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Landing at Green Mountain Phase 2

Transportation Impact Study
Camas, Washington

Date:
April 23, 2025

Prepared for:
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Pacific Lifestyle Homes

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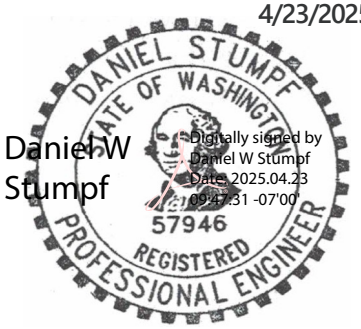
4/23/2025



Daniel W Stumpf

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Executive Summary

1. The proposed Landing at Green Mountain Phase 2 project will include the construction of a residential subdivision at/near 22111 NE 28th Street in Camas, Washington. The proposal will include the construction of 32 single-family detached houses, removing one existing single-family house for a net increase of 31 houses. Access to the site will be provided via a planned south leg at the intersection of N Hargrave Street at NE 28th Street.
2. The trip generation calculations show that the proposed subdivision is projected to generate an additional 21 AM peak hour trips, 29 PM peak hour trips, and 292 average weekday trips.
3. The proposed development is projected to impact nine of the transportation facilities where proportionate share fees are being collected by the City of Vancouver. The proposed development application will need to contribute a proportionate share fee of $28,949 toward these transportation improvement projects.
4. No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the proposed development application.
5. Traffic signal and all-way stop-control warrants are not projected to be met at any of the applicable study intersections under any analysis scenario through the 2027 site buildout year. Accordingly, no revisions to traffic controls are necessary or recommended as part of the proposed Landing at Green Mountain Phase 2 project.
6. The proposed development will reconstruct its associated street frontage with NE 28th Street to include pedestrian and bicycle facilities in accordance with City of Camas street standards. Additionally, appropriate pedestrian and bicycle facilities will be constructed within site internal streets to accommodate student pickup/drop-off via school bus. Therefore, adequate pedestrian and bicycle facilities will be available to accommodate students who may reside within the proposed Landing at Green Mountain Phase 2 subdivision, and no further mitigation to pedestrian and bicycle facilities are necessary and recommended.
7. All study intersections are currently operating acceptably per applicable agency standards and are projected to continue operating acceptably through the 2027 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.
8. The northeast bound left-turn lane at the intersection of NE Ingle Road at NE Goodwin Road is projected to experience 95th percentile queues which exceed the available striped lane storage. However, this excess queue can be accommodated by the northeast bound through lane without extending back to any other public intersection or driveway along NE Goodwin Road. Limited to no impacts to other intersections, as well as the study intersection itself, are expected to occur due to this queuing. Therefore, no queuing-related mitigation at the intersection is recommended as part of the proposed development.

Project Description

Introduction

The proposed Landing at Green Mountain Phase 2 project will include the construction of a residential subdivision at/near 22111 NE 28th Street in Camas, Washington. The proposal will include the construction of 32 single-family detached houses, removing one existing single-family house for a net increase of 31 houses. Access to the site will be provided via a planned south leg at the intersection of N Hargrave Street at NE 28th Street.

Based on correspondence with City of Camas staff, the report conducts safety and capacity/level of service analyses at the following intersections:

1. NE Ingle Road at NE Goodwin Road (City of Camas)
2. N Hargrave Street at NE 28th Street (City of Camas)
3. NE 232nd Avenue at NE 28th Street (Clark County)
4. NE 242nd Avenue (SR-500) at NE 28th Street (WSDOT)

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses, and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendix to this report.

Location Description

The project site is located south of NE 28th Street, east of NE Ingle Road, and west of NE 232nd Avenue in Camas, Washington. The site consists of assessor parcels 173210000 and 173177000/611175000 and encompasses an approximate total of 10.6 acres. Located within a developing area of the City of Camas, the site is immediately surrounded by single-family house subdivisions to the north, a currently under construction residential subdivision to the east, low-density residential uses to the west, and undeveloped/forested land to the south.

Figure 1 presents an aerial image of the nearby vicinity with the project site outlined in yellow.

Figure 1: Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

The study area is composed of six roadways near the site. Table 1 provides a description of each vicinity roadway.

Table 1: Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
NE Ingle Road	Camas	Collector	40	Not Permitted	Partial East Side	Partial Both Sides
NE Goodwin Road	Camas	Arterial	35/40	Not Permitted	Partial South Side	Partial Both Sides
N Hargrave Street	Camas	Local Street	25	Partially Permitted	Both Sides	None
NE 28th Street	Camas/Clark County	Arterial	40	Not Permitted	Partial North Side	Partial North Side
NE 232nd Avenue	Clark County	Arterial	45	Not Permitted	None	None
SR-500	WSDOT	Regionally Significant Highway	45	Not Permitted	None	None

Table Notes: Functional classification based on City of Camas Functional Classification Map

Study Intersections

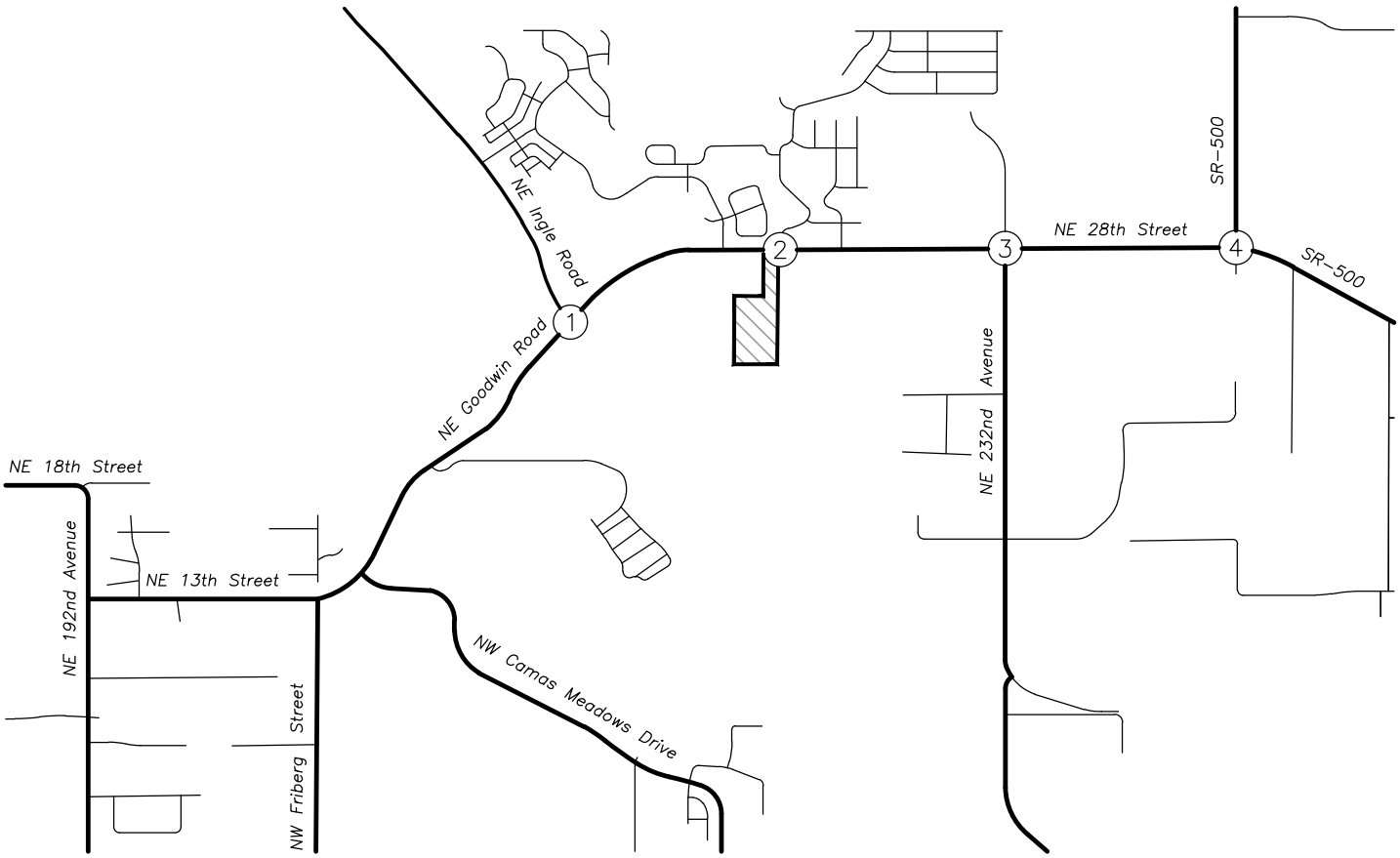
An analysis of four existing nearby intersections of significance was conducted. A summarized description of these study intersections under their existing lane configurations is provided in Table 2.

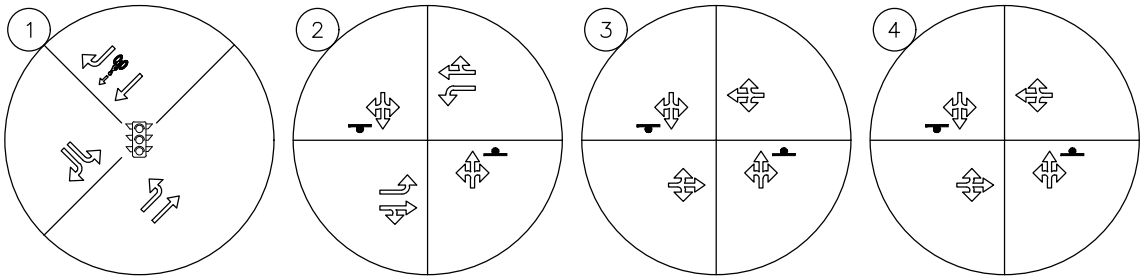
Table 2: Study Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	NE Ingle Road at NE Goodwin Road	Three-Legged	Signal	FYA NEB Left-turn Lane
2	N Hargrave Street at NE 28th Street	Four-Legged	Stop-Controlled	NB/SB Stop-Controlled Approach
3	NE 232nd Avenue at NE 28th Street	Four-Legged	Stop-Controlled	NB/SB Stop-Controlled Approaches
4	SR-500 at NE 28th Street	Four-Legged	Stop-Controlled	NB/SB Stop-Controlled Approaches

Table Notes: Flashing-Yellow-Arrow denoted as FYA.

A vicinity map showing the project site, vicinity streets, and study intersection configurations are shown in Figure 2.





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VICINITY MAP

Figure 2

Landing at Green Mountain Phase 2

4/23/2025

Site Trips

Trip Generation

The proposed Landing at Green Mountain Phase 2 subdivision will include the construction of 32 single-family detached houses, removing one existing single-family house for a net increase of 31 houses. To estimate the number of trips that are and will be generated by the existing and proposed uses, trip rates from the *Trip Generation Manual, 11th Edition*.[1] were used. Data from the land use code 210, *Single-Family Detached Housing*, was used to estimate site trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate an additional 21 AM peak hour trips, 29 PM peak hour trips, and 292 average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix.

Table 3: Site Trip Generation Summary

ITE Land Use Code		Size	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Existing Conditions									
210	Single-Family Detached Housing	1 unit	0	1	1	1	0	1	10
Proposed Conditions									
210	Single-Family Detached Housing	32 units	6	16	22	19	11	30	302
Net Change In Site Trip Generation									
Net New Trips		**31 units**	**6**	**15**	**21**	**18**	**11**	**29**	**292**

Trip Distribution

The trip distribution of the project site was derived using the Southwest Washington Regional Transportation Council (RTC) transportation system model. The project site is located in Transportation Analysis Zone (TAZ) #1829, for which a select zone analysis was run to determine the distribution of site trips entering and exiting the zone.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

The following trip distribution is projected:

- Approximately 48% of site trips will travel to/from the southwest along NE Goodwin Road, southwest of NE Ingle Road.
- Approximately 21% of site trips will travel to/from the north along NE Ingle Road, north of NE Goodwin Road.
- Approximately 15% of site trips will travel to/from the south along NE 232nd Avenue, south of NE 28th Street.
- Approximately 9% of site trips will travel to/from the north along SR-500, north of NE 28th Street.
- Approximately 7% of site trips will travel to/from the east along SR-500, east of NE 28th Street.

The trip distribution and assignment for the site trips generated during the AM and PM peak hours are shown in Figure 3.

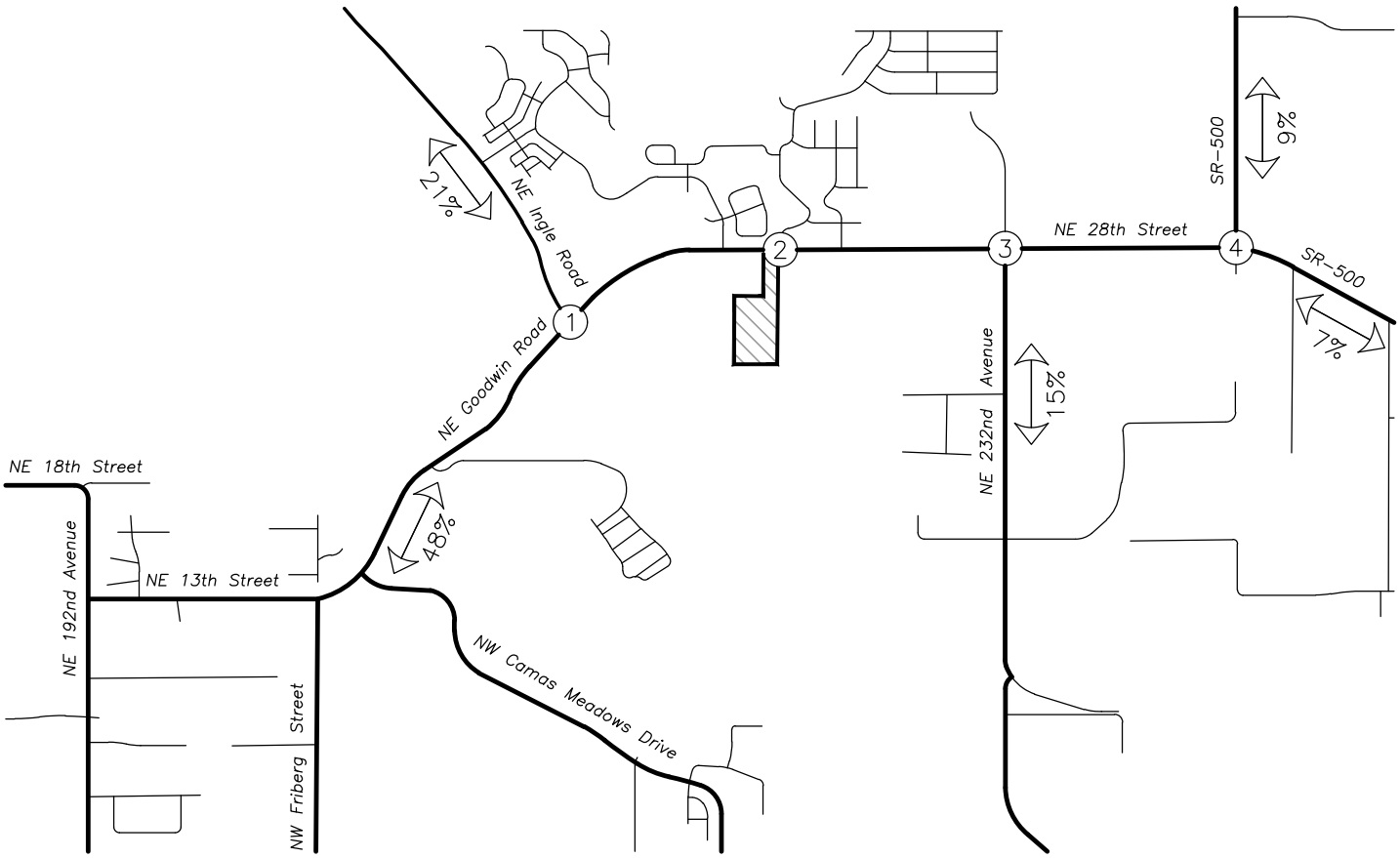
Proportionate Share Contributions

According to the project's Pre-Application Conference Report, proportionate share contributions are being collected for several transportation facilities throughout the City of Vancouver. Table 4 details these transportation improvement projects and the proportionate share fee contributions attributable to the proposed development.

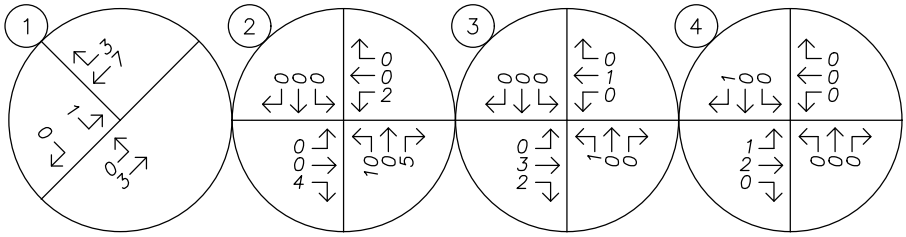
Table 4: Proportionate Share Contributions

Project Location	Unit Cost Per Trip		Percent of Site Trips Generated	Peak Hour Trip Impact		Proportionate Share Contribution
NE 137th Avenue (NE 49th Street to NE Fourth Plain Boulevard)	$3,000	PM	0.00%	0	PM	$0
NE Fourth Plain Boulevard at NE 152nd Avenue (Signal)	$333	PM	9.09%	3	PM	$999
S Lieser Road at MacArthur Boulevard/St Helens Avenue	$2,000	PM	0.00%	0	PM	$0
SE 176th Avenue at SE 20th Street	$400	PM	1.14%	0	PM	$0
NE 192nd Avenue at NE 13th Street	$400	PM	43.18%	13	PM	$5,200
SE 192nd Avenue at SE 34th Street	$150	PM	11.36%	3	PM	$450
SE 192nd Avenue at SR-14 Ramps	$2,000	PM	6.82%	2	PM	$4,000
SE 192nd Avenue at SE Columbia Palisades Drive (east/west legs only)	$830	PM	0.00%	0	PM	$0
MacArthur Boulevard at Andresen Road (Roundabout)	$2,285	PM	0.00%	0	PM	$0
MacArthur Boulevard at N Devine Road (Roundabout)	$2,226	PM	0.00%	0	PM	$0
Grove Street/SR-14 Off-Ramp at Columbia House Boulevard	$600	AM	0.00%	0	AM	$0
NE 172nd Avenue at NE 18th Street	$300	PM	9.09%	3	PM	$900
NE 179th Place at NE 18th Street	$900	PM	11.36%	3	PM	$2,700
NE 187th Avenue at NE 18th Street	$1,200	PM	13.64%	4	PM	$4,800
NE 162nd Avenue at NE 9th Street	$1,500	PM	0.00%	0	PM	$0
NE 172nd Avenue at NE 9th Street	$4,100	PM	0.00%	0	PM	$0
NE 192nd Avenue at NE 9th Street	$1,100	PM	28.41%	8	PM	$8,800
NE 187th Avenue at SE 1st Street	$1,100	PM	3.41%	1	PM	$1,100
Total Proportionate Share Contribution						**$28,949**

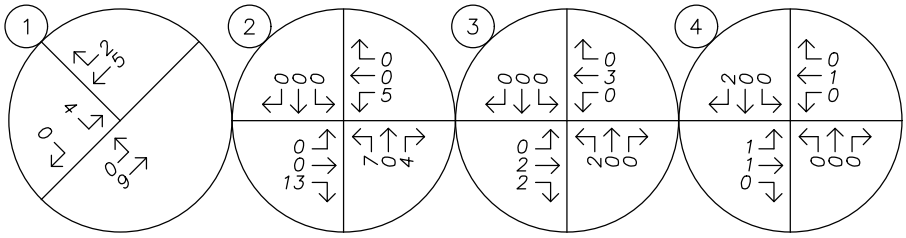
Per the RTC distribution modeling data and based on the calculated site trip generation, the proposed development is projected to impact nine of the transportation facilities where proportionate share fees are being collected. The proposed development application will need to contribute a proportionate share fee of $28,949 toward these transportation improvement projects.



AM PEAK HOUR



PM PEAK HOUR



LEGEND

XX% *PERCENT OF PROJECT TRIPS*

NET NEW TRIP GENERATION			
	IN	OUT	TOTAL
AM	6	15	21
PM	18	11	29

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SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Site Trips
AM & PM Peak Hours

Figure 3

Landing at Green Mountain Phase 2

4/23/2025

Traffic Volumes

Existing Conditions

Traffic counts were conducted at the study intersections on Wednesday, March 12, 2025, from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Data was used from each intersection's respective AM and PM peak hours.

Figure 4 shows the year 2025 existing traffic volumes at the study intersections during the AM and PM peak hours.

Background Conditions

Volume Growth

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to approximate the future year 2027 traffic volumes at the study intersections, a compounding growth rate of two percent per year for an assumed buildout condition of two years was applied to the year 2025 existing traffic volumes.

In-Process Data

In addition to the traffic volume growth described above, there are several in-process developments that are currently approved/proposed for construction within the site vicinity that are expected to impact nearby study intersections. These in-process developments include the following:

- CJ Dens East Subdivision (Approximately 40% Built)
- Green Mountain Estates Phases 1-7 (Approximately 70% Built)
- Monte Verde Subdivision (Approximately 0% Built)
- 18th Avenue Subdivision (Approximately 0% Built)
- Fresenius Kidney Care Medical Office (aka Archery Pad 5, Approximately 0% Built)
- Camas Heights Subdivision (Approximately 0% Built)
- Camas Meadows Subdivision (Approximately 0% Built)
- Camas Woods Subdivision (Approximately 0% Built)
- Valley View Estates (Approximately 40% Built)
- Green Mountain Master Plan (Approximately 75% Built)
- Hood Street Subdivision (Approximately 0% Built)
- McIntosh Subdivision (Approximately 0% Built)
- Village at Camas Meadows (Approximately 50% Built)

The in-process developments are not currently/fully contributing trips to the transportation system but may potentially be by the assumed 2027 buildout year of the site. Additional trips corresponding to each in-process development were added to the existing year traffic volumes in addition to the two years of traffic growth at

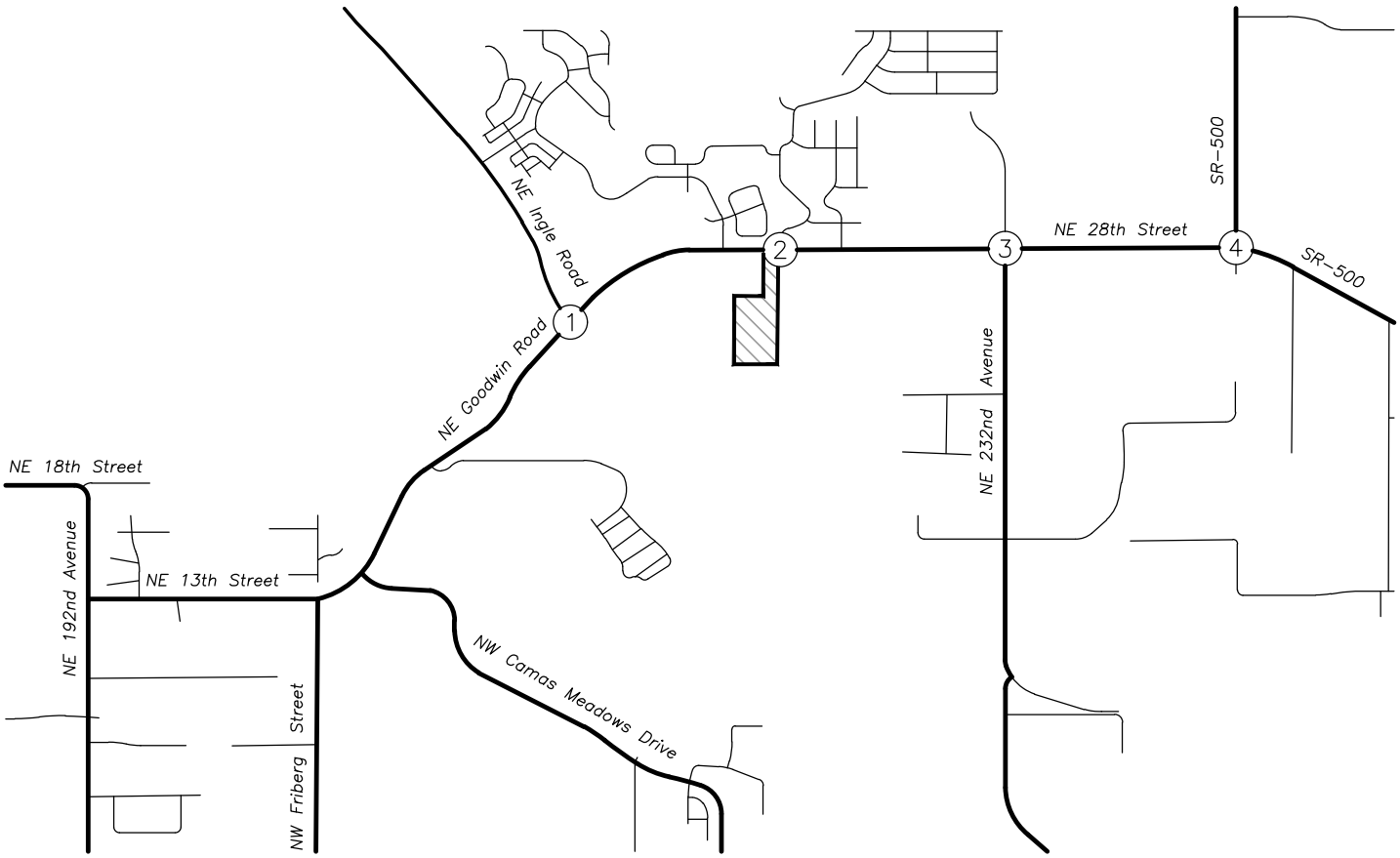
each of the applicable study intersections. To maintain a conservative analysis of operation at the study intersections, all in-process developments were assumed to be constructed by year 2027. Figure A in the technical appendix shows the in-process development trips at the study intersections during the AM and PM peak hours.

Figure 5 shows the projected year 2027 background traffic volumes at the study intersections during the AM and PM peak hours.

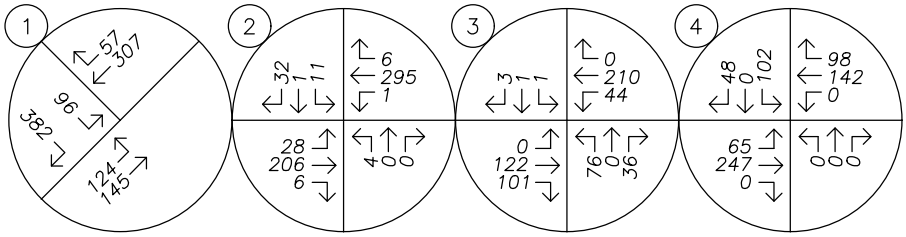
Buildout Conditions

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the projected year 2027 background traffic volumes to obtain the expected 2027 site buildout volumes.

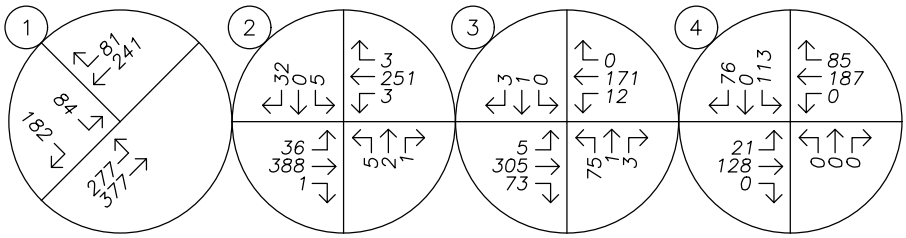
Figure 6 show the year 2027 buildout traffic volumes at the study intersections during the AM and PM peak hours.



AM PEAK HOUR



PM PEAK HOUR



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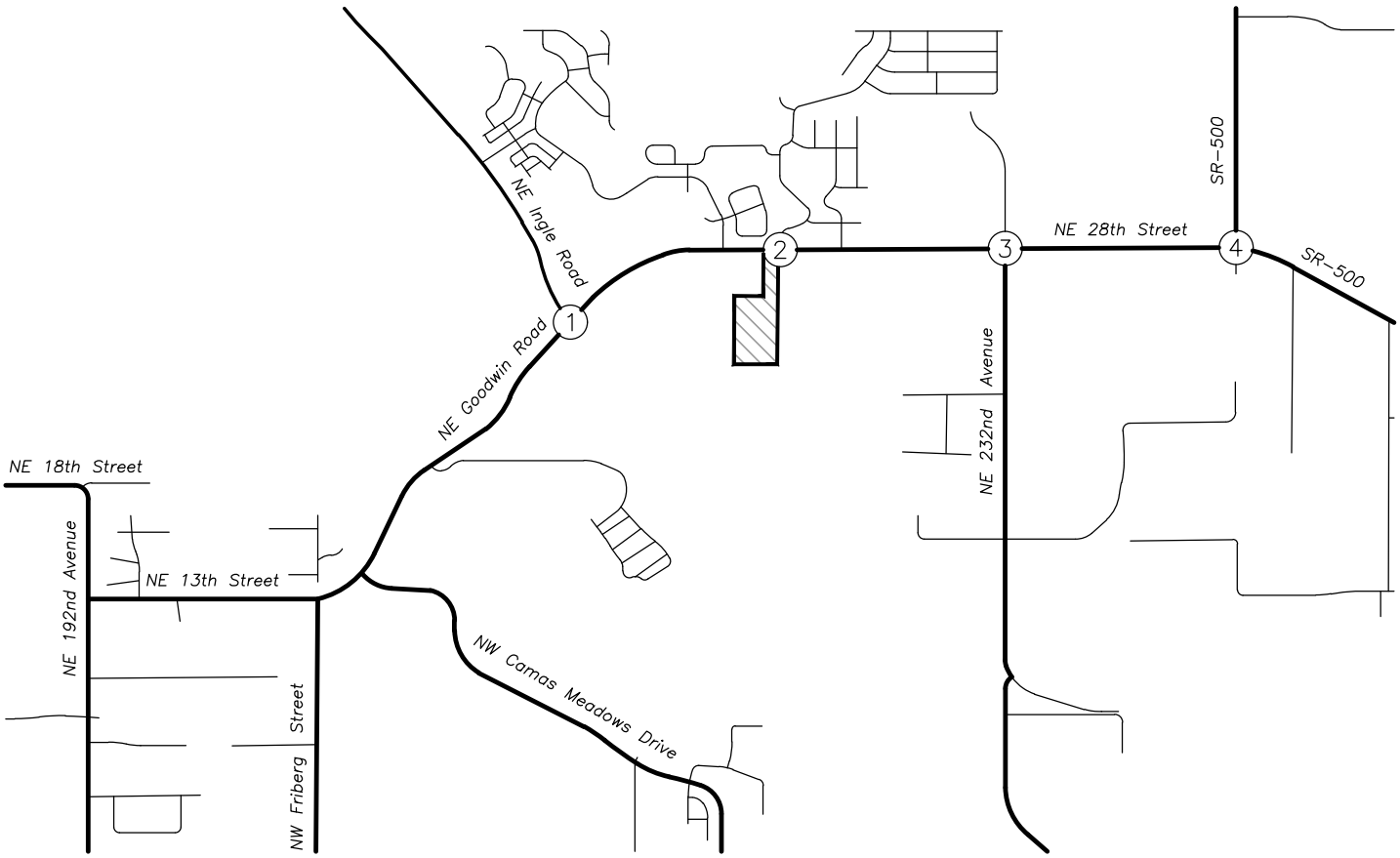
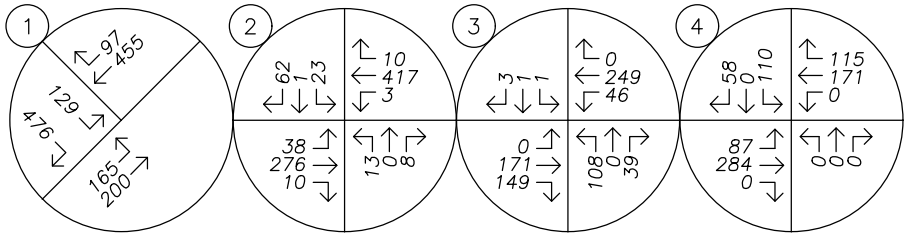
TRAFFIC VOLUMES
Year 2025 Existing Conditions
AM & PM Peak Hours

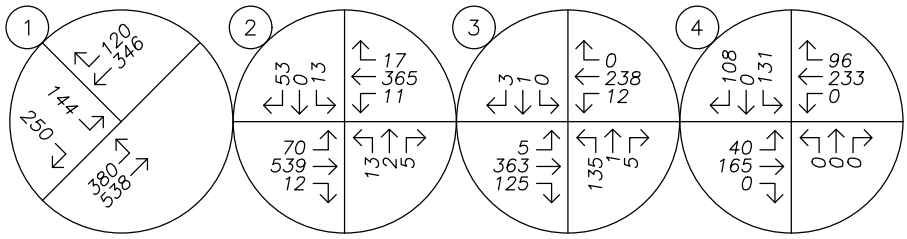
Figure 4
Landing at Green Mountain Phase 2
4/23/2025



AM PEAK HOUR



PM PEAK HOUR



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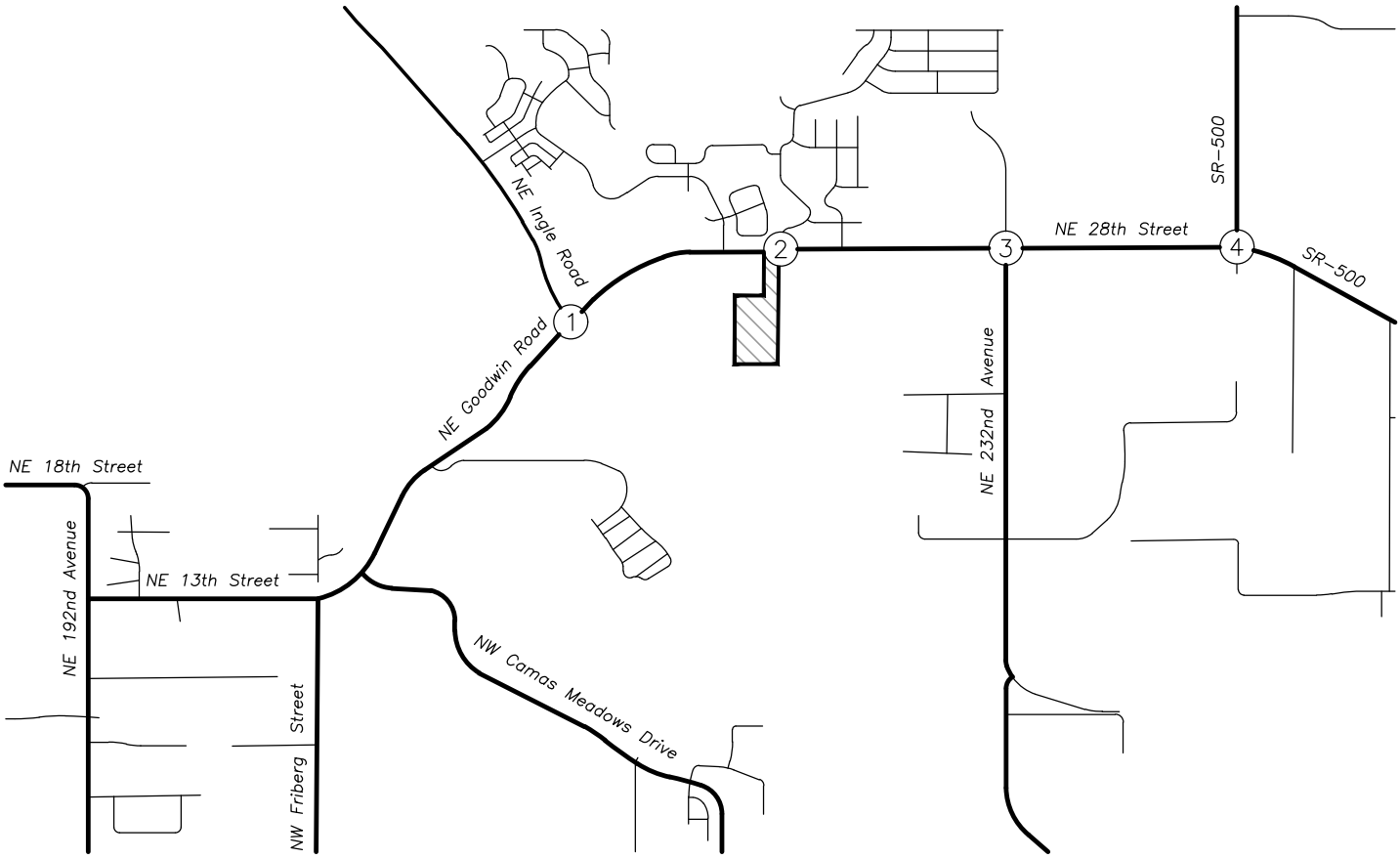
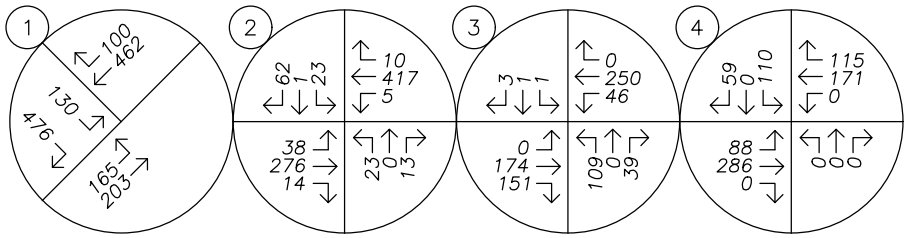
TRAFFIC VOLUMES
Year 2027 Background Conditions
AM & PM Peak Hours

Figure 5
Landing at Green Mountain Phase 2
4/23/2025



AM PEAK HOUR



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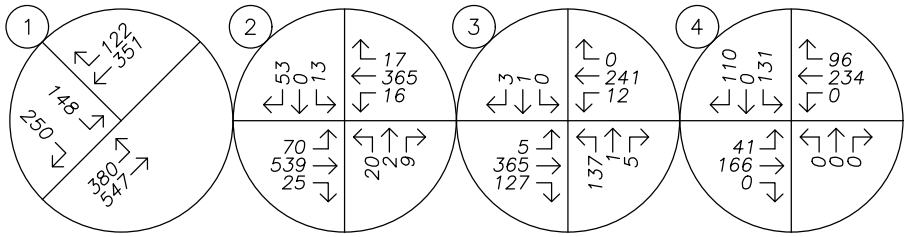

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TRAFFIC VOLUMES
Year 2027 Buildout Conditions
AM & PM Peak Hours

Figure 6
Landing at Green Mountain Phase 2
4/23/2025

Safety Analysis

Crash History Review

Using data obtained from the Washington Department of Transportation (WSDOT) Crash Data and Reporting Branch, a review of the most recent available five to six years of crash history (January 2019 to June 2024) at the study intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection.

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the PM peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.00 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

With regard to crash severity, WSDOT classifies crashes in the following categories:

- *No Apparent Injury* (NA);
- *Possible Injury* (P);
- *Suspected Minor Injury* (SM);
- *Suspected Serious Injury* (SS); and
- *Fatality* or *Fatal Injury*.

Table 5 provides a summary of crash types while Table 6 summarizes crash severities and rates for each of the applicable study intersections. Crash data is included in the technical appendix to this report.

Table 5: Crash Type Summary

No.	Intersection	Crash Type							Total
		Rear End	Turn	Angle	Fixed Object	Side swipe	Ped/ Bike	Other	
1	NE Ingle Road at NE Goodwin Road	0	7	0	0	0	1	0	8
2	N Hargrave Street at NE 28th Street	0	0	0	0	0	0	0	0
3	NE 232nd Avenue at NE 28th Street	1	6	0	2	0	1	0	10
4	SR-500 at NE 28th Street	0	2	2	0	0	0	0	4

Table 6: Crash Severity and Rate Summary

No.	Intersection	Crash Severity					Total Crashes	AADT	Crash Rate
		NA	P	SM	SS	Unknown			
1	NE Ingle Road at NE Goodwin Road	4	1	3	0	0	8	12,420	0.32
2	N Hargrave Street at NE 28th Street	0	0	0	0	0	0	7,270	0.00
3	NE 232nd Avenue at NE 28th Street	7	1	1	0	1	10	6,490	0.77
4	SR-500 at NE 28th Street	3	1	0	0	0	4	6,100	0.33

Per Table 6, two of the reported crashes at the study intersections involved bicyclists. The crashes include the following:

- One of the crashes occurred at the intersection of NE Ingle Road at NE Goodwin Road. The crash occurred when the driver of a northeast bound left-turning passenger car failed to yield right-of-way to a bicyclist at the intersection. One person involved in the collision was reported to have sustained injuries, where the crash was classified as *Suspected Minor Injury*.
- The second crash occurred at the intersection of NE 232nd Avenue at NE 28th Street. The crash occurred when the bicyclist conducted an improper turn/merge at the intersection and collided with a westbound traveling passenger car. The crash was classified as *No Apparent Injury*.

Based on a review of the crash history data, no significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the proposed development application.

Warrant Analysis

Preliminary traffic signal and preliminary all-way stop-control warrants were examined for the study intersections where such treatments would be applicable.

Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for the unsignalized study intersections to determine whether the installation of a new traffic signal will be warranted at the intersections by the 2027 site buildout year. Based on the preliminary analysis following a review of Warrant 1 in the *Manual on Uniform Traffic Control Devices*, or MUTCD, traffic signal warrants are not projected to be met at any of the unsignalized study intersections by the 2027 site buildout year. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

All-Way Stop-Control Warrants

To determine whether the installation of all-way stop-controls is warranted or nearing warrants at the applicable study intersections, the *Manual of Uniform Traffic Control Devices for Streets and Highways*[2] (MUTCD) was referenced. According to *Section 2B.12 All-Way Stop Control* of the MUTCD, installation of all-way stop controls may be considered at an intersection based on a review of the following warrants:

A. *All-Way Stop Control Warrant A: Crash Experience (see Section 2B.13)*

B. *All-Way Stop Control Warrant B: Sight Distance (see Section 2B.14)*

C. *All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection (see Section 2B.15)*

D. *All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles) (see Section 2B.16)*

E. *All-Way Stop Control Warrant E: Other Factors (see Section 2B.17)*

Note that according to the MUTCD, "[t]*he decision to install all-way stop control on site roadways open to public travel may be based on engineering judgment*" and "[w]*arrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification to install or not install all-way stop control.*"

Upon reviewing the aforementioned criteria, the following were concluded for each applicable warrant at the applicable unsignalized study intersections:

A. Three or less crashes over a 12-month period that could have been mitigated with the installation of all-way stop-controls were found at the study intersections via WSDOT crash data. Therefore, Warrant A is not met for any of the applicable study intersections.

B. Based on a preliminary review of intersection sight distances, no sight distance issues beyond the potential need to maintain foliage within the public right-of-way of applicable study intersections were found. Therefore, Warrant B is not met for any of the applicable study intersections.

C. Traffic signal warrants are not projected to be met at any of the applicable study intersections, whereby Warrant C is not met.

D. Based on a preliminary review of the volume warrant at the applicable study intersections, Warrant D is not projected to be met by the 2027 site buildout year.

E. Neither the need to control left-turn conflicts or further accommodate current pedestrian/bicycle volumes at the study intersections is necessary. Additionally, the study intersections are not composed of two residential neighborhood collector roads of similar design. Therefore, Warrant E is not met for any of the applicable study intersections.

[2] Federal Highway Administration (FTA), American Traffic Safety Services Association (ATSSA), Institute of Transportation Engineers (ITE), American Association of State Highway and Transportation Officials (AASHTO), *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 11th Edition, 2023.

Based on the review of all-way stop-control warrants, the installation of all-way stop-controls at any of the applicable study intersections by the 2027 site buildout year is not necessary or recommended. Therefore, no all-way stop-control mitigation at the study intersections is recommended as part of the proposed development.

Pedestrian and Bicycle Safety

Intermittent sidewalks and bicycle lanes are in place along the site adjacent roadway of NE 28th Street. These facilities are generally provided along segments of the roadway where recent, higher density residential subdivision projects have been developed. As the area continues to redevelop with higher intensive uses, it is expected that segments of area roadways that do not currently have sidewalks or bicycle lanes will be reconstructed with such facilities overtime. Note that construction of these facilities is contingent on private development projects, such as the proposed Landing at Green Mountain Phase 2 subdivision, which will redeveloped their associated half-street frontages. Since the proposed development will reconstruct its street frontage with NE 28th Street, no further mitigation to pedestrian and bicycle facilities are necessary and recommended as part of the development application.

Specific to safety related to students walking/biking between the project site and nearby schools, the nearest schools to the project site include the following:

- Lacamas Lake Elementary School: An approximate 1.5 mile walking/biking distance to the southeast from the project site.
- Union High School: An approximate 2 mile walking/biking distance to the southwest from the project site.
- Illahee Elementary School and Shahala Middle School: An approximately 2.5 mile walking/biking distance to the southwest from the project site.
- Harmony Elementary School: An approximate 3 mile walking/biking distance to the west from the project site.
- Skyridge Middle School: An approximate 3 mile walking/biking distance to the south from the project site.

Given the lengthy travel distances between the nearest schools and the project site, it is unlikely that students who reside at the Landing at Green Mountain Phase 2 subdivision will walk or bike to school. Instead students may either travel to/from school via personal/family vehicles or will take a school bus, noting C-Tran does not currently offer transit services in the immediate site vicinity. School bus service to/from the project site will be coordinated with the applicable school districts. Based on the proposed site layout, school buses have the option of either stopping along NE 28th Street near the intersection of N Hargrave Street at NE 28th Street or enter the project site and circulate within the site internal streets. For either school bus service option, appropriate pedestrian and bicycle facilities will be constructed/available within site internal streets and along the project site's frontage with NE 28th Street. Therefore, adequate pedestrian and bicycle facilities will be available to accommodate students who may reside within the proposed subdivision.

Operational Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM).[3]. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Performance Standards

According to the City of Camas Engineering Design Standards, a minimum LOS C or better on minor and local streets, and LOS D on collector/arterials or better should be maintained for traffic operations.

According to Clark County's Unified Development Code, Title 40.350 – *Transportation and Circulation*, Clark County's performance standards require unsignalized intersections to operate at LOS E or better unless traffic signal warrants are met. If traffic signal warrants are met, the intersection is required to operate at LOS D or better. Individual movements at signalized intersections of regional significance are to operate with average delays of less than two cycle lengths or 240 seconds, whichever is less.

The study intersection along SR-500 operates under the jurisdiction of WSDOT. According to the Revised Code of Washington (RCW) 47.06.140(2):

> *The department of transportation, in consultation with local governments, shall set level of service standards for state highways and state ferry routes of statewide significance. Although the department shall consult with local governments when setting level of service standards, the department retains authority to make final decisions regarding level of service standards for state highways and state ferry routes of statewide significance. In establishing level of service standards for state highways and state ferry routes of statewide significance, the department shall consider the necessary balance between providing for the free interjurisdictional movement of people and goods and the needs of local communities using these facilities…*

Per WSDOT's online *Level of Service Standard* ArcGIS website.[4], the segment of SR-500 within the analysis area operates with an LOS C or better standard.

[3] Transportation Research Board, *Highway Capacity Manual 7th Edition*, 2022.

[4] WSDOT. (n.d.). *WSDOT - Level of Service Standard*. Map Viewer. https://wsdot.maps.arcgis.com/apps/mapviewer/index.html?layers=3f840aeeb1ba481c905270ca103cd1db

Delay & Capacity Analysis

The LOS, delay, and v/c results of the capacity analysis are shown in Table 7 for the AM and PM peak hours. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

Table 7: Capacity Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1. NE Ingle Road at NE Goodwin Road (City of Camas)						
2025 Existing Conditions	A	9	-	A	7	-
2027 Background Conditions	B	12	-	A	9	-
2027 Buildout Conditions	B	13	-	A	9	-
2. N Hargrave Street at NE 28th Street (City of Camas)						
2025 Existing Conditions	B	12	0.09	B	13	0.06
2027 Background Conditions	B	14	0.20	C	17	0.13
2027 Buildout Conditions	C	14	0.21	C	17	0.13
3. NE 232nd Avenue at NE 28th Street (Clark County)						
2025 Existing Conditions	C	19	0.38	C	15	0.18
2027 Background Conditions	E	37	0.67	C	23	0.42
2027 Buildout Conditions	E	38	0.68	C	23	0.43
4. NE 242nd Avenue (SR-500) at NE 28th Street (WSDOT)						
2025 Existing Conditions	C	16	0.32	C	16	0.40
2027 Background Conditions	C	20	0.43	C	24	0.60
2027 Buildout Conditions	C	21	0.43	C	24	0.61

Based on the results of the operational analysis, all study intersections are currently operating acceptably per applicable agency standards and are projected to continue operating acceptably through the 2027 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.

Intersection Queuing Analysis

In accordance with the City of Camas Engineering Design Standards, a queuing analysis was conducted at the study intersections to determine whether sufficient storage is available at applicable turning movements to accommodate projected queues.

The queue lengths were projected based on the results of a Synchro/SimTraffic simulation, with the reported values representing the 95th percentile queue length. The 95th percentile queue is a statistical measurement which indicates there is a 5 percent chance that the queue may exceed this length during the analysis period; however, given this is a probability, the 95th percentile queue length may theoretically never be met or observed in the field.

The projected 95th percentile queue lengths reported in the simulation are presented in Table 8 for the AM and PM peak hours. Note the reported queue lengths were rounded up to the nearest five feet. Available lane storages at applicable turning movements were rounded to the nearest five feet. Detailed queuing analysis worksheets are included in the technical appendix to this report.

Table 8: Queuing Analysis Summary

		Available Storage (ft)	AM Peak Hour 95th (ft)	PM Peak Hour 95th (ft)
1. NE Ingle Road at NE Goodwin Road				
2025 Existing Conditions	NEB LT	115	90	115
	NEB Through	-	75	95
	SWB Through	-	155	120
	SWB RT	100	50	55
	SEB LT	110	75	70
	SEB RT	-	145	70
2027 Background Conditions	NEB LT	115	110	**175**
	NEB Through	-	100	145
	SWB Through	-	235	200
	SWB RT	100	70	65
	SEB LT	110	95	100
	SEB RT	-	230	100
2027 Buildout Conditions	NEB LT	115	105	**175**
	NEB Through	-	90	150
	SWB Through	-	255	200
	SWB RT	100	65	70
	SEB LT	110	100	100
	SEB RT	-	215	100

Table Notes: ***BOLDED*** *text indicates queue length exceeds avaialble storage.*

Table 8: Queuing Analysis Summary (Continued)

		Available Storage (ft)	AM Peak Hour	PM Peak Hour
			95th (ft)	95th (ft)
2. N Hargrave Street at NE 28th Street				
2025 Existing Conditions	EB LT	-	35	30
	WB LT	-	0	10
	NB Lane	-	20	35
	SB Lane	-	50	50
2027 Background Conditions	EB LT	-	45	45
	WB LT	-	10	20
	NB Lane	-	40	50
	SB Lane	-	60	55
2027 Buildout Conditions	EB LT	-	45	45
	WB LT	-	10	30
	NB Lane	-	50	60
	SB Lane	-	65	60
3. NE 232nd Avenue at NE 28th Street				
2025 Existing Conditions	NB Lane	-	75	65
	SB Lane	-	20	25
2027 Background Conditions	NB Lane	-	95	90
	SB Lane	-	25	25
2027 Buildout Conditions	NB Lane	-	110	95
	SB Lane	-	20	30
4. SR-500 at NE 28th Street				
2025 Existing Conditions	NB Lane	-	0	0
	SB Lane	-	85	95
2027 Background Conditions	NB Lane	-	0	0
	SB Lane	-	95	120
2027 Buildout Conditions	NB Lane	-	0	0
	SB Lane	-	95	115

Table Notes: ***BOLDED*** *text indicates queue length exceeds avaialble storage.*

Based on the queuing analysis, the northeast bound left-turn lane at the intersection of NE Ingle Road at NE Goodwin Road is projected to experience 95th percentile queues which exceed the available striped lane storage. This extended queuing is projected to occur under the year 2027 analysis scenarios during the PM peak hour, with or without buildout of the proposed development. The maximum 95th percentile is projected to be approximately 175 feet, where the available striped storage area is approximately 115 feet. Although the 95th percentile queue may exceed the available striped storage area by approximately 60 feet (i.e., the length of 2 to 3 passenger cars), this excess queue can be accommodated by the northeast bound through lane, which experiences a 95th percentile queue of up to 150 feet for a total of 210 feet of queuing along the through lane. This 210-foot queue will not extend back to any other public intersection or driveway along NE Goodwin Road, whereby limited to no impacts to other intersections, as well as the study intersection itself, are expected to occur. Therefore, no queuing-related mitigation at the intersection is recommended as part of the proposed development.

Conclusions

The proposed development is projected to impact nine of the transportation facilities where proportionate share fees are being collected by the City of Vancouver. The proposed development application will need to contribute a proportionate share fee of $28,949 toward these transportation improvement projects.

No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the proposed development application.

Traffic signal and all-way stop-control warrants are not projected to be met at any of the applicable study intersections under any analysis scenario through the 2027 site buildout year. Accordingly, no revisions to traffic controls are necessary or recommended as part of the proposed Landing at Green Mountain Phase 2 project.

The proposed development will reconstruct its associated street frontage with NE 28th Street to include pedestrian and bicycle facilities in accordance with City of Camas street standards. Additionally, appropriate pedestrian and bicycle facilities will be constructed within site internal streets to accommodate student pickup/drop-off via school bus. Therefore, adequate pedestrian and bicycle facilities will be available to accommodate students who may reside within the proposed Landing at Green Mountain Phase 2 subdivision, and no further mitigation to pedestrian and bicycle facilities are necessary and recommended.

All study intersections are currently operating acceptably per applicable agency standards and are projected to continue operating acceptably through the 2027 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.

The northeast bound left-turn lane at the intersection of NE Ingle Road at NE Goodwin Road is projected to experience 95th percentile queues which exceed the available striped lane storage. However, this excess queue can be accommodated by the northeast bound through lane without extending back to any other public intersection or driveway along NE Goodwin Road. Limited to no impacts to other intersections, as well as the study intersection itself, are expected to occur due to this queuing. Therefore, no queuing-related mitigation at the intersection is recommended as part of the proposed development.

Appendix A – Site Plan

Site Plan

The Landing At Green Mountain 2

Located in the SW ¼ of Section 21, T2N, R3E, W.M.
Camas, Washington

APPLICANT:
Pacific Lifestyle Homes
Contact: Nick Edwards
11815 NE 99th St
Vancouver, WA 98682
(360) 597-7098
NickE@buildplh.com

OWNERS:
Emmert Family III LLC
10470 SE Hillcrest Dr
Happy Valley, OR 97086

Dan Elzinga
22007 NE 28th Street
Camas, WA, 98607

Linda Middagh
22015 NE 28th Street
Camas, WA, 98607

PROJECT CONTACT:
PLS Engineering
Jayson Taylor, PE
604 W Evergreen Blvd
Vancouver, WA 98660
(360) 944-6519
pm@plsengineering.com

SITE LOCATION:
Parcel # 173177000
Parcel # 173210000
Parcel # 173169000

22111 NE 28th Street Camas, WA 98607
22007 NE 28th Street Camas, WA, 98607
22015 NE 28th Street Camas, WA, 98607

LAND USE:
The applicant is proposing a 51 lot subdivision in the R7.5 zone.

Per Municipal Code section 18.09.060, density transfer is proposed with the inclusion of a park area that has 0.5 acres of contiguous area. We are requesting flexibility to the minimum lot width standards with the proposed park and trail on the south end of the site.

The applicant is proposing to develop a modified parcel #17317700 that will contain 10.6 acres. A proposed BLA will reduce parcel 17321000 to 1.96 acres and parcel 173169000 to 1.95 acres. The applicant is requesting to submit the BLA application concurrent with the preliminary subdivision application. The intent is to process the subdivision application as if the site does not include the other two parcels. The BLA will be recorded prior to final engineering approval.
The site is bordered by NE 28th Street and Green Mountain Subdivision to the north, recently constructed Monte Verde Subdivision (SUB22-05) to the east, a single-family residence to the west and Camp Currie to the south. A BPA righ-of-way runs diagonally through the site.

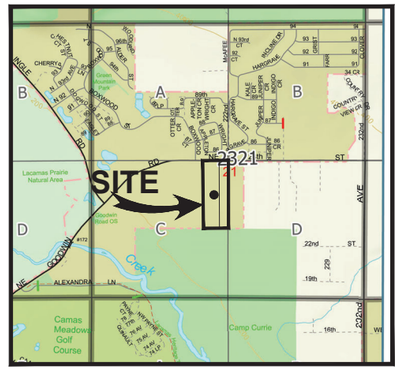
Proposed Development Area = 10.6 Acres
Proposed open space = 1.19 Acres
Minimum Proposed Lot Area = 5000 sq-ft
Maximum Proposed Lot Area = 8581 sq-ft
Average Lot Area = 5695 sq-ft
Min. Lot Width = 45'
Proposed Density = 5.42 d.u./net acre (51 lots)
Maximum Density = 5.80 d.u./net acre (54 lots)

TRANSPORTATION:
For primary access to the site the applicant is proposing to construct a roadway connection to NE 26th Street that is being constructed by the project to the east. NE 28th Street is classified as a 3-land collector/arterial. Half width improvements are proposed for this public roadway. Internal public roadways will consist of private and public local access roadways.

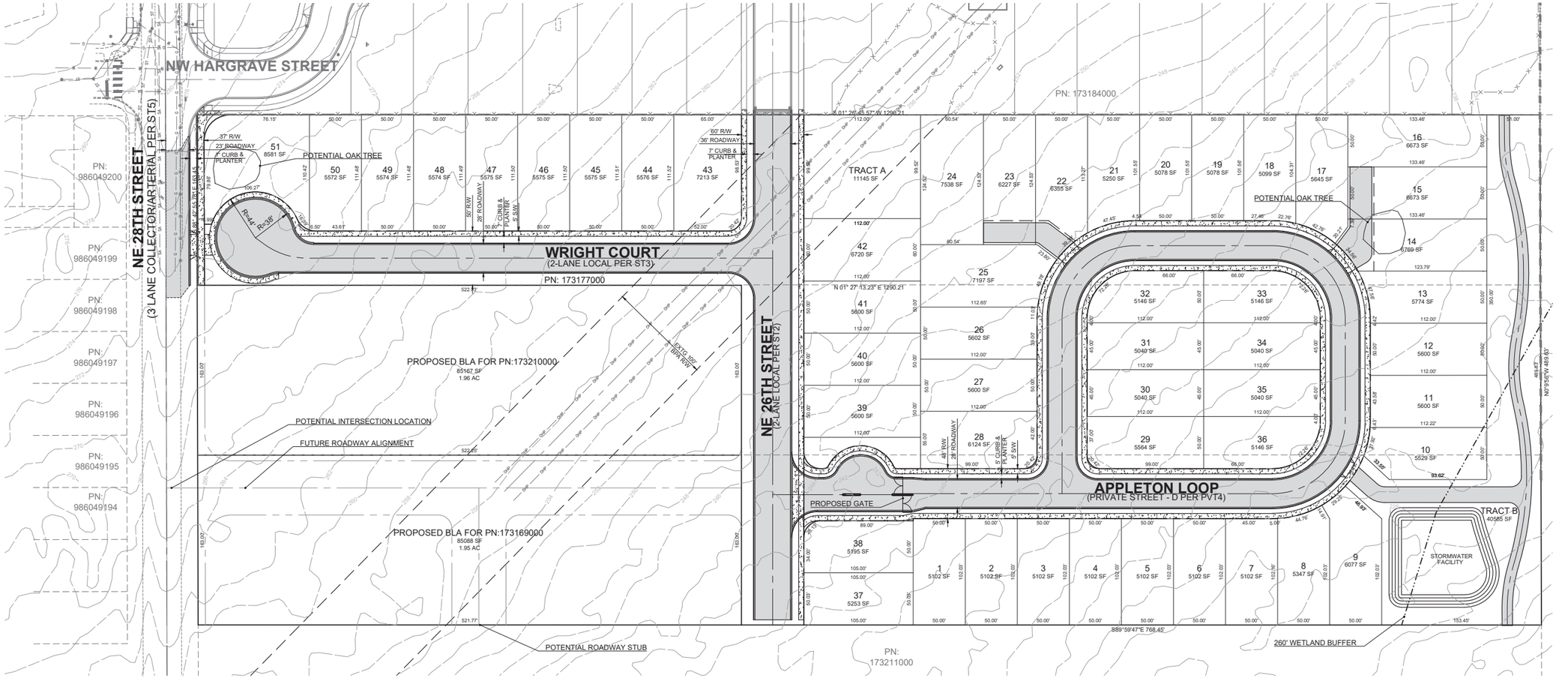
UTILITIES:
Stormwater runoff is proposed to be collected and routed to a detention facility located on the south end of the site, runoff generated from pollution generating surfaces will be treated prior to entering the stormwater facility.

The site will be served by public water and sanitary sewer provided by the City of Camas. Due to the existing grade of the site that slopes away from NE 28th Street, only a few lots can be served by gravity sewer service. A majority of the lots will need to utilize a grinder pump system.

There is an existing well and septic system located on the site that are proposed to be removed/abandoned.



VICINITY MAP
NOT TO SCALE



Scale 1" = 50'
50 25 0 50

Legend	
Proposed Asphalt	
Proposed Concrete	

Conceptual Plat For:

The Landing At Green Mountain 2

A Site Located in the City of Camas, WA

Engineering - Surveying - Planning | 604 W. Evergreen Blvd. Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

PLS ENGINEERING

Revisions

1	2	3	4	5	6

Project No.	3886
SCALE:	H: 1' = 50' V: N/A
DESIGNED BY:	JMT
DRAFTED BY:	JMT
REVIEWED BY:	TGJ

01
01

Appendix B – Trip Generation and Distribution

Trip Generation Calculations

RTC TAZ Data

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Site Trips - Existing Conditions

Land Use:	Single-Family Detached Housing
Land Use Code:	210
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	Dwelling Units
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	1

WARNING: Variable Quantity is less than Minimum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	0	1	1

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	1	0	1

WEEKDAY

Trip Rate: 9.43

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	5	5	10

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	5	5	10

Source: Trip Generation Manual, 11th Edition

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Site Trips - Proposed Conditions

Land Use:	Single-Family Detached Housing
Land Use Code:	210
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	Dwelling Units
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	32

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	6	16	22

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	19	11	30

WEEKDAY

Trip Rate: 9.43

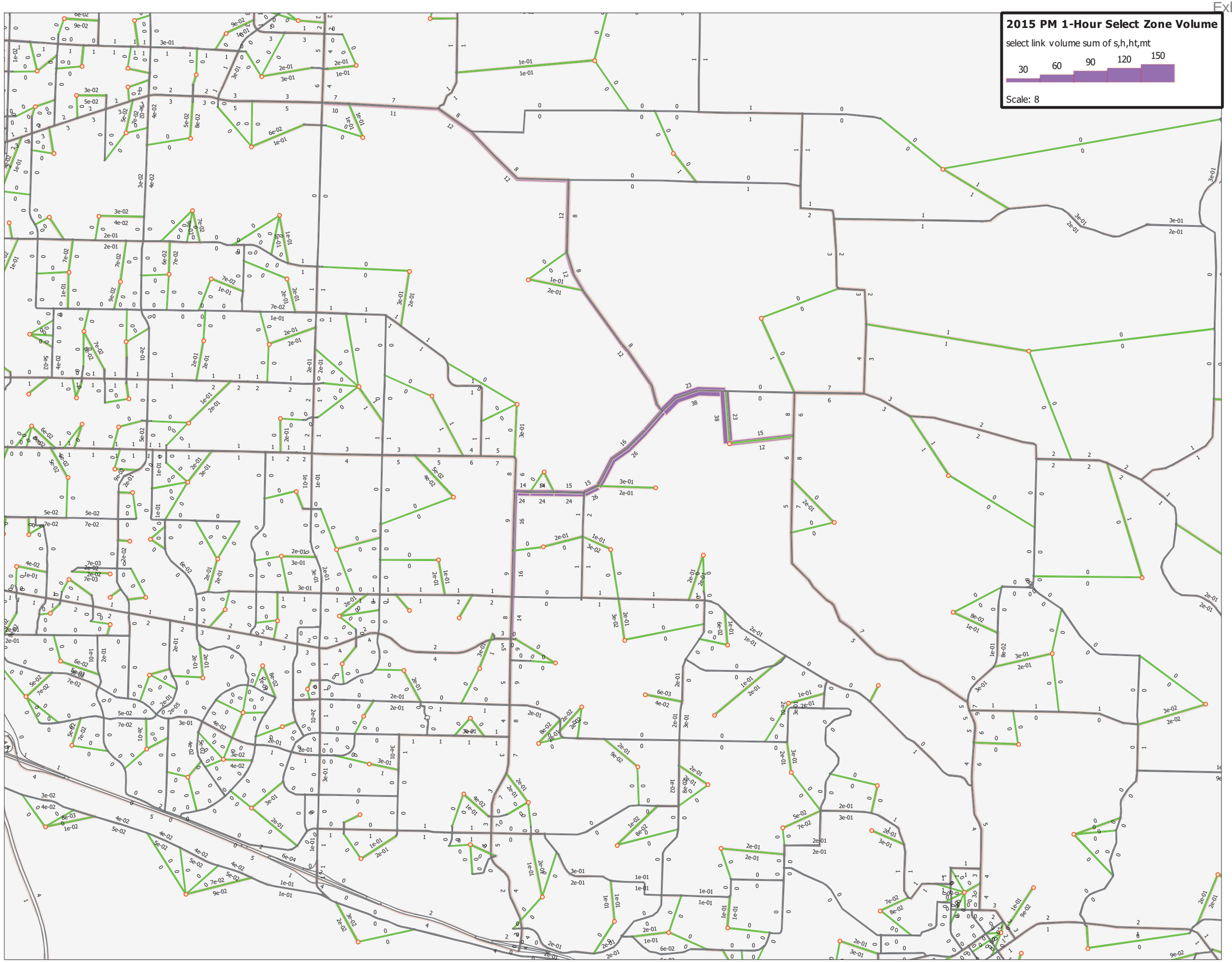
	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	151	151	302

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	152	152	304

Source: Trip Generation Manual, 11th Edition


2015 PM 1-Hour Select Zone Volume
select link volume sum of s,h,ht,mt
30
60
90
120
150
Scale: 8

Appendix C – Traffic Volumes

Traffic Counts

In-Process Trips

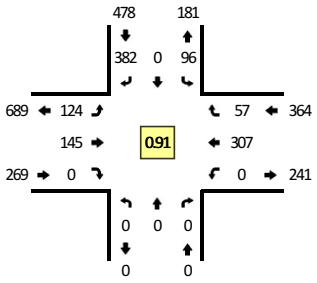
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

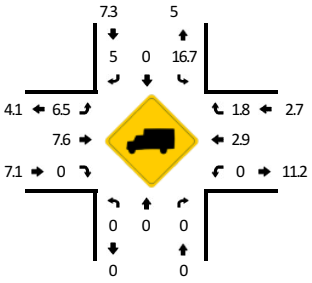
LOCATION: NE Ingle Rd -- NE Goodwin Rd/NE 28th St
CITY/STATE: Camas, WA

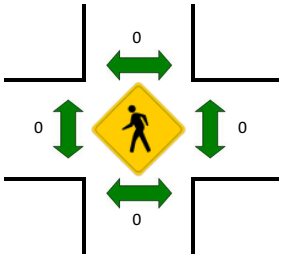
QC JOB #: 16956001
DATE: Wed, Mar 12 2025

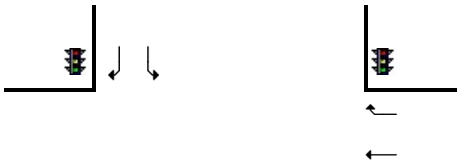
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 8:35 AM -- 8:50 AM

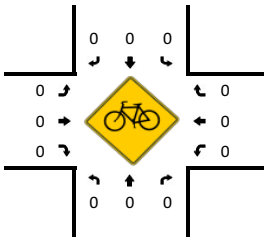


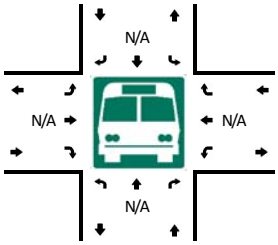
TRUE DATA TO IMPROVE MOBILITY

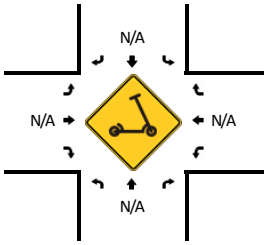












5-Min Count Period Beginning At	NE Ingle Rd (Northbound)				NE Ingle Rd (Southbound)				NE Goodwin Rd/NE 28th St (Eastbound)				NE Goodwin Rd/NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	9	0	15	0	6	8	0	0	0	10	6	0	54	
7:05 AM	0	0	0	0	3	0	15	0	6	7	0	0	0	12	7	0	50	
7:10 AM	0	0	0	0	9	0	9	0	7	8	0	0	0	20	1	0	54	
7:15 AM	0	0	0	0	3	0	12	0	7	6	0	0	0	15	6	0	49	
7:20 AM	0	0	0	0	6	0	19	0	6	10	0	0	0	14	3	0	58	
7:25 AM	0	0	0	0	9	0	20	0	8	8	0	0	0	20	4	0	69	
7:30 AM	0	0	0	0	7	0	25	0	8	7	0	0	0	19	8	0	74	
7:35 AM	0	0	0	0	11	0	22	0	5	7	0	0	0	35	6	0	86	
7:40 AM	0	0	0	0	6	0	35	0	8	10	0	0	0	24	4	0	87	
7:45 AM	0	0	0	0	12	0	31	0	3	15	0	0	0	33	4	0	98	
7:50 AM	0	0	0	0	8	0	39	0	6	23	0	0	0	23	4	0	103	
7:55 AM	0	0	0	0	5	0	31	0	4	12	0	0	0	24	5	0	81	863
8:00 AM	0	0	0	0	14	0	30	0	7	15	0	0	0	31	7	0	104	913
8:05 AM	0	0	0	0	7	0	25	0	13	12	0	0	0	27	5	0	89	952
8:10 AM	0	0	0	0	5	0	23	0	7	14	0	0	0	24	5	0	78	976
8:15 AM	0	0	0	0	6	0	36	0	4	5	0	0	0	20	4	0	75	1002
8:20 AM	0	0	0	0	6	0	32	0	7	10	0	0	0	23	9	0	87	1031
8:25 AM	0	0	0	0	13	0	45	0	17	7	0	0	0	22	4	0	108	1070
8:30 AM	0	0	0	0	2	0	38	0	10	12	0	0	0	18	1	0	81	1077
8:35 AM	0	0	0	0	9	0	45	0	10	11	0	0	0	37	3	0	115	1106
8:40 AM	0	0	0	0	8	0	20	0	12	9	0	0	0	30	7	0	86	1105
8:45 AM	0	0	0	0	13	0	18	0	27	15	0	0	0	28	3	0	104	1111
8:50 AM	0	0	0	0	5	0	21	0	11	15	0	0	0	25	3	0	80	1088
8:55 AM	0	0	0	0	8	0	13	0	9	12	0	0	0	15	4	0	61	1068

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	120	0	332	0	196	140	0	0	0	380	52	0	1220
Heavy Trucks	0	0	0		36	0	12		16	4	0		0	4	4		76
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

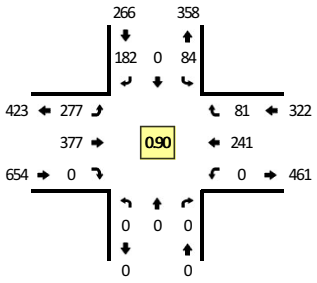
Type of peak hour being reported: Intersection Peak

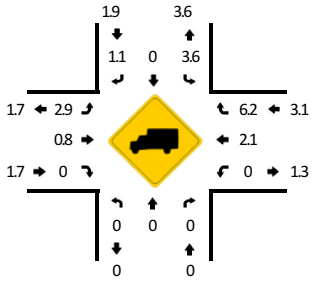
Method for determining peak hour: Total Entering Volume

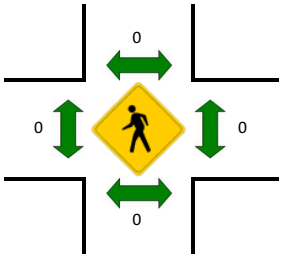
LOCATION: NE Ingle Rd -- NE Goodwin Rd/NE 28th St
CITY/STATE: Camas, WA

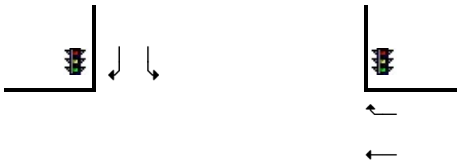
QC JOB #: 16956002
DATE: Wed, Mar 12 2025

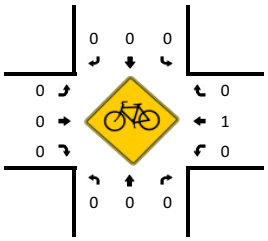
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

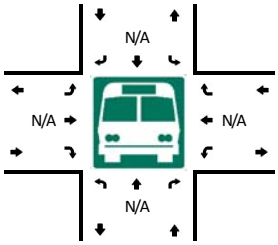


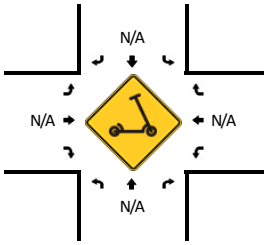












5-Min Count Period Beginning At	NE Ingle Rd (Northbound)				NE Ingle Rd (Southbound)				NE Goodwin Rd/NE 28th St (Eastbound)				NE Goodwin Rd/NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	10	0	8	0	17	34	0	0	0	11	9	0	89	
4:05 PM	0	0	0	0	12	0	9	0	13	24	0	0	0	17	7	0	82	
4:10 PM	0	0	0	0	10	0	12	0	26	29	0	0	0	21	9	0	107	
4:15 PM	0	0	0	0	6	0	17	0	25	27	0	0	0	15	3	0	93	
4:20 PM	0	0	0	0	12	0	17	0	23	22	0	0	0	15	3	0	92	
4:25 PM	0	0	0	0	7	0	15	0	34	24	0	0	0	16	4	0	100	
4:30 PM	0	0	0	0	5	0	12	0	28	29	0	0	0	18	15	0	107	
4:35 PM	0	0	0	0	4	0	11	0	12	27	0	0	0	23	4	0	81	
4:40 PM	0	0	0	0	7	0	20	0	19	25	0	0	0	26	11	0	108	
4:45 PM	0	0	0	0	4	0	15	0	18	36	0	0	0	22	8	0	103	
4:50 PM	0	0	0	0	6	0	18	0	21	31	0	0	0	23	3	0	102	
4:55 PM	0	0	0	0	11	0	12	0	16	29	0	0	0	15	3	0	86	1150
5:00 PM	0	0	0	0	6	0	10	0	19	50	0	0	0	21	6	0	112	1173
5:05 PM	0	0	0	0	3	0	18	0	29	24	0	0	0	21	4	0	99	1190
5:10 PM	0	0	0	0	9	0	14	0	29	28	0	0	0	13	5	0	98	1181
5:15 PM	0	0	0	0	13	0	21	0	32	36	0	0	0	15	8	0	125	1213
5:20 PM	0	0	0	0	8	0	23	0	23	32	0	0	0	18	7	0	111	1232
5:25 PM	0	0	0	0	8	0	8	0	31	30	0	0	0	26	7	0	110	1242
5:30 PM	0	0	0	0	5	0	17	0	19	18	0	0	0	14	6	0	79	1214
5:35 PM	0	0	0	0	6	0	16	0	27	34	0	0	0	15	8	0	106	1239
5:40 PM	0	0	0	0	10	0	15	0	23	32	0	0	0	18	4	0	102	1233
5:45 PM	0	0	0	0	14	0	11	0	13	31	0	0	0	17	7	0	93	1223
5:50 PM	0	0	0	0	5	0	20	0	19	20	0	0	0	26	3	0	93	1214
5:55 PM	0	0	0	0	9	0	13	0	15	28	0	0	0	20	9	0	94	1222

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	116	0	208	0	344	392	0	0	0	236	88	0	1384
Heavy Trucks	0	0	0		4	0	0		0	4	0		0	4	4		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

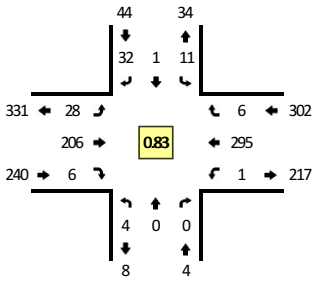
Type of peak hour being reported: Intersection Peak

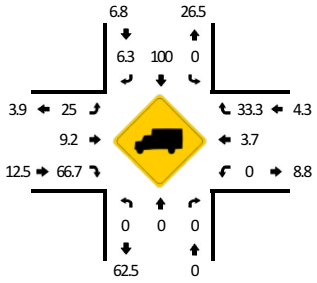
Method for determining peak hour: Total Entering Volume

LOCATION: N Hargrave St -- NE 28th St
CITY/STATE: Camas, WA

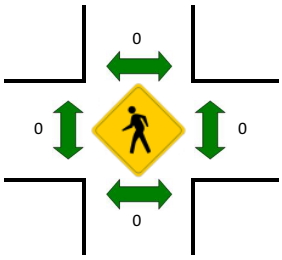
QC JOB #: 16956003
DATE: Wed, Mar 12 2025

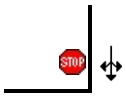
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

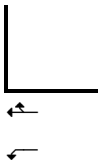


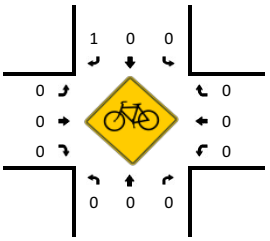


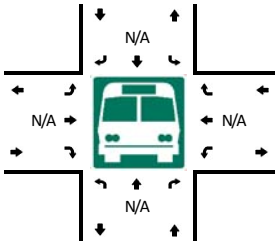
TRUE DATA TO IMPROVE MOBILITY

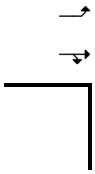


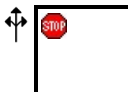


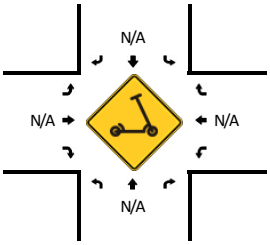












5-Min Count Period Beginning At	N Hargrave St (Northbound)				N Hargrave St (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	1	0	1	14	0	0	0	15	0	0	32	
7:05 AM	0	0	0	0	0	0	3	0	3	11	0	0	0	14	0	0	31	
7:10 AM	0	0	0	0	0	0	5	0	1	10	0	0	0	15	0	0	31	
7:15 AM	0	0	0	0	0	0	1	0	3	8	2	0	1	16	0	0	31	
7:20 AM	1	0	0	0	0	0	3	0	2	15	0	0	0	13	0	0	34	
7:25 AM	1	0	0	0	0	0	1	0	2	15	2	0	0	31	0	0	52	
7:30 AM	0	0	0	0	0	0	2	0	2	8	0	0	0	19	1	0	32	
7:35 AM	0	0	0	0	0	0	6	0	4	15	0	0	1	21	0	0	47	
7:40 AM	0	0	0	0	0	0	2	0	1	13	0	0	1	24	0	0	41	
7:45 AM	1	0	0	0	2	1	6	0	5	22	1	0	0	24	0	0	62	
7:50 AM	1	0	0	0	2	0	4	0	2	24	1	0	0	19	0	0	53	
7:55 AM	1	0	0	0	0	0	1	0	3	19	1	0	0	26	1	0	52	498
8:00 AM	0	0	0	0	3	0	1	0	3	30	1	0	1	34	0	0	73	539
8:05 AM	0	0	0	0	0	0	2	0	2	14	0	0	0	28	1	0	47	555
8:10 AM	0	0	0	0	0	0	2	0	1	21	0	0	0	25	1	0	50	574
8:15 AM	1	0	0	0	0	0	0	0	1	6	0	0	0	23	1	0	32	575
8:20 AM	0	0	0	0	1	0	2	0	2	12	1	0	0	23	0	0	41	582
8:25 AM	0	0	0	0	1	0	2	0	2	13	1	0	0	24	0	0	43	573
8:30 AM	0	0	0	0	0	0	1	0	1	13	0	0	0	13	1	0	29	570
8:35 AM	0	0	0	0	1	0	4	0	3	15	0	0	0	25	0	0	48	571
8:40 AM	0	0	0	0	1	0	7	0	3	17	0	0	0	31	1	0	60	590
8:45 AM	0	0	0	0	2	0	3	0	5	20	0	0	0	23	1	0	54	582
8:50 AM	0	0	0	0	1	0	5	0	1	16	1	0	0	15	0	0	39	568
8:55 AM	0	0	0	0	0	0	7	0	2	17	0	0	0	11	0	0	37	553

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	20	0	24	0	32	292	12	0	4	316	4	0	712
Heavy Trucks	0	0	0		0	0	4		8	24	8		0	12	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

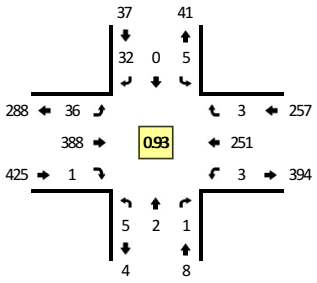
Type of peak hour being reported: Intersection Peak

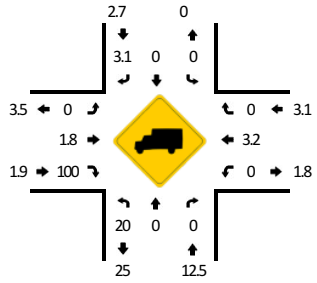
Method for determining peak hour: Total Entering Volume

LOCATION: N Hargrave St -- NE 28th St
CITY/STATE: Camas, WA

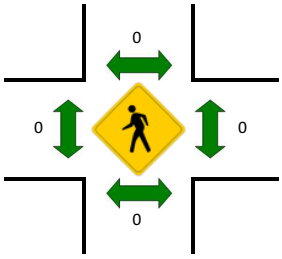
QC JOB #: 16956004
DATE: Wed, Mar 12 2025

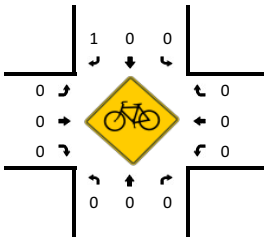
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

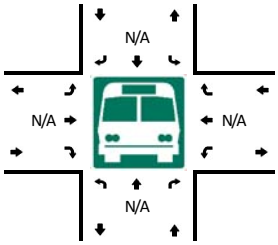


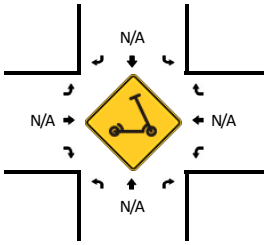


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	N Hargrave St (Northbound)				N Hargrave St (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	0	3	0	0	37	0	0	0	16	0	0	57	
4:05 PM	0	0	0	0	2	0	0	0	2	31	2	0	0	21	0	0	58	
4:10 PM	0	0	0	0	0	0	4	0	2	32	0	0	0	22	0	0	60	
4:15 PM	0	0	0	0	0	0	4	0	4	26	0	0	0	15	0	0	49	
4:20 PM	1	0	0	0	0	0	2	0	2	33	0	0	0	13	0	0	51	
4:25 PM	1	0	0	0	0	0	3	0	3	24	0	0	0	15	0	0	46	
4:30 PM	2	1	0	0	1	0	4	0	1	32	0	0	2	24	1	0	68	
4:35 PM	0	0	1	0	1	0	0	0	2	25	0	0	0	22	0	0	51	
4:40 PM	1	0	0	0	0	0	3	0	1	31	0	0	0	28	0	0	64	
4:45 PM	1	0	0	0	0	0	4	0	3	34	0	0	0	24	0	0	66	
4:50 PM	0	0	0	0	0	0	5	0	1	30	0	0	0	19	0	0	55	
4:55 PM	0	0	0	0	2	0	4	0	6	26	1	0	0	15	0	0	54	679
5:00 PM	0	0	0	0	0	0	0	0	3	48	0	0	0	24	0	0	75	697
5:05 PM	0	0	0	0	0	0	4	0	3	25	0	0	0	16	0	0	48	687
5:10 PM	1	1	0	0	0	0	2	0	3	28	0	0	1	13	1	0	50	677
5:15 PM	0	0	0	0	1	0	2	0	3	42	0	0	0	22	0	0	70	698
5:20 PM	0	0	0	0	0	0	2	0	7	35	0	0	0	24	0	0	68	715
5:25 PM	0	0	0	0	0	0	2	0	3	32	0	0	0	20	1	0	58	727
5:30 PM	0	0	0	0	0	0	2	0	2	18	0	0	0	19	0	0	41	700
5:35 PM	1	0	0	0	0	0	2	0	1	36	0	0	0	19	0	0	59	708
5:40 PM	1	0	0	0	0	0	4	0	2	31	0	0	1	18	1	0	58	702
5:45 PM	0	0	0	0	0	0	5	0	3	41	0	0	0	20	0	0	69	705
5:50 PM	0	0	0	0	0	0	5	0	2	24	0	0	0	22	0	0	53	703
5:55 PM	0	0	0	0	0	1	10	0	2	27	0	0	0	20	0	0	60	709

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	24	0	52	436	0	0	0	264	4	0	784
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	8	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

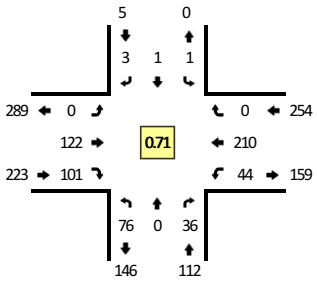
Type of peak hour being reported: Intersection Peak

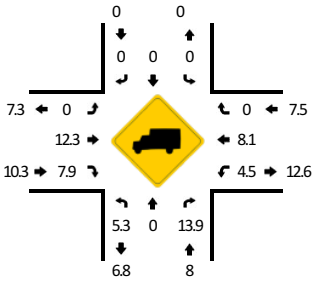
Method for determining peak hour: Total Entering Volume

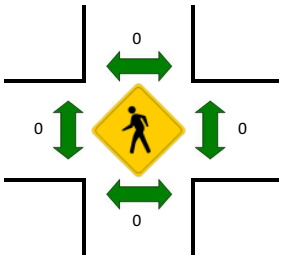
LOCATION: NE 232nd Ave -- NE 28th St
CITY/STATE: Fern Prairie, WA

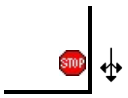
QC JOB #: 16956005
DATE: Wed, Mar 12 2025

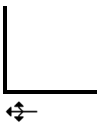
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

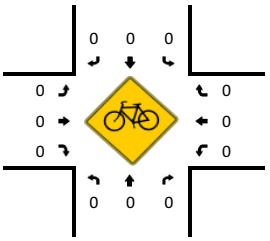


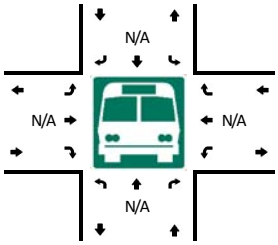


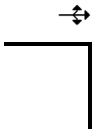


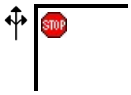


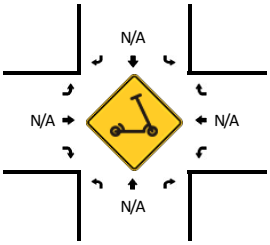












5-Min Count Period Beginning At	NE 232nd Ave (Northbound)				NE 232nd Ave (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	0	0	0	0	0	7	9	0	1	11	2	0	32	
7:05 AM	2	0	0	0	0	0	0	0	0	6	3	0	0	9	0	0	20	
7:10 AM	3	0	2	0	0	0	0	0	0	8	0	0	1	9	1	0	24	
7:15 AM	1	0	0	0	0	0	0	0	0	5	1	0	0	12	0	0	19	
7:20 AM	2	0	0	0	0	0	0	0	0	8	3	0	2	7	0	0	22	
7:25 AM	1	0	0	0	1	0	1	0	0	7	8	0	2	29	0	0	49	
7:30 AM	5	0	0	0	0	0	0	0	0	8	0	0	1	16	0	0	30	
7:35 AM	1	0	0	0	0	0	0	0	0	2	9	0	7	18	0	0	37	
7:40 AM	2	0	0	0	0	0	0	0	0	11	5	0	6	16	0	0	40	
7:45 AM	4	0	6	0	1	0	0	0	0	9	8	0	6	15	0	0	49	
7:50 AM	4	0	4	0	0	0	0	0	0	10	20	0	18	18	0	0	74	
7:55 AM	14	0	8	0	0	0	0	0	0	15	13	0	7	12	0	0	69	465
8:00 AM	15	0	7	0	0	1	1	0	0	12	14	0	1	16	0	0	67	500
8:05 AM	9	0	6	0	0	0	0	0	0	14	9	0	0	20	0	0	58	538
8:10 AM	5	0	2	0	0	0	0	0	0	10	7	0	0	14	0	0	38	552
8:15 AM	6	0	1	0	0	0	0	0	0	4	5	0	0	18	0	0	34	567
8:20 AM	4	0	1	0	0	0	0	0	0	10	3	0	6	21	0	0	45	590
8:25 AM	1	0	0	0	0	0	0	0	0	10	5	0	3	19	0	0	38	579
8:30 AM	4	0	0	0	0	0	1	0	0	7	5	0	2	14	0	0	33	582
8:35 AM	4	0	1	0	0	0	1	0	0	9	4	0	1	17	0	0	37	582
8:40 AM	6	0	0	0	0	0	0	0	0	12	8	0	0	26	0	0	52	594
8:45 AM	2	0	3	0	0	0	0	0	0	15	5	0	0	16	0	0	41	586
8:50 AM	2	0	0	0	0	0	0	0	0	10	5	0	0	17	0	0	34	546
8:55 AM	3	0	1	0	0	0	0	0	0	11	6	0	0	13	0	0	34	511

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	132	0	76	0	0	4	4	0	0	148	188	0	104	184	0	0	840
Heavy Trucks	8	0	12		0	0	0		0	12	16		0	12	0		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

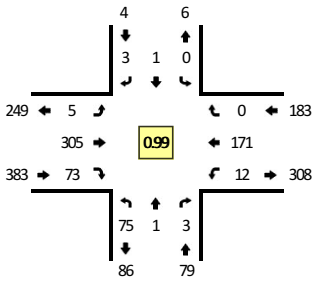
Type of peak hour being reported: Intersection Peak

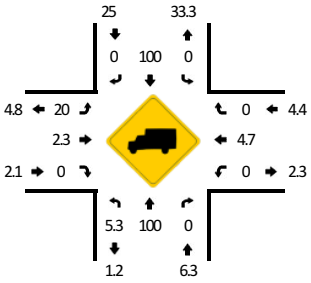
Method for determining peak hour: Total Entering Volume

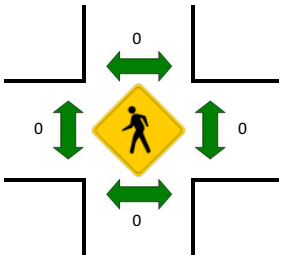
LOCATION: NE 232nd Ave -- NE 28th St
CITY/STATE: Fern Prairie, WA

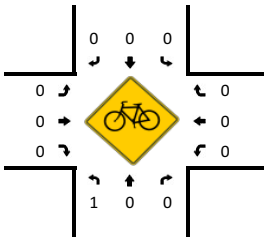
QC JOB #: 16956006
DATE: Wed, Mar 12 2025

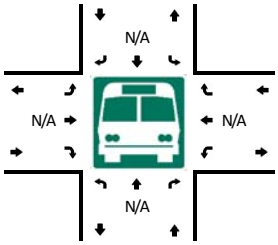
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 4:25 PM -- 4:40 PM

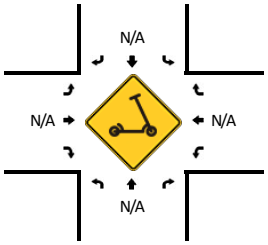












5-Min Count Period Beginning At	NE 232nd Ave (Northbound)				NE 232nd Ave (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	0	1	0	0	0	0	0	0	27	8	0	1	8	0	0	50	
4:05 PM	8	0	0	0	0	0	0	0	0	30	6	0	1	14	0	0	59	
4:10 PM	8	0	0	0	0	0	0	0	1	22	7	0	1	15	0	0	54	
4:15 PM	3	0	1	0	0	0	1	0	0	20	6	0	0	13	0	0	44	
4:20 PM	1	0	0	0	0	0	0	0	0	24	6	0	0	11	0	0	42	
4:25 PM	7	1	1	0	0	0	1	0	1	27	6	0	0	9	0	0	53	
4:30 PM	8	0	1	0	0	0	0	0	0	24	7	0	0	18	0	0	58	
4:35 PM	6	0	0	0	0	0	1	0	0	24	3	0	0	19	0	0	53	
4:40 PM	5	0	0	0	0	0	1	0	0	18	6	0	1	18	0	0	49	
4:45 PM	8	0	0	0	0	0	0	0	2	27	4	0	3	17	0	0	61	
4:50 PM	4	0	0	0	0	0	0	0	0	30	3	0	2	10	0	0	49	
4:55 PM	4	0	0	0	0	0	0	0	0	20	7	0	2	13	0	0	46	618
5:00 PM	8	0	1	0	0	0	0	0	0	23	10	0	0	15	0	0	57	625
5:05 PM	6	0	0	0	0	0	0	0	1	36	3	0	0	14	0	0	60	626
5:10 PM	4	0	0	0	0	0	0	0	1	19	9	0	0	8	0	0	41	613
5:15 PM	9	0	0	0	0	1	0	0	0	31	9	0	1	12	0	0	63	632
5:20 PM	6	0	0	0	0	0	0	0	0	26	6	0	3	18	0	0	59	649
5:25 PM	6	0	1	0	0	0	0	0	0	21	8	0	0	12	0	0	48	644
5:30 PM	3	0	0	0	0	0	0	0	0	17	5	0	1	15	0	0	41	627
5:35 PM	5	0	1	0	0	0	0	0	1	30	3	0	0	13	0	0	53	627
5:40 PM	5	0	0	0	0	0	0	0	1	21	8	0	1	11	0	0	47	625
5:45 PM	6	0	0	0	0	0	1	0	0	21	12	0	2	15	0	0	57	621
5:50 PM	7	0	1	0	0	0	0	0	2	18	10	0	0	15	0	0	53	625
5:55 PM	7	0	0	0	0	0	0	0	0	25	0	0	1	11	0	0	44	623

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	4	8	0	0	0	8	0	4	300	64	0	0	184	0	0	656
Heavy Trucks	8	4	0		0	0	0		0	8	0		0	12	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	4	0	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

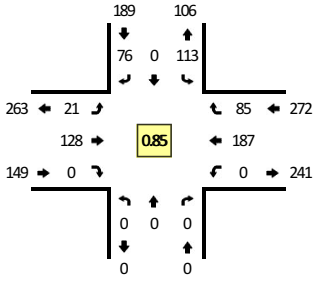
Type of peak hour being reported: Intersection Peak

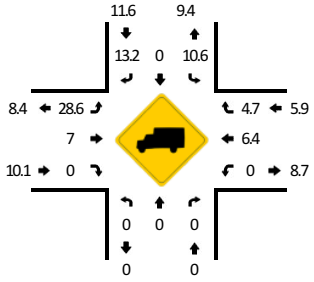
Method for determining peak hour: Total Entering Volume

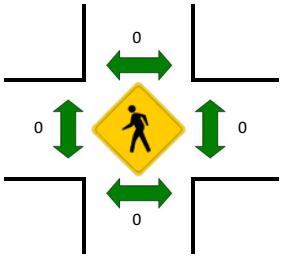
LOCATION: NE 242nd Ave -- NE 28th St
CITY/STATE: Fern Prairie, WA

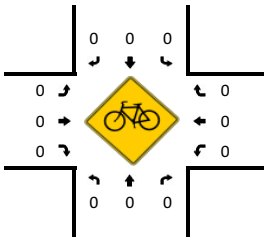
QC JOB #: 16956007
DATE: Wed, Mar 12 2025

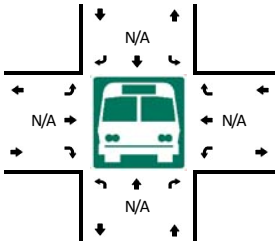
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

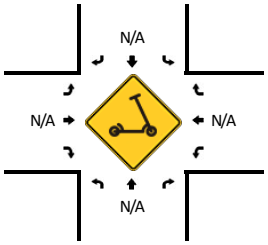












5-Min Count Period Beginning At	NE 242nd Ave (Northbound)				NE 242nd Ave (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	3	0	3	4	0	0	0	10	2	0	23	
7:05 AM	0	0	0	0	4	0	3	0	0	6	0	0	0	6	6	0	25	
7:10 AM	0	0	0	0	0	0	3	0	2	8	0	0	0	10	7	0	30	
7:15 AM	0	0	0	0	4	0	5	0	1	4	0	0	0	10	10	0	34	
7:20 AM	0	0	0	0	7	0	3	0	1	7	0	0	0	9	13	0	40	
7:25 AM	0	0	0	0	8	0	8	0	1	7	0	0	0	17	7	0	48	
7:30 AM	0	0	0	0	8	0	7	0	0	8	0	0	0	13	10	0	46	
7:35 AM	0	0	0	0	9	0	5	0	1	0	0	0	0	18	4	0	37	
7:40 AM	0	0	0	0	10	0	11	0	0	13	0	0	0	15	7	0	56	
7:45 AM	0	0	0	0	4	0	10	0	2	12	0	0	0	13	6	0	47	
7:50 AM	0	0	0	0	4	0	14	0	2	14	0	0	0	21	5	0	60	
7:55 AM	0	0	0	0	15	0	6	0	3	19	0	0	0	12	8	0	63	509
8:00 AM	0	0	0	0	12	0	0	0	4	11	0	0	0	17	11	0	55	541
8:05 AM	0	0	0	0	10	0	6	0	3	21	0	0	0	16	6	0	62	578
8:10 AM	0	0	0	0	13	0	3	0	3	10	0	0	0	10	8	0	47	595
8:15 AM	0	0	0	0	12	0	2	0	1	3	0	0	0	16	7	0	41	602
8:20 AM	0	0	0	0	8	0	4	0	1	10	0	0	0	19	6	0	48	610
8:25 AM	0	0	0	0	7	0	6	0	2	5	0	0	0	15	4	0	39	601
8:30 AM	0	0	0	0	7	0	3	0	1	11	0	0	0	9	6	0	37	592
8:35 AM	0	0	0	0	6	0	3	0	3	7	0	0	0	18	10	0	47	602
8:40 AM	0	0	0	0	5	0	6	0	2	9	0	0	0	17	3	0	42	588
8:45 AM	0	0	0	0	10	0	3	0	2	12	0	0	0	16	11	0	54	595
8:50 AM	0	0	0	0	9	0	2	0	1	10	0	0	0	11	4	0	37	572
8:55 AM	0	0	0	0	8	0	3	0	1	10	0	0	0	9	4	0	35	544

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	148	0	48	0	40	204	0	0	0	180	100	0	720
Heavy Trucks	0	0	0		12	0	0		12	8	0		0	8	12		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/18/2025 2:00 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

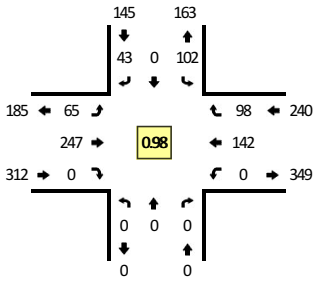
Type of peak hour being reported: Intersection Peak

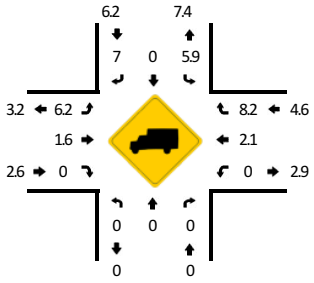
Method for determining peak hour: Total Entering Volume

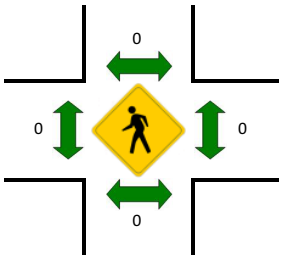
LOCATION: NE 242nd Ave -- NE 28th St
CITY/STATE: Fern Prairie, WA

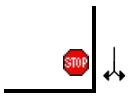
QC JOB #: 16956008
DATE: Wed, Mar 12 2025

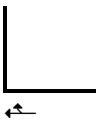
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

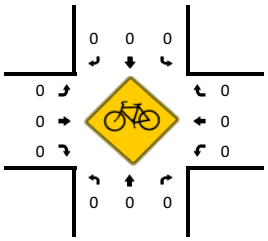


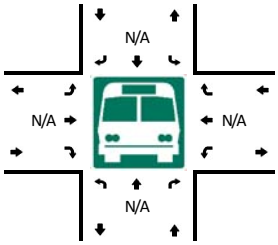


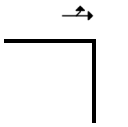


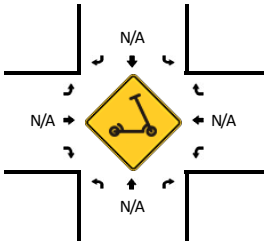












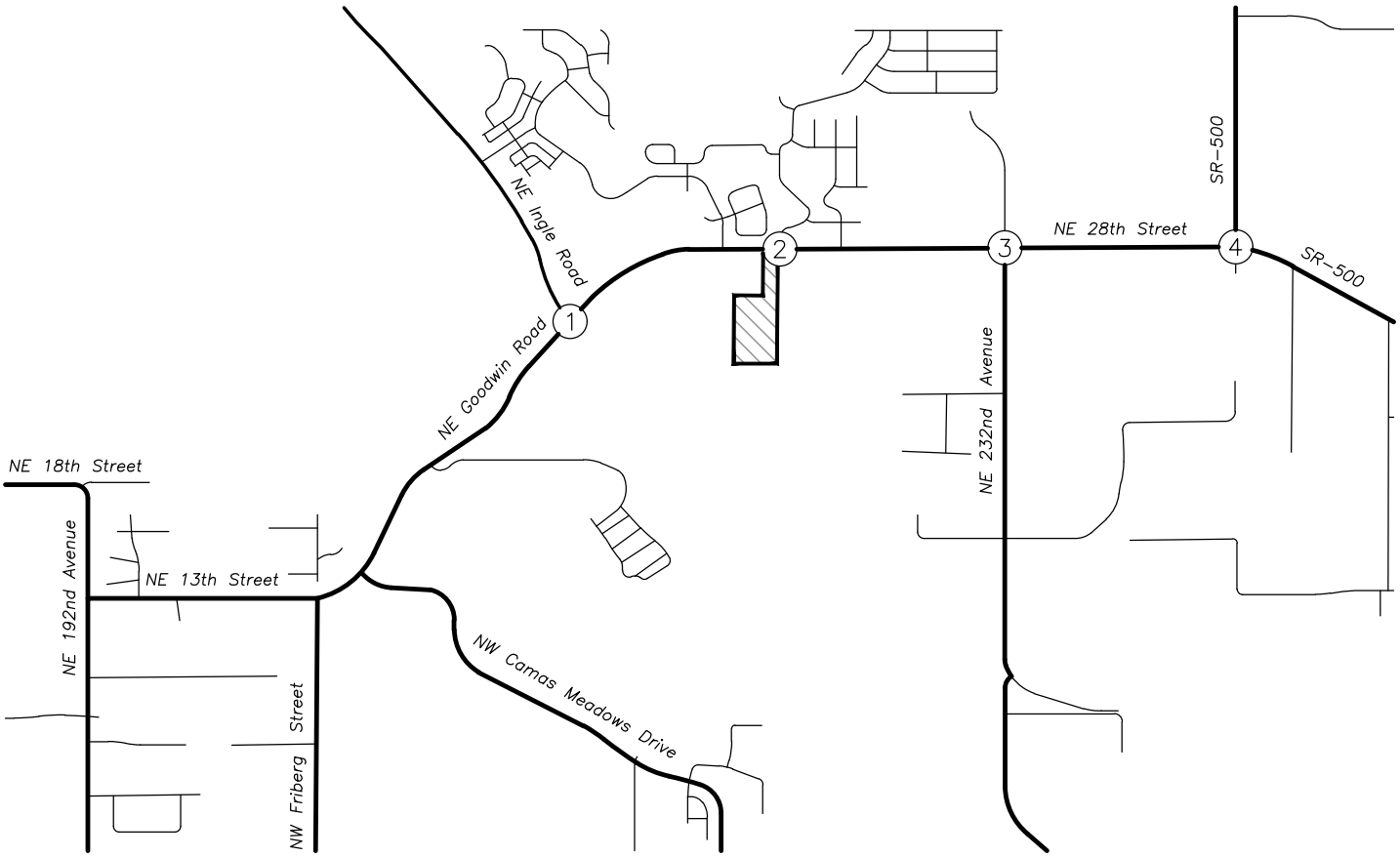
5-Min Count Period Beginning At	NE 242nd Ave (Northbound)				NE 242nd Ave (Southbound)				NE 28th St (Eastbound)				NE 28th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	9	0	1	0	5	18	0	0	0	6	8	0	47	
4:05 PM	0	0	0	0	5	0	3	0	6	29	0	0	0	12	6	0	61	
4:10 PM	0	0	0	0	9	0	6	0	6	14	0	0	0	11	11	0	57	
4:15 PM	0	0	0	0	6	0	1	0	4	19	0	0	0	10	8	0	48	
4:20 PM	0	0	0	0	6	0	3	0	4	18	0	0	0	7	9	0	47	
4:25 PM	0	0	0	0	6	0	4	0	5	26	0	0	0	8	9	0	58	
4:30 PM	0	0	0	0	9	0	5	0	5	21	0	0	0	13	9	0	62	
4:35 PM	0	0	0	0	8	0	1	0	4	17	0	0	0	17	8	0	55	
4:40 PM	0	0	0	0	8	0	8	0	6	12	0	0	0	14	9	0	57	
4:45 PM	0	0	0	0	9	0	3	0	10	19	0	0	0	13	9	0	63	
4:50 PM	0	0	0	0	5	0	2	0	8	24	0	0	0	10	6	0	55	
4:55 PM	0	0	0	0	10	0	4	0	2	13	0	0	0	10	7	0	46	656
5:00 PM	0	0	0	0	12	0	4	0	7	19	0	0	0	13	8	0	63	672
5:05 PM	0	0	0	0	11	0	2	0	10	26	0	0	0	10	7	0	66	677
5:10 PM	0	0	0	0	9	0	2	0	1	20	0	0	0	7	9	0	48	668
5:15 PM	0	0	0	0	4	0	2	0	3	26	0	0	0	13	7	0	55	675
5:20 PM	0	0	0	0	11	0	6	0	4	24	0	0	0	14	10	0	69	697
5:25 PM	0	0	0	0	10	0	5	0	5	18	0	0	0	5	8	0	51	690
5:30 PM	0	0	0	0	6	0	2	0	2	15	0	0	0	16	10	0	51	679
5:35 PM	0	0	0	0	8	0	2	0	8	20	0	0	0	11	7	0	56	680
5:40 PM	0	0	0	0	8	0	3	0	5	14	0	0	0	10	7	0	47	670
5:45 PM	0	0	0	0	11	0	3	0	4	19	0	0	0	11	10	0	58	665
5:50 PM	0	0	0	0	5	0	4	0	6	15	0	0	0	10	7	0	47	657
5:55 PM	0	0	0	0	6	0	1	0	6	16	0	0	0	12	3	0	44	655

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	128	0	32	0	72	260	0	0	0	120	96	0	708
Heavy Trucks	0	0	0		0	0	0		4	4	0		0	0	8		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

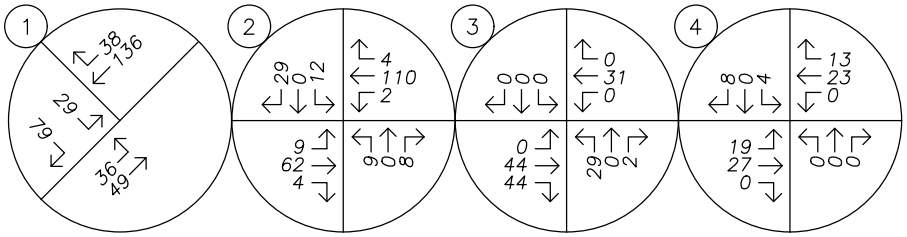
Comments:

Report generated on 3/18/2025 2:00 PM

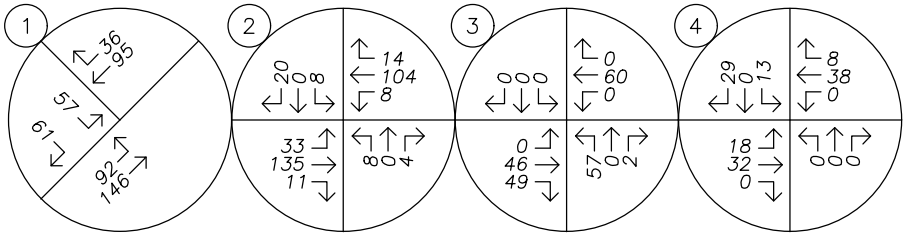
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



AM PEAK HOUR



PM PEAK HOUR



no scale

lancaster mobley

TRAFFIC VOLUMES
In-Process Development Trips
AM & PM Peak Hours

Figure A
Landing at Green Mountain Phase 2
4/9/2025

Appendix D – Safety Analysis

Crash History Data

Preliminary Signal Warrant Analysis

Preliminary All-Way Stop-Control Warrant Analysis

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

CITY STREET INTERSECTIONS

Goodwin Rd @ Ingle Rd

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION
City Street	Clark	Camas	NE GOODWIN RD			0	NE INGLE RD						No	EA18227	02/18/2020	15:27	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn
City Street	Clark	Camas	NE GOODWIN RD			2456	NE INGLE RD						No	EF36498	11/01/2024	19:53	Suspected Minor Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-Street Lights On	Entering at angle	Making Right Turn
City Street	Clark	Camas	NE GOODWIN RD			2456	NE INGLE RD						No	EE09429	10/13/2023	13:05	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Left Turn
City Street	Clark	Camas	NE GOODWIN RD			2456	NE INGLE RD						No	EC98250	10/28/2022	15:07	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Making Left Turn
City Street	Clark	Camas	NE GOODWIN RD			2456	NE INGLE RD						No	ED96903	09/05/2023	11:15	Suspected Minor Injury	1	0	1	0	1	Passenger Car		At Intersection and Related	Clear	Dry	Daylight	Vehicle Strikes Pedalcyclist	Making Left Turn
City Street	Clark	Camas	NE GOODWIN RD			2456	NE INGLE RD						No	EB31078	05/10/2021	08:30	No Apparent Injury	0	0	2	0	0	Passenger Car	Truck (Flatbad,Van,etc)	At Intersection and Related	Clear	Dry	Daylight	Entering at angle	Making Left Turn
City Street	Clark	Camas	NE INGLE RD			2801	NE GOODWIN RD						No	EC42752	05/02/2022	17:00	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Wet	Daylight	Entering at angle	Making Left Turn
City Street	Clark	Camas	NE INGLE RD			0	NE GOODWIN RD						No	E966064	09/20/2019	16:58	Possible Injury	2	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Making Left Turn

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

CITY STREET INTERSECTIONS

Goodwin Rd @ Ingle Rd

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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.

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Going Straight Ahead	West	North	East	West	Distractions Outside Vehicle			None									Lane of Primary Trafficway	1140563.25	118372.87
Going Straight Ahead	Northwest	Southwest	Northeast	Southwest	Did Not Grant RW to Vehicle			None									Intersecting Trafficway	1140562.72	118372.88
Going Straight Ahead	North	East	East	West	Disregard Traffic Sign and Signals			None									Lane of Primary Trafficway	1140562.72	118372.88
Going Straight Ahead	Northwest	Northeast	Northeast	Southwest	Did Not Grant RW to Vehicle			None									Lane of Primary Trafficway	1140562.72	118372.88
	South	West			Did Not Grant R/W to Non Motorist									None			Lane of Primary Trafficway	1140562.72	118372.88
Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle			None									Lane of Primary Trafficway	1140562.72	118372.88
Going Straight Ahead	Northwest	Northeast	Northeast	Southwest	Unknown Distraction			None									Lane of Primary Trafficway	1140562.72	118372.88
Going Straight Ahead	West	North	North	South	Did Not Grant RW to Vehicle			None									Lane of Primary Trafficway	1140563.26	118372.88

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

CITY STREET INTERSECTIONS

28th St @ Hargrave St / 22nd Ave - *No Reported Crashes*

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

CITY STREET INTERSECTIONS

28th St @ Hargrave St / 22nd Ave - *No Reported Crashes*

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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.

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

28th St (Co Rd # 93350, mp 3.070 - 3.110) @ 232nd Ave (Co Rd # 30950, mp 2.870 - 2.890)

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION
County Road	Clark		30950	2.890			93350	3.090					No	EE81852	05/28/2024	14:30	No Apparent Injury	0	0	1	0	0	Truck & Trailer		At Intersection and Related	Overcast	Dry	Daylight	Utility Pole	Making Right Turn
County Road	Clark		93350	3.090			30950	2.890					No	E923671	05/23/2019	16:54	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - one left turn - one straight	Going Straight Ahead
County Road	Clark		93350	3.090			30950	2.890					No	EB42601	06/15/2021	18:31	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Making Right Turn
County Road	Clark		93350	3.090			30950	2.890					No	EA02765	12/20/2019	09:12	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	From same direction - one left turn - one straight	Going Straight Ahead
County Road	Clark		93350	3.090			30950	2.890					No	EB53840	07/20/2021	15:10	Suspected Minor Injury	3	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Dry	Daylight	Entering at angle	Making Left Turn
County Road	Clark		93350	3.090			30950	2.890					No	EB10619	02/28/2021	16:35	No Apparent Injury	0	0	1	0	1	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Clear	Dry	Daylight	Vehicle Strikes Pedalcyclist	Going Straight Ahead
County Road	Clark		93350	3.090			30950	2.890					No	EB69640	09/01/2021	11:59	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Clear	Dry	Daylight	Utility Pole	Going Straight Ahead
County Road	Clark		93350	3.090			30950	2.890					No	EE74231	02/18/2024	15:52	Unknown	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Unknown	Other	Entering at angle	Going Straight Ahead
County Road	Clark		93350	3.090			30950	2.890					No	ED64349	05/21/2023	16:55	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	From same direction - one right turn - one straight	Going Straight Ahead
County Road	Clark		93350	3.090									No	EA84265	11/24/2020	15:25	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	Driveway Related but Not at Driveway	Overcast	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

28th St (Co Rd # 93350, mp 3.070 - 3.110) @ 232nd Ave (Co Rd # 30950, mp 2.870 - 2.890)

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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.

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
	West	South			None												Past the Outside Shoulder of Primary Trafficway	1145581.94	119082.99
Making Left Turn	East	West	East	South	Inattention	Follow Too Closely		None									Lane of Primary Trafficway	1145581.43	119082.29
Stopped at Signal or Stop Sign	West	South	South	West	Exceeding Reas. Safe Speed			None									Intersecting Trafficway	1145581.94	119082.99
Making Left Turn	East	West	East	South	Follow Too Closely			None									Lane of Primary Trafficway	1145581.43	119082.28
Going Straight Ahead	South	West	East	West	Did Not Grant RW to Vehicle	Unknown Distraction		None									Lane of Primary Trafficway	1145581.94	119082.99
	East	West			None									Improper Turn/Merge			Lane of Primary Trafficway	1145581.94	119082.99
	East	West			Other Contributing Circ Not Listed												Past the Outside Shoulder of Primary Trafficway	1145581.94	119082.99
Making Left Turn	West	East	South	Northwest	None			Unknown Distraction									Lane of Primary Trafficway	1145581.94	119082.99
Making Right Turn	West	East	West	South	Distracted by Adjusting Vehicle Cntrls			None									Lane of Primary Trafficway	1145581.94	119082.99
Stopped for Traffic	East	West	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None									Lane of Primary Trafficway	1145581.94	119082.99

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 500 (aka 242nd Ave / Dresser Rd, mp 13.82 - 13.86) @ 28th St (Co Rd # 93350, mp 3.570 - 3.590)

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION
State Route	Clark		500	13.84									No	EF31345	10/28/2024	07:59	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Driveway within Major Intersection	Overcast	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn
State Route	Clark		500	13.84									No	E961000	09/04/2019	11:57	Possible Injury	2	0	2	0	0	Passenger Car	Truck Tractor & Semi-Trailer	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead
State Route	Clark		500	13.84									No	EB87073	11/06/2021	15:55	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Driveway within Major Intersection	Raining	Wet	Daylight	Entering at angle	Starting in Traffic Lane
State Route	Clark		500	13.84									No	ED77436	07/04/2023	16:05	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Starting in Traffic Lane

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* MULTIPLE INTERSECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 500 (aka 242nd Ave / Dresser Rd, mp 13.82 - 13.86) @ 28th St (Co Rd # 93350, mp 3.570 - 3.590)

01/01/2019 - 6/30/2024 *See 2nd tab below for road info*

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.

VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Going Straight Ahead	North	East	South	North	Did Not Grant RW to Vehicle			None									Lane 1 Increasing Milepost	1148224.12	119052.38
Going Straight Ahead	North	South	East	West	Under Influence of Drugs			None									Lane 1 Decreasing Milepost	1148229.61	119051.46
Going Straight Ahead	North	South	East	West	Did Not Grant RW to Vehicle			None									Lane 1 Increasing Milepost	1148221.08	119048
Making Left Turn	West	East	West	North	Improper Turn/Merge			None									Lane 1 Increasing Milepost	1148221.08	119048

Traffic Signal Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

	Major Street:	Minor Street:
	NE 28th Street	N Hargrave Street
Number of Lanes:	1	1
PM Peak Hour Volumes:	1032	53

Warrant Used:

_____	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	10,320	6,200	
Minor Street*	530	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	10,320	9,300	
Minor Street*	530	950	**No**
Combination Warrant			
Major Street	10,320	7,440	
Minor Street*	530	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

	Major Street:	Minor Street:
	NE 28th Street	NE 232nd Avenue
Number of Lanes:	1	1
PM Peak Hour Volumes:	750	142

Warrant Used:

_____	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	7,500	6,200	
Minor Street*	1,420	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	7,500	9,300	
Minor Street*	1,420	950	**No**
Combination Warrant			
Major Street	7,500	7,440	
Minor Street*	1,420	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

Major Street:	NE 28th Street/SR-500	Minor Street:	SR-500 (North Leg)
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	537	PM Peak Hour Volumes:	214

Warrant Used:

_____ 100 percent of standard warrants used
X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	5,370	6,200	
Minor Street*	2,140	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	5,370	9,300	
Minor Street*	2,140	950	**No**
Combination Warrant			
Major Street	5,370	7,440	
Minor Street*	2,140	1,480	**No**

* Minor street right-turning traffic volumes reduced by 25%

Multi-Way Stop Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

Major Street:	NE 28th Street	Minor Street:	N Hargrave Street
PM Peak Hour Volumes:	1032	PM Peak Hour Volumes:	98

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph.

ADT on Major St. (total of both approaches)		ADT on Minor St. (total of both approaches)	
100% Warrants	70% Warrants	100% Warrants	70% Warrants
5,310	3,717	3,540	2,478

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Multi-Way Stop Warrant Met?
Section 2B.07.C			
Major Street	10,320	3,717	
Minor Street	980	2,478	**No**

Note: Minor Street includes the total of vehicular, pedestrian, and bicycle traffic.

Multi-Way Stop Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

Major Street:	NE 28th Street	Minor Street:	NE 232nd Avenue
PM Peak Hour Volumes:	750	PM Peak Hour Volumes:	148

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph.

ADT on Major St. (total of both approaches)		ADT on Minor St. (total of both approaches)	
100% Warrants	70% Warrants	100% Warrants	70% Warrants
5,310	3,717	3,540	2,478

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Multi-Way Stop Warrant Met?
Section 2B.07.C			
Major Street	7,500	3,717	
Minor Street	1,480	2,478	**No**

Note: Minor Street includes the total of vehicular, pedestrian, and bicycle traffic.

Multi-Way Stop Warrant Analysis

Project: Landing at Green Mountain Phase 2
Date: 4/3/2025
Scenario: 2027 Buildout Conditions

Major Street:	NE 28th Street/SR-500	Minor Street:	SR-500 (North Leg)
PM Peak Hour Volumes:	537	PM Peak Hour Volumes:	241

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph.

ADT on Major St. (total of both approaches)		ADT on Minor St. (total of both approaches)	
100% Warrants	70% Warrants	100% Warrants	70% Warrants
5,310	3,717	3,540	2,478

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Multi-Way Stop Warrant Met?
Section 2B.07.C			
Major Street	5,370	3,717	
Minor Street	2,410	2,478	**No**

Note: Minor Street includes the total of vehicular, pedestrian, and bicycle traffic.

Appendix E – Operation Analysis

Level of Service Descriptions

Synchro Capacity Reports

SimTraffic Queuing Reports

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	96	382	124	145	307	57
Future Volume (veh/h)	96	382	124	145	307	57
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1796	1796	1796	1796	1856	1856
Adj Flow Rate, veh/h	105	94	136	159	337	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	3	3
Cap, veh/h	236	210	565	991	522	442
Arrive On Green	0.14	0.14	0.11	0.55	0.28	0.28
Sat Flow, veh/h	1711	1522	1711	1796	1856	1572
Grp Volume(v), veh/h	105	94	136	159	337	20
Grp Sat Flow(s),veh/h/ln	1711	1522	1711	1796	1856	1572
Q Serve(g_s), s	1.6	1.6	1.3	1.3	4.6	0.3
Cycle Q Clear(g_c), s	1.6	1.6	1.3	1.3	4.6	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	236	210	565	991	522	442
V/C Ratio(X)	0.45	0.45	0.24	0.16	0.65	0.05
Avail Cap(c_a), veh/h	1211	1077	752	1891	1249	1058
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	11.5	5.4	3.2	9.1	7.6
Incr Delay (d2), s/veh	1.3	1.5	0.2	0.1	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.5	0.2	0.1	1.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	12.8	13.0	5.6	3.3	10.5	7.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	199			295	357	
Approach Delay, s/veh	12.9			4.3	10.3	
Approach LOS	B			A	B	

Timer - Assigned Phs		4		6	7	8
Phs Duration (G+Y+Rc), s		20.5		8.5	7.8	12.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		30.5		20.5	6.5	19.5
Max Q Clear Time (g_c+I1), s		3.3		3.6	3.3	6.6
Green Ext Time (p_c), s		0.8		0.5	0.1	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	8.8
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	206	6	1	295	6	4	0	0	11	1	32
Future Vol, veh/h	28	206	6	1	295	6	4	0	0	11	1	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	13	13	13	4	4	4	0	0	0	7	7	7
Mvmt Flow	34	248	7	1	355	7	5	0	0	13	1	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	363	0	0	255	0	0	678	684	252	677	684	359
Stage 1	-	-	-	-	-	-	319	319	-	361	361	-
Stage 2	-	-	-	-	-	-	358	365	-	316	323	-
Critical Hdwy	4.23	-	-	4.14	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.317	-	-	2.236	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	1138	-	-	1298	-	-	369	374	792	360	365	674
Stage 1	-	-	-	-	-	-	697	656	-	647	617	-
Stage 2	-	-	-	-	-	-	664	627	-	685	642	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1138	-	-	1298	-	-	336	362	792	349	354	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	502	502	-	525	503	-
Stage 1	-	-	-	-	-	-	676	637	-	646	616	-
Stage 2	-	-	-	-	-	-	624	626	-	665	623	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.96	0.03	12.24	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	502	1138	-	-	1298	-	-	625
HCM Lane V/C Ratio	0.01	0.03	-	-	0.001	-	-	0.085
HCM Ctrl Dly (s/v)	12.2	8.3	-	-	7.8	-	-	11.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	122	101	44	210	0	76	0	36	1	1	3
Future Vol, veh/h	0	122	101	44	210	0	76	0	36	1	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	10	10	10	8	8	8	8	8	8	0	0	0
Mvmt Flow	0	172	142	62	296	0	107	0	51	1	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	296	0	0	314	0	0	663	663	243	592	734	296
Stage 1	-	-	-	-	-	-	243	243	-	420	420	-
Stage 2	-	-	-	-	-	-	420	420	-	172	314	-
Critical Hdwy	4.2	-	-	4.18	-	-	7.18	6.58	6.28	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Follow-up Hdwy	2.29	-	-	2.272	-	-	3.572	4.072	3.372	3.5	4	3.3
Pot Cap-1 Maneuver	1221	-	-	1213	-	-	366	374	781	421	350	748
Stage 1	-	-	-	-	-	-	747	694	-	615	593	-
Stage 2	-	-	-	-	-	-	599	579	-	835	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1221	-	-	1213	-	-	341	351	781	370	328	748
Mov Cap-2 Maneuver	-	-	-	-	-	-	341	351	-	370	328	-
Stage 1	-	-	-	-	-	-	747	694	-	578	557	-
Stage 2	-	-	-	-	-	-	558	544	-	781	660	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.41	18.84	12.12
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	416	1221	-	-	312	-	-	512
HCM Lane V/C Ratio	0.379	-	-	-	0.051	-	-	0.014
HCM Ctrl Dly (s/v)	18.8	0	-	-	8.1	0	-	12.1
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.7	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	65	247	0	0	142	98	0	0	0	102	0	48
Future Vol, veh/h	65	247	0	0	142	98	0	0	0	102	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	5	5	5	0	0	0	6	6	6
Mvmt Flow	66	252	0	0	145	100	0	0	0	104	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	245	0	0	252	0	0	530	630	252	580	580	195
Stage 1	-	-	-	-	-	-	385	385	-	195	195	-
Stage 2	-	-	-	-	-	-	145	245	-	385	385	-
Critical Hdwy	4.13	-	-	4.15	-	-	7.1	6.5	6.2	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Follow-up Hdwy	2.227	-	-	2.245	-	-	3.5	4	3.3	3.554	4.054	3.354
Pot Cap-1 Maneuver	1315	-	-	1296	-	-	463	401	792	420	421	836
Stage 1	-	-	-	-	-	-	642	614	-	798	732	-
Stage 2	-	-	-	-	-	-	863	707	-	630	604	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1315	-	-	1296	-	-	410	378	792	395	396	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	378	-	395	396	-
Stage 1	-	-	-	-	-	-	605	578	-	798	732	-
Stage 2	-	-	-	-	-	-	812	707	-	593	569	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.64	0	0	16.12
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	375	-	-	1296	-	-	476
HCM Lane V/C Ratio	-	0.05	-	-	-	-	-	0.322
HCM Ctrl Dly (s/v)	0	7.9	0	-	0	-	-	16.1
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	1.4

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	84	182	277	377	241	81
Future Volume (veh/h)	84	182	277	377	241	81
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	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	1870	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	93	29	308	419	268	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	3	3
Cap, veh/h	194	172	688	1074	445	369
Arrive On Green	0.11	0.11	0.18	0.57	0.24	0.24
Sat Flow, veh/h	1781	1585	1781	1870	1856	1539
Grp Volume(v), veh/h	93	29	308	419	268	26
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1856	1539
Q Serve(g_s), s	1.4	0.5	3.1	3.5	3.6	0.4
Cycle Q Clear(g_c), s	1.4	0.5	3.1	3.5	3.6	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	194	172	688	1074	445	369
V/C Ratio(X)	0.48	0.17	0.45	0.39	0.60	0.07
Avail Cap(c_a), veh/h	1129	1004	1033	2173	1176	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	11.5	5.3	3.3	9.6	8.4
Incr Delay (d2), s/veh	1.8	0.5	0.5	0.2	1.3	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.3	0.1	1.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.7	11.9	5.8	3.5	10.9	8.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	122			727	294	
Approach Delay, s/veh	13.3			4.5	10.7	
Approach LOS	B			A	B	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			20.8		7.6	9.5	11.3
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s			33.0		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s			5.5		3.4	5.1	5.6
Green Ext Time (p_c), s			2.5		0.2	0.4	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	7.0
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	388	1	3	251	3	5	2	1	5	0	32
Future Vol, veh/h	36	388	1	3	251	3	5	2	1	5	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	3	3	3	13	13	13	3	3	3
Mvmt Flow	39	417	1	3	270	3	5	2	1	5	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	273	0	0	418	0	0	772	775	418	774	774	272
Stage 1	-	-	-	-	-	-	495	495	-	278	278	-
Stage 2	-	-	-	-	-	-	276	280	-	496	496	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.23	6.63	6.33	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.617	4.117	3.417	3.527	4.027	3.327
Pot Cap-1 Maneuver	1290	-	-	1135	-	-	304	316	612	315	328	765
Stage 1	-	-	-	-	-	-	536	528	-	726	679	-
Stage 2	-	-	-	-	-	-	707	660	-	554	544	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1290	-	-	1135	-	-	281	306	612	302	318	765
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	446	-	469	464	-
Stage 1	-	-	-	-	-	-	520	512	-	724	677	-
Stage 2	-	-	-	-	-	-	673	658	-	534	528	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.67	0.1	12.96	10.41
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	461	1290	-	-	1135	-	-	705
HCM Lane V/C Ratio	0.019	0.03	-	-	0.003	-	-	0.056
HCM Ctrl Dly (s/v)	13	7.9	-	-	8.2	-	-	10.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	305	73	12	171	0	75	1	3	0	1	3
Future Vol, veh/h	5	305	73	12	171	0	75	1	3	0	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	4	4	4	6	6	6	25	25	25
Mvmt Flow	5	308	74	12	173	0	76	1	3	0	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	173	0	0	382	0	0	553	552	345	516	589	173
Stage 1	-	-	-	-	-	-	355	355	-	197	197	-
Stage 2	-	-	-	-	-	-	197	197	-	319	392	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.16	6.56	6.26	7.35	6.75	6.45
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.554	4.054	3.354	3.725	4.225	3.525
Pot Cap-1 Maneuver	1404	-	-	1166	-	-	438	436	689	435	391	815
Stage 1	-	-	-	-	-	-	654	623	-	755	697	-
Stage 2	-	-	-	-	-	-	795	730	-	647	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1404	-	-	1166	-	-	428	429	689	425	385	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	428	429	-	425	385	-
Stage 1	-	-	-	-	-	-	651	620	-	746	689	-
Stage 2	-	-	-	-	-	-	782	722	-	640	566	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.53	15.14	10.69
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	434	23	-	-	118	-	-	637
HCM Lane V/C Ratio	0.184	0.004	-	-	0.01	-	-	0.006
HCM Ctrl Dly (s/v)	15.1	7.6	0	-	8.1	0	-	10.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	21	128	0	0	187	85	0	0	0	113	0	76
Future Vol, veh/h	21	128	0	0	187	85	0	0	0	113	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	10	10	10	6	6	6	0	0	0	12	12	12
Mvmt Flow	25	151	0	0	220	100	0	0	0	133	0	89

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	320	0	0	151	0	0	420	520	151	470	470	270
Stage 1	-	-	-	-	-	-	200	200	-	270	270	-
Stage 2	-	-	-	-	-	-	220	320	-	200	200	-
Critical Hdwy	4.2	-	-	4.16	-	-	7.1	6.5	6.2	7.22	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Follow-up Hdwy	2.29	-	-	2.254	-	-	3.5	4	3.3	3.608	4.108	3.408
Pot Cap-1 Maneuver	1196	-	-	1406	-	-	547	463	901	487	477	745
Stage 1	-	-	-	-	-	-	806	739	-	714	668	-
Stage 2	-	-	-	-	-	-	787	656	-	779	717	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1196	-	-	1406	-	-	471	453	901	476	466	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	471	453	-	476	466	-
Stage 1	-	-	-	-	-	-	788	723	-	714	668	-
Stage 2	-	-	-	-	-	-	693	656	-	762	701	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.14	0	0	15.68
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	254	-	-	1406	-	-	557
HCM Lane V/C Ratio	-	0.021	-	-	-	-	-	0.399
HCM Ctrl Dly (s/v)	0	8.1	0	-	0	-	-	15.7
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	1.9

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	129	476	165	200	455	97
Future Volume (veh/h)	129	476	165	200	455	97
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1796	1796	1796	1796	1856	1856
Adj Flow Rate, veh/h	142	235	181	220	500	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	3	3
Cap, veh/h	365	325	447	1011	637	540
Arrive On Green	0.21	0.21	0.11	0.56	0.34	0.34
Sat Flow, veh/h	1711	1522	1711	1796	1856	1572
Grp Volume(v), veh/h	142	235	181	220	500	45
Grp Sat Flow(s),veh/h/ln	1711	1522	1711	1796	1856	1572
Q Serve(g_s), s	2.9	5.8	2.4	2.5	9.7	0.8
Cycle Q Clear(g_c), s	2.9	5.8	2.4	2.5	9.7	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	365	325	447	1011	637	540
V/C Ratio(X)	0.39	0.72	0.41	0.22	0.79	0.08
Avail Cap(c_a), veh/h	829	738	539	1406	945	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	14.7	7.8	4.4	11.9	8.9
Incr Delay (d2), s/veh	0.7	3.0	0.6	0.1	2.6	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.5	0.4	3.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.2	17.8	8.4	4.5	14.5	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	377			401	545	
Approach Delay, s/veh	16.4			6.3	14.1	
Approach LOS	B			A	B	

Timer - Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				27.1		13.1	8.8	18.3
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				31.5		19.5	6.5	20.5
Max Q Clear Time (g_c+I1), s				4.5		7.8	4.4	11.7
Green Ext Time (p_c), s				1.2		0.9	0.1	2.1

Intersection Summary								
HCM 7th Control Delay, s/veh			12.4					
HCM 7th LOS			B					

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	276	10	3	417	10	13	0	8	23	1	62
Future Vol, veh/h	38	276	10	3	417	10	13	0	8	23	1	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	13	13	13	4	4	4	0	0	0	7	7	7
Mvmt Flow	46	333	12	4	502	12	16	0	10	28	1	75

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	514	0	0	345	0	0	940	952	339	940	952	508
Stage 1	-	-	-	-	-	-	430	430	-	516	516	-
Stage 2	-	-	-	-	-	-	510	522	-	424	436	-
Critical Hdwy	4.23	-	-	4.14	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.317	-	-	2.236	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	997	-	-	1203	-	-	246	262	708	239	254	555
Stage 1	-	-	-	-	-	-	607	587	-	533	526	-
Stage 2	-	-	-	-	-	-	550	534	-	598	571	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1203	-	-	202	249	708	224	242	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	366	406	-	415	414	-
Stage 1	-	-	-	-	-	-	579	560	-	531	525	-
Stage 2	-	-	-	-	-	-	473	533	-	563	545	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.03	0.06	13.5	13.91
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	449	997	-	-	1203	-	-	507
HCM Lane V/C Ratio	0.056	0.046	-	-	0.003	-	-	0.204
HCM Ctrl Dly (s/v)	13.5	8.8	-	-	8	-	-	13.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	171	149	46	249	0	108	0	39	1	1	3
Future Vol, veh/h	0	171	149	46	249	0	108	0	39	1	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	10	10	10	8	8	8	8	8	8	0	0	0
Mvmt Flow	0	241	210	65	351	0	152	0	55	1	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	351	0	0	451	0	0	827	826	346	721	931	351
Stage 1	-	-	-	-	-	-	346	346	-	480	480	-
Stage 2	-	-	-	-	-	-	481	480	-	241	451	-
Critical Hdwy	4.2	-	-	4.18	-	-	7.18	6.58	6.28	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Follow-up Hdwy	2.29	-	-	2.272	-	-	3.572	4.072	3.372	3.5	4	3.3
Pot Cap-1 Maneuver	1165	-	-	1079	-	-	284	301	684	345	269	697
Stage 1	-	-	-	-	-	-	658	625	-	571	558	-
Stage 2	-	-	-	-	-	-	555	544	-	767	575	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1165	-	-	1079	-	-	260	278	684	294	249	697
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	278	-	294	249	-
Stage 1	-	-	-	-	-	-	658	625	-	528	516	-
Stage 2	-	-	-	-	-	-	509	504	-	705	575	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.33	36.89	13.58
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	311	1165	-	-	281	-	-	426
HCM Lane V/C Ratio	0.666	-	-	-	0.06	-	-	0.017
HCM Ctrl Dly (s/v)	36.9	0	-	-	8.6	0	-	13.6
HCM Lane LOS	E	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	4.5	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	87	284	0	0	171	115	0	0	0	110	0	58
Future Vol, veh/h	87	284	0	0	171	115	0	0	0	110	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	5	5	5	0	0	0	6	6	6
Mvmt Flow	89	290	0	0	174	117	0	0	0	112	0	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	0	290	0	0	642	759	290	701	701	233
Stage 1	-	-	-	-	-	-	467	467	-	233	233	-
Stage 2	-	-	-	-	-	-	174	292	-	467	467	-
Critical Hdwy	4.13	-	-	4.15	-	-	7.1	6.5	6.2	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Follow-up Hdwy	2.227	-	-	2.245	-	-	3.5	4	3.3	3.554	4.054	3.354
Pot Cap-1 Maneuver	1264	-	-	1255	-	-	390	338	754	348	358	796
Stage 1	-	-	-	-	-	-	580	565	-	761	704	-
Stage 2	-	-	-	-	-	-	832	675	-	568	555	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1264	-	-	1255	-	-	331	310	754	319	328	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	331	310	-	319	328	-
Stage 1	-	-	-	-	-	-	531	518	-	761	704	-
Stage 2	-	-	-	-	-	-	770	675	-	521	508	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.89	0	0	20.42
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	422	-	-	1255	-	-	402
HCM Lane V/C Ratio	-	0.07	-	-	-	-	-	0.426
HCM Ctrl Dly (s/v)	0	8.1	0	-	0	-	-	20.4
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	2.1

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	144	250	380	538	346	120
Future Volume (veh/h)	144	250	380	538	346	120
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	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	1870	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	160	57	422	598	384	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	3	3
Cap, veh/h	243	216	661	1151	528	438
Arrive On Green	0.14	0.14	0.21	0.62	0.28	0.28
Sat Flow, veh/h	1781	1585	1781	1870	1856	1539
Grp Volume(v), veh/h	160	57	422	598	384	40
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1856	1539
Q Serve(g_s), s	3.1	1.2	5.1	6.5	6.8	0.7
Cycle Q Clear(g_c), s	3.1	1.2	5.1	6.5	6.8	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	243	216	661	1151	528	438
V/C Ratio(X)	0.66	0.26	0.64	0.52	0.73	0.09
Avail Cap(c_a), veh/h	885	788	810	1704	922	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	6.6	3.9	11.7	9.5
Incr Delay (d2), s/veh	3.0	0.6	1.2	0.4	1.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.9	0.6	2.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.9	14.7	7.8	4.3	13.6	9.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	217			1020	424	
Approach Delay, s/veh	17.0			5.7	13.2	
Approach LOS	B			A	B	

Timer - Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				26.8		9.4	12.0	14.8
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				33.0		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s				8.5		5.1	7.1	8.8
Green Ext Time (p_c), s				3.8		0.5	0.5	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	9.1
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	539	12	11	365	17	13	2	5	13	0	53
Future Vol, veh/h	70	539	12	11	365	17	13	2	5	13	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	3	3	3	13	13	13	3	3	3
Mvmt Flow	75	580	13	12	392	18	14	2	5	14	0	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	411	0	0	592	0	0	1153	1171	586	1156	1168	402
Stage 1	-	-	-	-	-	-	737	737	-	425	425	-
Stage 2	-	-	-	-	-	-	416	434	-	731	743	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.23	6.63	6.33	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.617	4.117	3.417	3.527	4.027	3.327
Pot Cap-1 Maneuver	1148	-	-	978	-	-	166	184	490	173	192	646
Stage 1	-	-	-	-	-	-	394	409	-	605	585	-
Stage 2	-	-	-	-	-	-	593	562	-	412	420	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1148	-	-	978	-	-	140	170	490	157	178	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	319	-	321	333	-
Stage 1	-	-	-	-	-	-	368	382	-	598	577	-
Stage 2	-	-	-	-	-	-	534	556	-	378	393	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.94	0.24	16.52	12.69
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1148	-	-	978	-	-	539
HCM Lane V/C Ratio	0.064	0.066	-	-	0.012	-	-	0.132
HCM Ctrl Dly (s/v)	16.5	8.4	-	-	8.7	-	-	12.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	363	125	12	238	0	135	1	5	0	1	3
Future Vol, veh/h	5	363	125	12	238	0	135	1	5	0	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	4	4	4	6	6	6	25	25	25
Mvmt Flow	5	367	126	12	240	0	136	1	5	0	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	493	0	0	705	705	430	642	768	240
Stage 1	-	-	-	-	-	-	440	440	-	265	265	-
Stage 2	-	-	-	-	-	-	265	265	-	377	503	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.16	6.56	6.26	7.35	6.75	6.45
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.554	4.054	3.354	3.725	4.225	3.525
Pot Cap-1 Maneuver	1326	-	-	1060	-	-	346	356	617	357	306	745
Stage 1	-	-	-	-	-	-	588	571	-	693	650	-
Stage 2	-	-	-	-	-	-	731	682	-	600	505	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	1060	-	-	337	350	617	346	301	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	350	-	346	301	-
Stage 1	-	-	-	-	-	-	585	568	-	684	641	-
Stage 2	-	-	-	-	-	-	718	673	-	591	502	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0.4	22.78	11.67
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	343	17	-	-	86	-	-	544
HCM Lane V/C Ratio	0.416	0.004	-	-	0.011	-	-	0.007
HCM Ctrl Dly (s/v)	22.8	7.7	0	-	8.4	0	-	11.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	165	0	0	233	96	0	0	0	131	0	108
Future Vol, veh/h	40	165	0	0	233	96	0	0	0	131	0	108
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	10	10	10	6	6	6	0	0	0	12	12	12
Mvmt Flow	47	194	0	0	274	113	0	0	0	154	0	127

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	194	0	0	562	675	194	619	619	331
Stage 1	-	-	-	-	-	-	288	288	-	331	331	-
Stage 2	-	-	-	-	-	-	274	387	-	288	288	-
Critical Hdwy	4.2	-	-	4.16	-	-	7.1	6.5	6.2	7.22	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Follow-up Hdwy	2.29	-	-	2.254	-	-	3.5	4	3.3	3.608	4.108	3.408
Pot Cap-1 Maneuver	1129	-	-	1355	-	-	440	378	852	387	392	689
Stage 1	-	-	-	-	-	-	724	677	-	662	628	-
Stage 2	-	-	-	-	-	-	736	613	-	698	656	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1129	-	-	1355	-	-	342	360	852	369	373	689
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	360	-	369	373	-
Stage 1	-	-	-	-	-	-	690	646	-	662	628	-
Stage 2	-	-	-	-	-	-	600	613	-	666	625	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.62	0	0	23.71
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	351	-	-	1355	-	-	467
HCM Lane V/C Ratio	-	0.042	-	-	-	-	-	0.602
HCM Ctrl Dly (s/v)	0	8.3	0	-	0	-	-	23.7
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	3.9

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	130	476	165	203	462	100
Future Volume (veh/h)	130	476	165	203	462	100
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1796	1796	1796	1796	1856	1856
Adj Flow Rate, veh/h	143	238	181	223	508	47
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	3	3
Cap, veh/h	367	327	442	1014	644	546
Arrive On Green	0.21	0.21	0.11	0.56	0.35	0.35
Sat Flow, veh/h	1711	1522	1711	1796	1856	1572
Grp Volume(v), veh/h	143	238	181	223	508	47
Grp Sat Flow(s),veh/h/ln	1711	1522	1711	1796	1856	1572
Q Serve(g_s), s	2.9	5.9	2.4	2.5	10.0	0.8
Cycle Q Clear(g_c), s	2.9	5.9	2.4	2.5	10.0	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	367	327	442	1014	644	546
V/C Ratio(X)	0.39	0.73	0.41	0.22	0.79	0.09
Avail Cap(c_a), veh/h	802	714	532	1406	952	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	14.9	7.9	4.4	12.0	9.0
Incr Delay (d2), s/veh	0.7	3.1	0.6	0.1	2.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.5	0.4	3.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.4	18.0	8.5	4.5	14.7	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	381			404	555	
Approach Delay, s/veh	16.6			6.3	14.2	
Approach LOS	B			A	B	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	27.5	13.2	8.9	18.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	31.9	19.1	6.5	20.9
Max Q Clear Time (g_c+I1), s	4.5	7.9	4.4	12.0
Green Ext Time (p_c), s	1.2	0.9	0.1	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	12.5
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	276	14	5	417	10	23	0	13	23	1	62
Future Vol, veh/h	38	276	14	5	417	10	23	0	13	23	1	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	13	13	13	4	4	4	0	0	0	7	7	7
Mvmt Flow	46	333	17	6	502	12	28	0	16	28	1	75

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	514	0	0	349	0	0	948	959	341	945	961	508
Stage 1	-	-	-	-	-	-	433	433	-	520	520	-
Stage 2	-	-	-	-	-	-	515	527	-	424	441	-
Critical Hdwy	4.23	-	-	4.14	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.317	-	-	2.236	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	997	-	-	1198	-	-	243	259	706	237	251	555
Stage 1	-	-	-	-	-	-	605	585	-	530	524	-
Stage 2	-	-	-	-	-	-	546	532	-	598	569	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1198	-	-	199	246	706	220	238	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	363	403	-	411	410	-
Stage 1	-	-	-	-	-	-	578	559	-	527	521	-
Stage 2	-	-	-	-	-	-	469	529	-	558	542	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.02	0.09	14.06	13.95
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	441	997	-	-	1198	-	-	505
HCM Lane V/C Ratio	0.098	0.046	-	-	0.005	-	-	0.205
HCM Ctrl Dly (s/v)	14.1	8.8	-	-	8	-	-	14
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	174	151	46	250	0	109	0	39	1	1	3
Future Vol, veh/h	0	174	151	46	250	0	109	0	39	1	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	10	10	10	8	8	8	8	8	8	0	0	0
Mvmt Flow	0	245	213	65	352	0	154	0	55	1	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	352	0	0	458	0	0	834	833	351	727	939	352
Stage 1	-	-	-	-	-	-	351	351	-	482	482	-
Stage 2	-	-	-	-	-	-	482	482	-	245	458	-
Critical Hdwy	4.2	-	-	4.18	-	-	7.18	6.58	6.28	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.1	5.5	-
Follow-up Hdwy	2.29	-	-	2.272	-	-	3.572	4.072	3.372	3.5	4	3.3
Pot Cap-1 Maneuver	1164	-	-	1072	-	-	281	298	679	342	266	696
Stage 1	-	-	-	-	-	-	653	621	-	570	557	-
Stage 2	-	-	-	-	-	-	554	543	-	763	571	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1164	-	-	1072	-	-	257	275	679	291	246	696
Mov Cap-2 Maneuver	-	-	-	-	-	-	257	275	-	291	246	-
Stage 1	-	-	-	-	-	-	653	621	-	527	515	-
Stage 2	-	-	-	-	-	-	508	503	-	701	571	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	1.33	38.27	13.65
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	1164	-	-	280	-	-	423
HCM Lane V/C Ratio	0.679	-	-	-	0.06	-	-	0.017
HCM Ctrl Dly (s/v)	38.3	0	-	-	8.6	0	-	13.7
HCM Lane LOS	E	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	4.6	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	286	0	0	171	115	0	0	0	110	0	59
Future Vol, veh/h	88	286	0	0	171	115	0	0	0	110	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	5	5	5	0	0	0	6	6	6
Mvmt Flow	90	292	0	0	174	117	0	0	0	112	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	0	292	0	0	646	763	292	705	705	233
Stage 1	-	-	-	-	-	-	471	471	-	233	233	-
Stage 2	-	-	-	-	-	-	174	292	-	471	471	-
Critical Hdwy	4.13	-	-	4.15	-	-	7.1	6.5	6.2	7.16	6.56	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.16	5.56	-
Follow-up Hdwy	2.227	-	-	2.245	-	-	3.5	4	3.3	3.554	4.054	3.354
Pot Cap-1 Maneuver	1264	-	-	1253	-	-	387	336	752	346	356	796
Stage 1	-	-	-	-	-	-	577	563	-	761	704	-
Stage 2	-	-	-	-	-	-	832	675	-	565	553	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1264	-	-	1253	-	-	328	308	752	317	326	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	328	308	-	317	326	-
Stage 1	-	-	-	-	-	-	528	515	-	761	704	-
Stage 2	-	-	-	-	-	-	769	675	-	518	506	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.9	0	0	20.57
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	424	-	-	1253	-	-	401
HCM Lane V/C Ratio	-	0.071	-	-	-	-	-	0.43
HCM Ctrl Dly (s/v)	0	8.1	0	-	0	-	-	20.6
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	2.1

HCM 7th Signalized Intersection Summary
1: NE 28th Street & NE Ingle Road

04/03/2025

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	148	250	380	547	351	122
Future Volume (veh/h)	148	250	380	547	351	122
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	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	1870	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	164	57	422	608	390	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	3	3
Cap, veh/h	247	220	656	1151	533	442
Arrive On Green	0.14	0.14	0.21	0.62	0.29	0.29
Sat Flow, veh/h	1781	1585	1781	1870	1856	1539
Grp Volume(v), veh/h	164	57	422	608	390	40
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	1856	1539
Q Serve(g_s), s	3.2	1.2	5.1	6.8	6.9	0.7
Cycle Q Clear(g_c), s	3.2	1.2	5.1	6.8	6.9	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	247	220	656	1151	533	442
V/C Ratio(X)	0.66	0.26	0.64	0.53	0.73	0.09
Avail Cap(c_a), veh/h	876	780	801	1686	913	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	14.1	6.7	4.0	11.8	9.6
Incr Delay (d2), s/veh	3.0	0.6	1.3	0.4	2.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.1	0.9	0.6	2.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.0	14.7	7.9	4.4	13.7	9.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	221			1030	430	
Approach Delay, s/veh	17.1			5.8	13.4	
Approach LOS	B			A	B	

Timer - Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				27.0		9.6	12.0	15.0
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				33.0		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s				8.8		5.2	7.1	8.9
Green Ext Time (p_c), s				3.9		0.5	0.5	1.6

Intersection Summary								
HCM 7th Control Delay, s/veh			9.3					
HCM 7th LOS			A					

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	539	25	16	365	17	20	2	9	13	0	53
Future Vol, veh/h	70	539	25	16	365	17	20	2	9	13	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	3	3	3	13	13	13	3	3	3
Mvmt Flow	75	580	27	17	392	18	22	2	10	14	0	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	411	0	0	606	0	0	1170	1189	593	1167	1193	402
Stage 1	-	-	-	-	-	-	744	744	-	436	436	-
Stage 2	-	-	-	-	-	-	427	445	-	731	757	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.23	6.63	6.33	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.63	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.617	4.117	3.417	3.527	4.027	3.327
Pot Cap-1 Maneuver	1148	-	-	967	-	-	161	179	486	170	186	646
Stage 1	-	-	-	-	-	-	390	406	-	597	578	-
Stage 2	-	-	-	-	-	-	585	556	-	412	414	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1148	-	-	967	-	-	135	164	486	152	171	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	314	-	314	324	-
Stage 1	-	-	-	-	-	-	365	379	-	586	568	-
Stage 2	-	-	-	-	-	-	524	546	-	375	387	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.92	0.35	16.97	12.76
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1148	-	-	967	-	-	535
HCM Lane V/C Ratio	0.1	0.066	-	-	0.018	-	-	0.133
HCM Ctrl Dly (s/v)	17	8.4	-	-	8.8	-	-	12.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	365	127	12	241	0	137	1	5	0	1	3
Future Vol, veh/h	5	365	127	12	241	0	137	1	5	0	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	4	4	4	6	6	6	25	25	25
Mvmt Flow	5	369	128	12	243	0	138	1	5	0	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	243	0	0	497	0	0	711	711	433	647	775	243
Stage 1	-	-	-	-	-	-	443	443	-	268	268	-
Stage 2	-	-	-	-	-	-	268	268	-	379	507	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.16	6.56	6.26	7.35	6.75	6.45
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.56	-	6.35	5.75	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.554	4.054	3.354	3.725	4.225	3.525
Pot Cap-1 Maneuver	1323	-	-	1057	-	-	343	353	614	354	304	742
Stage 1	-	-	-	-	-	-	586	569	-	690	647	-
Stage 2	-	-	-	-	-	-	729	680	-	598	503	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1323	-	-	1057	-	-	334	347	614	343	298	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	334	347	-	343	298	-
Stage 1	-	-	-	-	-	-	583	566	-	681	639	-
Stage 2	-	-	-	-	-	-	715	671	-	589	500	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0.4	23.24	11.71
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	339	17	-	-	85	-	-	541
HCM Lane V/C Ratio	0.426	0.004	-	-	0.011	-	-	0.007
HCM Ctrl Dly (s/v)	23.2	7.7	0	-	8.4	0	-	11.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	41	166	0	0	234	96	0	0	0	131	0	110
Future Vol, veh/h	41	166	0	0	234	96	0	0	0	131	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	10	10	10	6	6	6	0	0	0	12	12	12
Mvmt Flow	48	195	0	0	275	113	0	0	0	154	0	129

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	195	0	0	567	680	195	624	624	332
Stage 1	-	-	-	-	-	-	292	292	-	332	332	-
Stage 2	-	-	-	-	-	-	275	388	-	292	292	-
Critical Hdwy	4.2	-	-	4.16	-	-	7.1	6.5	6.2	7.22	6.62	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.22	5.62	-
Follow-up Hdwy	2.29	-	-	2.254	-	-	3.5	4	3.3	3.608	4.108	3.408
Pot Cap-1 Maneuver	1128	-	-	1354	-	-	437	376	851	384	389	687
Stage 1	-	-	-	-	-	-	721	675	-	661	627	-
Stage 2	-	-	-	-	-	-	735	612	-	695	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1128	-	-	1354	-	-	338	358	851	366	370	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	338	358	-	366	370	-
Stage 1	-	-	-	-	-	-	686	642	-	661	627	-
Stage 2	-	-	-	-	-	-	597	612	-	662	622	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.65	0	0	24.09
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	357	-	-	1354	-	-	465
HCM Lane V/C Ratio	-	0.043	-	-	-	-	-	0.61
HCM Ctrl Dly (s/v)	0	8.3	0	-	0	-	-	24.1
HCM Lane LOS	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	4

Queuing and Blocking Report
2025 Existing Conditions - AM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	88	166	109	89	193	55
Average Queue (ft)	33	80	47	35	85	20
95th Queue (ft)	74	141	86	75	153	46
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	53	30	63
Average Queue (ft)	8	4	23
95th Queue (ft)	34	19	50
Link Distance (ft)	1308	698	442
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	11	88	101	28
Average Queue (ft)	1	12	38	3
95th Queue (ft)	8	49	71	18
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2025 Existing Conditions - AM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	72	4	108
Average Queue (ft)	16	0	46
95th Queue (ft)	51	3	84
Link Distance (ft)	2563	927	567
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report
2025 Existing Conditions - PM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	82	89	151	110	144	64
Average Queue (ft)	34	35	66	47	66	26
95th Queue (ft)	68	68	114	91	117	53
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (ft)	41	2	16	48	56
Average Queue (ft)	7	0	1	9	20
95th Queue (ft)	28	2	8	34	47
Link Distance (ft)	1308	1308	972	698	442
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	21	46	78	42
Average Queue (ft)	1	5	32	4
95th Queue (ft)	10	28	61	23
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2025 Existing Conditions - PM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	54	111
Average Queue (ft)	6	53
95th Queue (ft)	32	91
Link Distance (ft)	2563	567
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report
2027 Background Conditions - AM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	115	284	134	116	275	94
Average Queue (ft)	47	127	62	48	142	30
95th Queue (ft)	91	228	109	96	231	66
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	56	11	37	69
Average Queue (ft)	13	1	14	33
95th Queue (ft)	42	8	39	59
Link Distance (ft)	1308	972	698	442
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	11	101	125	26
Average Queue (ft)	0	18	49	6
95th Queue (ft)	5	64	95	24
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2027 Background Conditions - AM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	97	4	119
Average Queue (ft)	24	0	50
95th Queue (ft)	69	4	91
Link Distance (ft)	2563	927	567
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report
2027 Background Conditions - PM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	116	128	213	185	250	74
Average Queue (ft)	54	53	103	78	114	35
95th Queue (ft)	96	97	175	142	196	62
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	TR	LTR	LTR
Maximum Queue (ft)	55	30	6	61	63
Average Queue (ft)	17	4	0	17	30
95th Queue (ft)	44	20	5	48	53
Link Distance (ft)	1308	972	972	698	442
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	29	49	119	44
Average Queue (ft)	2	5	48	4
95th Queue (ft)	12	29	89	23
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2027 Background Conditions - PM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	75	7	162
Average Queue (ft)	14	0	66
95th Queue (ft)	47	7	117
Link Distance (ft)	2563	927	567
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report
2027 Buildout Conditions - AM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	128	260	127	105	290	86
Average Queue (ft)	50	124	59	44	146	30
95th Queue (ft)	98	215	101	87	252	64
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	51	18	49	75
Average Queue (ft)	13	1	23	35
95th Queue (ft)	41	8	47	63
Link Distance (ft)	1308	972	698	442
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	15	98	141	28
Average Queue (ft)	0	19	51	4
95th Queue (ft)	6	67	109	19
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2027 Buildout Conditions - AM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	117	8	120
Average Queue (ft)	28	1	52
95th Queue (ft)	78	6	94
Link Distance (ft)	2563	927	567
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Queuing and Blocking Report
2027 Buildout Conditions - PM Peak Hour 04/03/2025

Intersection: 1: NE 28th Street & NE Ingle Road

Movement	SE	SE	NE	NE	SW	SW
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	117	123	206	192	235	76
Average Queue (ft)	55	54	103	80	114	37
95th Queue (ft)	99	97	173	146	196	67
Link Distance (ft)	627	627	636	636	1278	1278
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: N Hargrave Street & NE 28th Street

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (ft)	56	16	39	81	72
Average Queue (ft)	16	1	6	24	31
95th Queue (ft)	43	12	26	58	56
Link Distance (ft)	1308	1308	972	698	442
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: NE 232nd Avenue/Driveway & NE 28th Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	56	115	47
Average Queue (ft)	2	7	49	5
95th Queue (ft)	17	34	91	26
Link Distance (ft)	1506	2563	694	464
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
2027 Buildout Conditions - PM Peak Hour 04/03/2025

Intersection: 4: Driveway & NE 28th Street & SR-500

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	60	6	145
Average Queue (ft)	16	0	66
95th Queue (ft)	49	4	114
Link Distance (ft)	2563	927	567
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0