crosswalk Program (long-term alternative)
- **NE 26th St** – Add a crosswalk on the north leg of the intersection because this location is used for student drop-off for Interlake High School (long-term alternative)
- **Interlake Saints CT** – Modify the existing RRFB crosswalk with a raised crosswalk at the intersection to increase visibility of pedestrians and reduce vehicle speeds (long-term alternative)
- **NE 21st PI** – Install RRFB with a raised crosswalk on the north leg of the intersection as part of the City of Bellevue’s Crosswalk Program (long-term alternative)

The MIP recommends no more than 600 feet of spacing between marked pedestrian crossings along corridors, which is intended for planning purposes. Installing these additional crosswalks will get closer to the pedestrian crossing performance target and improve pedestrian safety.

COLLISION ANALYSIS

The crash data for the 164th Ave NE corridor was retrieved from the Washington State Department of Transportation (WSDOT) Public Disclosure Request Center database between January 1, 2019, to December 31, 2023. Crash records include all data collected by the reporting officer, including crash identification (jurisdiction, location, date, time), demographics (age, sobriety, safety equipment usage), environmental (weather, road surface), and crash details (type of collision, contributing circumstance, vehicle type, severity).¹

Safety data along 164th Ave NE is shown in Figure 1.

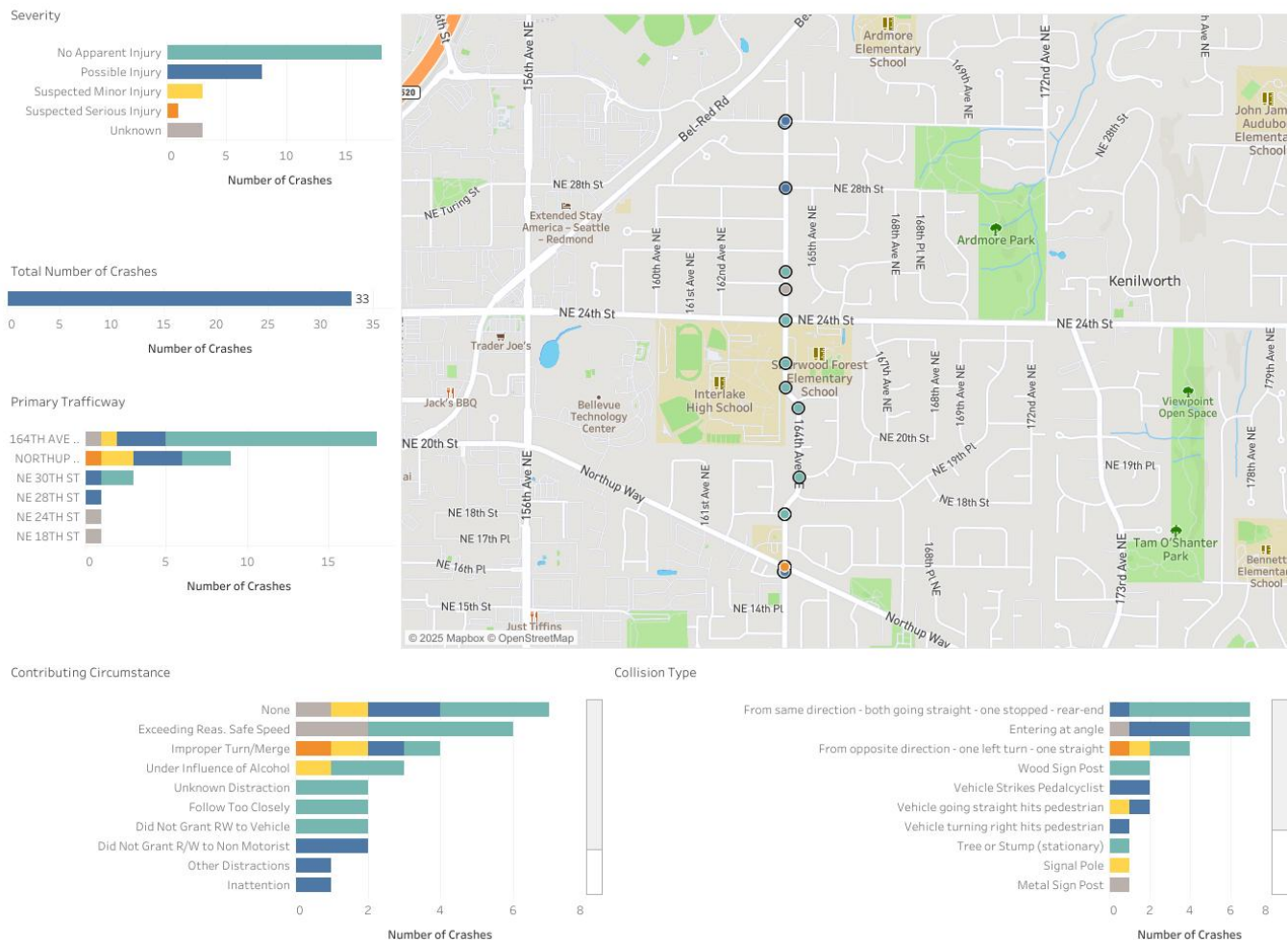


FIGURE 1: 164TH AVE NE SAFETY DATA FROM 2019 TO 2023

¹ ⁶ Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists, compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

The collision data indicates 33 crashes occurred along the 164th Ave NE corridor over a five-year period. There was one reported suspected serious injury at the 164th Ave NE and Northup Way intersection, resulting from an improper turn/merge movement. The most frequent contributing factor across all crashes was drivers exceeding reasonable and safe speeds.

The planned near-term and long-term alternatives - adding marked crosswalks and raised crosswalks across the corridor, and installing speed cushions along the corridor - could help reduce vehicle speeds and improve safety.

The data includes three reported crashes with vehicles hitting a pedestrian. Two of those crashes occurred at the Northup Way intersection and one at the NE 30th St intersection. These resulted in a possibly injury and a suspected minor injury. Additionally, there were two reported crashes of a vehicle hitting a bicyclist at the Northup Way intersection and at the NE 30th St intersection; both resulted in a possible injury.

Since then, there have been two reported bicycle serious injury crashes at the 164th Ave NE and NE 24th St intersection in 2025. One crash was due to a prohibited U-turn vehicle hitting a bicyclist and the other crash is due to an eastbound e-bike traveling in the wrong crosswalk without yielding and hitting an eastbound right-turning vehicle from behind.

The proposed improvements will help reduce future pedestrian and bicyclist collisions and they include installing additional mid-block crossings along the corridor, replacing existing crosswalks with high visibility crosswalk markings and raised crosswalks, installing northbound and southbound bicycle lanes and shared lane markings on 164th Ave NE, and installing a shared use path on the east side NE 164th Ave in the long-term alternative.

CONCLUSIONS AND RECOMMENDATIONS

The traffic analysis shows that the proposed near-term and long-term alternatives along 164th Ave NE will improve safety, meet the City's multimodal performance targets (except the bicycle performance target between NE 24th St and NE 30th St in the near-term), and maintain acceptable traffic operations.

Recommended near-term actions include installing bicycle lanes with green skip striping, shared lane markings, bike boxes, wayfinding signage, new crosswalk and update curb ramp on crossing streets between Northup Way and NE 24th St; removing northbound and southbound left-turn lanes at NE 24th St with permissive left-turn phasing, prohibiting right-turn-on-red, applying school-period signal timing changes; and modifying channelization at school driveways. Long-term actions include maintaining near-term elements, installing a shared-use path, and installing additional crosswalks north of NE 24th St, and two raised crossings south of NE 24th St.

These improvements advance the City's Vision Zero goals by reducing speeds, improving visibility, and creating safer, connected facilities for people walking, biking, and driving.

APPENDIX

CONTENTS

SECTION 1: EXISTING TRAFFIC COUNTS

SECTION 2: SIGNAL TIMING

SECTION 3: FUTURE 2044 VOLUMES

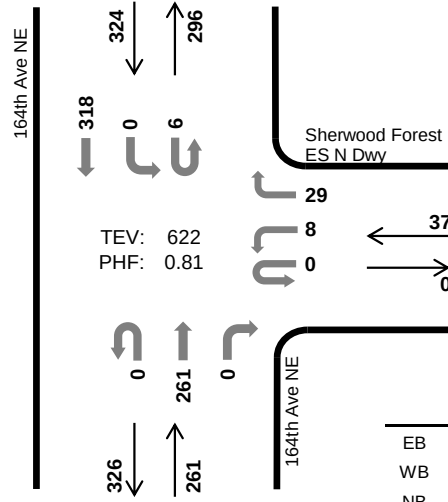
SECTION 4: SYNCHRO OUTPUT RESULTS

SECTION 1: EXISTING TRAFFIC COUNTS

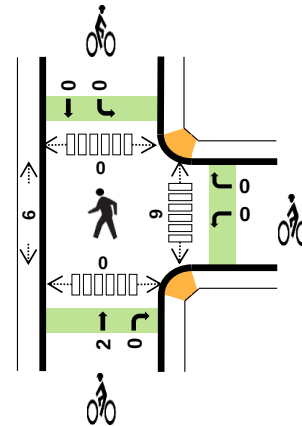
164th Ave NE Sherwood Forest ES N Dwy



Peak Hour



Date: 04/30/2025
Count Period: 7:30 AM to 9:30 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	-	-
WB	2.7%	0.71
NB	0.8%	0.85
SB	2.5%	0.78
TOTAL	1.8%	0.81

Two-Hour Count Summaries

Interval Start		0				Sherwood Forest ES N Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM		0	0	0	0	0	1	0	5	0	0	49	0	0	0	60	0	115	0
7:45 AM		0	0	0	0	0	2	0	9	0	0	77	0	6	0	98	0	192	0
8:00 AM		0	0	0	0	0	3	0	5	0	0	74	0	0	0	68	0	150	0
8:15 AM		0	0	0	0	0	3	0	10	0	0	40	0	0	0	78	0	131	588
8:30 AM		0	0	0	0	0	0	0	5	0	0	70	0	0	0	74	0	149	622
8:45 AM		0	0	0	0	0	8	0	2	0	0	71	0	0	0	66	0	147	577
9:00 AM		0	0	0	0	0	1	0	1	0	0	56	0	0	0	54	0	112	539
9:15 AM		0	0	0	0	0	0	0	0	0	0	32	0	0	0	48	0	80	488
Count Total		0	0	0	0	0	18	0	37	0	0	469	0	6	0	546	0	1,076	0
Peak Hour	All	0	0	0	0	0	8	0	29	0	0	261	0	6	0	318	0	622	0
	HV	0	0	0	0	0	1	0	0	0	0	2	0	0	0	8	0	11	0
	HV%	-	-	-	-	-	13%	-	0%	-	-	1%	-	0%	-	3%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:30 AM	0	0	0	2	2	0	0	1	0	1	1	2	0	0	3
7:45 AM	0	0	1	0	1	0	0	0	0	0	2	1	0	0	3
8:00 AM	0	0	0	3	3	0	0	0	0	0	4	1	0	0	5
8:15 AM	0	1	0	3	4	0	0	2	0	2	2	4	0	0	6
8:30 AM	0	0	1	2	3	0	0	0	0	0	1	0	0	0	1
8:45 AM	0	7	2	1	10	0	0	2	0	2	4	2	0	0	6
9:00 AM	0	0	0	2	2	0	0	0	0	0	1	5	0	2	8
9:15 AM	0	0	1	2	3	0	0	1	0	1	1	2	0	0	3
Count Total	0	8	5	15	28	0	0	6	0	6	16	17	0	2	35
Peak Hr	0	1	2	8	11	0	0	2	0	2	9	6	0	0	15

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	0				Sherwood Forest ES N Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	4	10
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	11
8:45 AM	0	0	0	0	0	6	0	1	0	0	2	0	0	0	1	0	10	20
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	19
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	18
Count Total	0	0	0	0	0	7	0	1	0	0	5	0	0	0	15	0	28	0
Peak Hour	0	0	0	0	0	1	0	0	0	0	2	0	0	0	8	0	11	0

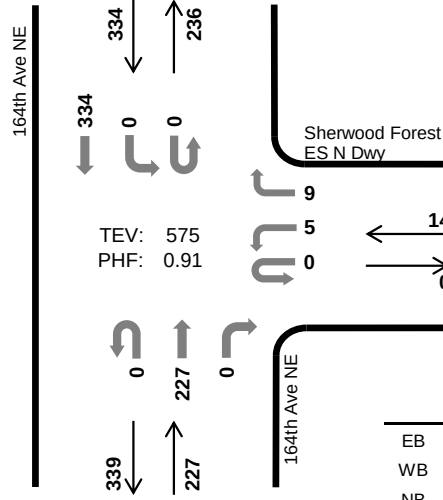
Two-Hour Count Summaries - Bikes																		
Interval Start	0			Sherwood Forest ES N Dwy			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	3				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	4				
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
9:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	3				
Count Total	0	0	0	0	0	0	0	6	0	0	0	0	6	0				
Peak Hour	0	0	0	0	0	0	0	2	0	0	0	0	2	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

164th Ave NE Sherwood Forest ES N Dwy

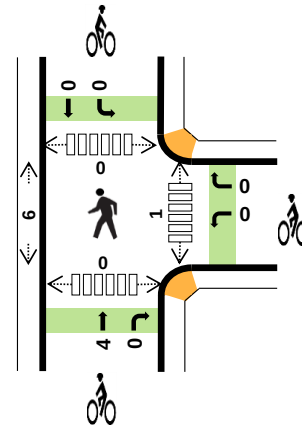


Peak Hour



TEV: 575
PHF: 0.91

Date: 04/30/2025
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



	HV %:	PHF
EB	-	-
WB	0.0%	0.70
NB	2.2%	0.95
SB	0.9%	0.84
TOTAL	1.4%	0.91

Two-Hour Count Summaries

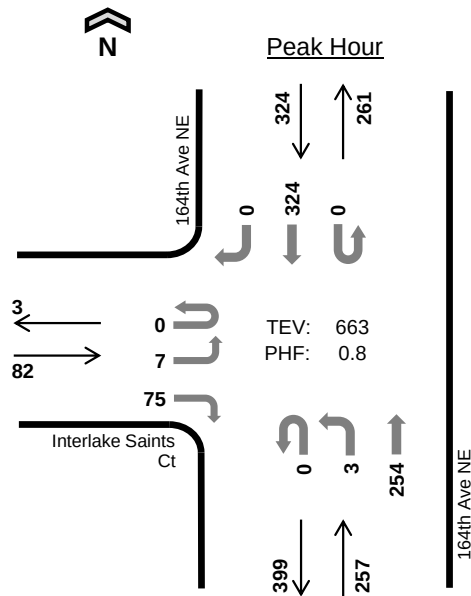
Interval Start		0				Sherwood Forest ES N Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM		0	0	0	0	0	3	0	2	0	0	44	0	0	0	34	0	83	0
2:15 PM		0	0	0	0	0	1	0	1	0	0	50	0	0	0	41	0	93	0
2:30 PM		0	0	0	0	0	0	0	1	0	0	47	0	0	0	56	0	104	0
2:45 PM		0	0	0	0	0	3	0	2	0	0	33	0	1	0	60	0	99	379
3:00 PM		0	0	0	0	0	2	0	2	0	0	54	0	0	0	70	0	128	424
3:15 PM		0	0	0	0	0	2	0	2	0	0	55	0	0	0	83	0	142	473
3:30 PM		0	0	0	0	0	0	0	1	0	0	58	0	0	0	99	0	158	527
3:45 PM		0	0	0	0	0	1	0	4	0	0	60	0	0	0	82	0	147	575
Count Total		0	0	0	0	0	12	0	15	0	0	401	0	1	0	525	0	954	0
Peak Hour	All	0	0	0	0	0	5	0	9	0	0	227	0	0	0	334	0	575	0
	HV	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	8	0
	HV%	-	-	-	-	-	0%	-	0%	-	-	2%	-	-	-	1%	-	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

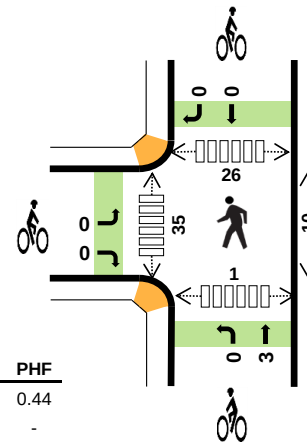
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	0	1	0	1	0	0	0	0	0	6	0	0	0	6
2:15 PM	0	0	2	1	3	0	0	0	0	0	7	2	0	1	10
2:30 PM	0	0	0	1	1	0	0	0	0	0	5	0	0	2	7
2:45 PM	0	0	1	1	2	0	0	1	0	1	5	0	0	0	5
3:00 PM	0	0	1	2	3	0	0	1	0	1	0	1	0	0	1
3:15 PM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2
3:30 PM	0	0	1	0	1	0	0	2	0	2	1	2	0	0	3
3:45 PM	0	0	2	1	3	0	0	1	0	1	0	1	0	0	1
Count Total	0	0	9	6	15	0	0	5	0	5	24	8	0	3	35
Peak Hr	0	0	5	3	8	0	0	4	0	4	1	6	0	0	7

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	0				Sherwood Forest ES N Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	9
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7
3:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	8
Count Total	0	0	0	0	0	0	0	0	0	0	9	0	0	0	6	0	15	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	8	0
Two-Hour Count Summaries - Bikes																		
Interval Start	0			Sherwood Forest ES N Dwy			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
3:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
3:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	4	4
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	4	4
Count Total	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	0	0	0
Peak Hour	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																		

164th Ave NE Interlake Saints Ct



Date: 04/30/2025
Count Period: 7:30 AM to 9:30 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	4.9%	0.44
WB	-	-
NB	1.2%	0.93
SB	2.8%	0.81
TOTAL	2.4%	0.80

Two-Hour Count Summaries

Interval Start		Interlake Saints Ct				0				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM		0	0	0	25	0	0	0	0	0	4	44	0	0	0	61	1	135	0
7:45 AM		0	3	0	44	0	0	0	0	0	1	60	0	0	0	100	0	208	0
8:00 AM		0	3	0	26	0	0	0	0	0	1	64	0	0	0	71	0	165	0
8:15 AM		0	1	0	4	0	0	0	0	0	1	61	0	0	0	79	0	146	654
8:30 AM		0	0	0	1	0	0	0	0	0	0	69	0	0	0	74	0	144	663
8:45 AM		0	0	0	0	0	0	0	0	0	0	71	0	0	0	75	0	146	601
9:00 AM		0	0	0	0	0	0	0	0	0	0	57	0	0	0	55	0	112	548
9:15 AM		0	1	0	2	0	0	0	0	0	0	35	0	0	0	48	0	86	488
Count Total		0	8	0	102	0	0	0	0	0	7	461	0	0	0	563	1	1,142	0
Peak Hour	All	0	7	0	75	0	0	0	0	0	3	254	0	0	0	324	0	663	0
	HV	0	0	0	4	0	0	0	0	0	1	2	0	0	0	9	0	16	0
	HV%	-	0%	-	5%	-	-	-	-	-	33%	1%	-	-	-	3%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

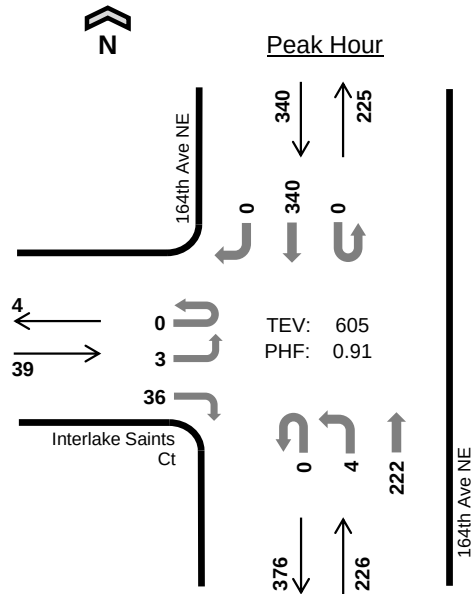
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:30 AM	0	0	2	3	5	0	0	0	0	0	1	6	0	0	7
7:45 AM	3	0	2	0	5	0	0	0	0	0	5	26	19	0	50
8:00 AM	0	0	0	3	3	0	0	1	0	1	2	3	4	1	10
8:15 AM	1	0	0	4	5	0	0	2	0	2	2	6	1	0	9
8:30 AM	0	0	1	2	3	0	0	0	0	0	1	0	2	0	3
8:45 AM	0	0	2	7	9	0	0	2	0	2	1	5	3	0	9
9:00 AM	0	0	0	2	2	0	0	0	0	0	3	3	7	0	13
9:15 AM	0	0	1	1	2	0	0	1	0	1	2	1	4	0	7
Count Total	4	0	8	22	34	0	0	6	0	6	17	50	40	1	108
Peak Hr	4	0	3	9	16	0	0	3	0	3	10	35	26	1	72

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Interlake Saints Ct				0				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	1	5	0
7:45 AM	0	0	0	3	0	0	0	0	0	1	1	0	0	0	0	0	0	5	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5	18
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	3	16
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	7	0	9	20
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	19
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	16
Count Total	0	0	0	4	0	0	0	0	0	3	5	0	0	0	21	1		34	0
Peak Hour	0	0	0	4	0	0	0	0	0	1	2	0	0	0	9	0		16	0

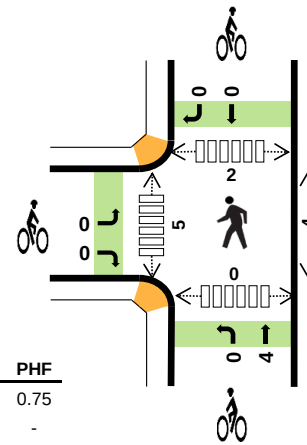
Two-Hour Count Summaries - Bikes																			
Interval Start	Interlake Saints Ct			0			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2		3	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3	3
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2		5	5
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4	4
9:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		3	3
Count Total	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6		0	0
Peak Hour	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3		0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

164th Ave NE Interlake Saints Ct



Date: 04/30/2025
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



	HV %:	PHF
EB	2.6%	0.75
WB	-	-
NB	2.7%	0.94
SB	0.9%	0.87
TOTAL	1.7%	0.91

Two-Hour Count Summaries

Interval Start		Interlake Saints Ct				0				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM		0	0	0	2	0	0	0	0	0	1	45	0	0	0	36	0	84	0
2:15 PM		0	0	0	3	0	0	0	0	0	1	50	0	0	0	43	0	97	0
2:30 PM		0	2	0	4	0	0	0	0	1	2	45	0	0	0	55	0	109	0
2:45 PM		0	1	0	6	0	0	0	0	0	1	33	0	0	0	63	0	104	394
3:00 PM		0	2	0	10	0	0	0	0	0	1	52	0	0	0	72	0	137	447
3:15 PM		0	0	0	5	0	0	0	0	0	0	57	0	0	0	86	0	148	498
3:30 PM		0	1	0	12	0	0	0	0	0	2	54	0	0	0	98	0	167	556
3:45 PM		0	0	0	9	0	0	0	0	0	1	59	0	0	0	84	0	153	605
Count Total		0	6	0	51	0	0	0	0	1	9	395	0	0	0	537	0	999	0
Peak Hour	All	0	3	0	36	0	0	0	0	0	4	222	0	0	0	340	0	605	0
	HV	0	0	0	1	0	0	0	0	0	1	5	0	0	0	3	0	10	0
	HV%	-	0%	-	3%	-	-	-	-	-	25%	2%	-	-	-	1%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	0	1	0	1	0	0	0	0	0	2	4	4	1	11
2:15 PM	0	0	2	1	3	0	0	0	0	0	5	7	4	0	16
2:30 PM	0	0	0	1	1	0	0	0	0	0	5	3	0	0	8
2:45 PM	0	0	1	1	2	0	0	1	0	1	0	0	2	0	2
3:00 PM	0	0	2	2	4	0	0	1	0	1	0	0	0	0	0
3:15 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
3:30 PM	1	0	0	0	1	0	0	2	0	2	3	4	2	0	9
3:45 PM	0	0	2	1	3	0	0	1	0	1	1	1	0	0	2
Count Total	1	0	10	6	17	0	0	5	0	5	16	19	12	1	48
Peak Hr	1	0	6	3	10	0	0	4	0	4	4	5	2	0	11

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Interlake Saints Ct				0				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	7
3:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	4	10
3:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	9
3:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	9
3:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	10
Count Total	0	0	0	1	0	0	0	0	0	1	9	0	0	0	6	0	17	0
Peak Hour	0	0	0	1	0	0	0	0	0	1	5	0	0	0	3	0	10	0

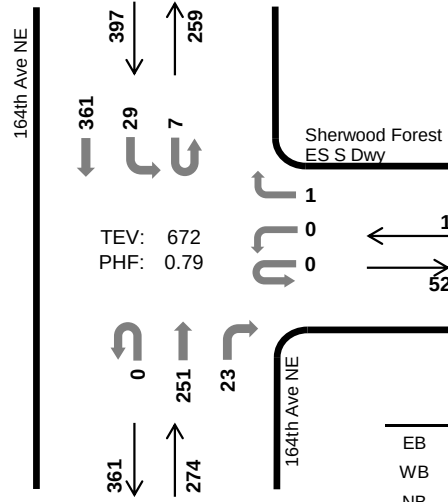
Two-Hour Count Summaries - Bikes																		
Interval Start	Interlake Saints Ct			0			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1				
3:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	2				
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
3:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	4				
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
Count Total	0	0	0	0	0	0	0	5	0	0	0	0	5	0				
Peak Hour	0	0	0	0	0	0	0	4	0	0	0	0	4	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

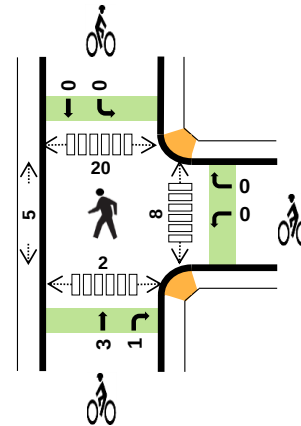
164th Ave NE Sherwood Forest ES S Dwy



Peak Hour



Date: 04/30/2025
Count Period: 7:30 AM to 9:30 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	-	-
WB	0.0%	0.25
NB	2.6%	0.89
SB	3.3%	0.68
TOTAL	3.0%	0.79

Two-Hour Count Summaries

Interval Start		0				Sherwood Forest ES S Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM		0	0	0	0	0	0	0	0	0	0	49	6	0	9	79	0	143	0
7:45 AM		0	0	0	0	0	0	0	0	0	0	63	5	7	10	129	0	214	0
8:00 AM		0	0	0	0	0	0	0	0	0	0	65	4	0	5	89	0	163	0
8:15 AM		0	0	0	0	0	0	0	0	0	0	54	6	0	10	71	0	141	661
8:30 AM		0	0	0	0	0	0	0	1	0	0	69	8	0	4	72	0	154	672
8:45 AM		0	0	0	0	0	0	0	0	0	0	69	2	0	1	75	0	147	605
9:00 AM		0	0	0	0	0	0	0	0	0	0	56	1	0	0	54	0	111	553
9:15 AM		0	0	0	0	0	0	0	0	0	0	35	0	0	0	50	0	85	497
Count Total		0	0	0	0	0	0	0	1	0	0	460	32	7	39	619	0	1,158	0
Peak Hour	All	0	0	0	0	0	0	0	1	0	0	251	23	7	29	361	0	672	0
	HV	0	0	0	0	0	0	0	0	0	0	3	4	0	2	11	0	20	0
	HV%	-	-	-	-	-	-	-	0%	-	-	1%	17%	0%	7%	3%	-	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:30 AM	0	0	2	2	4	0	0	0	0	0	1	1	0	0	2
7:45 AM	0	0	2	3	5	0	0	0	0	0	5	4	14	0	23
8:00 AM	0	0	0	3	3	0	0	2	0	2	1	0	2	0	3
8:15 AM	0	0	0	5	5	0	0	2	0	2	1	1	3	2	7
8:30 AM	0	0	5	2	7	0	0	0	0	0	1	0	1	0	2
8:45 AM	0	0	3	7	10	0	0	2	0	2	1	0	4	0	5
9:00 AM	0	0	0	2	2	0	0	0	0	0	3	2	6	0	11
9:15 AM	0	0	1	1	2	0	0	1	0	1	2	1	2	0	5
Count Total	0	0	13	25	38	0	0	7	0	7	15	9	32	2	58
Peak Hr	0	0	7	13	20	0	0	4	0	4	8	5	20	2	35

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	0				Sherwood Forest ES S Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5	17
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	4	0	1	1	0	7	20
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	1	0	1	6	0	10	25
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	24
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	21
Count Total	0	0	0	0	0	0	0	0	0	0	8	5	0	3	22	0	38	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	3	4	0	2	11	0	20	0

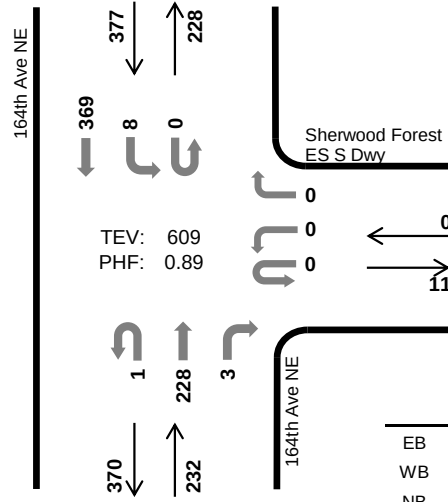
Two-Hour Count Summaries - Bikes																		
Interval Start	0			Sherwood Forest ES S Dwy			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	2	0				
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	4				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	6				
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
9:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	3				
Count Total	0	0	0	0	0	0	0	6	1	0	0	0	7	0				
Peak Hour	0	0	0	0	0	0	0	3	1	0	0	0	4	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

164th Ave NE Sherwood Forest ES S Dwy

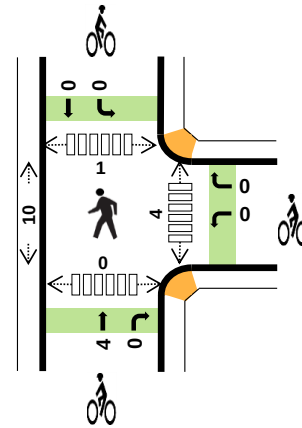


Peak Hour



TEV: 609
PHF: 0.89

Date: 04/30/2025
Count Period: 2:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



	HV %:	PHF
EB	-	-
WB	-	-
NB	2.6%	0.95
SB	1.1%	0.83
TOTAL	1.6%	0.89

Two-Hour Count Summaries

Interval Start		0				Sherwood Forest ES S Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM		0	0	0	0	0	0	0	0	0	0	45	0	0	0	38	0	83	0
2:15 PM		0	0	0	0	0	0	0	0	0	0	51	1	0	0	46	0	98	0
2:30 PM		0	0	0	0	0	0	0	0	1	0	47	1	0	1	58	0	108	0
2:45 PM		0	0	0	0	0	0	0	0	1	0	34	1	0	6	63	0	105	394
3:00 PM		0	0	0	0	0	0	0	0	0	0	53	0	0	3	80	0	136	447
3:15 PM		0	0	0	0	0	0	0	0	0	0	58	2	0	1	88	0	149	498
3:30 PM		0	0	0	0	0	0	0	0	1	0	56	1	0	1	113	0	172	562
3:45 PM		0	0	0	0	0	0	0	0	0	0	61	0	0	3	88	0	152	609
Count Total		0	0	0	0	0	0	0	0	3	0	405	6	0	15	574	0	1,003	0
Peak Hour	All	0	0	0	0	0	0	0	0	1	0	228	3	0	8	369	0	609	0
	HV	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
	HV%	-	-	-	-	-	-	-	-	0%	-	3%	0%	-	0%	1%	-	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

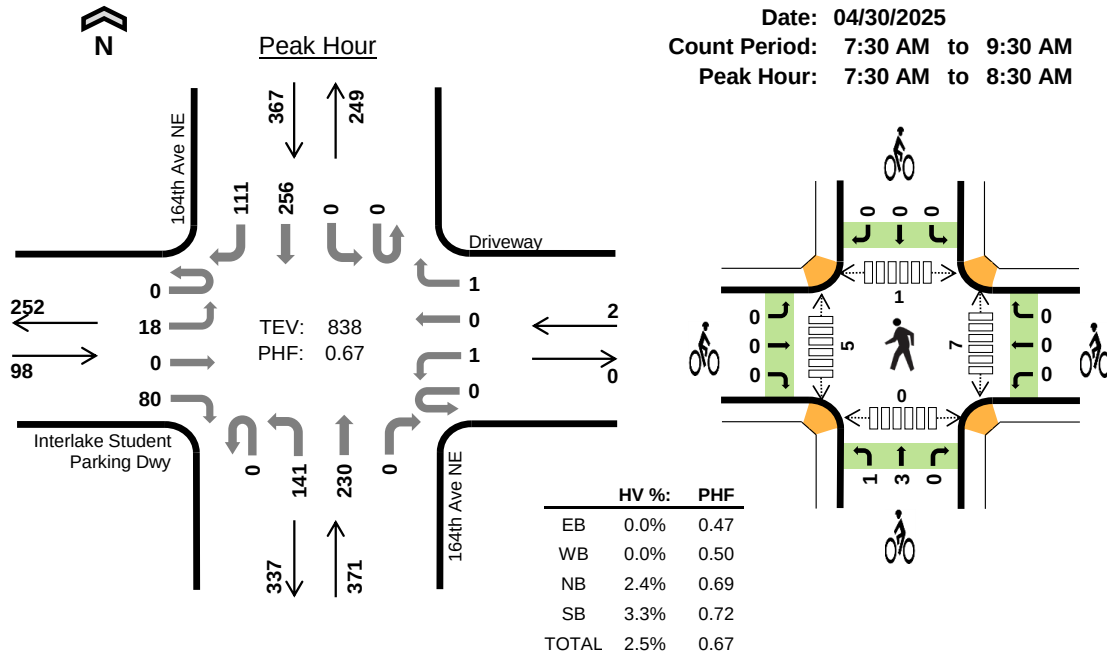
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	0	1	0	1	0	0	0	0	0	2	3	4	1	10
2:15 PM	0	0	2	1	3	0	0	0	0	0	2	6	3	0	11
2:30 PM	0	0	0	1	1	0	0	0	0	0	3	1	0	0	4
2:45 PM	0	0	1	1	2	0	0	1	0	1	0	0	2	1	3
3:00 PM	0	0	2	2	4	0	0	1	0	1	0	0	0	0	0
3:15 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	1	1	0	0	2	0	2	3	4	1	0	8
3:45 PM	0	0	2	1	3	0	0	1	0	1	1	6	0	0	7
Count Total	0	0	10	7	17	0	0	5	0	5	11	20	10	2	43
Peak Hr	0	0	6	4	10	0	0	4	0	4	4	10	1	0	15

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	0				Sherwood Forest ES S Dwy				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	10
3:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	9
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9
3:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	10
Count Total	0	0	0	0	0	0	0	0	0	0	10	0	0	0	7	0	17	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0

Two-Hour Count Summaries - Bikes																		
Interval Start	0			Sherwood Forest ES S Dwy			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1				
3:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	2				
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
3:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	4				
3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
Count Total	0	0	0	0	0	0	0	5	0	0	0	0	5	0				
Peak Hour	0	0	0	0	0	0	0	4	0	0	0	0	4	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

164th Ave NE Interlake Student Parking Dwy



Two-Hour Count Summaries

Interval Start		Interlake Student Parking Dwy				Driveway				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM		0	3	0	14	0	0	0	0	0	32	52	0	0	0	49	28	178	0
7:45 AM		0	8	0	44	0	0	0	0	0	76	59	0	0	0	75	53	315	0
8:00 AM		0	7	0	22	0	0	0	1	0	27	62	0	0	0	66	26	211	0
8:15 AM		0	0	0	0	0	1	0	0	0	6	57	0	0	0	66	4	134	838
8:30 AM		0	1	0	0	0	0	0	0	0	2	75	0	0	0	67	3	148	808
8:45 AM		0	1	0	0	0	0	0	0	0	0	71	0	0	0	76	1	149	642
9:00 AM		0	1	0	1	0	0	0	0	0	1	56	0	0	0	54	1	114	545
9:15 AM		0	1	0	1	0	0	0	0	0	5	37	0	0	0	48	2	94	505
Count Total		0	22	0	82	0	1	0	1	0	149	469	0	0	0	501	118	1,343	0
Peak Hour	All	0	18	0	80	0	1	0	1	0	141	230	0	0	0	256	111	838	0
	HV	0	0	0	0	0	0	0	0	0	4	5	0	0	0	12	0	21	0
	HV%	-	0%	-	0%	-	0%	-	0%	-	3%	2%	-	-	-	5%	0%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:30 AM	0	0	2	2	4	0	0	1	0	1	1	0	1	0	2
7:45 AM	0	0	6	3	9	0	0	0	0	0	4	4	0	0	8
8:00 AM	0	0	1	3	4	0	0	1	0	1	1	0	0	0	1
8:15 AM	0	0	0	4	4	0	0	2	0	2	1	1	0	0	2
8:30 AM	0	0	4	1	5	0	0	0	0	0	2	0	0	0	2
8:45 AM	0	0	3	6	9	0	0	2	0	2	1	4	0	0	5
9:00 AM	0	0	0	2	2	0	0	0	0	0	3	3	0	0	6
9:15 AM	0	0	1	1	2	0	0	1	0	1	2	1	0	0	3
Count Total	0	0	17	22	39	0	0	7	0	7	15	13	1	0	29
Peak Hour	0	0	9	12	21	0	0	4	0	4	7	5	1	0	13

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Interlake Student Parking Dwy				Driveway				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
7:45 AM	0	0	0	0	0	0	0	0	0	4	2	0	0	0	3	0	9	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	21
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	22
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	9	22
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	20
9:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	18
Count Total	0	0	0	0	0	0	0	0	0	4	13	0	0	0	22	0	39	0
Peak Hour	0	0	0	0	0	0	0	0	0	4	5	0	0	0	12	0	21	0

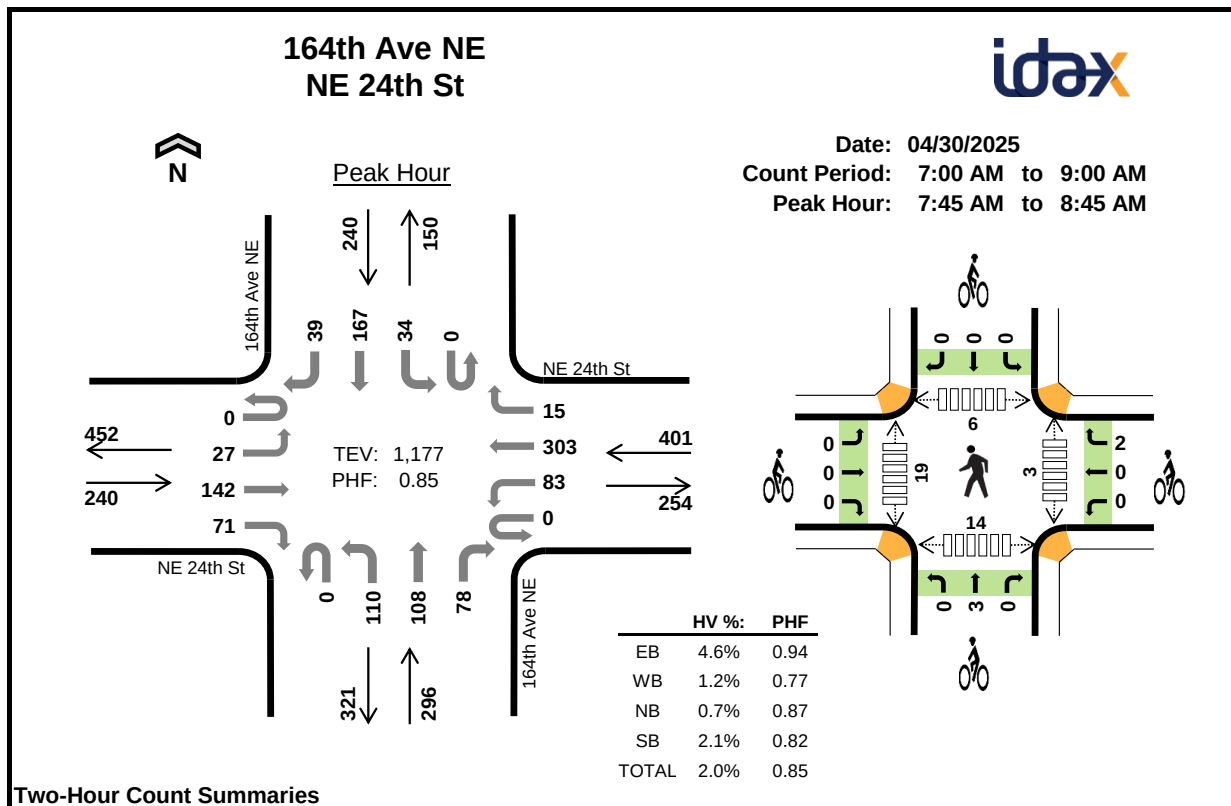
Two-Hour Count Summaries - Bikes																		
Interval Start	Interlake Student Parking Dwy				Driveway				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
7:30 AM	0	0	0		0	0	0		1	0	0		0	0	0		1	0
7:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
8:00 AM	0	0	0		0	0	0		0	1	0		0	0	0		1	0
8:15 AM	0	0	0		0	0	0		0	2	0		0	0	0		2	4
8:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	3
8:45 AM	0	0	0		0	0	0		0	2	0		0	0	0		2	5
9:00 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	4
9:15 AM	0	0	0		0	0	0		0	1	0		0	0	0		1	3
Count Total	0	0	0		0	0	0		1	6	0		0	0	0		7	0
Peak Hour	0	0	0		0	0	0		1	3	0		0	0	0		4	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Interlake Student Parking Dwy				Driveway				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	10
3:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	9
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9
3:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	10
Count Total	0	1	0	0	0	0	0	0	0	0	9	0	0	0	6	1	17	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	5	0	0	0	3	1	10	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Interlake Student Parking Dwy				Driveway				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
2:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
2:15 PM	0	0	0		0	0	0		0	0	0		0	1	0		1	0
2:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
2:45 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	2
3:00 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	3
3:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	2
3:30 PM	1	0	0		0	0	0		0	1	0		0	0	0		2	4
3:45 PM	0	0	0		0	0	0		0	1	0		0	0	0		1	4
Count Total	1	0	0		0	0	0		0	4	0		0	1	0		6	0
Peak Hour	1	0	0		0	0	0		0	3	0		0	0	0		4	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		NE 24th St				NE 24th St				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	19	8	0	3	55	3	0	17	11	2	0	1	13	2	136	0
7:15 AM		0	3	25	16	0	10	68	4	0	18	16	5	0	2	9	5	181	0
7:30 AM		0	4	17	22	0	18	73	4	0	27	21	6	0	4	22	7	225	0
7:45 AM		0	16	28	15	0	49	77	5	0	44	22	19	0	11	40	22	348	890
8:00 AM		0	7	30	20	0	10	57	1	0	29	40	16	0	4	36	13	263	1,017
8:15 AM		0	2	39	19	0	10	62	3	0	21	22	10	0	8	50	4	250	1,086
8:30 AM		0	2	45	17	0	14	107	6	0	16	24	33	0	11	41	0	316	1,177
8:45 AM		0	3	50	10	0	38	120	10	0	16	22	35	0	6	19	2	331	1,160
Count Total		0	39	253	127	0	152	619	36	0	188	178	126	0	47	230	55	2,050	0
Peak Hour	All	0	27	142	71	0	83	303	15	0	110	108	78	0	34	167	39	1,177	0
	HV	0	0	6	5	0	0	4	1	0	2	0	0	0	2	3	0	23	0
	HV%	-	0%	4%	7%	-	0%	1%	7%	-	2%	0%	0%	-	6%	2%	0%	2%	0

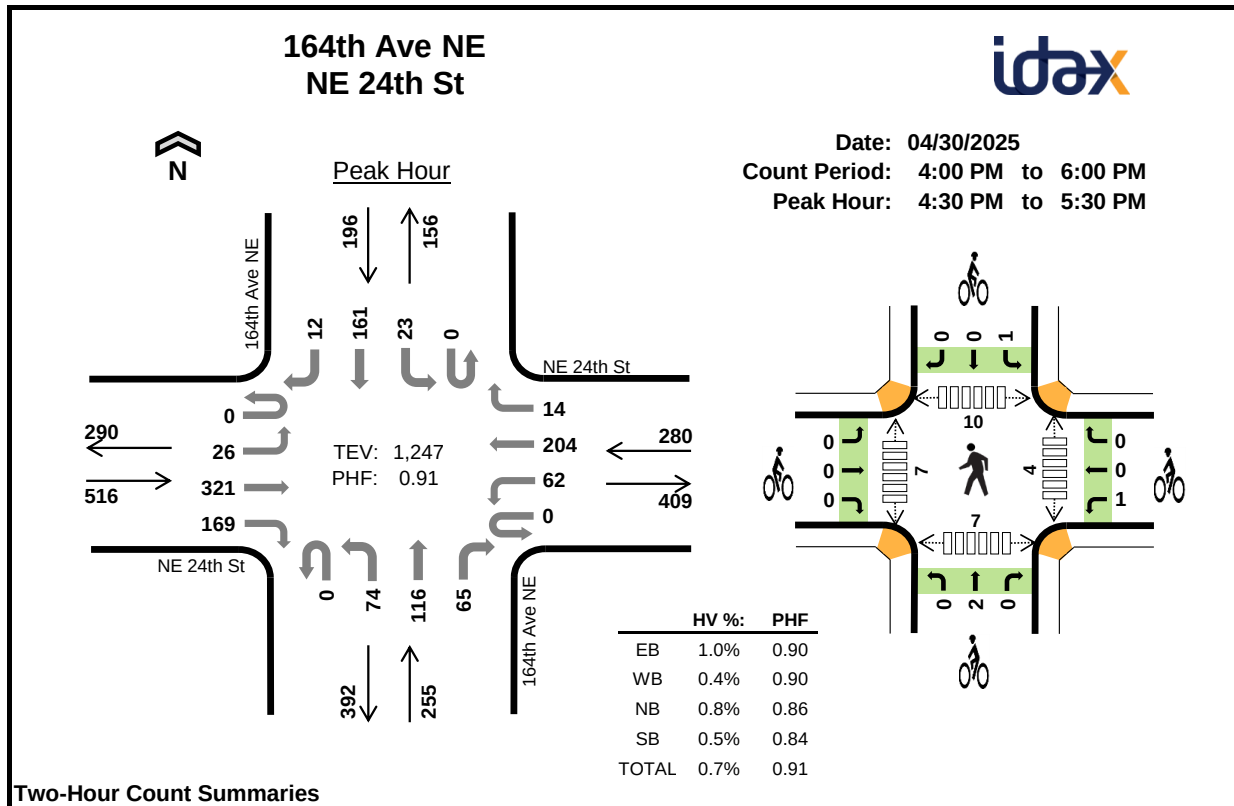
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	3	0	1	9	0	0	1	2	3	1	2	1	2	6
7:15 AM	2	0	4	0	6	0	0	1	0	1	1	1	0	1	3
7:30 AM	1	4	0	1	6	0	0	1	0	1	0	6	1	1	8
7:45 AM	1	2	1	1	5	0	1	0	0	1	0	15	3	7	25
8:00 AM	3	0	0	1	4	0	1	1	0	2	1	2	0	3	6
8:15 AM	3	0	0	3	6	0	0	2	0	2	2	2	1	2	7
8:30 AM	4	3	1	0	8	0	0	0	0	0	0	0	2	2	4
8:45 AM	0	1	3	0	4	0	0	2	0	2	1	7	0	8	16
Count Total	19	13	9	7	48	0	2	8	2	12	6	35	8	26	75
Peak Hour	11	5	2	5	23	0	2	3	0	5	3	19	6	14	42

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	NE 24th St				NE 24th St				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	2	0	0	3	0	0	0	0	0	0	1	0	0	9	0
7:15 AM	0	0	0	2	0	0	0	0	0	2	1	1	0	0	0	0	6	0
7:30 AM	0	0	1	0	0	1	2	1	0	0	0	0	0	0	1	0	6	0
7:45 AM	0	0	1	0	0	0	1	1	0	1	0	0	0	1	0	0	5	26
8:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	4	21
8:15 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	1	2	0	6	21
8:30 AM	0	0	2	2	0	0	3	0	0	1	0	0	0	0	0	0	8	23
8:45 AM	0	0	0	0	0	1	0	0	0	2	0	1	0	0	0	0	4	22
Count Total	0	0	10	9	0	2	9	2	0	6	1	2	0	3	4	0	48	0
Peak Hour	0	0	6	5	0	0	4	1	0	2	0	0	0	2	3	0	23	0

Two-Hour Count Summaries - Bikes																		
Interval Start	NE 24th St			NE 24th St			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3	0				
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0				
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0				
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	6				
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	2	5				
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	6				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5				
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	6				
Count Total	0	0	0	0	0	2	0	8	0	0	2	0	12	0				
Peak Hour	0	0	0	0	0	2	0	3	0	0	0	0	5	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		NE 24th St				NE 24th St				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	66	36	0	9	50	2	0	26	32	13	0	3	32	6	280	0
4:15 PM		0	5	65	26	0	10	48	0	0	22	28	15	0	4	41	5	269	0
4:30 PM		0	9	66	45	0	12	49	4	0	21	22	11	0	7	48	3	297	0
4:45 PM		0	9	92	34	0	17	54	7	0	13	29	14	0	1	37	4	311	1,157
5:00 PM		0	2	74	41	0	11	49	0	0	20	32	22	0	5	36	4	296	1,173
5:15 PM		0	6	89	49	0	22	52	3	0	20	33	18	0	10	40	1	343	1,247
5:30 PM		0	3	88	55	0	7	50	1	0	7	23	8	0	7	41	5	295	1,245
5:45 PM		0	6	80	45	0	11	43	2	0	14	27	12	0	7	44	3	294	1,228
Count Total		0	45	620	331	0	99	395	19	0	143	226	113	0	44	319	31	2,385	0
Peak Hour	All	0	26	321	169	0	62	204	14	0	74	116	65	0	23	161	12	1,247	0
	HV	0	0	2	3	0	0	1	0	0	2	0	0	0	1	0	0	9	0
	HV%	-	0%	1%	2%	-	0%	0%	0%	-	3%	0%	0%	-	4%	0%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	0	0	0	3	0	0	0	1	1	1	1	1	0	3
4:15 PM	1	0	1	0	2	0	0	0	1	1	0	1	2	2	5
4:30 PM	2	1	0	0	3	0	0	2	0	2	2	3	4	2	11
4:45 PM	0	0	1	0	1	0	0	0	0	0	0	1	4	1	6
5:00 PM	2	0	0	1	3	0	0	0	0	0	1	3	1	2	7
5:15 PM	1	0	1	0	2	0	1	0	1	2	1	0	1	2	4
5:30 PM	3	1	1	0	5	0	0	1	1	2	6	4	3	1	14
5:45 PM	1	1	1	0	3	0	0	0	1	1	0	5	0	1	6
Count Total	13	3	5	1	22	0	1	3	5	9	11	18	16	11	56
Peak Hour	5	1	2	1	9	0	1	2	1	4	4	7	10	7	28

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	NE 24th St				NE 24th St				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
4:30 PM	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	9
5:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	3	9
5:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	9
5:30 PM	0	0	0	3	0	0	1	0	0	0	0	0	1	0	0	0	5	11
5:45 PM	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	3	13
Count Total	0	0	4	9	0	0	3	0	0	4	0	1	0	1	0	0	22	0
Peak Hour	0	0	2	3	0	0	1	0	0	2	0	0	0	1	0	0	9	0

Two-Hour Count Summaries - Bikes																		
Interval Start	NE 24th St			NE 24th St			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0				
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0				
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4				
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
5:15 PM	0	0	0	1	0	0	0	0	0	1	0	0	2	4				
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	4				
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	5				
Count Total	0	0	0	1	0	0	0	3	0	3	2	0	9	0				
Peak Hour	0	0	0	1	0	0	0	2	0	1	0	0	4	0				

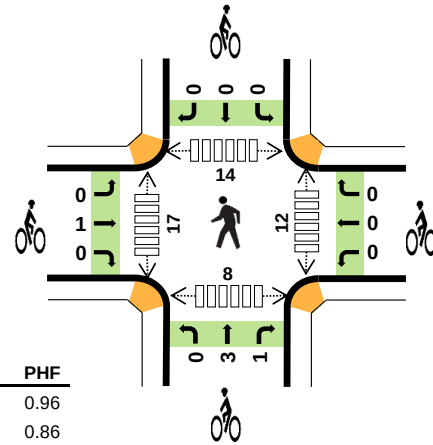
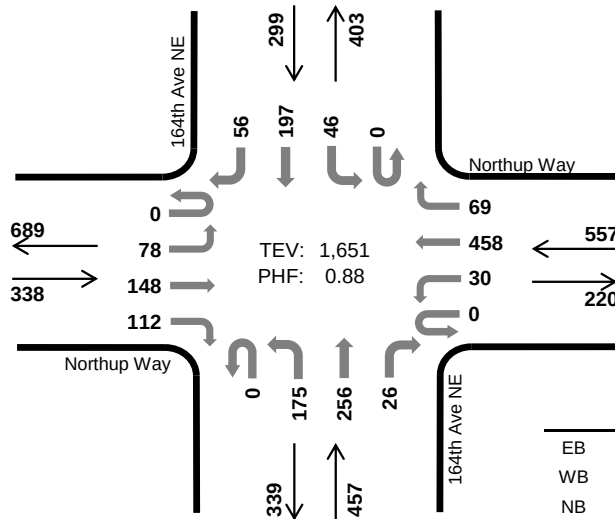
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

164th Ave NE Northup Way



Peak Hour

Date: 04/30/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	6.5%	0.96
WB	2.0%	0.86
NB	1.1%	0.74
SB	4.7%	0.78
TOTAL	3.1%	0.88

Two-Hour Count Summaries

Interval Start		Northup Way				Northup Way				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	8	13	9	0	9	52	9	0	25	25	5	0	7	22	4	188	0
7:15 AM		0	6	23	14	0	10	88	18	0	43	44	3	0	5	22	10	286	0
7:30 AM		0	16	35	28	0	9	118	15	0	58	67	4	0	3	54	12	419	0
7:45 AM		0	15	37	31	0	4	106	27	0	51	101	3	0	19	57	20	471	1,364
8:00 AM		0	21	38	29	0	11	98	7	0	34	51	4	0	21	55	13	382	1,558
8:15 AM		0	26	38	24	0	6	136	20	0	32	37	15	0	3	31	11	379	1,651
8:30 AM		0	16	35	35	0	5	104	14	0	48	69	8	0	12	30	8	384	1,616
8:45 AM		0	9	44	22	0	13	138	10	0	53	48	13	0	12	53	12	427	1,572
Count Total		0	117	263	192	0	67	840	120	0	344	442	55	0	82	324	90	2,936	0
Peak Hour	All	0	78	148	112	0	30	458	69	0	175	256	26	0	46	197	56	1,651	0
	HV	0	2	15	5	0	2	6	3	0	2	2	1	0	3	6	5	52	0
	HV%	-	3%	10%	4%	-	7%	1%	4%	-	1%	1%	4%	-	7%	3%	9%	3%	0

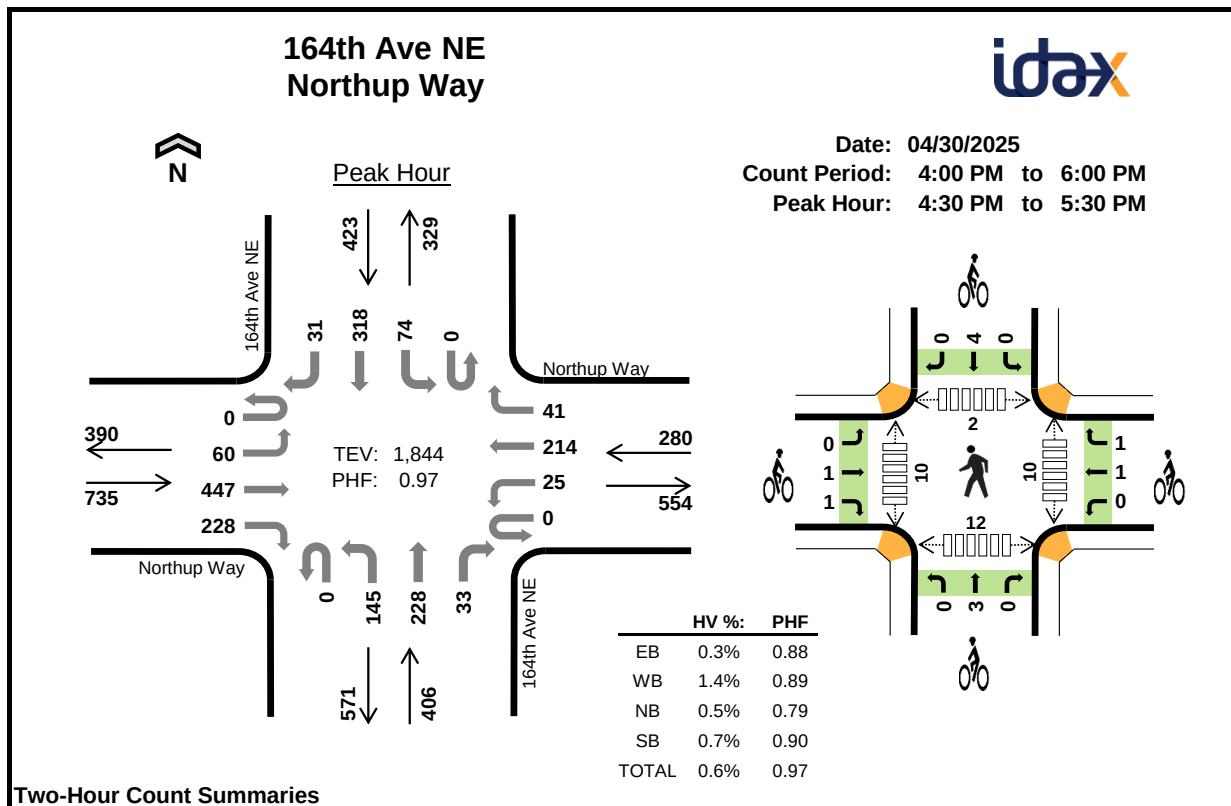
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	0	0	1	4	0	0	0	1	1	0	1	0	0	1
7:15 AM	2	7	4	0	13	0	0	2	0	2	0	2	0	0	2
7:30 AM	1	3	2	4	10	1	0	1	0	2	2	2	3	1	8
7:45 AM	12	3	0	3	18	0	0	0	0	0	2	10	4	2	18
8:00 AM	4	1	1	2	8	0	0	1	0	1	4	1	1	4	10
8:15 AM	5	4	2	5	16	0	0	2	0	2	4	4	6	1	15
8:30 AM	4	2	4	1	11	0	0	0	0	0	2	1	1	2	6
8:45 AM	2	4	4	6	16	0	1	0	0	1	0	1	0	2	3
Count Total	33	24	17	22	96	1	1	6	1	9	14	22	15	12	63
Peak Hour	22	11	5	14	52	1	0	4	0	5	12	17	14	8	51

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Northup Way				Northup Way				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	4	0
7:15 AM	0	0	1	1	0	1	5	1	0	0	2	2	0	0	0	0	13	0
7:30 AM	0	0	0	1	0	0	2	1	0	0	2	0	0	1	1	2	10	0
7:45 AM	0	1	9	2	0	1	1	1	0	0	0	0	0	0	2	1	18	45
8:00 AM	0	0	3	1	0	0	1	0	0	1	0	0	0	2	0	0	8	49
8:15 AM	0	1	3	1	0	1	2	1	0	1	0	1	0	0	3	2	16	52
8:30 AM	0	0	3	1	0	1	0	1	0	0	4	0	0	1	0	0	11	53
8:45 AM	0	0	1	1	0	0	3	1	0	2	2	0	0	0	6	0	16	51
Count Total	0	3	22	8	0	4	14	6	0	4	10	3	0	5	12	5	96	0
Peak Hour	0	2	15	5	0	2	6	3	0	2	2	1	0	3	6	5	52	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Northup Way			Northup Way			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0			
7:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0			
7:30 AM	0	1	0	0	0	0	0	1	0	0	0	0	2	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5			
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	5			
8:15 AM	0	0	0	0	0	0	0	1	1	0	0	0	2	5			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3			
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	4			
Count Total	0	1	0	0	0	1	0	5	1	1	0	0	9	0			
Peak Hour	0	1	0	0	0	0	0	3	1	0	0	0	5	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Northrup Way				Northrup Way				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	11	91	57	0	4	44	6	0	30	50	9	0	15	55	11	383	0
4:15 PM		0	11	107	43	0	7	59	9	0	36	50	7	0	8	51	10	398	0
4:30 PM		0	17	115	60	0	3	50	12	0	35	52	4	0	19	81	7	455	0
4:45 PM		0	13	105	56	0	8	52	10	0	36	60	7	0	19	80	9	455	1,691
5:00 PM		0	17	95	47	0	9	60	10	0	48	65	15	0	19	67	5	457	1,765
5:15 PM		0	13	132	65	0	5	52	9	0	26	51	7	0	17	90	10	477	1,844
5:30 PM		0	7	90	53	0	7	55	8	0	34	52	15	0	22	66	6	415	1,804
5:45 PM		0	8	71	50	0	14	59	6	0	35	48	7	0	13	108	12	431	1,780
Count Total		0	97	806	431	0	57	431	70	0	280	428	71	0	132	598	70	3,471	0
Peak Hour	All	0	60	447	228	0	25	214	41	0	145	228	33	0	74	318	31	1,844	0
	HV	0	0	1	1	0	0	2	2	0	0	1	1	0	2	1	0	11	0
	HV%	-	0%	0%	0%	-	0%	1%	5%	-	0%	0%	3%	-	3%	0%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

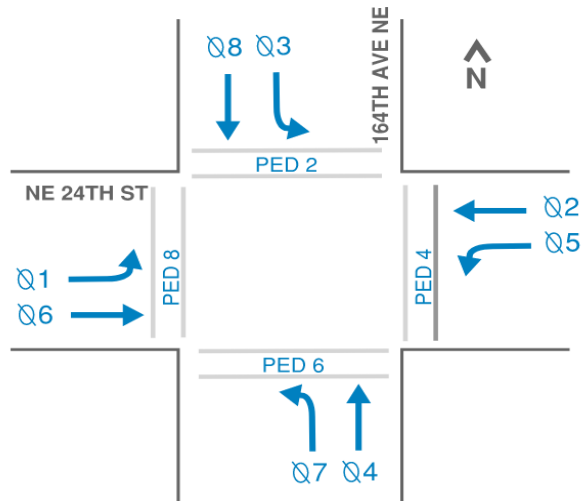
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	2	2	0	0	1	1	2	1	5	2	0	8
4:15 PM	4	2	0	0	6	0	0	0	1	1	3	2	2	2	9
4:30 PM	0	0	0	1	1	1	1	1	1	4	3	3	2	0	8
4:45 PM	0	3	1	0	4	0	0	1	1	2	1	3	0	5	9
5:00 PM	0	0	0	2	2	1	1	0	1	3	6	1	0	3	10
5:15 PM	2	1	1	0	4	0	0	1	1	2	0	3	0	4	7
5:30 PM	3	1	1	2	7	0	0	0	0	0	2	3	0	4	9
5:45 PM	1	1	2	4	8	0	0	0	3	3	0	0	0	2	2
Count Total	10	8	5	11	34	2	2	4	9	17	16	20	6	20	62
Peak Hour	2	4	2	3	11	2	2	3	4	11	10	10	2	12	34

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Northup Way				Northup Way				164th Ave NE				164th Ave NE				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0
4:15 PM	0	2	2	0	0	1	0	1	0	0	0	0	0	0	0	0	6	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
4:45 PM	0	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	4	13
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	13
5:15 PM	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	4	11
5:30 PM	0	0	0	3	0	0	1	0	0	0	1	0	0	1	1	0	7	17
5:45 PM	0	0	0	1	0	0	0	1	0	0	1	1	0	0	4	0	8	21
Count Total	0	2	3	5	0	1	3	4	0	0	3	2	0	4	7	0	34	0
Peak Hour	0	0	1	1	0	0	2	2	0	0	1	1	0	2	1	0	11	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Northup Way			Northup Way			164th Ave NE			164th Ave NE			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0				
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0				
4:30 PM	0	0	1	0	0	1	0	1	0	0	1	0	4	0				
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	9				
5:00 PM	0	1	0	0	1	0	0	0	0	0	1	0	3	10				
5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	11				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7				
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3	8				
Count Total	0	1	1	0	1	1	0	4	0	0	9	0	17	0				
Peak Hour	0	1	1	0	1	1	0	3	0	0	4	0	11	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

SECTION 2: SIGNAL TIMING



164th Ave NE and NE 24th St

Signal Phase	1	2	3	4	5	6	7	8
Green Min	5	7	5	5	5	7	5	5
Yellow	4	4	4	4	4	4	4	4
Red	1	1	1	1	1	1	1	1
Average Split AM	21	47	21	26	21	47	21	26
Average Split PM	15	36	16	23	15	36	16	23
Left Turn	FYA P-	-	FYA P-	-	FYA P-	-	FYA P-	-
Lead or Lag	lead	-	lead	-	lead	-	lead	-

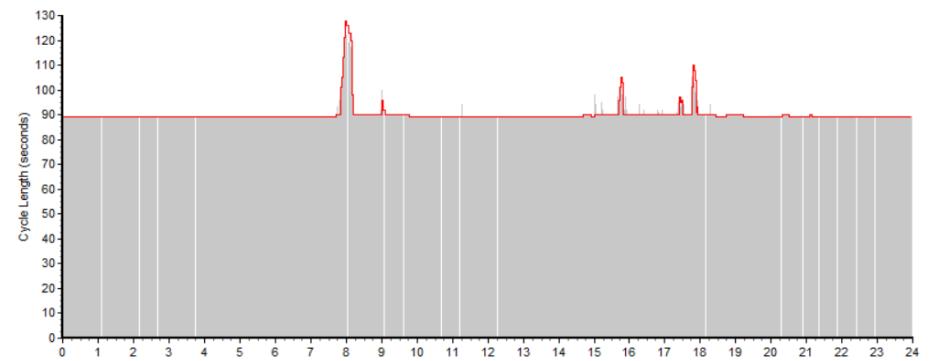
Pedestrian Phase	1	2	3	4	5	6	7	8
LPI	-	-	-	-	-	-	-	-
Walk	-	7	-	7	-	7	-	7
Flash Don't Walk	-	7	-	7	-	9	-	8

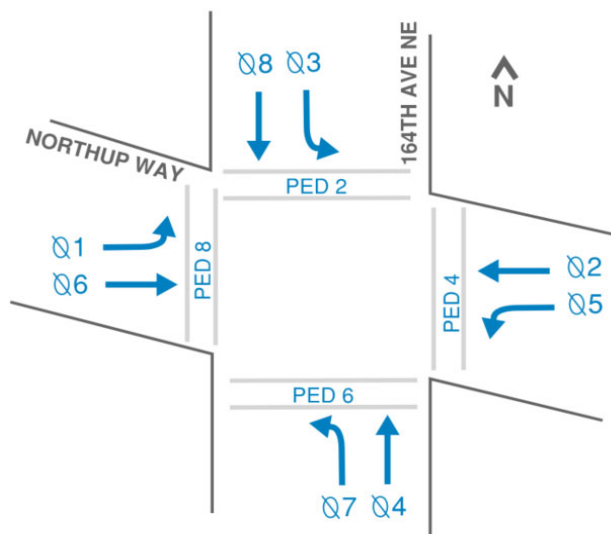
Cycle Length

Min	90	Avg AM	115	<school start (7:45-8:15)
Max	135	Avg PM	90	

Other Notes

FYA P- = Protected-permissive with Flashing Yellow Arrow, remains protected for pedestrian phase
 proposed to add 5 second LPI during school start/release time once programming updated
 Averaged for 3/25/25





164th Ave NE and Northup Way

Signal Phase	1	2	3	4	5	6	7	8
Green Min	5	7	5	5	5	7	5	5
Yellow	4	4	4	4	4	4	4	4
Red	1	1	1	1	1	1	1	1
Average Split AM	20	52	22	36	20	52	22	36
Average Split PM	17	37	21	35	17	37	21	35
Left Turn	FYA P-	-	FYA P-	-	FYA P-	-	FYA P-	-
Lead or Lag	lead	-	lead	-	lead	-	lead	-

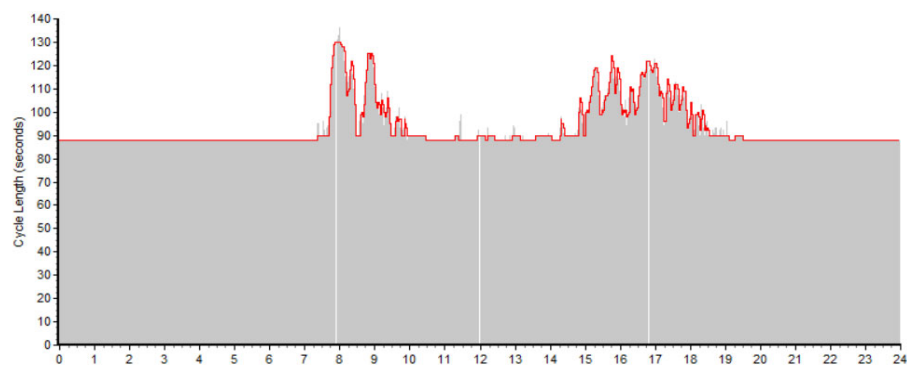
Pedestrian Phase	1	2	3	4	5	6	7	8
LPI	-	-	-	-	-	-	-	-
Walk	-	7	-	7	-	7	-	7
Flash Don't Walk	-	12	-	12	-	11	-	11

Cycle Length

Min	90	Avg AM	130	<school start (7:45-8:15)
Max	130	Avg PM	110	

Other Notes

FYA P- = Protected-permissive with Flashing Yellow Arrow, remains protected for pedestrian phase
Averaged for 3/25/25



FYA P- = Protected-permissive with Flashing Yellow Arrow, remains protected for pedestrian phase

Perm = Permissive only left turn phasing

Transit signal priority - green extension for E-W

FYA = Protected-permissive with Flashing Yellow Arrow

Pro = Protected left turn phasing

LPI = leading pedestrian interval

Lead or Lag

Lead = left turn phase before opposing thru phase

Lag = left turn phase after opposing thru phase

SECTION 3: FUTURE 2044 VOLUMES

164th Ave NE Corridor Study
AM Peak Hour Volumes

2025 Exisintg Counts

2025	Cross Streets		NB			SB			EB			WB			NB		SB		EB		WB		Total	
Int#	NS Address	EW Address	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
75	164th Ave NE	NE 24th St	110	108	78	34	167	39	27	142	71	83	303	15	296	150	240	321	240	254	401	452	1177	1177
76	164th Ave NE	Northup Wy	175	256	26	46	197	56	78	148	112	30	458	69	457	403	299	339	338	220	557	689	1651	1651

2044

2044	Cross Streets		NB			SB			EB			WB			NB		SB		EB		WB		Total	
Int#	NS Address	EW Address	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
75	164th Ave NE	NE 24th St	116	135	84	32	166	36	31	142	74	75	260	15	335	181	234	315	247	258	350	412	1166	1166
76	164th Ave NE	Northup Wy	191	281	28	44	186	54	89	141	118	29	456	70	500	440	284	333	348	213	555	701	1687	1687

Annual Compound Growth Rate on 164th Ave NE Between NE 24th Ave and Northup Way

	SB	NB
S of NE 24th Ave	-0.10%	0.65%
N of Northup Way	-0.27%	0.46%
Average	-0.18%	0.56%

164th Ave NE Corridor Study **PM Peak Hour Volumes**

2025 Counts

2025	Cross Streets		NB			SB			EB			WB			NB		SB		EB		WB		Total	
Int#	NS Address	EW Address	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
75	164th Ave NE	NE 24th St	74	116	65	23	161	12	26	321	169	62	204	14	255	156	196	392	516	409	280	290	1247	1247
76	164th Ave NE	Northup Wy	145	228	33	74	318	31	60	447	228	25	214	41	406	329	423	571	735	554	280	390	1844	1844

2044

2044	Cross Streets		NB			SB			EB			WB			NB		SB		EB		WB		Total	
Int#	NS Address	EW Address	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
75	164th Ave NE	NE 24th St	78	110	59	21	171	13	24	290	155	60	222	15	247	149	205	386	469	370	297	313	1218	1218
76	164th Ave NE	Northup Wy	148	214	34	73	307	32	56	454	247	31	251	43	396	313	412	585	757	561	325	431	1890	1890

Annual Compound Growth Rate on 164th Ave NE Between NE 24th Ave and Northup Way

	SB	NB
S of NE 24th Ave	-0.08%	-0.17%
N of Northup Way	-0.14%	-0.26%
Average	-0.11%	-0.21%

SECTION 4: SYNCHRO OUTPUT RESULTS

Bellevue 164th Ave MOEs

		AM 2025 EXISTING CONDITIONS				AM 2025 BUILD CONDITIONS 1 (Remove NB and SB left-turn lane, permissive phasing at NE 24th St. No left turn lane along driveways)				AM 2025 BUILD CONDITIONS 2 (Remove NB and SB left-turn lane, split phasing)				AM 2025 BUILD CONDITIONS 3 (Build 1 + No NB and SB RTOR)				AM 2025 BUILD CONDITIONS 4 (Build 3 + School Signal Timing Modifications)			
INTERSECTION NAME	MOVEMENT	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH
164th Ave NE / NE 24th St	EBL	10.7	B	9	24	9.6	A	8	21	20.3	C	13	33	9.6	A	8	21	30.7	C	15	49
	EBTR	15.1	B	93	165	13.8	B	83	152	28.3	C	135	223	13.8	B	99	166	19.5	B	105	218
	WBL	10.9	B	27	56	9.7	A	24	50	20.6	C	42	78	9.7	A	25	50	32.1	C	45	112
	WBTR	15.2	B	160	251	13.8	B	144	233	29.4	C	225	335	13.8	B	151	234	19.5	B	158	311
	NBL	29.4	C	57	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NBTR	33.8	C	107	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NBLTR	-	-	-	-	27.8	C	165	262	46.3	D	218	325	27.8	C	176	#283	17.6	B	151	271
	SBL	26.7	C	17	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SBTR	44.1	D	139	224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SBLTR	-	-	-	-	24	C	118	183	45.8	D	181	272	24	C	123	189	16.2	B	109	195
164th Ave NE / Northrup Way	Intersection	24.4	C	-	-	19	B	-	-	36	D	-	-	19	B	-	-	19.5	B	-	-
	EBL	17.7	B	30	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EBT	16.2	B	75	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EBR	16	B	0	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	13	B	11	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	WBTR	27.2	C	367	#635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NBL	32.2	C	100	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NBTR	36.1	D	206	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SBL	27.6	C	24	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SBTR	47.7	D	193	299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Sherwood Forest Elementary School North Driveway	Intersection	30	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	12.7	B	-	3	14.9	B	3	3	-	-	-	-	-	-	-	-	-	-	-	-
	WBR	10.3	B	-	5	10.3	B	-	5	-	-	-	-	-	-	-	-	-	-	-	-
	NBTR	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	SBLT	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	Intersection	12.7	B	-	-	14.9	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Interlake Saints Ct	EBLR	12.2	B	-	15	12.2	B	-	15	-	-	-	-	-	-	-	-	-	-	-	-
	NBT	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	SBT	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	Intersection	12.2	B	-	-	12.2	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NBTR	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	164th Ave NE / Sherwood Forest Elementary School South Driveway	SBL	7.9	A	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SBT		0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
SBLT		-	-	-	-	7.9	A	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Intersection		7.9	A	-	-	7.9	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Interlake Student Parking Driveway	EBLR	21	C	-	33	21	C	-	33	-	-	-	-	-	-	-	-	-	-	-	-
	NBLT	9.5	A	-	20	9.5	A	-	20	-	-	-	-	-	-	-	-	-	-	-	-
	SBTR	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Intersection	21	C	-	-	21	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Bellevue 164th

[illegible]

	PM 2025 EXISTING CONDITIONS				PM 2025 BUILD CONDITIONS 1 (Remove NB and SB left-turn lane, permissive phasing at NE 24th St. No left turn lane along driveways)				PM 2025 BUILD CONDITIONS 2 (Remove NB and SB left-turn lane, split phasing)				PM 2025 BUILD CONDITIONS 3 (Build 1 + No NB and SB RTOR)				PM 2025 BUILD CONDITIONS 4 (Build 3 + School Signal Timing Modifications)			
INTERSECTION NAME	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH	DELAY	LEVEL OF SERVICE	50TH PERCENTILE QUEUE LENGTH	95TH PERCENTILE QUEUE LENGTH
164th Ave NE / NE 24th St	8.5	A	6	21	6.6	A	4	17	14.3	B	10	28	6.6	A	4	18	34.7	C	14	45
	14.8	B	211	#446	14.8	B	162	#357	28.5	C	315	#554	14.8	B	181	#406	19.5	B	238	410
	10.8	B	15	40	8.4	A	10	32	17.9	B	24	54	8.4	A	11	33	34.3	C	33	83
	11.3	B	56	154	8.9	A	39	131	18.3	B	113	197	8.9	A	41	136	12.6	B	55	156
	24	C	28	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	29.1	C	61	145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	24.8	C	103	188	50.1	D	180	291	24.8	C	112	198	23	C	129	236
	22.9	C	8	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	32	C	86	159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	22.8	C	77	139	50	D	145	241	22.8	C	79	141	21.2	C	91	170
	20.6	C	-	-	16.6	B	-	-	33.7	C	-	-	16.6	B	-	-	20.3	C	-	-
	13.9	B	19	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Northup Way	22	C	177	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18.4	B	0	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14.7	B	8	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19.1	B	111	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23.8	C	54	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	26.6	C	130	218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20.9	C	27	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	35	D	194	318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11.6	B	-	0	13	B	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	9.6	A	-	0	9.6	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Interlake Saints Ct	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	11.6	B	-	-	13	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	B	-	5	11	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Sherwood Forest Elementary School South Driveway	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	7.8	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	7.8	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	7.8	A	-	-	7.8	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13.3	B	-	10	13.3	B	-	10	-	-	-	-	-	-	-	-	-	-	-	-
164th Ave NE / Interlake Student Parking Driveway	8.2	A	-	0	8.2	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	0	A	-	0	0	A	-	0	-	-	-	-	-	-	-	-	-	-	-	-
	13.3	B	-	-	13.3	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DKS

[illegible]

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	0.98		0.93	0.99		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	32	167	84	98	356	18	129	127	92	40	196	46
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	518	548	276	618	883	45	262	207	150	246	237	56
Arrive On Green	0.03	0.48	0.48	0.05	0.50	0.50	0.08	0.21	0.21	0.04	0.16	0.16
Sat Flow, veh/h	1810	1149	578	1810	1775	90	1781	990	717	1725	1445	339
Grp Volume(v), veh/h	32	0	251	98	0	374	129	0	219	40	0	242
Grp Sat Flow(s),veh/h/ln	1810	0	1727	1810	0	1865	1781	0	1708	1725	0	1785
Q Serve(g_s), s	0.7	0.0	7.8	2.4	0.0	11.1	5.2	0.0	10.2	1.6	0.0	11.5
Cycle Q Clear(g_c), s	0.7	0.0	7.8	2.4	0.0	11.1	5.2	0.0	10.2	1.6	0.0	11.5
Prop In Lane	1.00		0.33	1.00		0.05	1.00		0.42	1.00		0.19
Lane Grp Cap(c), veh/h	518	0	823	618	0	928	262	0	357	246	0	293
V/C Ratio(X)	0.06	0.00	0.30	0.16	0.00	0.40	0.49	0.00	0.61	0.16	0.00	0.83
Avail Cap(c_a), veh/h	791	0	823	853	0	928	442	0	407	498	0	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	14.1	10.7	0.0	13.9	28.0	0.0	31.6	26.4	0.0	35.6
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.1	0.0	1.3	1.4	0.0	2.2	0.3	0.0	8.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.1	0.9	0.0	4.7	2.3	0.0	4.4	0.7	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.7	0.0	15.1	10.9	0.0	15.2	29.4	0.0	33.8	26.7	0.0	44.1
LnGrp LOS	B		B	B		B	C		C	C		D
Approach Vol, veh/h	283			472			348			282		
Approach Delay, s/veh	14.6			14.3			32.2			41.6		
Approach LOS	B			B			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	48.8	8.1	23.4	9.5	47.0	12.1	19.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	16.0	42.0	16.0	21.0	16.0	42.0	16.0	21.0				
Max Q Clear Time (g_c+I1), s	2.7	13.1	3.6	12.2	4.4	9.8	7.2	13.5				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.8	0.2	1.6	0.2	0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.4											
HCM 7th LOS	C											

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor		0.98		0.97	1.00		0.96	0.98		0.99	0.98	
Frt		0.950			0.993			0.937			0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1679	0	1805	1859	0	1770	1752	0	1703	1784	0
Flt Permitted	0.433			0.546			0.374			0.492		
Satd. Flow (perm)	823	1679	0	1008	1859	0	672	1752	0	876	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			2			28			9	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	32	167	84	98	356	18	129	127	92	40	196	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	251	0	98	374	0	129	219	0	40	242	0
v/c Ratio	0.06	0.33		0.17	0.42		0.41	0.45		0.12	0.74	
Control Delay (s/veh)	11.6	19.6		12.2	20.3		27.3	31.3		22.9	51.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	11.6	19.6		12.2	20.3		27.3	31.3		22.9	51.4	
Queue Length 50th (ft)	9	93		27	160		57	107		17	139	
Queue Length 95th (ft)	24	165		56	251		97	175		38	224	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150			100			50		
Base Capacity (vph)	620	759		691	900		409	489		439	403	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.33		0.14	0.42		0.32	0.45		0.09	0.60	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

5: 164th Ave NE & Northup Way

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	148	112	30	458	69	175	256	26	46	197	56
Future Volume (veh/h)	78	148	112	30	458	69	175	256	26	46	197	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.96	0.99		0.98	0.99		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1752	1841	1796	1885	1841	1885	1885	1841	1796	1856	1767
Adj Flow Rate, veh/h	89	168	127	34	520	78	199	291	30	52	224	64
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	10	4	7	1	4	1	1	4	7	3	9
Cap, veh/h	311	830	713	555	734	110	303	439	45	243	262	75
Arrive On Green	0.04	0.47	0.47	0.03	0.46	0.46	0.11	0.26	0.26	0.04	0.19	0.19
Sat Flow, veh/h	1767	1752	1505	1711	1598	240	1795	1670	172	1711	1372	392
Grp Volume(v), veh/h	89	168	127	34	0	598	199	0	321	52	0	288
Grp Sat Flow(s),veh/h/ln	1767	1752	1505	1711	0	1838	1795	0	1842	1711	0	1764
Q Serve(g_s), s	2.7	5.7	5.0	1.0	0.0	26.7	8.9	0.0	15.9	2.2	0.0	16.2
Cycle Q Clear(g_c), s	2.7	5.7	5.0	1.0	0.0	26.7	8.9	0.0	15.9	2.2	0.0	16.2
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.09	1.00		0.22
Lane Grp Cap(c), veh/h	311	830	713	555	0	844	303	0	484	243	0	337
V/C Ratio(X)	0.29	0.20	0.18	0.06	0.00	0.71	0.66	0.00	0.66	0.21	0.00	0.85
Avail Cap(c_a), veh/h	491	830	713	754	0	844	405	0	558	463	0	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	15.7	15.5	13.0	0.0	22.2	29.7	0.0	33.7	27.1	0.0	40.0
Incr Delay (d2), s/veh	0.5	0.5	0.5	0.0	0.0	5.0	2.4	0.0	2.4	0.4	0.0	7.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.3	1.8	0.4	0.0	12.1	4.0	0.0	7.4	1.0	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.7	16.2	16.0	13.0	0.0	27.2	32.2	0.0	36.1	27.6	0.0	47.7
LnGrp LOS	B	B	B	B		C	C		D	C		D
Approach Vol, veh/h	384				632				520			
Approach Delay, s/veh	16.5				26.4				34.6			
Approach LOS	B				C				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	52.0	8.9	31.9	8.1	53.5	16.2	24.6				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	47.0	17.0	31.0	15.0	47.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	4.7	28.7	4.2	17.9	3.0	7.7	10.9	18.2				
Green Ext Time (p_c), s	0.1	3.7	0.1	1.5	0.0	1.4	0.3	1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	30.0											
HCM 7th LOS	C											

Lanes, Volumes, Timings
5: 164th Ave NE & Northup Way

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	148	112	30	458	69	175	256	26	46	197	56
Future Volume (vph)	78	148	112	30	458	69	175	256	26	46	197	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		240	40		0	75		0	50		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor			0.95	0.98	0.99		0.97	0.99		0.99	0.98	
Frt			0.850		0.980			0.986			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1727	1553	1687	1820	0	1787	1838	0	1687	1730	0
Flt Permitted	0.195			0.634			0.291			0.335		
Satd. Flow (perm)	360	1727	1476	1103	1820	0	534	1838	0	586	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		7			4			10	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		713			762			1522			360	
Travel Time (s)		13.9			14.8			34.6			9.8	
Confl. Peds. (#/hr)	14		8	8		14	17		12	12		17
Confl. Bikes (#/hr)			1						4			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	3%	10%	4%	7%	1%	4%	1%	1%	4%	7%	3%	9%
Adj. Flow (vph)	89	168	127	34	520	78	199	291	30	52	224	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	168	127	34	598	0	199	321	0	52	288	0
v/c Ratio	0.31	0.21	0.17	0.06	0.75		0.60	0.61		0.19	0.79	
Control Delay (s/veh)	17.7	21.6	4.7	14.9	36.5		32.5	41.0		24.2	57.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	17.7	21.6	4.7	14.9	36.5		32.5	41.0		24.2	57.1	
Queue Length 50th (ft)	30	75	0	11	367		100	206		24	193	
Queue Length 95th (ft)	65	141	37	31	#635		158	310		50	299	
Internal Link Dist (ft)		633			682			1442			280	
Turn Bay Length (ft)	125		240	40			75			50		
Base Capacity (vph)	383	810	759	666	793		387	563		393	502	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.23	0.21	0.17	0.05	0.75		0.51	0.57		0.13	0.57	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

Lanes, Volumes, Timings

15: Sherwood Forest Elementary School North Driveway

08/14/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	29	261	0	0	318
Future Volume (vph)	8	29	261	0	0	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1597	1615	1881	0	0	1845
Flt Permitted	0.950					
Satd. Flow (perm)	1597	1615	1881	0	0	1845
Link Speed (mph)	20		25			25
Link Distance (ft)	446		166			171
Travel Time (s)	15.2		4.5			4.7
Confl. Peds. (#/hr)				9	9	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	13%	0%	1%	0%	0%	3%
Adj. Flow (vph)	10	36	322	0	0	393
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	36	322	0	0	393
Intersection Summary						
Area Type:	Other					

Lanes, Volumes, Timings

2: Interlake Saints Ct

08/14/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	75	0	254	324	0
Future Volume (vph)	7	75	0	254	324	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.877					
Flt Protected	0.996					
Satd. Flow (prot)	1587	0	0	1881	1845	0
Flt Permitted	0.996					
Satd. Flow (perm)	1587	0	0	1881	1845	0
Link Speed (mph)	20			25	25	
Link Distance (ft)	568			126	57	
Travel Time (s)	19.4			3.4	1.6	
Confl. Peds. (#/hr)	26	1	35			35
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	5%	0%	1%	3%	0%
Adj. Flow (vph)	9	94	0	318	405	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	0	318	405	0
Intersection Summary						
Area Type:	Other					

Lanes, Volumes, Timings

18: Sherwood Forest Elementary School South Driveway

08/14/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	251	23	36	361
Future Volume (vph)	0	0	251	23	36	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	0	1		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.989			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1842	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1842	0	1770	1863
Link Speed (mph)	20		25			25
Link Distance (ft)	566		165			126
Travel Time (s)	19.3		4.5			3.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	273	25	39	392
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	298	0	39	392
Intersection Summary						
Area Type:	Other					



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	50	141	230	256	111
Future Volume (vph)	18	50	141	230	256	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.901				0.959	
Flt Protected	0.987			0.981		
Satd. Flow (prot)	1690	0	0	1821	1761	0
Flt Permitted	0.987			0.981		
Satd. Flow (perm)	1690	0	0	1821	1761	0
Link Speed (mph)	20			25	25	
Link Distance (ft)	409			631	165	
Travel Time (s)	13.9			17.2	4.5	
Confl. Peds. (#/hr)	1		5			5
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67
Heavy Vehicles (%)	0%	0%	3%	2%	5%	0%
Adj. Flow (vph)	27	75	210	343	382	166
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	0	553	548	0
Intersection Summary						
Area Type:	Other					

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.96	0.99		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	32	167	84	98	356	18	129	127	92	40	196	46
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	521	531	267	623	866	44	197	169	108	96	362	79
Arrive On Green	0.03	0.46	0.46	0.06	0.49	0.49	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	1149	578	1810	1775	90	468	600	384	149	1287	280
Grp Volume(v), veh/h	32	0	251	98	0	374	348	0	0	282	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1726	1810	0	1865	1452	0	0	1716	0	0
Q Serve(g_s), s	0.7	0.0	6.9	2.1	0.0	9.7	6.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	6.9	2.1	0.0	9.7	17.1	0.0	0.0	10.3	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.05	0.37		0.26	0.14		0.16
Lane Grp Cap(c), veh/h	521	0	799	623	0	910	474	0	0	537	0	0
V/C Ratio(X)	0.06	0.00	0.31	0.16	0.00	0.41	0.73	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	821	0	799	877	0	910	737	0	0	839	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.5	0.0	12.8	9.5	0.0	12.4	25.5	0.0	0.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.1	0.0	1.4	2.2	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.7	0.8	0.0	4.0	6.0	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.6	0.0	13.8	9.7	0.0	13.8	27.8	0.0	0.0	24.0	0.0	0.0
LnGrp LOS	A		B	A		B	C			C		
Approach Vol, veh/h	283			472			348			282		
Approach Delay, s/veh	13.3			12.9			27.8			24.0		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	41.9		26.3	9.4	40.0		26.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	35.0		35.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.7	11.7		19.1	4.1	8.9		12.3				
Green Ext Time (p_c), s	0.0	2.3		2.2	0.1	1.5		1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.0								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.950			0.993			0.964			0.978	
Flt Protected	0.950			0.950				0.982			0.993	
Satd. Flow (prot)	1805	1683	0	1805	1859	0	0	1770	0	0	1781	0
Flt Permitted	0.444			0.557				0.680			0.913	
Satd. Flow (perm)	837	1683	0	1031	1859	0	0	1212	0	0	1636	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			3			20			11	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	32	167	84	98	356	18	129	127	92	40	196	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	251	0	98	374	0	0	348	0	0	282	0
v/c Ratio	0.06	0.34		0.16	0.42			0.85			0.52	
Control Delay (s/veh)	10.8	18.7		11.4	19.4			45.9			26.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	10.8	18.7		11.4	19.4			45.9			26.0	
Queue Length 50th (ft)	8	83		24	144			165			118	
Queue Length 95th (ft)	21	152		50	233			262			183	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	640	740		710	884			533			711	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.34		0.14	0.42			0.65			0.40	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	29	261	0	0	318
Future Vol, veh/h	8	29	261	0	0	318
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	13	0	1	0	0	3
Mvmt Flow	10	36	322	0	0	393
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	724	331	0	0	331	0
Stage 1	331	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Critical Hdwy	6.53	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	377	715	-	-	1240	-
Stage 1	703	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	374	709	-	-	1229	-
Mov Cap-2 Maneuver	374	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	11.33	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 374 709	1229	-		
HCM Lane V/C Ratio	-	- 0.026 0.051	-	-		
HCM Ctrl Dly (s/v)	-	- 14.9 10.3	0	-		
HCM Lane LOS	-	- B B	A	-		
HCM 95th %tile Q(veh)	-	- 0.1 0.2	0	-		

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	75	0	254	324	0
Future Vol, veh/h	7	75	0	254	324	0
Conflicting Peds, #/hr	26	1	35	0	0	35
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	5	0	1	3	0
Mvmt Flow	9	94	0	318	405	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	749	406	-	0	-	0
Stage 1	405	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.4	6.25	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	-	-	-	-
Pot Cap-1 Maneuver	383	638	0	-	-	0
Stage 1	678	-	0	-	-	0
Stage 2	723	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	383	638	-	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	12.18	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		603			
HCM Lane V/C Ratio	-		0.17			
HCM Ctrl Dly (s/v)	-		12.2			
HCM Lane LOS	-		B			
HCM 95th %tile Q(veh)	-		0.6			

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	251	23	36	361
Future Vol, veh/h	0	0	251	23	36	361
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	-	-	-	-
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	0	0	273	25	39	392

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	285	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	754	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	754	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.72
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	163	-
HCM Lane V/C Ratio	-	-	0.031	-
HCM Ctrl Dly (s/v)	-	-	0	7.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection

Int Delay, s/veh 3.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 18 50 141 230 256 111

Future Vol, veh/h 18 50 141 230 256 111

Conflicting Peds, #/hr 1 0 5 0 0 5

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 67 67 67 67 67 67

Heavy Vehicles, % 0 0 3 2 5 0

Mvmt Flow 27 75 210 343 382 166

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1235 470 553 0 - 0

Stage 1 470 - - - - -

Stage 2 765 - - - - -

Critical Hdwy 6.4 6.2 4.13 - - -

Critical Hdwy Stg 1 5.4 - - - - -

Critical Hdwy Stg 2 5.4 - - - - -

Follow-up Hdwy 3.5 3.3 2.227 - - -

Pot Cap-1 Maneuver 197 598 1012 - - -

Stage 1 633 - - - - -

Stage 2 463 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 144 595 1007 - - -

Mov Cap-2 Maneuver 144 - - - - -

Stage 1 468 - - - - -

Stage 2 461 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 20.96 3.62 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 684 - 326 - -

HCM Lane V/C Ratio 0.209 - 0.311 - -

HCM Ctrl Dly (s/v) 9.5 0 21 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0.8 - 1.3 - -

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.96	1.00		0.93	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	32	167	84	98	356	18	129	127	92	40	196	46
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	313	365	184	405	608	31	148	146	106	47	231	54
Arrive On Green	0.03	0.32	0.32	0.05	0.34	0.34	0.23	0.23	0.23	0.19	0.19	0.19
Sat Flow, veh/h	1810	1146	576	1810	1775	90	647	637	462	253	1242	291
Grp Volume(v), veh/h	32	0	251	98	0	374	348	0	0	282	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1722	1810	0	1864	1746	0	0	1787	0	0
Q Serve(g_s), s	1.1	0.0	11.0	3.4	0.0	15.5	18.1	0.0	0.0	14.4	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	11.0	3.4	0.0	15.5	18.1	0.0	0.0	14.4	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.05	0.37		0.26	0.14		0.16
Lane Grp Cap(c), veh/h	313	0	548	405	0	639	400	0	0	332	0	0
V/C Ratio(X)	0.10	0.00	0.46	0.24	0.00	0.59	0.87	0.00	0.00	0.85	0.00	0.00
Avail Cap(c_a), veh/h	547	0	548	595	0	639	538	0	0	493	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.2	0.0	25.6	20.3	0.0	25.5	35.0	0.0	0.0	37.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.7	0.3	0.0	3.9	11.3	0.0	0.0	8.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	4.8	1.4	0.0	7.4	8.9	0.0	0.0	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.3	0.0	28.3	20.6	0.0	29.4	46.3	0.0	0.0	45.8	0.0	0.0
LnGrp LOS	C		C	C		C	D			D		
Approach Vol, veh/h	283			472			348			282		
Approach Delay, s/veh	27.4			27.5			46.3			45.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	37.3		26.6	10.1	35.0		22.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	30.0		29.0	15.0	30.0		26.0				
Max Q Clear Time (g_c+I1), s	3.1	17.5		20.1	5.4	13.0		16.4				
Green Ext Time (p_c), s	0.0	1.8		1.5	0.1	1.3		1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				36.0								
HCM 7th LOS				D								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor		0.98		0.97	1.00			0.97			0.98	
Frt		0.950			0.993			0.964			0.978	
Flt Protected	0.950			0.950				0.982			0.993	
Satd. Flow (prot)	1805	1678	0	1805	1858	0	0	1768	0	0	1777	0
Flt Permitted	0.339			0.476				0.982			0.993	
Satd. Flow (perm)	644	1678	0	881	1858	0	0	1734	0	0	1775	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			2			14			7	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			678			2020	
Travel Time (s)		14.8			19.8			18.5			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	32	167	84	98	356	18	129	127	92	40	196	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	251	0	98	374	0	0	348	0	0	282	0
v/c Ratio	0.10	0.48		0.24	0.58			0.81			0.77	
Control Delay (s/veh)	21.4	34.5		22.5	35.5			53.2			54.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	21.4	34.5		22.5	35.5			53.2			54.1	
Queue Length 50th (ft)	13	135		42	225			218			181	
Queue Length 95th (ft)	33	223		78	335			325			272	
Internal Link Dist (ft)		572			792			598			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	439	518		495	641			523			468	
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	0.07	0.48		0.20	0.58			0.67			0.60	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.96	0.99		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	32	167	84	98	356	18	129	127	92	40	196	46
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	521	531	267	623	866	44	197	169	108	96	362	79
Arrive On Green	0.03	0.46	0.46	0.06	0.49	0.49	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	1149	578	1810	1775	90	468	600	384	149	1287	280
Grp Volume(v), veh/h	32	0	251	98	0	374	348	0	0	282	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1726	1810	0	1865	1452	0	0	1716	0	0
Q Serve(g_s), s	0.7	0.0	6.9	2.1	0.0	9.7	6.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	6.9	2.1	0.0	9.7	17.1	0.0	0.0	10.3	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.05	0.37		0.26	0.14		0.16
Lane Grp Cap(c), veh/h	521	0	799	623	0	910	474	0	0	537	0	0
V/C Ratio(X)	0.06	0.00	0.31	0.16	0.00	0.41	0.73	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	821	0	799	877	0	910	737	0	0	839	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.5	0.0	12.8	9.5	0.0	12.4	25.5	0.0	0.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.1	0.0	1.4	2.2	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.7	0.8	0.0	4.0	6.0	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.6	0.0	13.8	9.7	0.0	13.8	27.8	0.0	0.0	24.0	0.0	0.0
LnGrp LOS	A		B	A		B	C			C		
Approach Vol, veh/h	283			472			348			282		
Approach Delay, s/veh	13.3			12.9			27.8			24.0		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	41.9		26.3	9.4	40.0		26.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	35.0		35.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.7	11.7		19.1	4.1	8.9		12.3				
Green Ext Time (p_c), s	0.0	2.3		2.2	0.1	1.5		1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.0								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.950			0.993			0.964			0.978	
Flt Protected	0.950			0.950				0.982			0.993	
Satd. Flow (prot)	1805	1683	0	1805	1859	0	0	1770	0	0	1781	0
Flt Permitted	0.440			0.554				0.684			0.914	
Satd. Flow (perm)	830	1683	0	1026	1859	0	0	1220	0	0	1638	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	32	167	84	98	356	18	129	127	92	40	196	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	251	0	98	374	0	0	348	0	0	282	0
v/c Ratio	0.06	0.35		0.17	0.43			0.86			0.52	
Control Delay (s/veh)	11.0	21.4		11.6	20.0			47.8			26.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	11.0	21.4		11.6	20.0			47.8			26.7	
Queue Length 50th (ft)	8	99		25	151			176			123	
Queue Length 95th (ft)	21	166		50	234			#283			189	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	629	715		699	871			518			696	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.35		0.14	0.43			0.67			0.41	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (veh/h)	27	142	71	83	303	15	110	108	78	34	167	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	0.98		0.94	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	32	167	84	98	356	18	129	127	92	40	196	46
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	64	269	135	131	483	24	236	197	122	121	389	84
Arrive On Green	0.04	0.24	0.24	0.07	0.27	0.27	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1810	1142	574	1810	1774	90	487	674	417	145	1333	288
Grp Volume(v), veh/h	32	0	251	98	0	374	348	0	0	282	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1717	1810	0	1864	1578	0	0	1766	0	0
Q Serve(g_s), s	0.9	0.0	6.9	2.8	0.0	9.6	3.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	6.9	2.8	0.0	9.6	9.9	0.0	0.0	6.9	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.05	0.37		0.26	0.14		0.16
Lane Grp Cap(c), veh/h	64	0	404	131	0	508	555	0	0	594	0	0
V/C Ratio(X)	0.50	0.00	0.62	0.75	0.00	0.74	0.63	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	448	0	1078	448	0	1171	1453	0	0	1627	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.9	0.0	18.0	23.9	0.0	17.4	16.5	0.0	0.0	15.6	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	1.6	8.2	0.0	2.1	1.2	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.6	1.4	0.0	3.9	3.5	0.0	0.0	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.7	0.0	19.5	32.1	0.0	19.5	17.6	0.0	0.0	16.2	0.0	0.0
LnGrp LOS	C		B	C		B	B			B		
Approach Vol, veh/h	283			472			348			282		
Approach Delay, s/veh	20.8			22.1			17.6			16.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	21.3		22.4	10.8	19.4		22.4				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	13.0	33.0		48.0	13.0	33.0		48.0				
Max Q Clear Time (g_c+I1), s	2.9	11.6		11.9	4.8	8.9		8.9				
Green Ext Time (p_c), s	0.0	2.3		2.8	0.1	1.5		2.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.5								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Future Volume (vph)	27	142	71	83	303	15	110	108	78	34	167	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.950			0.993			0.964			0.978	
Flt Protected	0.950			0.950				0.982			0.993	
Satd. Flow (prot)	1805	1686	0	1805	1859	0	0	1771	0	0	1783	0
Flt Permitted	0.950			0.950				0.732			0.911	
Satd. Flow (perm)	1786	1686	0	1756	1859	0	0	1305	0	0	1635	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	32	167	84	98	356	18	129	127	92	40	196	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	251	0	98	374	0	0	348	0	0	282	0
v/c Ratio	0.20	0.51		0.45	0.56			0.74			0.48	
Control Delay (s/veh)	43.3	31.9		44.6	28.8			34.6			24.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	43.3	31.9		44.6	28.8			34.6			24.2	
Queue Length 50th (ft)	15	105		45	158			151			109	
Queue Length 95th (ft)	49	218		112	311			271			195	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	306	726		306	818			851			1066	
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	0.10	0.35		0.32	0.46			0.41			0.26	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	29	353	186	68	224	15	81	127	71	25	177	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	626	528	278	394	840	56	256	190	106	227	242	18
Arrive On Green	0.03	0.46	0.46	0.05	0.48	0.48	0.06	0.17	0.17	0.03	0.14	0.14
Sat Flow, veh/h	1810	1158	610	1810	1757	118	1767	1124	628	1753	1742	128
Grp Volume(v), veh/h	29	0	539	68	0	239	81	0	198	25	0	190
Grp Sat Flow(s),veh/h/ln	1810	0	1767	1810	0	1874	1767	0	1752	1753	0	1869
Q Serve(g_s), s	0.5	0.0	16.2	1.3	0.0	5.2	2.6	0.0	7.2	0.8	0.0	6.6
Cycle Q Clear(g_c), s	0.5	0.0	16.2	1.3	0.0	5.2	2.6	0.0	7.2	0.8	0.0	6.6
Prop In Lane	1.00		0.35	1.00		0.06	1.00		0.36	1.00		0.07
Lane Grp Cap(c), veh/h	626	0	806	394	0	897	256	0	295	227	0	259
V/C Ratio(X)	0.05	0.00	0.67	0.17	0.00	0.27	0.32	0.00	0.67	0.11	0.00	0.73
Avail Cap(c_a), veh/h	836	0	806	564	0	897	440	0	464	462	0	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.5	0.0	14.5	10.6	0.0	10.6	23.3	0.0	26.5	22.7	0.0	28.1
Incr Delay (d2), s/veh	0.0	0.0	4.4	0.2	0.0	0.7	0.7	0.0	2.6	0.2	0.0	4.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	6.7	0.5	0.0	2.1	1.1	0.0	3.1	0.3	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.5	0.0	18.8	10.8	0.0	11.3	24.0	0.0	29.1	22.9	0.0	32.0
LnGrp LOS	A		B	B		B	C		C	C		C
Approach Vol, veh/h	568				307				279			
Approach Delay, s/veh	18.3				11.2				27.6			
Approach LOS	B				B				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	37.5	6.9	16.5	8.6	36.0	8.9	14.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	10.0	31.0	11.0	18.0	10.0	31.0	11.0	18.0				
Max Q Clear Time (g_c+I1), s	2.5	7.2	2.8	9.2	3.3	18.2	4.6	8.6				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.7	0.1	3.0	0.1	0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.6									
HCM 7th LOS			C									

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99			1.00		0.99	0.99		0.99	1.00	
Fr't		0.948			0.991			0.946			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1753	0	1805	1877	0	1752	1774	0	1736	1876	0
Flt Permitted	0.583			0.264			0.515			0.540		
Satd. Flow (perm)	1086	1753	0	502	1877	0	936	1774	0	978	1876	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			4			28			4	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	29	353	186	68	224	15	81	127	71	25	177	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	539	0	68	239	0	81	198	0	25	190	0
v/c Ratio	0.05	0.69		0.18	0.25		0.25	0.43		0.07	0.59	
Control Delay (s/veh)	10.2	26.5		11.3	15.5		20.6	25.2		18.3	38.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.2	26.5		11.3	15.5		20.6	25.2		18.3	38.3	
Queue Length 50th (ft)	6	211		15	56		28	61		8	86	
Queue Length 95th (ft)	21	#446		40	154		59	145		24	159	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150			100			50		
Base Capacity (vph)	695	779		449	941		400	538		423	476	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.69		0.15	0.25		0.20	0.37		0.06	0.40	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

5: 164th Ave NE & Northup Way

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	447	228	25	214	41	145	228	33	74	318	31
Future Volume (veh/h)	60	447	228	25	214	41	145	228	33	74	318	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	0.99		0.96	0.99		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1885	1826	1900	1900	1856	1856	1900	1900
Adj Flow Rate, veh/h	62	461	235	26	221	42	149	235	34	76	328	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	1	5	0	0	3	3	0	0
Cap, veh/h	497	780	637	306	599	114	292	430	62	332	392	38
Arrive On Green	0.05	0.41	0.41	0.03	0.39	0.39	0.09	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	1810	1900	1552	1810	1529	291	1810	1613	233	1767	1695	165
Grp Volume(v), veh/h	62	461	235	26	0	263	149	0	269	76	0	360
Grp Sat Flow(s),veh/h/ln	1810	1900	1552	1810	0	1820	1810	0	1846	1767	0	1861
Q Serve(g_s), s	1.6	15.4	8.6	0.7	0.0	8.4	5.0	0.0	10.2	2.5	0.0	15.1
Cycle Q Clear(g_c), s	1.6	15.4	8.6	0.7	0.0	8.4	5.0	0.0	10.2	2.5	0.0	15.1
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.13	1.00		0.09
Lane Grp Cap(c), veh/h	497	780	637	306	0	713	292	0	493	332	0	431
V/C Ratio(X)	0.12	0.59	0.37	0.08	0.00	0.37	0.51	0.00	0.55	0.23	0.00	0.84
Avail Cap(c_a), veh/h	680	780	637	523	0	713	491	0	678	589	0	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	18.7	16.7	14.6	0.0	17.7	22.4	0.0	25.7	20.6	0.0	29.9
Incr Delay (d2), s/veh	0.1	3.3	1.6	0.1	0.0	1.5	1.4	0.0	0.9	0.3	0.0	5.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.0	3.3	0.3	0.0	3.6	2.1	0.0	4.5	1.0	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.9	22.0	18.4	14.7	0.0	19.1	23.8	0.0	26.6	20.9	0.0	35.0
LnGrp LOS	B	C	B	B		B	C		C	C		D
Approach Vol, veh/h	758			289			418			436		
Approach Delay, s/veh	20.2			18.7			25.6			32.6		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	37.0	9.1	26.8	7.2	38.5	12.0	23.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	32.0	16.0	30.0	12.0	32.0	16.0	30.0				
Max Q Clear Time (g_c+I1), s	3.6	10.4	4.5	12.2	2.7	17.4	7.0	17.1				
Green Ext Time (p_c), s	0.1	1.4	0.1	1.4	0.0	3.2	0.2	1.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.0											
HCM 7th LOS	C											

Lanes, Volumes, Timings
5: 164th Ave NE & Northup Way

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	447	228	25	214	41	145	228	33	74	318	31
Future Volume (vph)	60	447	228	25	214	41	145	228	33	74	318	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		240	40		0	75		0	50		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	1.00		0.94		1.00		0.99	0.99		0.98	1.00	
Frt			0.850		0.976			0.981			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1805	1816	0	1805	1845	0	1752	1866	0
Flt Permitted	0.508			0.312			0.246			0.445		
Satd. Flow (perm)	962	1900	1521	593	1816	0	462	1845	0	808	1866	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			235		9			7			4	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		713			762			1522			360	
Travel Time (s)		13.9			14.8			34.6			9.8	
Confl. Peds. (#/hr)	2		12	12		2	10		10	10		10
Confl. Bikes (#/hr)			2			2			3			4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	1%	5%	0%	0%	3%	3%	0%	0%
Adj. Flow (vph)	62	461	235	26	221	42	149	235	34	76	328	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	461	235	26	263	0	149	269	0	76	360	0
v/c Ratio	0.13	0.57	0.30	0.07	0.39		0.47	0.48		0.20	0.79	
Control Delay (s/veh)	15.9	26.8	4.6	15.7	26.0		22.3	30.3		17.9	45.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.9	26.8	4.6	15.7	26.0		22.3	30.3		17.9	45.8	
Queue Length 50th (ft)	19	177	0	8	111		54	130		27	194	
Queue Length 95th (ft)	49	400	54	26	218		97	218		55	318	
Internal Link Dist (ft)		633			682			1442			280	
Turn Bay Length (ft)	125		240	40			75			50		
Base Capacity (vph)	561	806	781	444	668		432	648		506	640	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.11	0.57	0.30	0.06	0.39		0.34	0.42		0.15	0.56	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	227	0	0	334
Future Vol, veh/h	5	9	227	0	0	334
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	5	10	249	0	0	367

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	617	250	0
Stage 1	250	-	-
Stage 2	367	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	456	793	-
Stage 1	796	-	-
Stage 2	705	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	456	792	-
Mov Cap-2 Maneuver	547	-	-
Stage 1	795	-	-
Stage 2	705	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.33	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	547	792
HCM Lane V/C Ratio	-	-	0.01	0.012
HCM Ctrl Dly (s/v)	-	-	11.6	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	0	222	340	0
Future Vol, veh/h	3	36	0	222	340	0
Conflicting Peds, #/hr	2	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	3	0	2	1	0
Mvmt Flow	3	40	0	244	374	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	620	374	-	0	-	0
Stage 1	374	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	-	-	-	-
Pot Cap-1 Maneuver	455	670	0	-	-	0
Stage 1	700	-	0	-	-	0
Stage 2	800	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	455	670	-	-	-	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	10.96	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 647		-			
HCM Lane V/C Ratio	- 0.066		-			
HCM Ctrl Dly (s/v)	- 11		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	229	3	8	377
Future Vol, veh/h	0	0	229	3	8	377
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	0	0	257	3	9	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	263	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	781	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	778	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.16
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1306
HCM Lane V/C Ratio	-	-	-	0.007
HCM Ctrl Dly (s/v)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	23	15	208	343	26
Future Vol, veh/h	23	23	15	208	343	26
Conflicting Peds, #/hr	0	0	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	0	0	2	1	4
Mvmt Flow	26	26	17	236	390	30

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	685	415	429	0	-	0
Stage 1	415	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.44	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	411	642	1141	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	396	636	1130	-	-	-
Mov Cap-2 Maneuver	396	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.26	0.55	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	121	-	488	-	-
HCM Lane V/C Ratio	0.015	-	0.107	-	-
HCM Ctrl Dly (s/v)	8.2	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	29	353	186	68	224	15	81	127	71	25	177	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	689	572	302	455	910	61	156	183	91	89	341	24
Arrive On Green	0.03	0.49	0.49	0.06	0.52	0.52	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1810	1158	610	1810	1757	118	389	868	429	116	1616	111
Grp Volume(v), veh/h	29	0	539	68	0	239	279	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1768	1810	0	1875	1686	0	0	1844	0	0
Q Serve(g_s), s	0.5	0.0	13.9	1.1	0.0	4.4	3.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	13.9	1.1	0.0	4.4	9.4	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.29		0.25	0.12		0.06
Lane Grp Cap(c), veh/h	689	0	874	455	0	971	430	0	0	453	0	0
V/C Ratio(X)	0.04	0.00	0.62	0.15	0.00	0.25	0.65	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	920	0	874	643	0	971	943	0	0	1034	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	0.0	11.5	8.3	0.0	8.3	23.1	0.0	0.0	22.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.3	0.2	0.0	0.6	1.7	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.4	0.4	0.0	1.7	3.9	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.6	0.0	14.8	8.4	0.0	8.9	24.8	0.0	0.0	22.8	0.0	0.0
LnGrp LOS	A		B	A		A	C			C		
Approach Vol, veh/h	568			307			279			215		
Approach Delay, s/veh	14.4			8.8			24.8			22.8		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	37.5		18.2	8.5	36.0		18.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	31.0		34.0	10.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.5	6.4		11.4	3.1	15.9		8.4				
Green Ext Time (p_c), s	0.0	1.4		1.9	0.1	3.2		1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				16.6								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99			1.00			0.99			1.00	
Frt		0.948			0.991			0.966			0.992	
Flt Protected	0.950			0.950				0.986			0.994	
Satd. Flow (prot)	1805	1753	0	1805	1877	0	0	1778	0	0	1860	0
Flt Permitted	0.606			0.316				0.778			0.939	
Satd. Flow (perm)	1129	1753	0	600	1877	0	0	1398	0	0	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			4			22			4	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	29	353	186	68	224	15	81	127	71	25	177	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	539	0	68	239	0	0	279	0	0	215	0
v/c Ratio	0.04	0.64		0.15	0.23			0.78			0.49	
Control Delay (s/veh)	7.2	20.2		7.8	11.8			37.6			26.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	7.2	20.2		7.8	11.8			37.6			26.0	
Queue Length 50th (ft)	4	162		10	39			103			77	
Queue Length 95th (ft)	17	#357		32	131			188			139	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	772	839		530	1018			730			905	
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	0.04	0.64		0.13	0.23			0.38			0.24	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	227	0	0	334
Future Vol, veh/h	5	9	227	0	0	334
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	5	10	249	0	0	367

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	617	250	0
Stage 1	250	-	-
Stage 2	367	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	456	793	-
Stage 1	796	-	-
Stage 2	705	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	456	792	-
Mov Cap-2 Maneuver	456	-	-
Stage 1	795	-	-
Stage 2	705	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.81	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	456	792
HCM Lane V/C Ratio	-	-	0.012	0.012
HCM Ctrl Dly (s/v)	-	-	13	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	0	222	340	0
Future Vol, veh/h	3	36	0	222	340	0
Conflicting Peds, #/hr	2	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	3	0	2	1	0
Mvmt Flow	3	40	0	244	374	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	620	374	-	0	-	0
Stage 1	374	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	-	-	-	-
Pot Cap-1 Maneuver	455	670	0	-	-	0
Stage 1	700	-	0	-	-	0
Stage 2	800	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	455	670	-	-	-	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	10.96	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 647		-			
HCM Lane V/C Ratio	- 0.066		-			
HCM Ctrl Dly (s/v)	- 11		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	229	3	8	377
Future Vol, veh/h	0	0	229	3	8	377
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	0	0	257	3	9	424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	263	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	781	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	778	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.16
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	37	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Ctrl Dly (s/v)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	23	15	208	343	26
Future Vol, veh/h	23	23	15	208	343	26
Conflicting Peds, #/hr	0	0	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	0	0	2	1	4
Mvmt Flow	26	26	17	236	390	30

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	685	415	429	0	-	0
Stage 1	415	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.44	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	411	642	1141	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	396	636	1130	-	-	-
Mov Cap-2 Maneuver	396	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.26	0.55	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	121	-	488	-	-
HCM Lane V/C Ratio	0.015	-	0.107	-	-
HCM Ctrl Dly (s/v)	8.2	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	29	353	186	68	224	15	81	127	71	25	177	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	546	500	264	311	786	53	94	148	83	30	215	16
Arrive On Green	0.03	0.43	0.43	0.04	0.45	0.45	0.18	0.18	0.18	0.14	0.14	0.14
Sat Flow, veh/h	1810	1157	610	1810	1757	118	514	806	450	217	1533	113
Grp Volume(v), veh/h	29	0	539	68	0	239	279	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1767	1810	0	1874	1770	0	0	1862	0	0
Q Serve(g_s), s	0.9	0.0	24.8	2.0	0.0	8.0	15.2	0.0	0.0	11.2	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	24.8	2.0	0.0	8.0	15.2	0.0	0.0	11.2	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.29		0.25	0.12		0.06
Lane Grp Cap(c), veh/h	546	0	764	311	0	838	325	0	0	261	0	0
V/C Ratio(X)	0.05	0.00	0.71	0.22	0.00	0.29	0.86	0.00	0.00	0.82	0.00	0.00
Avail Cap(c_a), veh/h	678	0	764	416	0	838	463	0	0	393	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.3	0.0	23.1	17.6	0.0	17.4	39.3	0.0	0.0	41.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.4	0.4	0.0	0.9	10.8	0.0	0.0	8.4	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	11.1	0.8	0.0	3.6	7.6	0.0	0.0	5.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.3	0.0	28.5	17.9	0.0	18.3	50.1	0.0	0.0	50.0	0.0	0.0
LnGrp LOS	B		C	B		B	D			D		
Approach Vol, veh/h	568			307			279			215		
Approach Delay, s/veh	27.8			18.2			50.1			50.0		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	49.5		23.3	9.2	48.0		18.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	43.0		26.0	10.0	43.0		21.0				
Max Q Clear Time (g_c+I1), s	2.9	10.0		17.2	4.0	26.8		13.2				
Green Ext Time (p_c), s	0.0	1.5		1.1	0.1	3.4		0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				33.7								
HCM 7th LOS				C								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.98			1.00			0.98			1.00	
Frt		0.948			0.991			0.966			0.992	
Flt Protected	0.950			0.950				0.986			0.994	
Satd. Flow (prot)	1805	1749	0	1805	1875	0	0	1776	0	0	1859	0
Flt Permitted	0.554			0.236				0.986			0.994	
Satd. Flow (perm)	1028	1749	0	448	1875	0	0	1765	0	0	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			13			2	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			710			2020	
Travel Time (s)		14.8			19.8			19.4			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	29	353	186	68	224	15	81	127	71	25	177	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	539	0	68	239	0	0	279	0	0	215	0
v/c Ratio	0.05	0.73		0.22	0.29			0.79			0.73	
Control Delay (s/veh)	15.9	35.4		17.5	23.2			57.4			59.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	15.9	35.4		17.5	23.2			57.4			59.4	
Queue Length 50th (ft)	10	315		24	113			180			145	
Queue Length 95th (ft)	28	#554		54	197			291			241	
Internal Link Dist (ft)		572			792			630			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	585	737		347	835			453			376	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.05	0.73		0.20	0.29			0.62			0.57	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	29	353	186	68	224	15	81	127	71	25	177	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	689	572	302	455	910	61	156	183	91	89	341	24
Arrive On Green	0.03	0.49	0.49	0.06	0.52	0.52	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1810	1158	610	1810	1757	118	389	868	429	116	1616	111
Grp Volume(v), veh/h	29	0	539	68	0	239	279	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1768	1810	0	1875	1686	0	0	1844	0	0
Q Serve(g_s), s	0.5	0.0	13.9	1.1	0.0	4.4	3.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	13.9	1.1	0.0	4.4	9.4	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.29		0.25	0.12		0.06
Lane Grp Cap(c), veh/h	689	0	874	455	0	971	430	0	0	453	0	0
V/C Ratio(X)	0.04	0.00	0.62	0.15	0.00	0.25	0.65	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	920	0	874	643	0	971	943	0	0	1034	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.6	0.0	11.5	8.3	0.0	8.3	23.1	0.0	0.0	22.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.3	0.2	0.0	0.6	1.7	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.4	0.4	0.0	1.7	3.9	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.6	0.0	14.8	8.4	0.0	8.9	24.8	0.0	0.0	22.8	0.0	0.0
LnGrp LOS	A		B	A		A	C			C		
Approach Vol, veh/h	568			307			279			215		
Approach Delay, s/veh	14.4			8.8			24.8			22.8		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	37.5		18.2	8.5	36.0		18.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	31.0		34.0	10.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.5	6.4		11.4	3.1	15.9		8.4				
Green Ext Time (p_c), s	0.0	1.4		1.9	0.1	3.2		1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				16.6								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99			1.00			0.99			1.00	
Frt		0.948			0.991			0.966			0.992	
Flt Protected	0.950			0.950				0.986			0.994	
Satd. Flow (prot)	1805	1753	0	1805	1877	0	0	1778	0	0	1860	0
Flt Permitted	0.604			0.310				0.789			0.943	
Satd. Flow (perm)	1125	1753	0	589	1877	0	0	1418	0	0	1763	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	29	353	186	68	224	15	81	127	71	25	177	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	539	0	68	239	0	0	279	0	0	215	0
v/c Ratio	0.04	0.67		0.16	0.24			0.77			0.48	
Control Delay (s/veh)	7.5	22.7		8.2	12.4			39.0			25.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	7.5	22.7		8.2	12.4			39.0			25.7	
Queue Length 50th (ft)	4	181		11	41			112			79	
Queue Length 95th (ft)	18	#406		33	136			198			141	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	760	810		518	1003			719			894	
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	0.04	0.67		0.13	0.24			0.39			0.24	

Intersection Summary

Area Type: Other

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (veh/h)	26	321	169	62	204	14	74	116	65	23	161	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	29	353	186	68	224	15	81	127	71	25	177	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	58	429	226	103	696	47	162	189	93	93	349	24
Arrive On Green	0.03	0.37	0.37	0.06	0.40	0.40	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1810	1156	609	1810	1756	118	384	871	428	115	1614	111
Grp Volume(v), veh/h	29	0	539	68	0	239	279	0	0	215	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	0	1874	1684	0	0	1840	0	0
Q Serve(g_s), s	0.9	0.0	16.3	2.2	0.0	5.2	2.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	16.3	2.2	0.0	5.2	8.8	0.0	0.0	6.0	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.29		0.25	0.12		0.06
Lane Grp Cap(c), veh/h	58	0	656	103	0	743	443	0	0	466	0	0
V/C Ratio(X)	0.50	0.00	0.82	0.66	0.00	0.32	0.63	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	245	0	1135	245	0	1205	841	0	0	918	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.1	0.0	16.8	27.3	0.0	12.3	21.5	0.0	0.0	20.5	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	2.7	7.0	0.0	0.2	1.5	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	6.2	1.1	0.0	2.0	3.6	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	0.0	19.5	34.3	0.0	12.6	23.0	0.0	0.0	21.2	0.0	0.0
LnGrp LOS	C		B	C		B	C			C		
Approach Vol, veh/h	568			307			279			215		
Approach Delay, s/veh	20.2			17.4			23.0			21.2		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	30.4		19.8	10.4	28.9		19.8				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	8.0	38.0		28.0	8.0	38.0		28.0				
Max Q Clear Time (g_c+I1), s	2.9	7.2		10.8	4.2	18.3		8.0				
Green Ext Time (p_c), s	0.0	1.5		1.7	0.0	3.6		1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				20.3								
HCM 7th LOS				C								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Future Volume (vph)	26	321	169	62	204	14	74	116	65	23	161	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99		0.99	1.00			0.99			1.00	
Frt		0.948			0.991			0.966			0.992	
Flt Protected	0.950			0.950				0.986			0.994	
Satd. Flow (prot)	1805	1756	0	1805	1878	0	0	1780	0	0	1861	0
Flt Permitted	0.950			0.950				0.808			0.940	
Satd. Flow (perm)	1773	1756	0	1791	1878	0	0	1454	0	0	1758	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	29	353	186	68	224	15	81	127	71	25	177	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	539	0	68	239	0	0	279	0	0	215	0
v/c Ratio	0.19	0.81		0.40	0.28			0.65			0.41	
Control Delay (s/veh)	41.8	33.9		46.3	16.3			35.3			28.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	41.8	33.9		46.3	16.3			35.3			28.1	
Queue Length 50th (ft)	14	238		33	55			129			91	
Queue Length 95th (ft)	45	410		83	156			236			170	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	189	876		189	974			534			646	
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	0.62		0.36	0.25			0.52			0.33	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36	
Future Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.97	0.97		0.93	0.98		0.94	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900	
Adj Flow Rate, veh/h	31	142	74	75	260	15	116	135	84	32	166	36	
Peak Hour 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	
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0	
Cap, veh/h	618	560	292	669	902	52	262	202	126	219	217	47	
Arrive On Green	0.03	0.49	0.49	0.05	0.51	0.51	0.07	0.19	0.19	0.03	0.15	0.15	
Sat Flow, veh/h	1810	1134	591	1810	1761	102	1781	1060	659	1725	1469	319	
Grp Volume(v), veh/h	31	0	216	75	0	275	116	0	219	32	0	202	
Grp Sat Flow(s),veh/h/ln	1810	0	1724	1810	0	1863	1781	0	1719	1725	0	1787	
Q Serve(g_s), s	0.7	0.0	6.2	1.7	0.0	7.2	4.6	0.0	10.0	1.3	0.0	9.2	
Cycle Q Clear(g_c), s	0.7	0.0	6.2	1.7	0.0	7.2	4.6	0.0	10.0	1.3	0.0	9.2	
Prop In Lane	1.00		0.34	1.00		0.05	1.00		0.38	1.00		0.18	
Lane Grp Cap(c), veh/h	618	0	852	669	0	954	262	0	328	219	0	263	
V/C Ratio(X)	0.05	0.00	0.25	0.11	0.00	0.29	0.44	0.00	0.67	0.15	0.00	0.77	
Avail Cap(c_a), veh/h	903	0	852	921	0	954	464	0	425	490	0	441	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	9.4	0.0	12.4	9.5	0.0	11.9	28.1	0.0	31.9	26.8	0.0	34.8	
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.1	0.0	0.8	1.2	0.0	2.6	0.3	0.0	4.6	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.4	0.6	0.0	3.0	2.0	0.0	4.4	0.5	0.0	4.3	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d), s/veh	9.4	0.0	13.2	9.6	0.0	12.6	29.3	0.0	34.5	27.1	0.0	39.5	
LnGrp LOS	A		B	A		B	C		C	C		D	
Approach Vol, veh/h	247				350				335				234
Approach Delay, s/veh	12.7				12.0				32.7				37.8
Approach LOS	B				B				C				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	7.6	48.6	7.7	21.2	9.1	47.0	11.3	17.5					
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0					
Max Green Setting (Gmax), s	16.0	42.0	16.0	21.0	16.0	42.0	16.0	21.0					
Max Q Clear Time (g_c+I1), s	2.7	9.2	3.3	12.0	3.7	8.2	6.6	11.2					
Green Ext Time (p_c), s	0.0	1.7	0.0	0.8	0.1	1.4	0.2	0.8					
Intersection Summary													
HCM 7th Control Delay, s/veh			23.3										
HCM 7th LOS			C										

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00		0.96	0.99		0.99	0.98	
Frt		0.949			0.992			0.942			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1676	0	1805	1855	0	1770	1764	0	1703	1789	0
Flt Permitted	0.536			0.591			0.447			0.480		
Satd. Flow (perm)	1006	1676	0	1088	1855	0	797	1764	0	855	1789	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			3			24			8	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour 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
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	216	0	75	275	0	116	219	0	32	202	0
v/c Ratio	0.05	0.27		0.12	0.30		0.36	0.48		0.10	0.68	
Control Delay (s/veh)	10.8	17.2		11.2	17.6		26.6	32.6		22.7	48.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.8	17.2		11.2	17.6		26.6	32.6		22.7	48.3	
Queue Length 50th (ft)	8	70		19	101		50	107		13	111	
Queue Length 95th (ft)	24	146		47	191		93	188		34	196	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150			100			50		
Base Capacity (vph)	709	786		741	920		424	467		426	418	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.27		0.10	0.30		0.27	0.47		0.08	0.48	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

5: 164th Ave NE & Northup Way

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	141	118	29	456	70	191	281	28	44	186	54
Future Volume (veh/h)	89	141	118	29	456	70	191	281	28	44	186	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.99	0.98		0.94	0.99		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1752	1841	1796	1885	1841	1885	1885	1841	1796	1856	1767
Adj Flow Rate, veh/h	89	141	118	29	456	70	191	281	28	44	186	54
Peak Hour 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
Percent Heavy Veh, %	3	10	4	7	1	4	1	1	4	7	3	9
Cap, veh/h	382	862	741	598	754	116	311	408	41	226	233	68
Arrive On Green	0.05	0.49	0.49	0.03	0.47	0.47	0.11	0.24	0.24	0.04	0.17	0.17
Sat Flow, veh/h	1767	1752	1506	1711	1592	244	1795	1676	167	1711	1364	396
Grp Volume(v), veh/h	89	141	118	29	0	526	191	0	309	44	0	240
Grp Sat Flow(s),veh/h/ln	1767	1752	1506	1711	0	1837	1795	0	1843	1711	0	1760
Q Serve(g_s), s	2.5	4.4	4.3	0.8	0.0	21.0	8.5	0.0	15.1	1.9	0.0	13.0
Cycle Q Clear(g_c), s	2.5	4.4	4.3	0.8	0.0	21.0	8.5	0.0	15.1	1.9	0.0	13.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.09	1.00		0.22
Lane Grp Cap(c), veh/h	382	862	741	598	0	870	311	0	448	226	0	300
V/C Ratio(X)	0.23	0.16	0.16	0.05	0.00	0.60	0.61	0.00	0.69	0.19	0.00	0.80
Avail Cap(c_a), veh/h	568	862	741	809	0	870	425	0	576	458	0	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	13.9	13.9	11.7	0.0	19.3	29.9	0.0	34.1	27.7	0.0	39.5
Incr Delay (d2), s/veh	0.3	0.4	0.5	0.0	0.0	3.1	2.0	0.0	2.4	0.4	0.0	4.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.8	1.5	0.3	0.0	9.2	3.8	0.0	7.0	0.8	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.8	14.3	14.4	11.8	0.0	22.4	31.9	0.0	36.5	28.1	0.0	44.4
LnGrp LOS	B	B	B	B		C	C		D	C		D
Approach Vol, veh/h	348			555			500			284		
Approach Delay, s/veh	14.5			21.8			34.7			41.9		
Approach LOS	B			C			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	52.0	8.5	29.1	7.8	53.8	15.7	21.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	47.0	17.0	31.0	15.0	47.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	4.5	23.0	3.9	17.1	2.8	6.4	10.5	15.0				
Green Ext Time (p_c), s	0.1	3.5	0.1	1.5	0.0	1.2	0.3	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	27.5											
HCM 7th LOS	C											

Lanes, Volumes, Timings
5: 164th Ave NE & Northup Way

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	141	118	29	456	70	191	281	28	44	186	54
Future Volume (vph)	89	141	118	29	456	70	191	281	28	44	186	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		240	40		0	75		0	50		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor			0.95	0.98	0.99		0.97	0.99		0.98	0.98	
Frt			0.850		0.980			0.986			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1727	1553	1687	1820	0	1787	1839	0	1687	1727	0
Flt Permitted	0.275			0.667			0.357			0.332		
Satd. Flow (perm)	507	1727	1476	1158	1820	0	650	1839	0	580	1727	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118		7			4			11	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		713			762			1522			360	
Travel Time (s)		13.9			14.8			34.6			9.8	
Confl. Peds. (#/hr)	14		8	8		14	17		12	12		17
Confl. Bikes (#/hr)			1						4			
Peak Hour 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
Heavy Vehicles (%)	3%	10%	4%	7%	1%	4%	1%	1%	4%	7%	3%	9%
Adj. Flow (vph)	89	141	118	29	456	70	191	281	28	44	186	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	141	118	29	526	0	191	309	0	44	240	0
v/c Ratio	0.25	0.17	0.15	0.05	0.64		0.56	0.63		0.17	0.73	
Control Delay (s/veh)	15.3	19.7	4.6	13.7	30.2		31.7	42.2		24.5	54.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.3	19.7	4.6	13.7	30.2		31.7	42.2		24.5	54.0	
Queue Length 50th (ft)	28	57	0	9	281		95	194		20	153	
Queue Length 95th (ft)	65	120	37	28	504		157	305		46	253	
Internal Link Dist (ft)		633			682			1442			280	
Turn Bay Length (ft)	125		240	40			75			50		
Base Capacity (vph)	454	838	777	710	820		404	564		386	518	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.20	0.17	0.15	0.04	0.64		0.47	0.55		0.11	0.46	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	29	300	0	0	326
Future Vol, veh/h	8	29	300	0	0	326
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	13	0	1	0	0	3
Mvmt Flow	10	36	370	0	0	402

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	782	379	0
Stage 1	379	-	-
Stage 2	402	-	-
Critical Hdwy	6.53	6.2	-
Critical Hdwy Stg 1	5.53	-	-
Critical Hdwy Stg 2	5.53	-	-
Follow-up Hdwy	3.617	3.3	-
Pot Cap-1 Maneuver	348	672	-
Stage 1	668	-	-
Stage 2	652	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	345	666	-
Mov Cap-2 Maneuver	457	-	-
Stage 1	663	-	-
Stage 2	652	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.21	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	457	666
HCM Lane V/C Ratio	-	-	0.022	0.054
HCM Ctrl Dly (s/v)	-	-	13	10.7
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.1	0.2

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	75	0	293	336	0
Future Vol, veh/h	7	75	0	293	336	0
Conflicting Peds, #/hr	26	1	35	0	0	35
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	5	0	1	3	0
Mvmt Flow	9	94	0	366	420	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	812	421	-	0	-	0
Stage 1	420	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Critical Hdwy	6.4	6.25	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	-	-	-	-
Pot Cap-1 Maneuver	351	626	0	-	-	0
Stage 1	667	-	0	-	-	0
Stage 2	687	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	351	626	-	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	12.44	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		586			
HCM Lane V/C Ratio	-		0.175			
HCM Ctrl Dly (s/v)	-		12.4			
HCM Lane LOS	-		B			
HCM 95th %tile Q(veh)	-		0.6			

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	290	23	36	373
Future Vol, veh/h	0	0	290	23	36	373
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	-	-	50	-
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	0	0	315	25	39	405

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	328	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	714	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	714	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.71
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1219
HCM Lane V/C Ratio	-	-	-	0.032
HCM Ctrl Dly (s/v)	-	-	0	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection

Int Delay, s/veh 3.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 18 50 141 269 268 111

Future Vol, veh/h 18 50 141 269 268 111

Conflicting Peds, #/hr 1 0 5 0 0 5

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 67 67 67 67 67 67

Heavy Vehicles, % 0 0 3 2 5 0

Mvmt Flow 27 75 210 401 400 166

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1311 488 571 0 - 0

Stage 1 488 - - - - -

Stage 2 823 - - - - -

Critical Hdwy 6.4 6.2 4.13 - - -

Critical Hdwy Stg 1 5.4 - - - - -

Critical Hdwy Stg 2 5.4 - - - - -

Follow-up Hdwy 3.5 3.3 2.227 - - -

Pot Cap-1 Maneuver 177 584 997 - - -

Stage 1 621 - - - - -

Stage 2 435 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 127 581 992 - - -

Mov Cap-2 Maneuver 127 - - - - -

Stage 1 450 - - - - -

Stage 2 433 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 23.09 3.3 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 619 - 299 - -

HCM Lane V/C Ratio 0.212 - 0.339 - -

HCM Ctrl Dly (s/v) 9.6 0 23.1 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0.8 - 1.5 - -

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.96	0.98		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	31	142	74	75	260	15	116	135	84	32	166	36
Peak Hour 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
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	624	546	285	676	887	51	186	181	101	92	346	69
Arrive On Green	0.03	0.48	0.48	0.05	0.50	0.50	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	1133	591	1810	1761	102	463	704	391	137	1343	269
Grp Volume(v), veh/h	31	0	216	75	0	275	335	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1724	1810	0	1863	1559	0	0	1749	0	0
Q Serve(g_s), s	0.6	0.0	5.4	1.5	0.0	6.2	6.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	5.4	1.5	0.0	6.2	14.5	0.0	0.0	8.0	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.05	0.35		0.25	0.14		0.15
Lane Grp Cap(c), veh/h	624	0	831	676	0	938	468	0	0	507	0	0
V/C Ratio(X)	0.05	0.00	0.26	0.11	0.00	0.29	0.72	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	940	0	831	953	0	938	803	0	0	883	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.2	0.0	11.1	8.4	0.0	10.5	25.2	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.1	0.0	0.8	2.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.0	0.5	0.0	2.5	5.5	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.3	0.0	11.9	8.4	0.0	11.3	27.2	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	A		B	A		B	C			C		
Approach Vol, veh/h	247			350			335			234		
Approach Delay, s/veh	11.4			10.7			27.2			23.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	41.6		23.7	8.9	40.0		23.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	35.0		35.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.6	8.2		16.5	3.5	7.4		10.0				
Green Ext Time (p_c), s	0.0	1.7		2.2	0.1	1.3		1.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				18.2								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.949			0.992			0.966			0.979	
Flt Protected	0.950			0.950				0.983			0.993	
Satd. Flow (prot)	1805	1680	0	1805	1856	0	0	1777	0	0	1784	0
Flt Permitted	0.556			0.606				0.726			0.920	
Satd. Flow (perm)	1045	1680	0	1119	1856	0	0	1297	0	0	1652	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			3			19			10	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour 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
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	216	0	75	275	0	0	335	0	0	234	0
v/c Ratio	0.05	0.28		0.12	0.28			0.84			0.47	
Control Delay (s/veh)	9.7	16.0		10.0	15.0			44.5			25.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	9.7	16.0		10.0	15.0			44.5			25.2	
Queue Length 50th (ft)	6	59		15	62			150			92	
Queue Length 95th (ft)	22	136		43	181			260			159	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	747	779		775	968			599			756	
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	0.04	0.28		0.10	0.28			0.56			0.31	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	29	300	0	0	326
Future Vol, veh/h	8	29	300	0	0	326
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	13	0	1	0	0	3
Mvmt Flow	10	36	370	0	0	402

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	782	379	0
Stage 1	379	-	-
Stage 2	402	-	-
Critical Hdwy	6.53	6.2	-
Critical Hdwy Stg 1	5.53	-	-
Critical Hdwy Stg 2	5.53	-	-
Follow-up Hdwy	3.617	3.3	-
Pot Cap-1 Maneuver	348	672	-
Stage 1	668	-	-
Stage 2	652	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	345	666	-
Mov Cap-2 Maneuver	345	-	-
Stage 1	663	-	-
Stage 2	652	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	345	666
HCM Lane V/C Ratio	-	-	0.029	0.054
HCM Ctrl Dly (s/v)	-	-	15.7	10.7
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0.2

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	75	0	293	336	0
Future Vol, veh/h	7	75	0	293	336	0
Conflicting Peds, #/hr	26	1	35	0	0	35
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	5	0	1	3	0
Mvmt Flow	9	94	0	366	420	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	812	421	-	0	-	0
Stage 1	420	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Critical Hdwy	6.4	6.25	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	-	-	-	-
Pot Cap-1 Maneuver	351	626	0	-	-	0
Stage 1	667	-	0	-	-	0
Stage 2	687	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	351	626	-	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	12.44	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 586		-			
HCM Lane V/C Ratio	- 0.175		-			
HCM Ctrl Dly (s/v)	- 12.4		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.6		-			

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	290	23	36	373
Future Vol, veh/h	0	0	290	23	36	373
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	-	-	-	-
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	0	0	315	25	39	405

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	328	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	714	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	714	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.71
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	158	-
HCM Lane V/C Ratio	-	-	0.032	-
HCM Ctrl Dly (s/v)	-	-	0	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection

Int Delay, s/veh 3.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 18 50 141 269 268 111

Future Vol, veh/h 18 50 141 269 268 111

Conflicting Peds, #/hr 1 0 5 0 0 5

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 67 67 67 67 67 67

Heavy Vehicles, % 0 0 3 2 5 0

Mvmt Flow 27 75 210 401 400 166

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1311 488 571 0 - 0

Stage 1 488 - - - - -

Stage 2 823 - - - - -

Critical Hdwy 6.4 6.2 4.13 - - -

Critical Hdwy Stg 1 5.4 - - - - -

Critical Hdwy Stg 2 5.4 - - - - -

Follow-up Hdwy 3.5 3.3 2.227 - - -

Pot Cap-1 Maneuver 177 584 997 - - -

Stage 1 621 - - - - -

Stage 2 435 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 127 581 992 - - -

Mov Cap-2 Maneuver 127 - - - - -

Stage 1 450 - - - - -

Stage 2 433 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 23.09 3.3 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 619 - 299 - -

HCM Lane V/C Ratio 0.212 - 0.339 - -

HCM Ctrl Dly (s/v) 9.6 0 23.1 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0.8 - 1.5 - -

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.96	1.00		0.93	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	31	142	74	75	260	15	116	135	84	32	166	36
Peak Hour 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
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	398	370	193	442	607	35	138	160	100	40	208	45
Arrive On Green	0.03	0.33	0.33	0.05	0.35	0.35	0.23	0.23	0.23	0.16	0.16	0.16
Sat Flow, veh/h	1810	1130	589	1810	1760	102	607	707	440	245	1269	275
Grp Volume(v), veh/h	31	0	216	75	0	275	335	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1719	1810	0	1862	1754	0	0	1789	0	0
Q Serve(g_s), s	0.9	0.0	8.3	2.3	0.0	9.7	15.6	0.0	0.0	10.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	8.3	2.3	0.0	9.7	15.6	0.0	0.0	10.8	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.05	0.35		0.25	0.14		0.15
Lane Grp Cap(c), veh/h	398	0	562	442	0	642	398	0	0	294	0	0
V/C Ratio(X)	0.08	0.00	0.38	0.17	0.00	0.43	0.84	0.00	0.00	0.80	0.00	0.00
Avail Cap(c_a), veh/h	660	0	562	671	0	642	635	0	0	543	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	22.2	17.9	0.0	21.6	31.7	0.0	0.0	34.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	2.0	0.2	0.0	2.1	5.8	0.0	0.0	4.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.5	1.0	0.0	4.5	7.2	0.0	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.6	0.0	24.2	18.0	0.0	23.6	37.5	0.0	0.0	39.3	0.0	0.0
LnGrp LOS	B		C	B		C	D			D		
Approach Vol, veh/h	247			350			335			234		
Approach Delay, s/veh	23.4			22.4			37.5			39.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	34.6		24.4	9.2	33.0		19.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	28.0		31.0	15.0	28.0		26.0				
Max Q Clear Time (g_c+I1), s	2.9	11.7		17.6	4.3	10.3		12.8				
Green Ext Time (p_c), s	0.0	1.4		1.8	0.1	1.1		1.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				30.3								
HCM 7th LOS				C								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.97			0.98	
Frt		0.949			0.992			0.966			0.979	
Flt Protected	0.950			0.950				0.983			0.993	
Satd. Flow (prot)	1805	1675	0	1805	1855	0	0	1775	0	0	1780	0
Flt Permitted	0.474			0.539				0.983			0.993	
Satd. Flow (perm)	891	1675	0	994	1855	0	0	1741	0	0	1778	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			2			14			7	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			422			2020	
Travel Time (s)		14.8			19.8			11.5			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour 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
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	216	0	75	275	0	0	335	0	0	234	0
v/c Ratio	0.08	0.41		0.17	0.43			0.79			0.70	
Control Delay (s/veh)	20.7	31.1		21.2	31.0			48.1			48.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	20.7	31.1		21.2	31.0			48.1			48.5	
Queue Length 50th (ft)	11	98		27	137			186			132	
Queue Length 95th (ft)	35	208		69	266			324			238	
Internal Link Dist (ft)		572			792			342			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	521	528		544	644			612			512	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.41		0.14	0.43			0.55			0.46	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.96	0.98		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	31	142	74	75	260	15	116	135	84	32	166	36
Peak Hour 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
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	624	546	285	676	887	51	186	181	101	92	346	69
Arrive On Green	0.03	0.48	0.48	0.05	0.50	0.50	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	1133	591	1810	1761	102	463	704	391	137	1343	269
Grp Volume(v), veh/h	31	0	216	75	0	275	335	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1724	1810	0	1863	1559	0	0	1749	0	0
Q Serve(g_s), s	0.6	0.0	5.4	1.5	0.0	6.2	6.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	5.4	1.5	0.0	6.2	14.5	0.0	0.0	8.0	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.05	0.35		0.25	0.14		0.15
Lane Grp Cap(c), veh/h	624	0	831	676	0	938	468	0	0	507	0	0
V/C Ratio(X)	0.05	0.00	0.26	0.11	0.00	0.29	0.72	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	940	0	831	953	0	938	803	0	0	883	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.2	0.0	11.1	8.4	0.0	10.5	25.2	0.0	0.0	23.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.1	0.0	0.8	2.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.0	0.5	0.0	2.5	5.5	0.0	0.0	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.3	0.0	11.9	8.4	0.0	11.3	27.2	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	A		B	A		B	C			C		
Approach Vol, veh/h	247			350			335			234		
Approach Delay, s/veh	11.4			10.7			27.2			23.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	41.6		23.7	8.9	40.0		23.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	35.0		35.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.6	8.2		16.5	3.5	7.4		10.0				
Green Ext Time (p_c), s	0.0	1.7		2.2	0.1	1.3		1.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				18.2								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.949			0.992			0.966			0.979	
Flt Protected	0.950			0.950				0.983			0.993	
Satd. Flow (prot)	1805	1680	0	1805	1856	0	0	1777	0	0	1784	0
Flt Permitted	0.554			0.604				0.729			0.922	
Satd. Flow (perm)	1041	1680	0	1115	1856	0	0	1302	0	0	1655	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour 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
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	216	0	75	275	0	0	335	0	0	234	0
v/c Ratio	0.05	0.29		0.12	0.29			0.85			0.46	
Control Delay (s/veh)	10.0	18.8		10.3	15.5			46.4			25.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	10.0	18.8		10.3	15.5			46.4			25.9	
Queue Length 50th (ft)	6	71		16	66			160			97	
Queue Length 95th (ft)	22	151		43	182			272			164	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	737	753		765	954			584			742	
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	0.04	0.29		0.10	0.29			0.57			0.32	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (veh/h)	31	142	74	75	260	15	116	135	84	32	166	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.98		0.94	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1796	1900	1885	1796	1870	1900	1900	1811	1870	1900
Adj Flow Rate, veh/h	31	142	74	75	260	15	116	135	84	32	166	36
Peak Hour 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
Percent Heavy Veh, %	0	4	7	0	1	7	2	0	0	6	2	0
Cap, veh/h	64	224	117	120	404	23	232	220	117	123	394	78
Arrive On Green	0.04	0.20	0.20	0.07	0.23	0.23	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1810	1124	586	1810	1759	101	446	760	404	127	1363	271
Grp Volume(v), veh/h	31	0	216	75	0	275	335	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1710	1810	0	1860	1610	0	0	1761	0	0
Q Serve(g_s), s	0.8	0.0	5.5	1.9	0.0	6.3	3.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	5.5	1.9	0.0	6.3	8.3	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.05	0.35		0.25	0.14		0.15
Lane Grp Cap(c), veh/h	64	0	340	120	0	428	569	0	0	596	0	0
V/C Ratio(X)	0.48	0.00	0.63	0.62	0.00	0.64	0.59	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	499	0	1197	499	0	1302	1654	0	0	1812	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.3	0.0	17.3	21.4	0.0	16.4	14.7	0.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	5.6	0.0	2.0	5.2	0.0	1.6	1.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.1	0.9	0.0	2.5	2.9	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.9	0.0	19.3	26.7	0.0	18.0	15.7	0.0	0.0	14.1	0.0	0.0
LnGrp LOS	C		B	C		B	B			B		
Approach Vol, veh/h	247			350			335			234		
Approach Delay, s/veh	20.4			19.9			15.7			14.1		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	17.8		20.6	10.1	16.4		20.6				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	13.0	33.0		48.0	13.0	33.0		48.0				
Max Q Clear Time (g_c+I1), s	2.8	8.3		10.3	3.9	7.5		7.0				
Green Ext Time (p_c), s	0.0	1.6		2.6	0.1	1.3		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				17.6								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Future Volume (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.99	0.98		0.97	1.00			0.98			0.99	
Frt		0.949			0.992			0.966			0.979	
Flt Protected	0.950			0.950				0.983			0.993	
Satd. Flow (prot)	1805	1683	0	1805	1856	0	0	1778	0	0	1786	0
Flt Permitted	0.950			0.950				0.784			0.920	
Satd. Flow (perm)	1783	1683	0	1754	1856	0	0	1401	0	0	1654	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	6		14	14		6	19		3	3		19
Confl. Bikes (#/hr)						2			3			
Peak Hour 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
Heavy Vehicles (%)	0%	4%	7%	0%	1%	7%	2%	0%	0%	6%	2%	0%
Adj. Flow (vph)	31	142	74	75	260	15	116	135	84	32	166	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	216	0	75	275	0	0	335	0	0	234	0
v/c Ratio	0.18	0.43		0.35	0.38			0.70			0.42	
Control Delay (s/veh)	38.3	28.0		38.4	21.6			31.4			22.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	38.3	28.0		38.4	21.6			31.4			22.5	
Queue Length 50th (ft)	13	80		32	69			137			84	
Queue Length 95th (ft)	46	186		85	219			253			159	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	325	769		325	879			966			1141	
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	0.10	0.28		0.23	0.31			0.35			0.21	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	24	290	155	60	222	15	78	110	59	21	171	13
Peak Hour 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
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	628	530	283	465	849	57	256	193	103	244	235	18
Arrive On Green	0.03	0.46	0.46	0.05	0.48	0.48	0.06	0.17	0.17	0.02	0.14	0.14
Sat Flow, veh/h	1810	1151	615	1810	1756	119	1767	1143	613	1753	1736	132
Grp Volume(v), veh/h	24	0	445	60	0	237	78	0	169	21	0	184
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	0	1874	1767	0	1756	1753	0	1868
Q Serve(g_s), s	0.4	0.0	12.2	1.1	0.0	5.0	2.5	0.0	6.0	0.7	0.0	6.4
Cycle Q Clear(g_c), s	0.4	0.0	12.2	1.1	0.0	5.0	2.5	0.0	6.0	0.7	0.0	6.4
Prop In Lane	1.00		0.35	1.00		0.06	1.00		0.35	1.00		0.07
Lane Grp Cap(c), veh/h	628	0	813	465	0	906	256	0	296	244	0	253
V/C Ratio(X)	0.04	0.00	0.55	0.13	0.00	0.26	0.30	0.00	0.57	0.09	0.00	0.73
Avail Cap(c_a), veh/h	848	0	813	643	0	906	444	0	469	488	0	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	13.1	9.5	0.0	10.3	23.3	0.0	25.8	22.5	0.0	27.9
Incr Delay (d2), s/veh	0.0	0.0	2.6	0.1	0.0	0.7	0.7	0.0	1.7	0.2	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.9	0.4	0.0	2.0	1.1	0.0	2.6	0.3	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	0.0	15.7	9.7	0.0	11.0	24.0	0.0	27.5	22.6	0.0	31.9
LnGrp LOS	A		B	A		B	C		C	C		C
Approach Vol, veh/h	469				297				247			
Approach Delay, s/veh	15.4				10.7				26.4		30.9	
Approach LOS	B				B				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	37.6	6.6	16.3	8.4	36.0	8.8	14.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	10.0	31.0	11.0	18.0	10.0	31.0	11.0	18.0				
Max Q Clear Time (g_c+I1), s	2.4	7.0	2.7	8.0	3.1	14.2	4.5	8.4				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.6	0.0	2.7	0.1	0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			19.1									
HCM 7th LOS			B									

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99		0.99	1.00		0.99	0.99		0.99	1.00	
Frt		0.948			0.991			0.948			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1753	0	1805	1877	0	1752	1778	0	1736	1873	0
Flt Permitted	0.585			0.360			0.540			0.606		
Satd. Flow (perm)	1089	1753	0	680	1877	0	982	1778	0	1097	1873	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			4			27			4	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour 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
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	445	0	60	237	0	78	169	0	21	184	0
v/c Ratio	0.04	0.55		0.13	0.26		0.23	0.36		0.06	0.57	
Control Delay (s/veh)	10.2	20.6		10.8	15.5		19.7	22.9		18.0	36.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.2	20.6		10.8	15.5		19.7	22.9		18.0	36.4	
Queue Length 50th (ft)	5	157		13	55		27	50		7	82	
Queue Length 95th (ft)	19	305		36	151		57	123		22	153	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150			100			50		
Base Capacity (vph)	688	814		520	923		417	550		453	487	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.55		0.12	0.26		0.19	0.31		0.05	0.38	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

5: 164th Ave NE & Northup Way

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	454	247	31	251	43	148	214	34	73	307	32
Future Volume (veh/h)	56	454	247	31	251	43	148	214	34	73	307	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	0.99		0.96	0.99		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1885	1826	1900	1900	1856	1856	1900	1900
Adj Flow Rate, veh/h	56	454	247	31	251	43	148	214	34	73	307	32
Peak Hour 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
Percent Heavy Veh, %	0	0	0	0	1	5	0	0	3	3	0	0
Cap, veh/h	480	783	639	318	621	106	296	410	65	336	373	39
Arrive On Green	0.04	0.41	0.41	0.03	0.40	0.40	0.09	0.26	0.26	0.05	0.22	0.22
Sat Flow, veh/h	1810	1900	1552	1810	1558	267	1810	1589	252	1767	1682	175
Grp Volume(v), veh/h	56	454	247	31	0	294	148	0	248	73	0	339
Grp Sat Flow(s),veh/h/ln	1810	1900	1552	1810	0	1825	1810	0	1841	1767	0	1858
Q Serve(g_s), s	1.4	14.8	8.9	0.8	0.0	9.3	4.9	0.0	9.3	2.4	0.0	13.9
Cycle Q Clear(g_c), s	1.4	14.8	8.9	0.8	0.0	9.3	4.9	0.0	9.3	2.4	0.0	13.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.14	1.00		0.09
Lane Grp Cap(c), veh/h	480	783	639	318	0	728	296	0	475	336	0	412
V/C Ratio(X)	0.12	0.58	0.39	0.10	0.00	0.40	0.50	0.00	0.52	0.22	0.00	0.82
Avail Cap(c_a), veh/h	671	783	639	532	0	728	501	0	688	600	0	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	18.2	16.5	14.1	0.0	17.3	22.4	0.0	25.6	20.6	0.0	29.7
Incr Delay (d2), s/veh	0.1	3.1	1.8	0.1	0.0	1.7	1.3	0.0	0.9	0.3	0.0	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.7	3.4	0.3	0.0	3.9	2.1	0.0	4.0	1.0	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.5	21.4	18.3	14.2	0.0	19.0	23.7	0.0	26.4	21.0	0.0	33.9
LnGrp LOS	B	C	B	B		B	C		C	C		C
Approach Vol, veh/h	757			325			396			412		
Approach Delay, s/veh	19.8			18.5			25.4			31.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	37.0	9.0	25.7	7.5	38.1	11.9	22.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	12.0	32.0	16.0	30.0	12.0	32.0	16.0	30.0				
Max Q Clear Time (g_c+I1), s	3.4	11.3	4.4	11.3	2.8	16.8	6.9	15.9				
Green Ext Time (p_c), s	0.1	1.6	0.1	1.3	0.0	3.3	0.2	1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	23.3											
HCM 7th LOS	C											

Lanes, Volumes, Timings
5: 164th Ave NE & Northup Way

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	454	247	31	251	43	148	214	34	73	307	32
Future Volume (vph)	56	454	247	31	251	43	148	214	34	73	307	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		240	40		0	75		0	50		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	1.00		0.94		1.00		0.99	0.99		0.98	0.99	
Frt			0.850		0.978			0.979			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1900	1615	1805	1822	0	1805	1839	0	1752	1864	0
Flt Permitted	0.471			0.305			0.277			0.477		
Satd. Flow (perm)	892	1900	1521	580	1822	0	520	1839	0	866	1864	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			247		8			7			5	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		713			762			1522			360	
Travel Time (s)		13.9			14.8			34.6			9.8	
Confl. Peds. (#/hr)	2		12	12		2	10		10	10		10
Confl. Bikes (#/hr)			2			2			3			4
Peak Hour 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
Heavy Vehicles (%)	0%	0%	0%	0%	1%	5%	0%	0%	3%	3%	0%	0%
Adj. Flow (vph)	56	454	247	31	251	43	148	214	34	73	307	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	454	247	31	294	0	148	248	0	73	339	0
v/c Ratio	0.12	0.59	0.33	0.09	0.43		0.45	0.45		0.19	0.77	
Control Delay (s/veh)	15.6	28.5	4.7	15.5	26.2		21.8	29.7		17.7	44.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	15.6	28.5	4.7	15.5	26.2		21.8	29.7		17.7	44.3	
Queue Length 50th (ft)	16	215	0	9	124		54	117		25	179	
Queue Length 95th (ft)	45	395	55	30	244		96	199		53	294	
Internal Link Dist (ft)		633			682			1442			280	
Turn Bay Length (ft)	125		240	40			75			50		
Base Capacity (vph)	546	764	759	445	678		445	655		517	649	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.59	0.33	0.07	0.43		0.33	0.38		0.14	0.52	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	219	0	0	328
Future Vol, veh/h	5	9	219	0	0	328
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	5	10	241	0	0	360

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	602	242	0
Stage 1	242	-	-
Stage 2	360	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	466	802	-
Stage 1	803	-	-
Stage 2	710	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	465	801	-
Mov Cap-2 Maneuver	554	-	-
Stage 1	802	-	-
Stage 2	710	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.27	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	554	801
HCM Lane V/C Ratio	-	-	0.01	0.012
HCM Ctrl Dly (s/v)	-	-	11.6	9.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	0	214	334	0
Future Vol, veh/h	3	36	0	214	334	0
Conflicting Peds, #/hr	2	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	3	0	2	1	0
Mvmt Flow	3	40	0	235	367	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	604	367	-	0	-	0
Stage 1	367	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	-	-	-	-
Pot Cap-1 Maneuver	465	676	0	-	-	0
Stage 1	705	-	0	-	-	0
Stage 2	807	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	465	676	-	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	10.9	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 653		-			
HCM Lane V/C Ratio	- 0.066		-			
HCM Ctrl Dly (s/v)	- 10.9		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	221	3	8	371
Future Vol, veh/h	0	0	221	3	8	371
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	0	0	248	3	9	417

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	254	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	790	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	787	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.16
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1316
HCM Lane V/C Ratio	-	-	-	0.007
HCM Ctrl Dly (s/v)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection

Int Delay, s/veh 1.2

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 23 23 15 200 337 26

Future Vol, veh/h 23 23 15 200 337 26

Conflicting Peds, #/hr 0 0 10 0 0 10

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 88 88 88 88 88 88

Heavy Vehicles, % 4 0 0 2 1 4

Mvmt Flow 26 26 17 227 383 30

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 669 408 423 0 - 0

Stage 1 408 - - - - -

Stage 2 261 - - - - -

Critical Hdwy 6.44 6.2 4.1 - - -

Critical Hdwy Stg 1 5.44 - - - - -

Critical Hdwy Stg 2 5.44 - - - - -

Follow-up Hdwy 3.536 3.3 2.2 - - -

Pot Cap-1 Maneuver 420 648 1148 - - -

Stage 1 667 - - - - -

Stage 2 778 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 405 642 1137 - - -

Mov Cap-2 Maneuver 405 - - - - -

Stage 1 650 - - - - -

Stage 2 770 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 13.11 0.57 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 126 - 496 - -

HCM Lane V/C Ratio 0.015 - 0.105 - -

HCM Ctrl Dly (s/v) 8.2 0 13.1 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0 - 0.4 - -

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	24	290	155	60	222	15	78	110	59	21	171	13
Peak Hour 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
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	708	587	314	543	939	63	160	164	77	84	311	22
Arrive On Green	0.03	0.51	0.51	0.05	0.53	0.53	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	1152	616	1810	1756	119	427	860	404	100	1629	117
Grp Volume(v), veh/h	24	0	445	60	0	237	247	0	0	205	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1767	1810	0	1874	1691	0	0	1846	0	0
Q Serve(g_s), s	0.4	0.0	10.0	0.9	0.0	4.1	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	10.0	0.9	0.0	4.1	8.0	0.0	0.0	6.0	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.32		0.24	0.10		0.06
Lane Grp Cap(c), veh/h	708	0	901	543	0	1002	401	0	0	418	0	0
V/C Ratio(X)	0.03	0.00	0.49	0.11	0.00	0.24	0.62	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	956	0	901	746	0	1002	966	0	0	1071	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.0	0.0	9.8	6.9	0.0	7.5	23.0	0.0	0.0	22.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.9	0.1	0.0	0.6	1.5	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	3.7	0.3	0.0	1.5	3.3	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.1	0.0	11.7	7.0	0.0	8.1	24.6	0.0	0.0	23.2	0.0	0.0
LnGrp LOS	A		B	A		A	C			C		
Approach Vol, veh/h	469			297			247			205		
Approach Delay, s/veh	11.4			7.9			24.6			23.2		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	37.5		16.6	8.2	36.0		16.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	31.0		34.0	10.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.4	6.1		10.0	2.9	12.0		8.0				
Green Ext Time (p_c), s	0.0	1.4		1.6	0.1	2.8		1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				15.2								
HCM 7th LOS				B								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99		0.99	1.00			0.99			1.00	
Frt		0.948			0.991			0.968			0.991	
Flt Protected	0.950			0.950				0.984			0.995	
Satd. Flow (prot)	1805	1753	0	1805	1877	0	0	1778	0	0	1861	0
Flt Permitted	0.611			0.411				0.774			0.956	
Satd. Flow (perm)	1138	1753	0	776	1877	0	0	1393	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			4			20			4	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour 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
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	445	0	60	237	0	0	247	0	0	205	0
v/c Ratio	0.03	0.50		0.11	0.23			0.71			0.48	
Control Delay (s/veh)	6.5	15.0		6.9	11.1			33.6			25.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	6.5	15.0		6.9	11.1			33.6			25.2	
Queue Length 50th (ft)	3	116		8	36			88			73	
Queue Length 95th (ft)	14	246		27	122			165			133	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	782	893		619	1014			773			982	
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	0.03	0.50		0.10	0.23			0.32			0.21	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	9	219	0	0	328
Future Vol, veh/h	5	9	219	0	0	328
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	5	10	241	0	0	360

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	602	242	0	0	242
Stage 1	242	-	-	-	-
Stage 2	360	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	466	802	-	-	1337
Stage 1	803	-	-	-	-
Stage 2	710	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	465	801	-	-	1335
Mov Cap-2 Maneuver	465	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	710	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.72	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 465 801	1335	-
HCM Lane V/C Ratio	-	- 0.012 0.012	-	-
HCM Ctrl Dly (s/v)	-	- 12.8 9.5	0	-
HCM Lane LOS	-	- B A	A	-
HCM 95th %tile Q(veh)	-	- 0 0	0	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	0	214	334	0
Future Vol, veh/h	3	36	0	214	334	0
Conflicting Peds, #/hr	2	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	3	0	2	1	0
Mvmt Flow	3	40	0	235	367	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	604	367	-	0	-	0
Stage 1	367	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	-	-	-	-
Pot Cap-1 Maneuver	465	676	0	-	-	0
Stage 1	705	-	0	-	-	0
Stage 2	807	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	465	676	-	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	10.9	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 653		-			
HCM Lane V/C Ratio	- 0.066		-			
HCM Ctrl Dly (s/v)	- 10.9		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	221	3	8	371
Future Vol, veh/h	0	0	221	3	8	371
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	0	0	248	3	9	417

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	254	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	790	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	787	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0.16
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	38	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Ctrl Dly (s/v)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-

Intersection

Int Delay, s/veh 1.2

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 23 23 15 200 337 26

Future Vol, veh/h 23 23 15 200 337 26

Conflicting Peds, #/hr 0 0 10 0 0 10

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 88 88 88 88 88 88

Heavy Vehicles, % 4 0 0 2 1 4

Mvmt Flow 26 26 17 227 383 30

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 669 408 423 0 - 0

Stage 1 408 - - - - -

Stage 2 261 - - - - -

Critical Hdwy 6.44 6.2 4.1 - - -

Critical Hdwy Stg 1 5.44 - - - - -

Critical Hdwy Stg 2 5.44 - - - - -

Follow-up Hdwy 3.536 3.3 2.2 - - -

Pot Cap-1 Maneuver 420 648 1148 - - -

Stage 1 667 - - - - -

Stage 2 778 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 405 642 1137 - - -

Mov Cap-2 Maneuver 405 - - - - -

Stage 1 650 - - - - -

Stage 2 770 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 13.11 0.57 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 126 - 496 - -

HCM Lane V/C Ratio 0.015 - 0.105 - -

HCM Ctrl Dly (s/v) 8.2 0 13.1 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0 - 0.4 - -

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	24	290	155	60	222	15	78	110	59	21	171	13
Peak Hour 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
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	567	515	275	401	815	55	93	131	70	26	213	16
Arrive On Green	0.02	0.45	0.45	0.04	0.46	0.46	0.17	0.17	0.17	0.14	0.14	0.14
Sat Flow, veh/h	1810	1151	615	1810	1756	119	560	789	423	191	1553	118
Grp Volume(v), veh/h	24	0	445	60	0	237	247	0	0	205	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	0	1874	1772	0	0	1862	0	0
Q Serve(g_s), s	0.7	0.0	17.9	1.7	0.0	7.5	13.0	0.0	0.0	10.3	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	17.9	1.7	0.0	7.5	13.0	0.0	0.0	10.3	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.32		0.24	0.10		0.06
Lane Grp Cap(c), veh/h	567	0	790	401	0	870	295	0	0	255	0	0
V/C Ratio(X)	0.04	0.00	0.56	0.15	0.00	0.27	0.84	0.00	0.00	0.80	0.00	0.00
Avail Cap(c_a), veh/h	711	0	790	514	0	870	461	0	0	426	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.0	0.0	19.6	14.8	0.0	15.8	38.8	0.0	0.0	40.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	0.2	0.0	0.8	7.8	0.0	0.0	5.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.7	0.7	0.0	3.3	6.3	0.0	0.0	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.1	0.0	22.5	14.9	0.0	16.6	46.6	0.0	0.0	46.1	0.0	0.0
LnGrp LOS	B		C	B		B	D			D		
Approach Vol, veh/h	469			297			247			205		
Approach Delay, s/veh	22.0			16.2			46.6			46.1		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	49.6		21.0	9.0	48.0		18.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	43.0		25.0	10.0	43.0		22.0				
Max Q Clear Time (g_c+I1), s	2.7	9.5		15.0	3.7	19.9		12.3				
Green Ext Time (p_c), s	0.0	1.5		1.0	0.0	3.0		0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				29.7								
HCM 7th LOS				C								

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.98			1.00			0.98			1.00	
Frt		0.948			0.991			0.968			0.991	
Flt Protected	0.950			0.950				0.984			0.995	
Satd. Flow (prot)	1805	1749	0	1805	1875	0	0	1776	0	0	1860	0
Flt Permitted	0.566			0.341				0.984			0.995	
Satd. Flow (perm)	1050	1749	0	648	1875	0	0	1764	0	0	1858	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			12			2	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			537			2020	
Travel Time (s)		14.8			19.8			14.6			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour 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
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	445	0	60	237	0	0	247	0	0	205	0
v/c Ratio	0.04	0.59		0.15	0.27			0.76			0.70	
Control Delay (s/veh)	15.2	28.8		15.9	20.6			55.0			56.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	15.2	28.8		15.9	20.6			55.0			56.1	
Queue Length 50th (ft)	8	224		20	84			153			133	
Queue Length 95th (ft)	25	397		49	194			258			227	
Internal Link Dist (ft)		572			792			457			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	609	754		435	893			446			404	
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	0.04	0.59		0.14	0.27			0.55			0.51	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	24	290	155	60	222	15	78	110	59	21	171	13
Peak Hour 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
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	708	587	314	543	939	63	160	164	77	84	311	22
Arrive On Green	0.03	0.51	0.51	0.05	0.53	0.53	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	1152	616	1810	1756	119	427	860	404	100	1629	117
Grp Volume(v), veh/h	24	0	445	60	0	237	247	0	0	205	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1767	1810	0	1874	1691	0	0	1846	0	0
Q Serve(g_s), s	0.4	0.0	10.0	0.9	0.0	4.1	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	10.0	0.9	0.0	4.1	8.0	0.0	0.0	6.0	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.32		0.24	0.10		0.06
Lane Grp Cap(c), veh/h	708	0	901	543	0	1002	401	0	0	418	0	0
V/C Ratio(X)	0.03	0.00	0.49	0.11	0.00	0.24	0.62	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	956	0	901	746	0	1002	966	0	0	1071	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.0	0.0	9.8	6.9	0.0	7.5	23.0	0.0	0.0	22.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.9	0.1	0.0	0.6	1.5	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	3.7	0.3	0.0	1.5	3.3	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.1	0.0	11.7	7.0	0.0	8.1	24.6	0.0	0.0	23.2	0.0	0.0
LnGrp LOS	A		B	A		A	C			C		
Approach Vol, veh/h	469				297				247			
Approach Delay, s/veh	11.4				7.9				24.6			
Approach LOS	B				A				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	37.5		16.6	8.2	36.0		16.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	31.0		34.0	10.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.4	6.1		10.0	2.9	12.0		8.0				
Green Ext Time (p_c), s	0.0	1.4		1.6	0.1	2.8		1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	15.2											
HCM 7th LOS	B											

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99		0.99	1.00			0.99			1.00	
Frt		0.948			0.991			0.968			0.991	
Flt Protected	0.950			0.950				0.984			0.995	
Satd. Flow (prot)	1805	1753	0	1805	1877	0	0	1778	0	0	1861	0
Flt Permitted	0.611			0.406				0.787			0.958	
Satd. Flow (perm)	1138	1753	0	767	1877	0	0	1416	0	0	1790	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour 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
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	445	0	60	237	0	0	247	0	0	205	0
v/c Ratio	0.03	0.51		0.11	0.24			0.71			0.46	
Control Delay (s/veh)	6.9	16.8		7.2	11.6			34.9			25.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	6.9	16.8		7.2	11.6			34.9			25.1	
Queue Length 50th (ft)	3	131		9	38			97			75	
Queue Length 95th (ft)	14	268		28	126			174			134	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	773	865		607	1000			767			969	
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	0.03	0.51		0.10	0.24			0.32			0.21	

Intersection Summary

Area Type: Other

HCM 7th Signalized Intersection Summary

8: NE 24th St

08/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (veh/h)	24	290	155	60	222	15	78	110	59	21	171	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1885	1870	1900	1900	1900	1856	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	24	290	155	60	222	15	78	110	59	21	171	13
Peak Hour 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
Percent Heavy Veh, %	0	1	2	0	0	0	3	0	0	4	0	0
Cap, veh/h	51	373	199	102	619	42	178	177	82	98	333	24
Arrive On Green	0.03	0.32	0.32	0.06	0.35	0.35	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1810	1149	614	1810	1755	119	412	867	401	97	1626	117
Grp Volume(v), veh/h	24	0	445	60	0	237	247	0	0	205	0	0
Grp Sat Flow(s),veh/h/ln	1810	0	1763	1810	0	1874	1680	0	0	1839	0	0
Q Serve(g_s), s	0.7	0.0	11.6	1.6	0.0	4.7	1.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	0.0	11.6	1.6	0.0	4.7	6.6	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.06	0.32		0.24	0.10		0.06
Lane Grp Cap(c), veh/h	51	0	572	102	0	661	437	0	0	455	0	0
V/C Ratio(X)	0.47	0.00	0.78	0.59	0.00	0.36	0.56	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	286	0	1009	286	0	1073	1094	0	0	1212	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.2	0.0	15.5	23.3	0.0	12.2	18.6	0.0	0.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	2.3	5.3	0.0	0.3	1.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.3	0.8	0.0	1.7	2.6	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.8	0.0	17.8	28.7	0.0	12.5	19.7	0.0	0.0	18.7	0.0	0.0
LnGrp LOS	C		B	C		B	B			B		
Approach Vol, veh/h	469			297			247			205		
Approach Delay, s/veh	18.4			15.8			19.7			18.7		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	24.9		17.4	9.9	23.4		17.4				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	8.0	29.0		32.0	8.0	29.0		32.0				
Max Q Clear Time (g_c+I1), s	2.7	6.7		8.6	3.6	13.6		7.0				
Green Ext Time (p_c), s	0.0	1.3		1.6	0.0	2.6		1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	18.1											
HCM 7th LOS	B											

Lanes, Volumes, Timings

8: NE 24th St

08/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Future Volume (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		0	150		0	100		0	50		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Ped Bike Factor	0.98	0.99		0.99	1.00			0.99			1.00	
Frt		0.948			0.991			0.968			0.991	
Flt Protected	0.950			0.950				0.984			0.995	
Satd. Flow (prot)	1805	1756	0	1805	1878	0	0	1780	0	0	1862	0
Flt Permitted	0.950			0.950				0.824			0.947	
Satd. Flow (perm)	1774	1756	0	1790	1878	0	0	1485	0	0	1771	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		652			872			171			2020	
Travel Time (s)		14.8			19.8			4.7			55.1	
Confl. Peds. (#/hr)	10		7	7		10	7		4	4		7
Confl. Bikes (#/hr)						1			2			1
Peak Hour 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
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	3%	0%	0%	4%	0%	0%
Adj. Flow (vph)	24	290	155	60	222	15	78	110	59	21	171	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	445	0	60	237	0	0	247	0	0	205	0
v/c Ratio	0.14	0.70		0.32	0.31			0.53			0.37	
Control Delay (s/veh)	35.2	27.6		37.2	17.0			27.2			23.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	35.2	27.6		37.2	17.0			27.2			23.4	
Queue Length 50th (ft)	10	178		25	53			96			75	
Queue Length 95th (ft)	35	311		68	151			181			143	
Internal Link Dist (ft)		572			792			91			1940	
Turn Bay Length (ft)	115			150								
Base Capacity (vph)	216	762		216	869			711			848	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.11	0.58		0.28	0.27			0.35			0.24	

Intersection Summary

Area Type: Other