6. Transportation Impact Study

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TRANSPORTATION IMPACT STUDY

September 8, 2025 Project# 31765

To: James E Carothers, PE & Anita Ashton
City of Camas Community Development Engineering
616 NE 4th Avenue
Camas, WA 98607

From: Chris Brehmer, PE, Claire Dougherty, PE, Julia Kuhn, PE, Sutapa Banerjee & Chancellor Reynolds

CC: Joe Deaser, Allied Development
John Meier, PE, AKS Engineering & Forestry LLC

RE: Stella Ridge Transportation Impact Study

Allied Development, the Applicant, proposes to develop 158 detached single-family homes on a 24.41 acre property located between NW Brady Road and NW 18th Avenue. A Transportation Impact Study (TIS) is required per City of Camas Municipal Code (CMC) Section 17.11.030.B.12 as part of the land use approvals for the new homes. This memorandum documents the TIS analysis, findings, and recommendations. No capacity based mitigation measures were identified at the study intersections operated and maintained by the City of Camas.

Subject to City review and direction, the following recommendations were identified to be implemented in conjunction with site development:

- Post a STOP (R1-1) sign on the Street A (NW Umatilla Street) southbound approach to NW 18th Avenue in accordance with applicable City of Camas standards and the *Manual on Uniform Traffic Control Devices* (MUTCD). Other on-site stop signs may be installed as appropriate per City of Camas direction.
- Locate and maintain site landscaping, above-ground utilities, and site signage at all local street intersections within and adjacent to the site to provide adequate intersection sight distance per applicable City requirements.
- Subject to City of Vancouver concurrence, pay the following proportional share intersection fees as identified per City of Vancouver requirements:
  - $6,000 towards SE 176th Avenue/SE 20th St mitigation
  - $2,400 towards NE 192nd Avenue/NE 13th Street mitigation
  - $900 towards SE 192nd Avenue/SE 34th Street mitigation
  - $118,000 towards SE 192nd Avenue/SR-14 ramps mitigation
  - $900 towards NE 172nd Avenue/NE 18th Street mitigation
  - $3,600 towards NE 179th Place/NE 18th Street mitigation
  - $6,000 towards NE 187th Avenue/NE 18th Street mitigation

The details of the study methodology, findings, and recommendations are summarized herein.

INTRODUCTION

Allied Development proposes to develop 158 single family detached homes on property located on the west side of NW Brady Road generally north of NW 18th Avenue. Vehicular site access for the proposed homes will be via a new north-south street connection to NW 18th Avenue (NW Umatilla Street) and a new

street extension connection to NW 20th Avenue (NW 21st Avenue). Construction is expected to begin in 2026 with full buildout anticipated by 2027. Figure 1 shows the site vicinity map, and Figure 2 shows a preliminary site plan.

STUDY METHODOLOGY

The City of Camas' *Transportation Impact Study Guidelines* (Reference 1) require preparation and submittal of a TIS for each proposed development that generates 200 or more daily vehicle trips. The 200 daily trip threshold is met this development, triggering a TIS.

The study intersections were determined through a scoping process with City of Camas staff and include the following City intersections:

- SE Bybee Road/SE 20th Street
- NW Fisher Creek Drive/NW 38th Avenue
- NW Parker Street/NW 38th Avenue
- NW Parker Street/NW Pacific Rim Boulevard
- NW Brady Road/NW 20th Avenue
- NW Brady Road/NW 16th Avenue
- NW Brady Road/NW McIntosh Road
- NW Grand Ridge Road/NW Brady Road
- Future Street/NW 18th Avenue

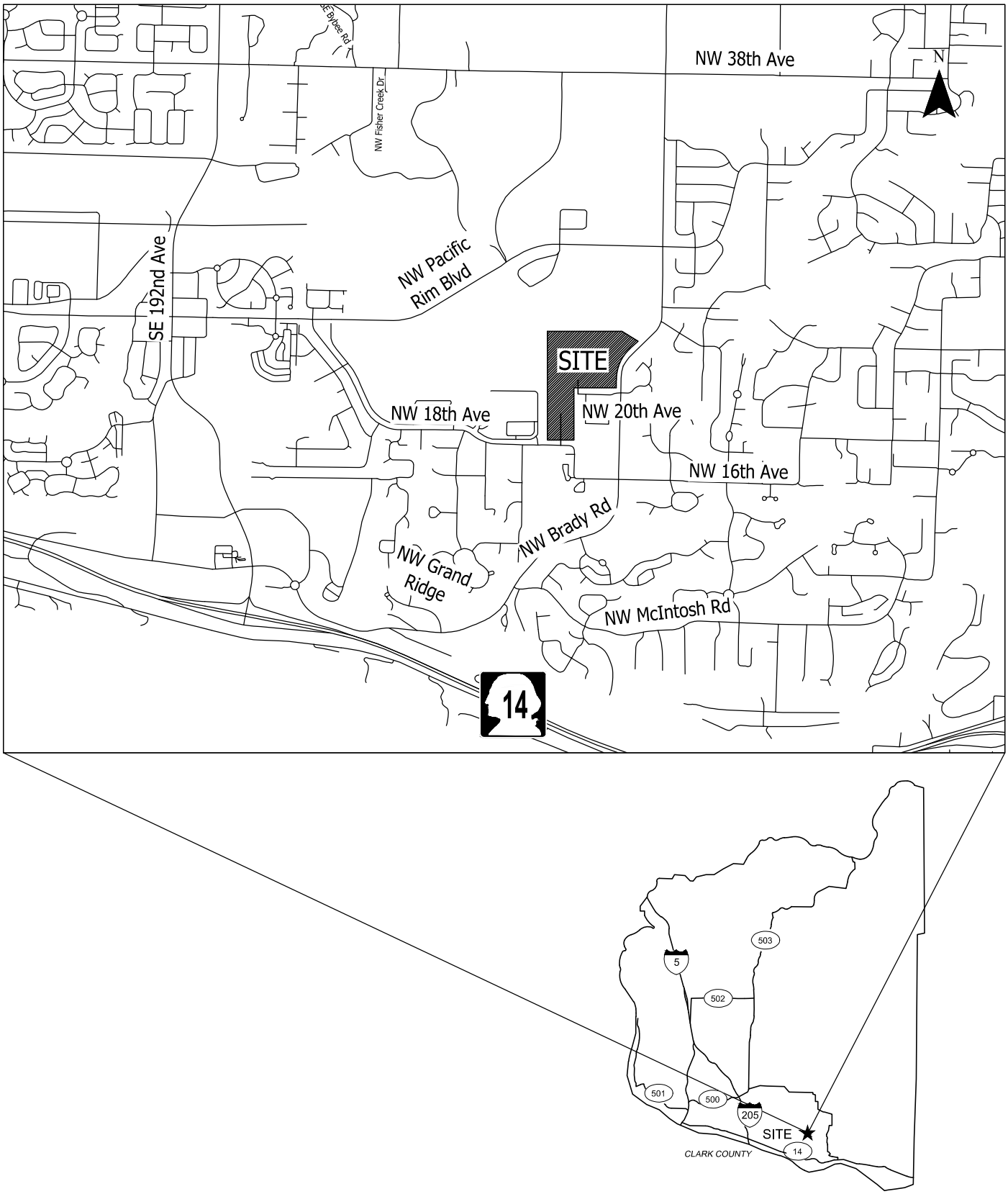
The study intersection list reflects a combination of City of Camas trip thresholds, the anticipated site trip distribution pattern and trip assignment, and City staff scoping direction. *Appendix A includes documentation from the scoping process - during the scoping process, 151 housing units were anticipated however through site plan refinement 158 housing units are currently proposed.*

Analysis Scenarios

Weekday morning (7-9 AM) and weekday afternoon commuter peak period (4-6 PM) traffic conditions were assessed for the following analysis scenarios:

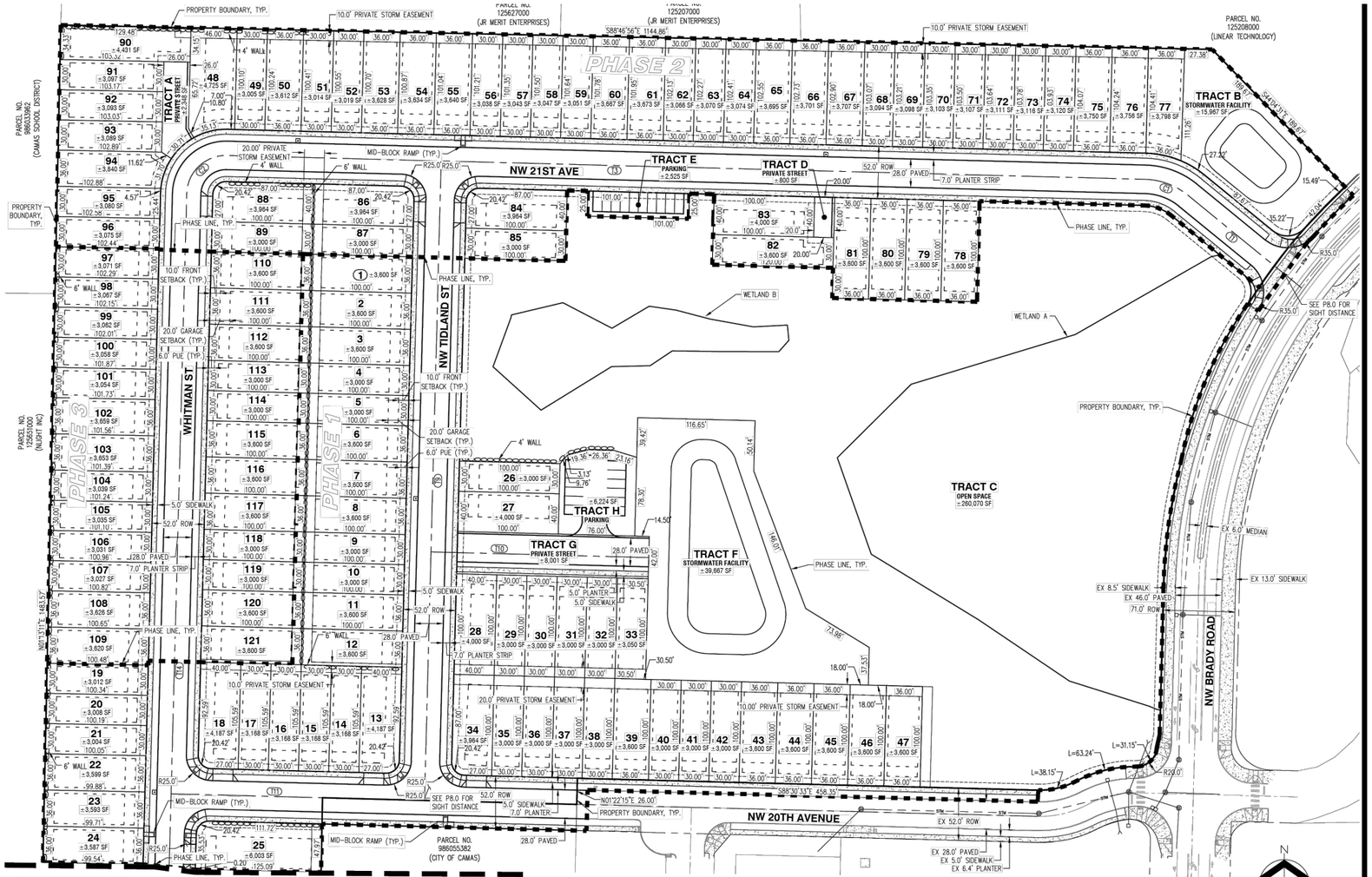
- Year 2025 existing traffic conditions
- Year 2027 background traffic conditions (including identified in-process developments, but not including any site-generated traffic volumes related to the proposed development); and,
- Year 2027 total traffic conditions (including site-generated traffic volumes to the proposed development).

The SE Bybee Road/SE 20th Street intersection will be vacated and SE Bybee Road realigned to form the north approach of the signalized NW Fisher Creek Road/NW 38th Street intersection in conjunction with private development by others. Accordingly, only existing conditions are analyzed at the NW Fisher Creek Road/NW 38th Street intersection and SE Bybee Rad volumes are rerouted for the future conditions analysis.



Site Vicinity Map
Camas, Washington

Figure
1



APPLICANT/CONTACT
ALLIED DEVELOPMENT, LLC
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SCOTTSDALE, AZ 85254
PH: (602) 932-9590
EMAIL: JOSEPHD@ALLIEDDEV.COM

OWNER
DALEY DENNIS
PO BOX 757
RANCHO SANTA FE, CA 92067

PROJECT PURPOSE
PHASED SUBDIVISION WITH 156 SINGLE-FAMILY RESIDENTIAL LOTS WITH ASSOCIATED ROAD AND SITE IMPROVEMENTS.

SITE AREA
24.41 AC (1,063,300 SF)

EXISTING LAND USE
UNDEVELOPED PROPERTY ZONED MULTIFAMILY RESIDENTIAL (MF-18)

CONTACT/ENGINEERING/PLANNING/ ARBORIST/SURVEYING/LANDSCAPE ARCHITECT/NATURAL RESOURCES
AKS ENGINEERING & FORESTRY, LLC.
CONTACT: MICHAEL ANDREOTTI
9600 NE 126TH AVENUE, SUITE 2520
VANCOUVER, WA 98682
PH: 360-882-0419
FAX: 360-882-0426
E-MAIL: ANDREOTTIM@AKS-ENG.COM

GEOTECHNICAL ENGINEER
COLUMBIA WEST ENGINEERING, INC.
CONTACT: DANIEL E. LEHTO, PE, GE
11917 NE 95TH STREET
VANCOUVER, WA 98682
PH: 360-823-2900

PROPERTY DESCRIPTION
LOCATED IN THE SOUTHEAST 1/4 OF SECTION 5, THE NORTHEAST 1/4 OF SECTION 8, AND SOUTHWEST 1/4 OF SECTION 4, TOWNSHIP 1 NORTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CLARK COUNTY, WASHINGTON. PROPERTY SERIAL NO.'S 125193-000, 986055-381, & 125185-000.

VERTICAL DATUM
CLARK COUNTY VERTICAL DATUM NGVD29(47); ELEVATIONS ARE BASED ON CLARK COUNTY BENCHMARK "LACAMAS-50", LOCATED TO THE NE OF THE INTERSECTION OF NW 16TH AVE & NW BRADY RD; ELEVATION = 521.19 FEET (NAVD29(47)).

LOT STATISTICS

SINGLE FAMILY DETACHED:	158
TOTAL LOTS:	158

SITE STATISTICS

PARCEL ZONE:	MULTI-FAMILY (MF-18)
GROSS AREA:	±24.41 AC (±1,063,300 SF)
TOTAL ROW DEDICATION:	±3.99 AC (±173,800 SF)
PROPOSED AVERAGE LOT AREA:	±3,495 SF

RESIDENTIAL PARKING STATISTICS

REQUIRED PARKING:	32 SPACES (158 LOTS/5 LOTS/SPACE)
TRACT E:	10 SPACES
TRACT H:	12 SPACES
TRACT I:	10 SPACES
TOTAL PROPOSED	32 SPACES

TRACT	PURPOSE	AREA
TRACT A	PRIVATE STREET	2,348 SF
TRACT B	STORMWATER FACILITY	15,967 SF
TRACT C	OPEN SPACE	260,070 SF
TRACT D	PRIVATE STREET	800 SF
TRACT E	PARKING	2,525 SF
TRACT F	STORMWATER FACILITY	39,667 SF
TRACT G	PRIVATE STREET	8,001 SF
TRACT H	PARKING	6,772 SF
TRACT I	PARKING	6,224 SF
TOTAL		*342,374 SF

*HOA TO OWN ALL TRACTS.

DENSITY CALCULATIONS (MF-18)

MAXIMUM DENSITY (18 DU/AC X 18.44 AC):	332 UNITS
MINIMUM DENSITY (6 DU/AC X 18.44 AC):	111 UNITS
PROPOSED DESNITY (DU/AC):	158 UNITS
REQUIRED MINIMUM LOT AREA:	2,100 SF
REQUIRED MINIMUM LOT WIDTH:	26 FT
REQUIRED MINIMUM LOT DEPTH:	60 FT

DEVELOPMENT STANDARDS (MF-18)

MINIMUM FRONT YARD SETBACK:	10 FEET
GARAGE SETBACK:	20 FEET
MINIMUM SIDE YARD:	3* FEET
MINIMUM STREET SIDE YARD:	15 FEET
MINIMUM REAR YARD:	10 FEET

* THE NON-ATTACHED SIDE OF A DWELLING UNIT SHALL BE THREE FEET, OTHERWISE A ZERO-LOT LINE IS ASSUMED.

THE PURPOSE OF THIS PRELIMINARY PLAT IS TO SHOW THE PROPOSED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT AN OFFICIAL PLAT AND IS NOT TO BE USED FOR SURVEY PURPOSES.

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, SUITE 2520
VANCOUVER, WA 98682
360.882.0419
WWW.AKS-ENG.COM

ENGINEERING · SURVEYING · NATURAL RESOURCE
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

PRELIMINARY SUBDIVISION PLAT
STELLA RIDGE SUBDIVISION
ALLIED DEVELOPMENT, LLC
CAMAS, WASHINGTON

PRELIMINARY NOT FOR CONSTRUCTION

JOB NUMBER:	12107
DATE:	8/29/2025
DESIGNED BY:	NTL
DRAWN BY:	JCS
CHECKED BY:	NTL

P3.0

RECEIVED FROM AKS ENGINEERING AND FORESTRY, LLC: (SEPTEMBER 2, 2025)

Preliminary Site Plan
Camas, Washington

Figure
2

KITTELSON & ASSOCIATES

Capacity Analysis Methodology

Intersection level-of-service and volume-to-capacity (v/c) analyses described in this report were performed at signalized and unsignalized intersections in accordance with the procedures stated in the *Highway Capacity Manual, 7th Edition* (Reference 2) methodology using Vistro 2024 software.

LOS Standards

City of Camas

Camas uses level of service (LOS) for traffic operations. Minor and local streets must meet LOS C standards, and collector and arterial streets must meet LOS D standards. If site traffic contributes to traffic operations that exceed the LOS D standard, then the TIS recommendations need to include mitigations or roadways improvements.

REPORT FORMAT

This report addresses the following transportation topics:

- Existing land use and transportation system conditions within the site vicinity, including facilities for people walking, bicycles and taking transit, as well as traffic safety and intersection operations;
- Planned developments and transportation improvements within the study area;
- Forecast year 2027 background traffic conditions during the weekday AM and PM peak hours;
- Weekday AM and PM peak hour site trip generation and distribution estimates;
- Forecast year 2027 total traffic conditions with site development during the weekday AM and PM peak hours; and,
- Conclusions and recommendations.

EXISTING CONDITIONS

The existing conditions analysis identifies site conditions and the current operational and geometric characteristics of streets within the study area. The purpose of this section is to set the stage for a basis of comparison to future conditions. The study intersections were inventoried in May 2025.

Site Conditions and Adjacent Land Uses

The proposed development is generally located on the west side of NW Brady Road north of NW 18th Avenue. The approximately 24.4-acre site is comprised of Parcel Numbers 125193000, 986055381, and 125185000. These three parcels are zoned multifamily residential (MF-18). The surrounding land use includes light industrial zoning to the north and west of the site with residential to the south and east.

The subject site is vacant today. The site accesses the public roadway system at NW 18th Avenue and NE 20th Avenue. Residential homes are generally located to the east and south, including Parker Village, which

is an existing gated residential community located on the south side of NW 20th Avenue with a single vehicular local street connection (NW Sage Street) to NW 20th Avenue. A City of Camas water facility is located north of NW 18th Avenue generally between the proposed development site and Parker Village.

The NLight, Inc. Global Headquarters borders the project site directly to the west. Discovery High School and Odyssey Middle School are located further to the west of the project site along the north side of NW 18th Avenue while Prune Hill Elementary school is located to the south and can be accessed via the intersection of NW Tidland Street and NW 16th Avenue.

Transportation Facilities

Table 1 provides a summary of the existing City of Camas streets closest to the site. Figure 3 illustrates the existing lane configurations and traffic control devices at the study intersections.

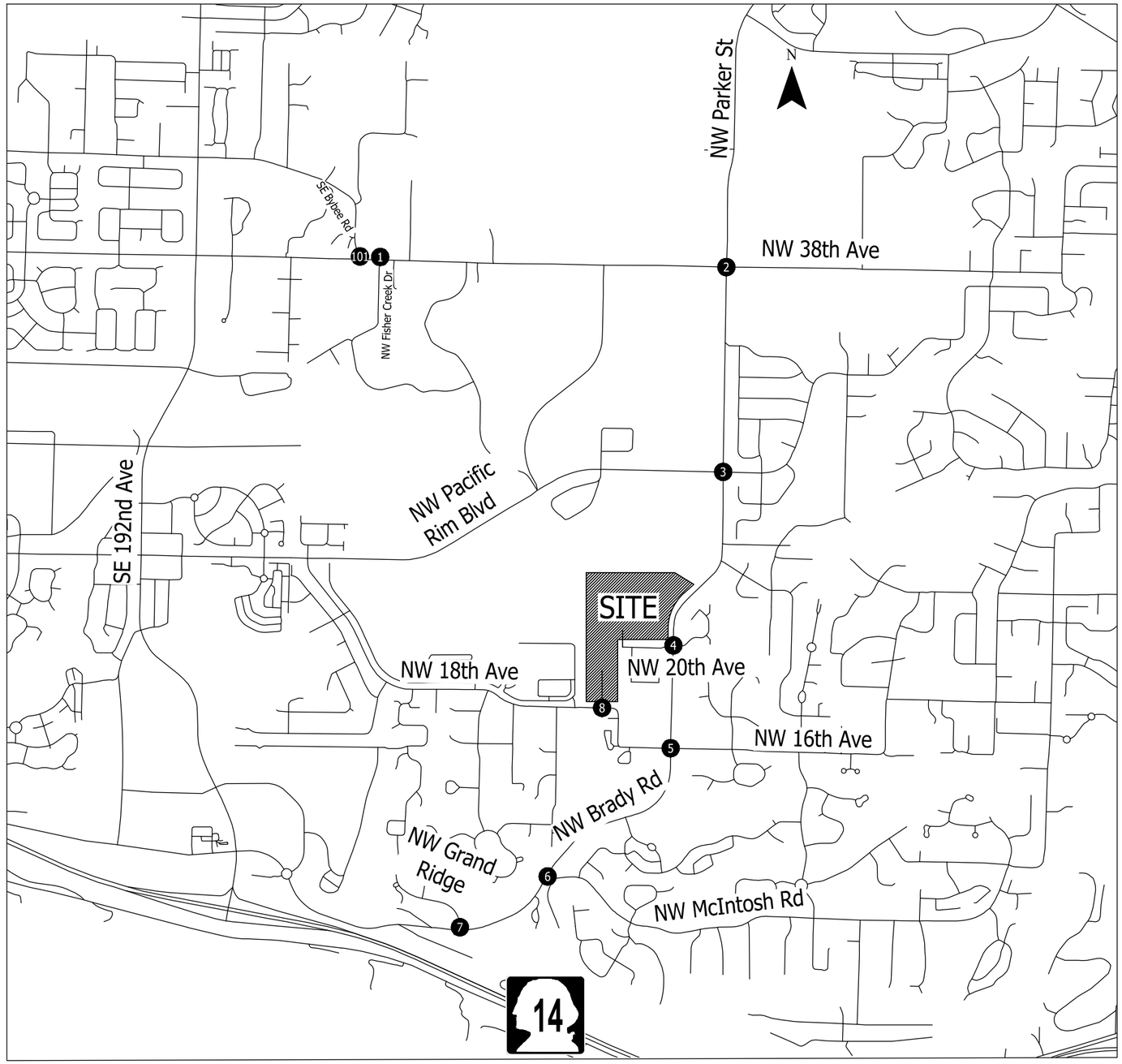
Table 1. Existing Transportation Facilities

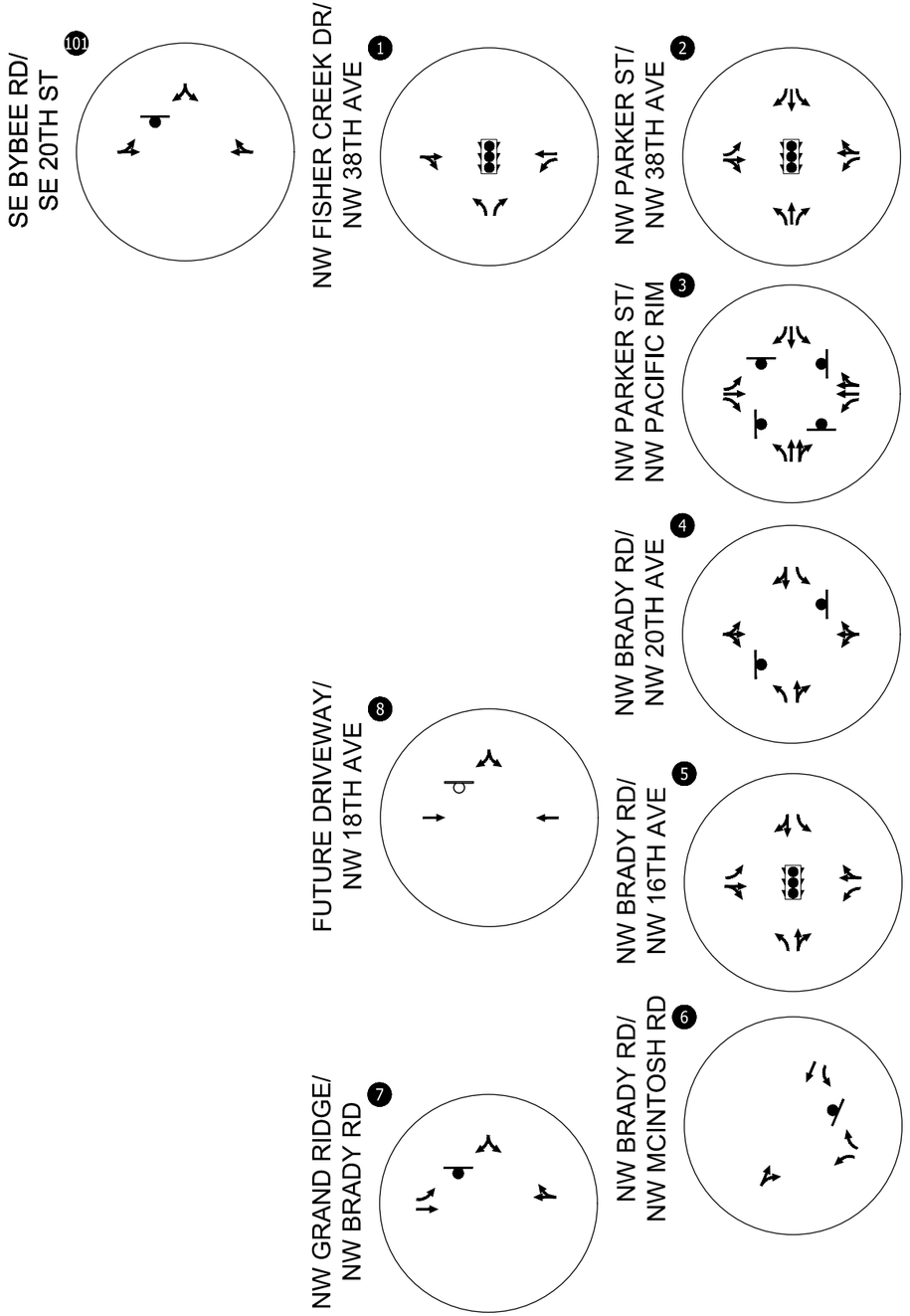
Street	Classification[1]	Cross-Section	Posted Speed	Sidewalks Present?	Bike Lanes Present?
NW 38th Avenue	Arterial	3-lane	40 mph	Yes	Yes
NW Parker Street	Arterial	4-lane	35 mph	Yes	Yes
NW Brady Road	Arterial	2-lane	35 mph	Partial	No
NW 16th Avenue (East of NW Brady Road)	Arterial	2-lane	25 mph	Yes	Yes
NW 18th Avenue	Collector	2-lane	25 mph	Partial	Partial
NW Pacific Rim Boulevard (West of NW Parker Street)	Arterial	5-lane	40 mph	Yes	No
NW Pacific Rim Boulevard (East of NW Parker Street)	Collector	2-lane	25 mph	Yes	No
NW McIntosh Road	Arterial	2-lane	30 mph	Yes	Partial
SE Bybee Road	Collector	2-lane	25 mph	No	No
NW Grand Ridge Drive	Local	2-lane	25 mph	Yes	No

[1] 2035 *City of Camas 2035 Comprehensive Plan (Transportation Element,* Reference 3*)*.

Facilities for Non-Motorized Users

As shown in Table 1, with the exception of some NW Brady Road and NW 18th Avenue segments (including the site frontage), sidewalks are generally present along roadways nearest the site and will connect people walking throughout the community. Bicycle lanes are absent along some arterial and collector roads as noted. The proposed development will provide a westbound bicycle lane and sidewalk along the site frontage on NW 18th Avenue and anticipates construction of sidewalks but no bike lanes along local streets on-site.





Stop Sign
Traffic Signal
Study Intersections
Future Stop Sign
Site area

Existing Lane Configurations
& Traffic Control Devices
Camas, Washington

Figure
3

Transit Facilities

C-Tran provides transit service within the City of Camas. There are no fixed-route transit services currently operated in the site vicinity. The nearest fixed-route service provides north-south service along SE 192nd Avenue on the border of Vancouver and Camas and is located approximately 1½ miles west of the project site.

Given the lack of transit service within a convenient ½ mile walking distance today and for the foreseeable future, no transit-related trip reductions were assumed in this study and no transit-related mitigation measures are recommended as part of the proposed development.

TRAFFIC SAFETY

The Washington State Department of Transportation (WSDOT) provided crash records for the five-year period from January 1, 2020 to December 31, 2024. The data was reviewed to identify potential crash trends or safety needs at the study intersection. Table 2 summarizes the reported crash type, severity and calculated crash rate by intersection. *Appendix B contains the WSDOT crash data*.

Table 2. Intersection Crash Frequency and Severity (January 2020 through December 2024)

#	Intersection	Collision Type								Crash Severity			Total Number of Crashes	Crash Rate[2]
		Rear-end	Turning	Angle	Side Swipe	Backing	Fixed Object	Ped/Bike	Other	PDO[1]	Injury	Fatality		
1	NW Fisher Creek Drive/NW 38th Avenue	-	-	-	-	-	-	-	-	-	-	-	**0**	0.00
2	NW Parker Street/NW 38th Avenue	1	1	-	-	-	1	-	-	2	1	-	**3**	0.10
3	NW Parker Street/NW Pacific Rim Blvd.	-	-	4	1	-	-	-	-	3	2	-	**5**	0.26
4	NW Brady Road/NW 20th Avenue	-	-	-	-	-	-	-	-	-	-	-	**0**	0.00
5	NW Brady Road/NW 16th Avenue	-	1	1	-	-	-	-	-	2	-	-	**2**	0.10
6	NW Brady Road/NW McIntosh Road	-	-	-	-	-	1	-	-	1	-	-	**1**	0.07
7	NW Grand Ridge Drive/NW Brady Road	2	-	-	-	-	-	-	-	1	1	-	**2**	0.13
8	Future Street/NW 18th Avenue	-	-	-	-	-	-	-	-	-	-	-	**0**	0.00
101	SE Bybee Road/SE 20th Street	-	-	1	-	-	-	-	-	-	1	-	**1**	0.05

[1] Property Damage Only
[2] Crash rate is calculated as the number of crashes per million entering vehicles.

The sections that follow provide identification of crash types and/or factors contributing to the reported crashes.

Walking and Biking Related Crashes

As shown in Table 2, there were there were reported no pedestrian or biking related crashes at any of the intersections during the study period.

Crash Severity

There were no reported fatal crashes at the study intersections. None of the study intersections experienced a crash rate greater than 1.0 crashes per million entering vehicles (i.e., the metric used by the City to assess whether further analyses are warranted).

Of the five reported crashes at the NE Parker Street/NE Pacific Rim Boulevard intersection:

- The injury-related crashes occurred during daylight conditions and both involved collisions between southbound through movements and westbound through movements. The most severe injury for both instances was listed as "suspected minor injury".
- Four crashes involved vehicles entering at an angle of which three did not grant proper right of way at the all-way stop. The reported crashes all involved different movements and no pattern was apparent.

No crash trends requiring mitigation were identified at the study intersections through the crash data review.

Other Considerations

Field observations noted a crest vertical curve on NW Brady Road impacts the available sight distance for the northbound and southbound left turn movements at the NW Brady Road/NW 16th Avenue signalized intersection (refer to Photo 1). The intersection was observed to operate with protected and permissive left turn phasing for the northbound and southbound movements during a May 2025 site visit. While the crash data does not show a trend of left turning crashes on the northbound and southbound approaches, the City can choose to verify the appropriateness of a permissive left turn phase per WSDOT *Design Manual* Chapter 1330.07 guidance regardless of the proposed development.

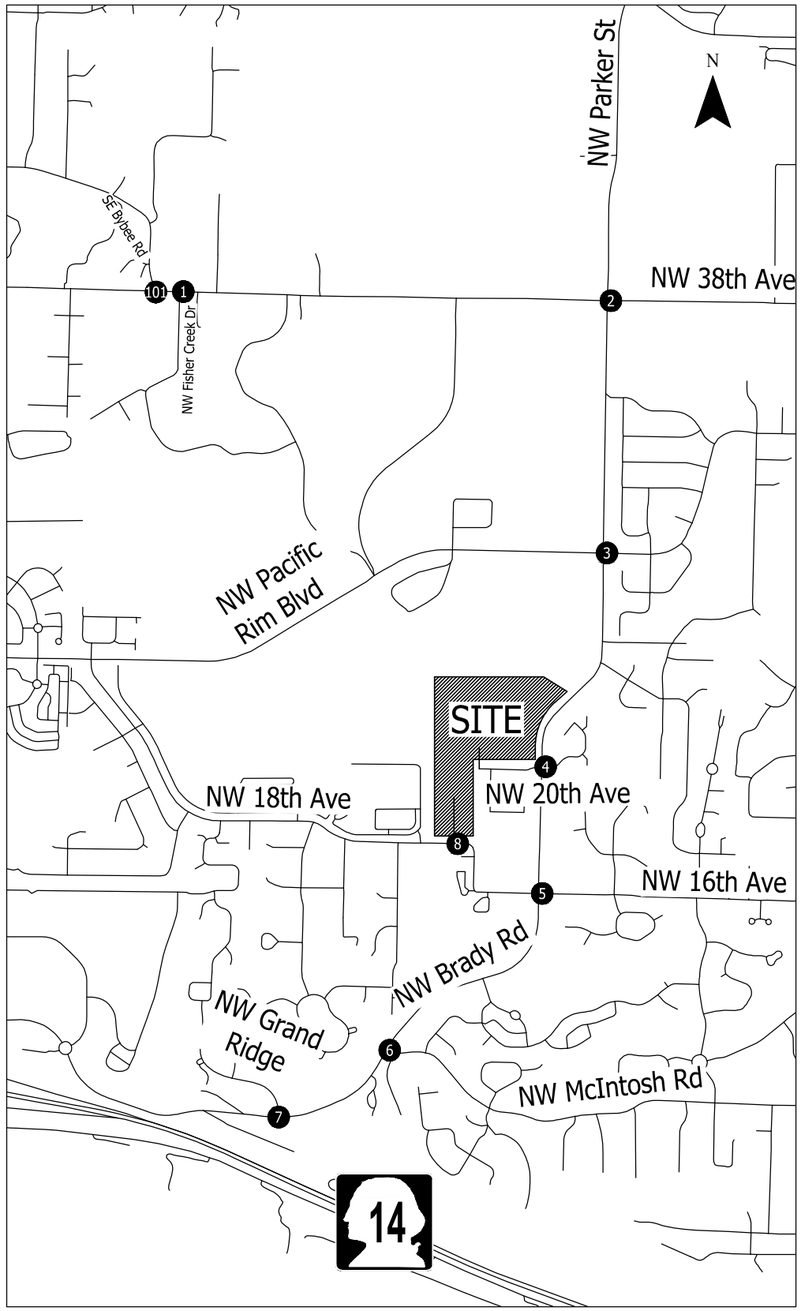
Photo 1. Northbound left-turn Driver View on NW Brady Road at NW 16th Avenue

Kittelson & Associates, Inc. Image captured May 28, 2025

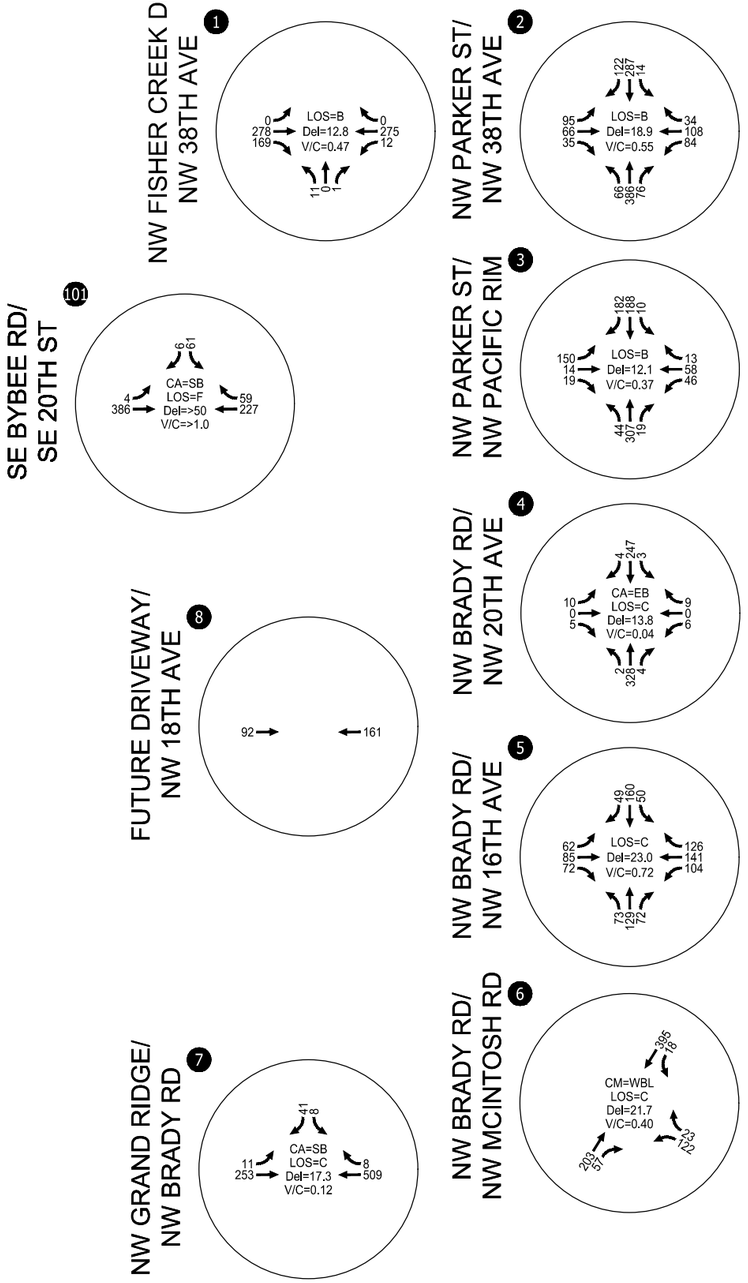
Traffic Volumes and Peak Hour Operations

Vehicle turning movement, pedestrian and bicycle counts were collected at the study intersections on a mid-week day in May 2025 during the morning (7:00 – 9:00 AM) and evening (4:00 - 6:00 PM) hours when local schools were in-session and there were no adverse weather conditions. *Appendix C contains the traffic count sheets used in this study*.

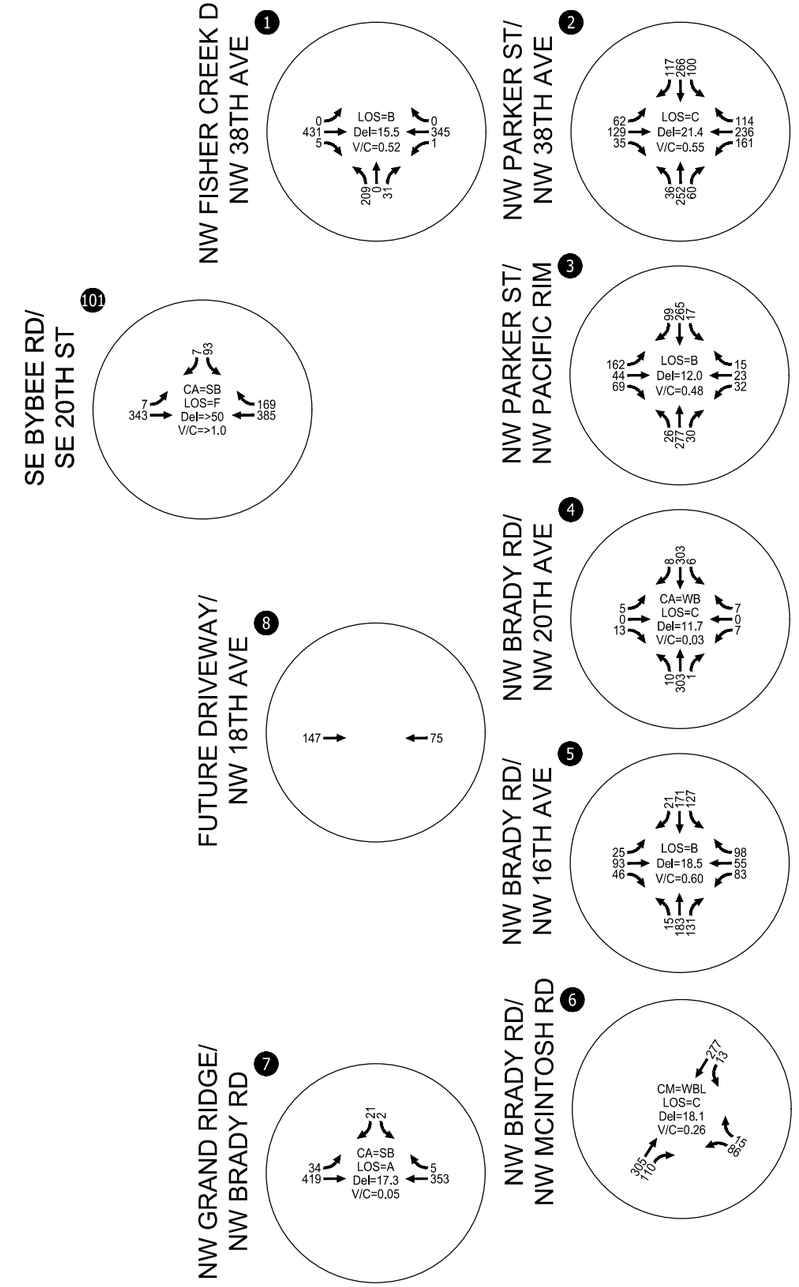
The weekday AM and PM peak hour traffic volumes and the associated intersection operations are shown in Figure 4. As shown, all study intersections except the stop controlled southbound approach to the SE Bybee Road/SE 20th Street intersection satisfy the City's applicable LOS D standard during AM and PM peak hour conditions. The existing lengthy peak hour delays on the southbound SE Bybee Road approach to SE 20th Street will be mitigated through realignment of SE Bybee Road to the signalized NW Fisher Creek Drive intersection as discussed in the future conditions section of this report. *Appendix D contains the existing conditions analysis worksheets.*



WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



CM = INTERSECTION MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/ CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/ CRITICAL MOVEMENT DELAY (UNSIGNALIZED)
V/C = INTERSECTION VOLUME-TO-CAPACITY RATIO (SIGNALIZED)/ CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO (UNSIGNALIZED)

Existing 2025 Traffic Volumes and Intersection Operations
Weekday AM & PM Peak Hours
Camas, Washington

Figure 4

2027 BACKGROUND TRAFFIC CONDITIONS

The year 2027 background traffic analysis identifies how the study intersections will operate prior to the construction and occupancy of the proposed homes. This analysis includes traffic attributed to planned developments within the study area but does not include traffic from the proposed homes.

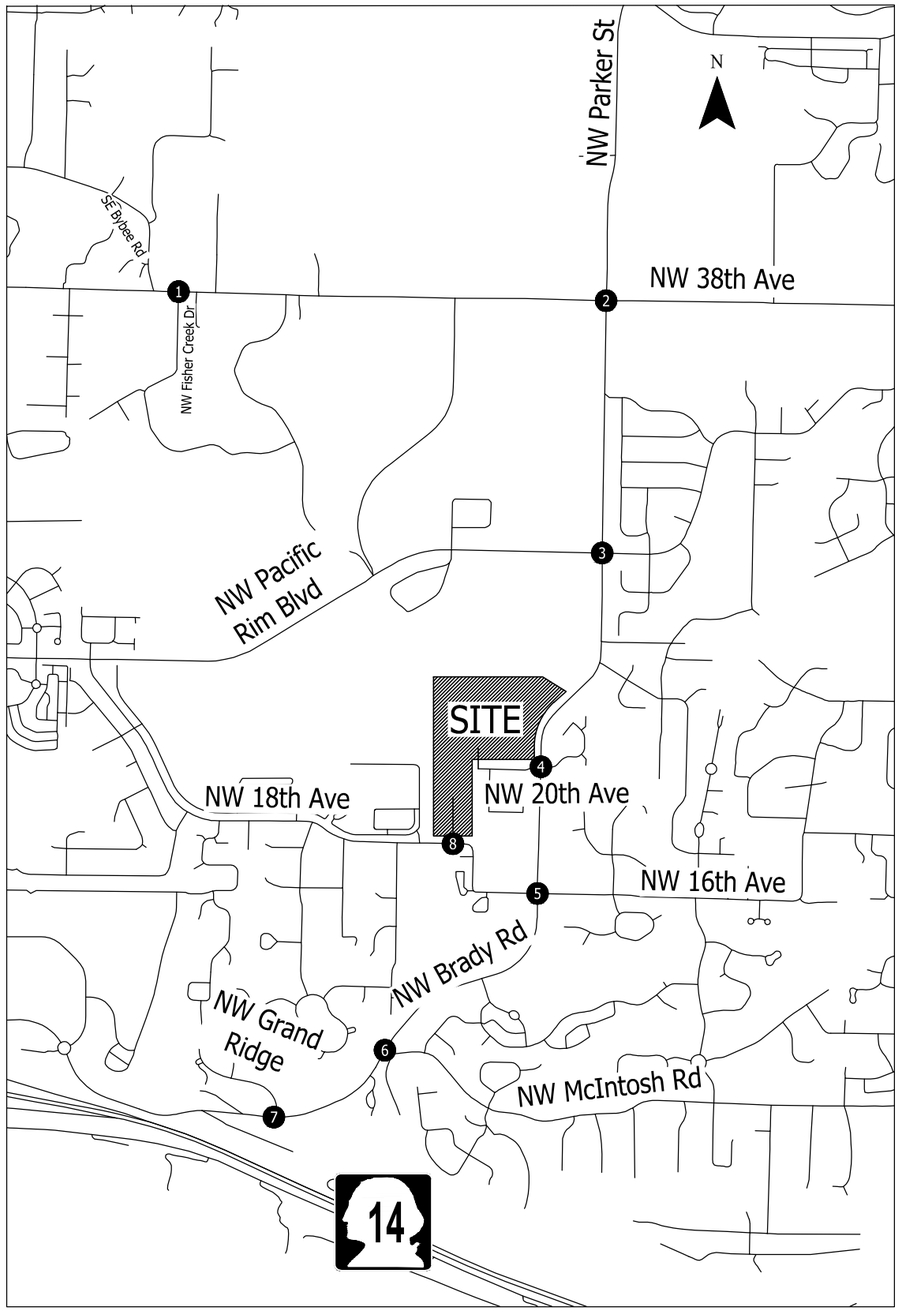
Planned Developments & Transportation Improvements

City staff identified the following previously approved developments to include in the traffic forecasts for the year 2027 (trip documentation is provided in *Appendix E*):

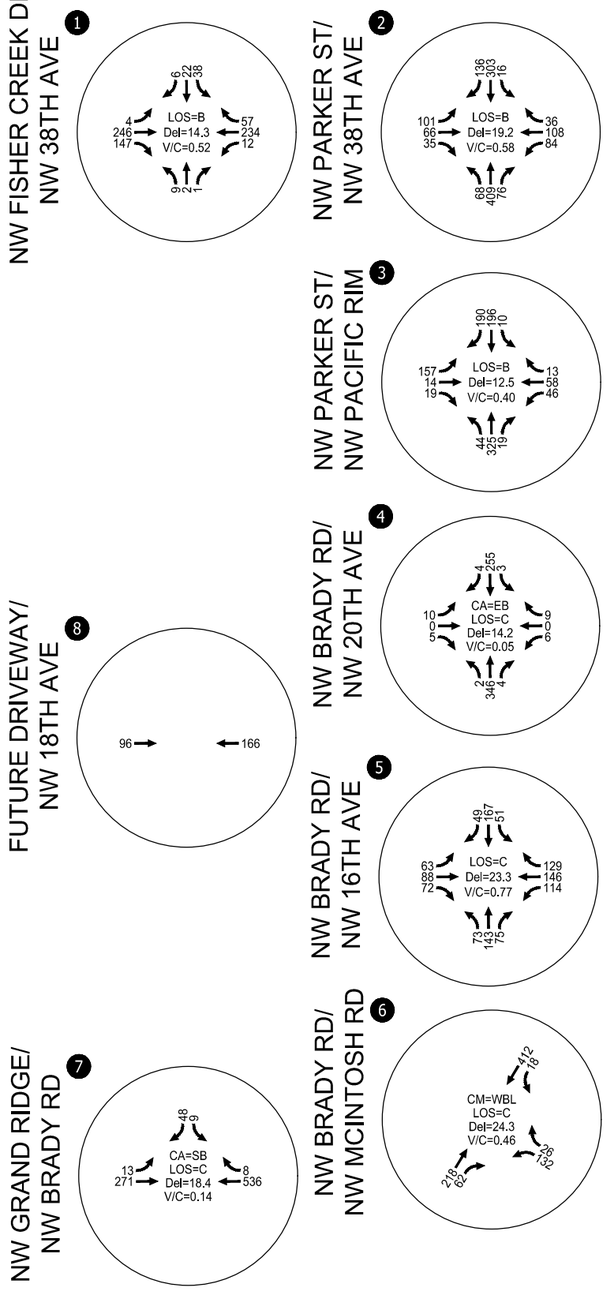
- Camas Woods and Camas Woods 2, located east of SR 500 between Everett Drive and NE 8th Street;
- McIntosh Subdivision, located south of NW McIntosh Road west of NW Fremont Street;
- 18th Ave Subdivision, located east of NW Hood Street/NW 16th Avenue and south of NW 18th Avenue west of NW Hancock Drive;
- Green Mountain Planned Residential Development (PRD), located east of NE Ingle Road north of NE 28th Street;
- Camas Meadows phase 3, located north of NW Lake Road southeast of NW Camas Meadows Drive and west of NW Lakespur Road;
- Hood Street Subdivision, located north of NW 16th Avenue and west of NW Hood Street and NW 18th Avenue;
- Firestone (Valley View Estates), located south of SE 40th Street east of SE Payne Road while connecting south to SE Grand Ridge Drive; and,
- Fresinus Kidney Care, located north of NW Lake Road and east of NW Lakespur Road.

The background conditions analysis assumes the realignment of SE Bybee Road to form the north approach of the signalized NW Fisher Creek Drive/NW 38th Street intersection. The realignment is being constructed in conjunction with a local development project and Clark County has programmed the future phasing and timing of the future north leg into the signal controller as of May 2025. Given the planned realignment, the projected 2027 vehicle turning movements at SE Bybee Road/SE 20th Avenue (Intersection #101) were reassigned to NW Fisher Creek Drive/NW 38th Street (intersection #1) as shown in Appendix E Figure E1.

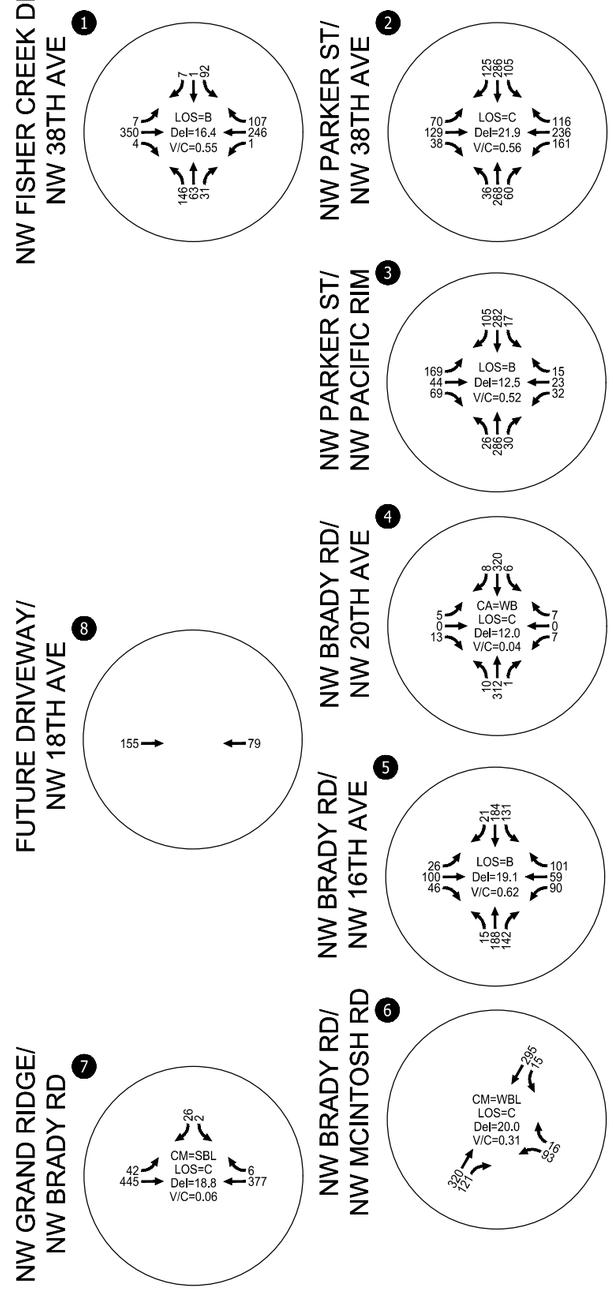
Figure 5 shows the projected background traffic volumes and corresponding intersection operations. All study intersections are forecast to continue to meet the City's LOS D requirement. *Appendix F contains the year 2027 background traffic analysis worksheets.*



WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR



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V/C = INTERSECTION VOLUME-TO-CAPACITY RATIO (SIGNALIZED)/ CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO (UNSIGNALIZED)

Background 2027 Traffic Volumes and Intersection Operations
Weekday AM & PM Peak Hours
Camas, Washington

Figure 5

KITTELSON & ASSOCIATES

PROPOSED DEVELOPMENT

The Applicant proposes to construct 158 detached single-family homes on the project site with buildout and occupancy anticipated by 2027. Vehicular site access for the homes will be via a new north-south street connection to NW 18th Avenue (NW Umatilla Street) and a new street extension of NW 20th Avenue to access NW Brady Road as shown in Figure 2.

Trip Generation Estimate

Table 3 summarizes the estimated site vehicle trips as calculated based on fitted equation trip rates contained in *the Trip Generation Manual, 11th Edition* (Reference 4).

Table 3. Estimated Site Trip Generation

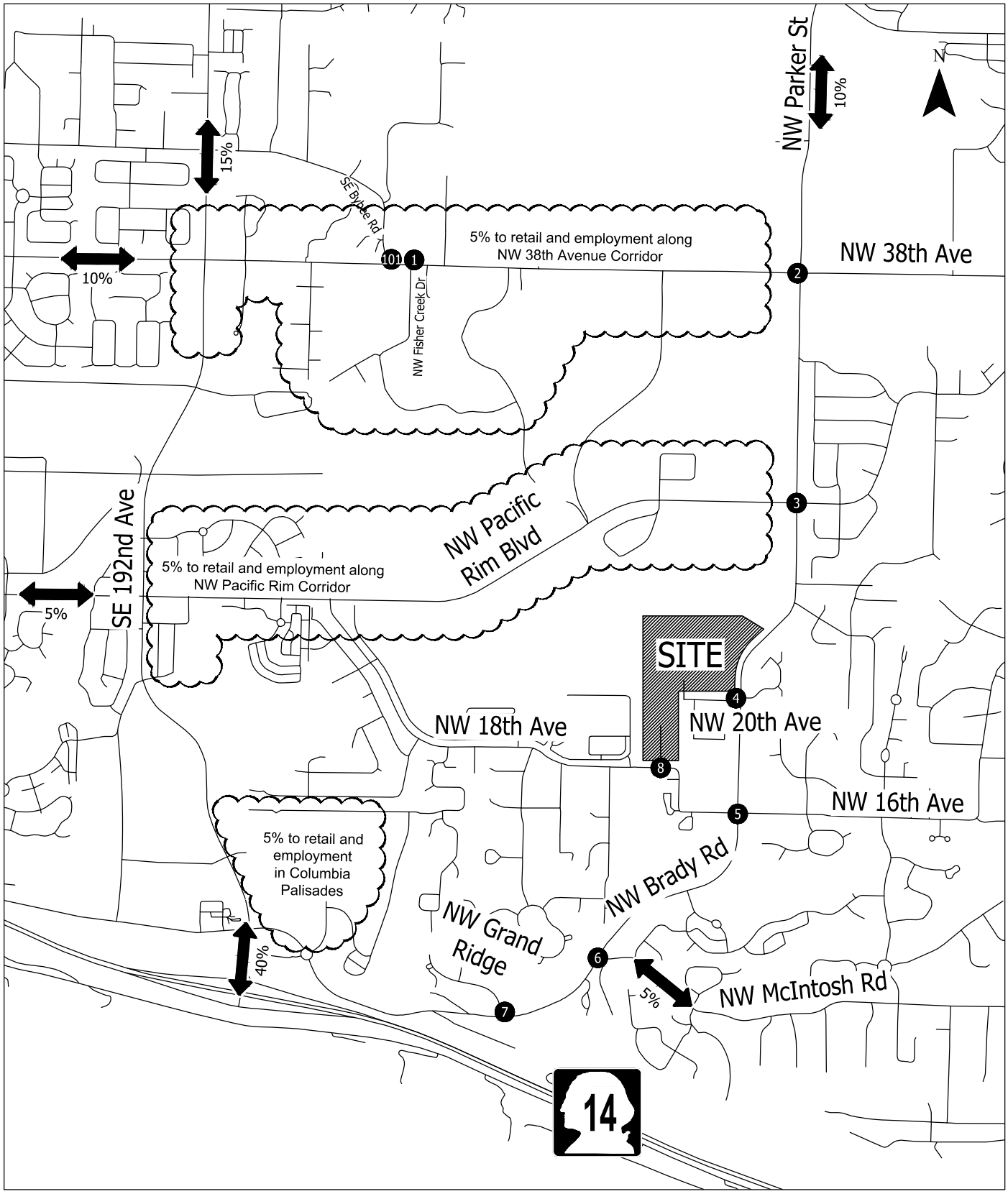
Land Use	ITE Code	Size (Units)	Daily Trips	Weekday AM Peak			Weekday PM Peak		
				Total	In	Out	Total	In	Out
Detached Single-Family Homes	210	158	1,537	113	28	85	153	96	57

Trip Distribution and Assignment

An estimated trip distribution pattern for the planned residential land uses was developed based on review of Southwest Washington Regional Transportation Council (RTC) modeling provided for Transportation Analysis Zone (TAZ) #1769 that encompasses the project site, local and regional employment areas, retail commercial areas, as well as consideration of the local roadway network[1].

Figure 6 shows the estimated trip distribution pattern and Figure 7 shows the resulting site-generated trip assignment for AM and PM peak hours.

[1] The RTC modeling data for TAZ #1769 is heavily weighted to land uses involving jobs and is not directly applicable to the proposed residential land use. Specifically, the RTC base model assumes 1 household and 664 jobs. As such, the model projects few trips north or east of the site and with 75% destined west along SE 34th Street to 192nd Avenue and the majority of those then traveling to SR 14.



Study Intersections

XX% Trip Distribution Percentage

Estimated Trip Distribution Pattern
Camas, Washington

Figure
6

H:\31\31765 - 12107 NW 18th Ave\report\figs\31765_figureset.dwg Sep 05, 2025 - 11:46am - cdougherty Layout Tab: Fig6 Trip Distribution

KITTELSON & ASSOCIATES

WEEKDAY AM PEAK HOUR

WEEKDAY PM PEAK HOUR

Site-Generated Trip Assignment
Weekday AM & PM Peak Hours
Camas, Washington

Figure
7

2027 TOTAL TRAFFIC CONDITIONS

The total traffic conditions analysis forecasts how the study intersections will operate with the traffic associated with full occupancy of the proposed residential development. The site-generated trips shown in Figure 7 were added to the 2027 background traffic volumes reflected in Figure 5 to arrive at the 2027 total traffic volumes shown in Figure 8. Figure 8 also shows the resulting intersection operations under total traffic conditions. For ease of comparison, Table 4 and Table 5 summarize intersection operations for the AM and PM peak hour analysis periods, respectively. All of the study intersections were found to continue to satisfy the City's LOS performance standard.

Appendix G contains the year 2027 total traffic analysis worksheets.

WEEKDAY AM PEAK HOUR

WEEKDAY PM PEAK HOUR

CM = INTERSECTION MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/ CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/ CRITICAL MOVEMENT DELAY (UNSIGNALIZED)
V/C = INTERSECTION VOLUME-TO-CAPACITY RATIO (SIGNALIZED)/ CRITICAL MOVEMENT VOLUME-TO-CAPACITY RATIO (UNSIGNALIZED)

Total 2027 Traffic Volumes and Operations
Weekday AM & PM Peak Hours
Camas, Washington

Figure
8

KITTELSON & ASSOCIATES

Table 4. Projected Weekday AM Peak Hour Study Intersection Operations Summary

ID	Study Intersection	Traffic Control	LOS Standard	Existing Conditions	2027 Background Traffic	2027 Total Traffic
1	NW Fisher Creek Drive/ NW 38th Avenue	Signalized	LOS D	LOS=B Del=12.8 V/C=0.47	LOS=B Del=14.3 V/C=0.52	LOS=B Del=14.4 V/C=0.53
2	NW Parker Street/ NW 38th Avenue	Signalized	LOS D	LOS=B Del=18.9 V/C=0.55	LOS=B Del=19.2 V/C=0.58	LOS=B Del=19.5 V/C=0.57
3	NW Parker Street/ NW Pacific Rim Boulevard	AWSC	LOS D	LOS=B Del=12.1 V/C=0.37	LOS=B Del=12.5 V/C=0.40	LOS=B Del=12.9 V/C=0.42
4	NW Brady Road/ NW 20th Avenue	TWSC	LOS D	CA=EB LOS=C Del=13.8 V/C=0.04	CA=EB LOS=C Del=14.2 V/C=0.05	CA=EB LOS=C Del=16.3 V/C=0.23
5	NW Brady Road/ NW 16th Avenue	Signalized	LOS D	LOS=C Del=23.0 V/C=0.72	LOS=C Del=23.3 V/C=0.77	LOS=C Del=24.3 V/C=0.88
6	NW Brady Road/ NW McIntosh Road	TWSC	LOS D	CM=WBL LOS=C Del=21.7 V/C=0.40	CM=WBL LOS=C Del=24.3 V/C=0.46	CM=WBL LOS=D Del=28.2 V/C=0.51
7	NW Grand Ridge Road/ NW Brady Road	TWSC	LOS D	CA=SB LOS=C Del=17.3 V/C=0.12	CA=SB LOS=C Del=18.4 V/C=0.14	CA=SB LOS=C Del=19.6 V/C=0.16
8	Future Street/ NW 18th Avenue	TWSC	LOS D	Future Intersection	Future Intersection	CA=SB LOS=B Del=10.6 V/C=0.02
101	SE Bybee Road/ SE 20th Street	TWSC	LOS D	CA=SB **LOS=F** Del > 50.0 V/C > 1.0	Closed/ Realigned	Closed/ Realigned

Where: TWSC = Two-way Stop Control, LOS = Level of Service, CA = Critical Approach, CM = Critical Movement, V/C = Volume-to-Capacity ratio, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, L = Left-turn, R = Right-turn. **Bold indicates operating requirement is exceeded.**

Table 5. Projected Weekday PM Peak Hour Study Intersection Operations Summary

ID	Study Intersection	Traffic Control	LOS Standard	Existing Conditions	2027 Background Traffic	2027 Total Traffic
1	NW Fisher Creek Drive/ NW 38th Avenue	Signalized	LOS D	LOS=B Del=15.5 V/C=0.52	LOS=B Del=16.4 V/C=0.55	LOS=B Del=16.6 V/C=0.57
2	NW Parker Street/ NW 38th Avenue	Signalized	LOS D	LOS=C Del=21.4 V/C=0.55	LOS=C Del=21.9 V/C=0.56	LOS=C Del=22.5 V/C=0.56
3	NW Parker Street/ NW Pacific Rim Boulevard	AWSC	LOS D	LOS=B Del=12.0 V/C=0.48	LOS=B Del=12.5 V/C=0.52	LOS=B Del=13.5 V/C=0.60
4	NW Brady Road/ NW 20th Avenue	TWSC	LOS D	CA=WB LOS=C Del=11.7 V/C=0.03	CA=WB LOS=C Del=12.0 V/C=0.04	CA=EB LOS=C Del=16.0 V/C=0.17
5	NW Brady Road/ NW 16th Avenue	Signalized	LOS D	LOS=B Del=18.5 V/C=0.60	LOS=B Del=19.1 V/C=0.62	LOS=B Del=19.7 V/C=0.65
6	NW Brady Road/ NW McIntosh Road	TWSC	LOS D	CM=WBL LOS=C Del=18.1 V/C=0.26	CM=WBL LOS=C Del=20.0 V/C=0.31	CM=WBL LOS=C Del=22.8 V/C=0.35
7	NW Grand Ridge Road/ NW Brady Road	TWSC	LOS D	CA=SB LOS=C Del=17.3 V/C=0.05	CA=SB LOS=C Del=18.8 V/C=0.06	CA=SB LOS=C Del=20.3 V/C=0.06
8	Future Street/ NW 18th Avenue	TWSC	LOS D	Future Intersection	Future Intersection	CA=SB LOS=B Del=10.1 V/C=0.01
101	SE Bybee Road/ SE 20th Street	TWSC	LOS D	CA=SB **LOS=F** Del > 50.0 V/C > 1.0	Closed/ Realigned	Closed/ Realigned

Where: TWSC = Two-way Stop Control, LOS = Level of Service, CA = Critical Approach, CM = Critical Movement, V/C = Volume-to-Capacity ratio, NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, L = Left-turn, R = Right-turn. **Bold indicates operating requirement is exceeded.**

Traffic Control Considerations

We recommend the proposed development post a STOP (R1-1) sign on the southbound Street A approach to NW 18th Avenue in conjunction with site development in accordance with applicable City of Camas standards and the *Manual on Uniform Traffic Control Devices* (MUTCD). Other on-site stop signs may be installed as appropriate per City of Camas direction.

CITY OF VANCOUVER PROPORTIONATE SHARE CONTRIBUTIONS

The City of Vancouver collects proportionate share fee contributions from all future developments that add one or more site-generated trips to an adopted list of intersections that require mitigation. Table 6 provides a summary of the current proportional share fee intersections, the mitigation cost per trip, the estimated number of site-generated trips added based on the current site plan by land use type as well as the corresponding mitigation fee anticipated. We anticipate the final fee amount due will be determined at the time of site plan application and payment will be paid prior to building permit issuance.

Table 6. City of Vancouver Proportionate Share Fee Summary

Mitigation Location	Mitigation Cost/Peak Hour Trip	Peak Hour Trips Added	Estimated Mitigation Cost
137th Ave: 49th St to Fourth Plain Blvd	$3,000/PM	0	$0
Fourth Plain Blvd & 152nd Ave Signal	$333/PM	0	$0
Lieser/St. Helens/MacArthur	$2,000/PM	0	$0
176th Ave & SE 20th St	$400/PM	15	$6,000
192nd Avenue & NE 13th Street	$400/PM	6	$2,400
192nd Ave & SE 34th St	$150/PM	6	$900
192nd Ave & SR-14 ramps	$2,000/PM	59	$118,000
MacArthur & Andresen Roundabout	$2,285/PM	0	$0
MacArthur & Devine Roundabout	$2,226/PM	0	$0
Grove St/Columbia House Blvd/SR-14 WB Ramp	$600/AM	0	$0
NE 172nd Avenue & NE 18th Street	$300/PM	3	$900
NE 179th Place & NE 18th Street	$900/PM	4	$3,600
NE 187th Avenue & NE 18th Street	$1,200/PM	5	$6,000
NE 162nd Avenue & NE 9th Street	$1,500/PM	0	$0
NE 172nd Avenue & NE 9th Street	$4,100/PM	0	$0
NE 192nd Avenue & NE 9th Street	$1,100/PM	0	$0
NE 187th Avenue & SE 1st Street	$1,100/PM	0	$0
Total Proportional Share Cost			$137,800

SUMMARY FINDINGS & RECOMMENDATIONS

Based on the transportation impact analysis results, the proposed Strella Ridge residential homes can be developed while maintaining acceptable operations at the study.

Findings & Recommendations

- All study intersections experience performance levels that satisfy the applicable operating parameters today and in 2027 assuming full occupancy of the homes.
- The proposed site development is projected to add weekday PM peak hour trips to the following intersections where the City of Vancouver assesses proportional share mitigation payments:
  - SE 176th Avenue/SE 20th Street: 15 trips
  - NE 192nd Avenue/NE 13th Street: 6 trips
  - SE 192nd Avenue/SE 34th Street: 6 trips
  - SE 192nd Avenue/SR-14 Ramps: 59 trips
  - NE 172nd Avenue/NE 18th Street: 3 trips
  - NE 179th Place/NE 18th Street: 4 trips
  - NE 187th Avenue/NE 18th Street: 5 trips

Recommendations

Based on the traffic operations analysis findings, we recommend the following in conjunction with the proposed site development.

- Post a STOP (R1-1) sign on the Street A southbound approach to NW 18th Avenue in accordance with applicable City of Camas standards and the *Manual on Uniform Traffic Control Devices* (MUTCD). Other on-site stop signs may be installed as appropriate per City of Camas direction.
- Locate and maintain site landscaping, above-ground utilities, and site signage at all local street intersections within and adjacent to the site to provide adequate intersection sight distance per applicable City requirements.
- Subject to City of Vancouver concurrence, pay the following proportional share intersection fees as identified per City of Vancouver requirements:
  - $6,000 towards SE 176th Avenue/SE 20th St mitigation
  - $2,400 towards NE 192nd Avenue/NE 13th Street mitigation
  - $900 towards SE 192nd Avenue/SE 34th Street mitigation
  - $118,000 towards SE 192nd Avenue/SR-14 ramps mitigation
  - $900 towards NE 172nd Avenue/NE 18th Street mitigation
  - $3,600 towards NE 179th Place/NE 18th Street mitigation
  - $6,000 towards NE 187th Avenue/NE 18th Street mitigation

REFERENCES

1. City of Camas. *Transportation Impact Study Guidelines*. June 10, 2019.

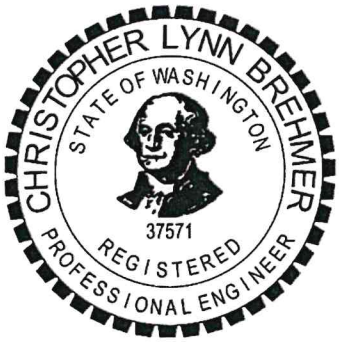
2. Transportation Research Board. *Highway Capacity Manual, 7th Edition*. 2022.

3. City of Camas. Camas 2035. https://www.cityofcamas.us/sites/default/files/fileattachments/community_development/page/5971/comprehensive_plan_camas_2035.pdf

4. Institute of Transportation Engineers. *Trip Generation Manual, 11th Edition*. September 2021.

LIST OF APPENDICES

A. Traffic Study Scoping Documentation
B. Traffic Count Data
C. WSDOT Crash Data
D. Existing Conditions Analysis Worksheets
E. In-Process Data
F. Year 2027 Background Traffic Conditions Analysis Worksheets
G. Year 2027 Total Traffic Conditions Analysis Worksheets



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Appendix A: Traffic Study Scoping Documentation

KITTELSON & ASSOCIATES
851 SW 6th Avenue, Suite 600
Portland, OR 97204
P 503.228.5230

SCOPING MEMORANDUM

May 7, 2025 Project# 31765

To: James E Carothers, PE & Anita Ashton
City of Camas Community Development Engineering

From: Chris Brehmer, PE & Julia Kuhn, PE

CC: John Meier, PE, AKS Engineering & Forestry, LLC
Joe Deaser, Allied Development

RE: NW 18th Avenue Residential Transportation Impact Study Scoping Request (PA 25-1049)

This memorandum documents project assumptions and a proposed analysis methodology associated with transportation impact study (TIS) preparation for the proposed NW 18th Avenue residential development in Camas. Details of the TIS assumptions and methodology are documented herein based on preliminary pre-application conference feedback as well as guidance in the City of Camas *Transportation Impact Study Guidelines*.

We request that you please review this material and provide us with your comments, suggestions and any questions. We will proceed with the TIS analysis pending City scoping confirmation.

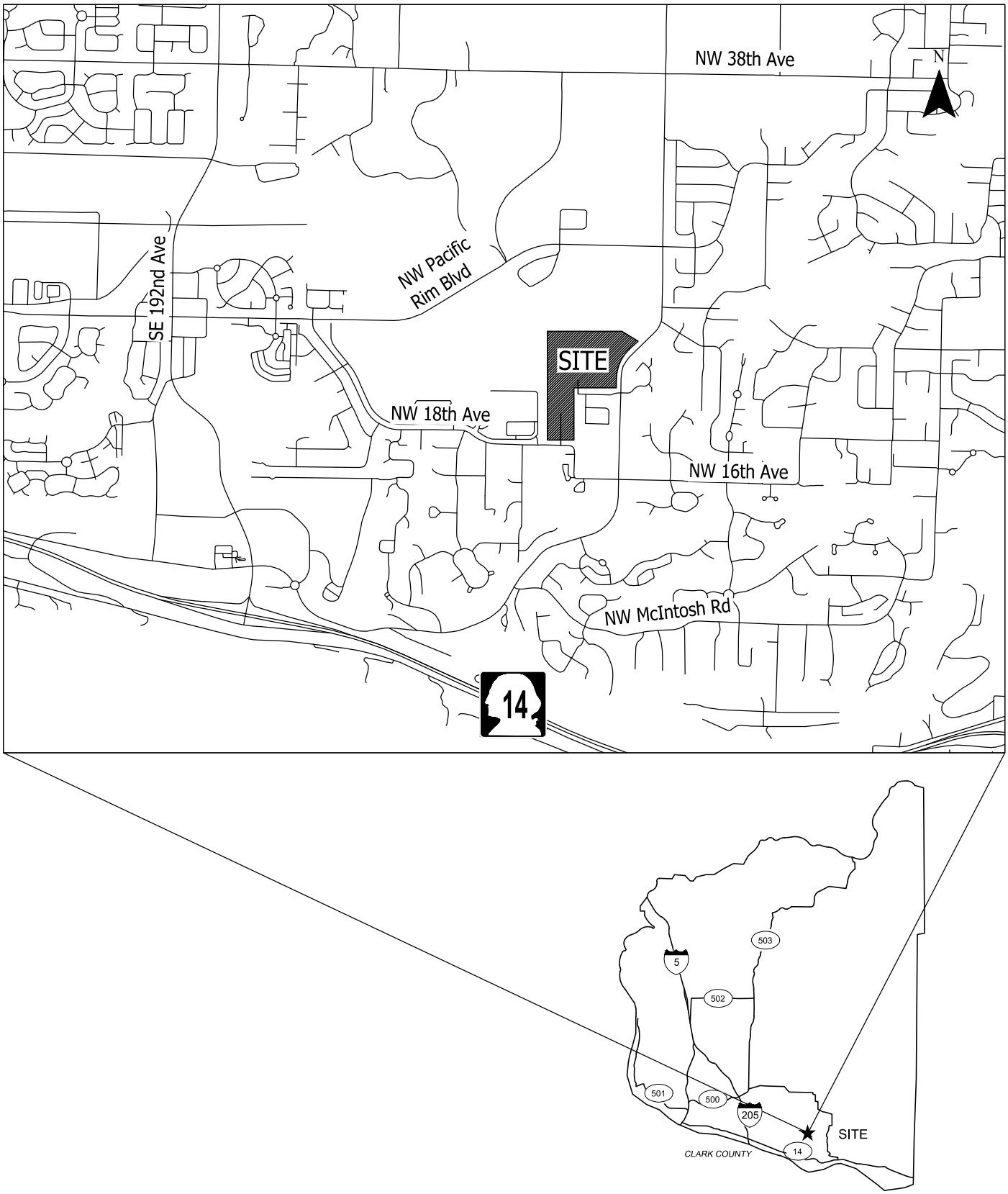
PROPOSED PROJECT

Allied Development proposes to develop 151 single family detached homes on property located on the west side of NW Brady Road generally north of NW 18th Avenue[1]. Vehicular site access is proposed via a new north-south street connection to NW 18th Avenue (NW Umatilla Street) and a new street extension connection to NW 20th Avenue (NW 21st Avenue). Construction is expected to begin in 2026 with full buildout anticipated by 2027.

Figure 1 shows a site vicinity map and Figure 2 shows the preliminary site plan. The project site and property north of the site are both vacant today. Residential homes are generally located to the east and south, including Parker Village, which is an existing gated residential community located on the south side of NW 20th Avenue with a single vehicular local street connection (NW Sage Street) to NW 20th Avenue. A City of Camas water facility is located north of NW 18th Avenue generally between the proposed development site and Parker Village.

The NLight, Inc. Global Headquarters borders the project site directly to the west. Discovery High School and Odyssey Middle School are located off-site further to the west of the project site along the north side of NW 18th Avenue while Prune Hill Elementary school is located to the south and can be accessed via the intersection of NW Tidland Street and NW 16th Avenue.

[1] Parcel Numbers: 125193000, 986055381, and 125185000



Site Vicinity Map
Camas, Washington

Figure
1

AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE., STE. 2520
VANCOUVER, WA 98682
360.882.0419
WWW.AKS-ENG.COM

ENGINEERING · SURVEYING · NATURAL RESOURCES
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

PROPOSED LAYOUT
NW 18TH AVENUE
JOE DEASER
CAMAS WASHINGTON

PRELIMINARY NOT FOR CONSTRUCTION

JOB NUMBER:	12107
DATE:	
DESIGNED BY:	MAZ
DRAWN BY:	MAZ
CHECKED BY:	MAJ

PA002

Know what's **below.** **Call** before you dig.

AKS DRAWING FILE: 12107PA002.DWG | LAYOUT: PA002

C:\Users\jhenriksen\appdata\local\temp\AcPublish_65136\31765_figureset.dwg May 07, 2025 - 10:13am - jhenriksen Layout Tab: Fig2 Proposed Site Plan

RECEIVED FROM AKS ENGINEERING AND FORESTRY, LLC: (APRIL 18, 2024)

Preliminary Site Plan
Camas, Washington

Figure
2

KITTELSON & ASSOCIATES

ESTIMATED TRIP GENERATION

Weekday daily, AM, and PM peak hour vehicle trips for the proposed homes were estimated using data from the *Trip Generation Manual, 11th Edition*, published by the Institute of Transportation Engineers (ITE), as summarized in Table 1 below. The residential trip estimates shown in Table 1 reflect fitted equation trip rates.

Table 1. Estimated Site Trip Generation

Land Use	ITE Code	Size (units)	Daily Trips	Weekday AM Peak			Weekday PM Peak		
				Total	In	Out	Total	In	Out
Detached Single-Family Homes	210	151	1,474	108	27	81	146	92	54

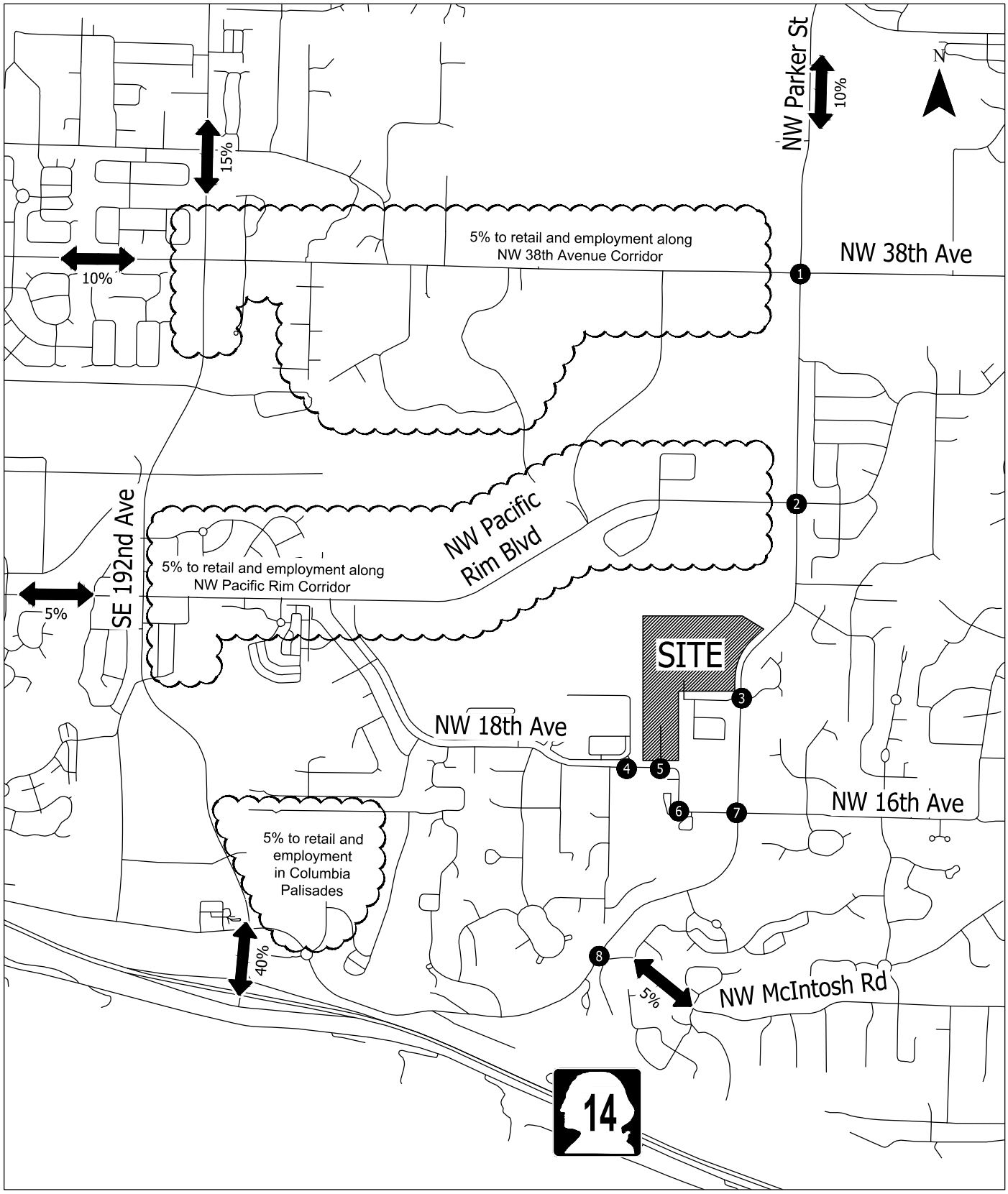
According to the City of Camas' *Transportation Impact Study Guidelines*, a TIS is required when a proposed development generates 200 or more daily vehicle trips. As Table 1 shows, this threshold has been met for this project, triggering a TIS.

ESTIMATED TRIP DISTRIBUTION PATTERN

An estimated trip distribution pattern for the planned residential land uses was developed based on review of Southwest Washington Regional Transportation Council (RTC) modeling provided for Transportation Analysis Zone (TAZ) #1769 that encompasses the project site, local and regional employment areas, retail commercial areas, as well as consideration of the local roadway network[2].

Figures 3 and 4 illustrate the estimated trip distribution pattern and corresponding new site-generated trip assignment to potential study intersections during the weekday AM and PM peak hours based on the trip estimates in Table 1.

[2] The RTC modeling data for TAZ #1769 is heavily weighted to land uses involving jobs and is not directly applicable to the proposed residential land use. Specifically, the RTC base model assumes 1 household and 664 jobs. As such, the model projects few trips north or east of the site and with 75% destined west along SE 34th Street to 192nd Avenue and the majority of those then traveling to SR 14.



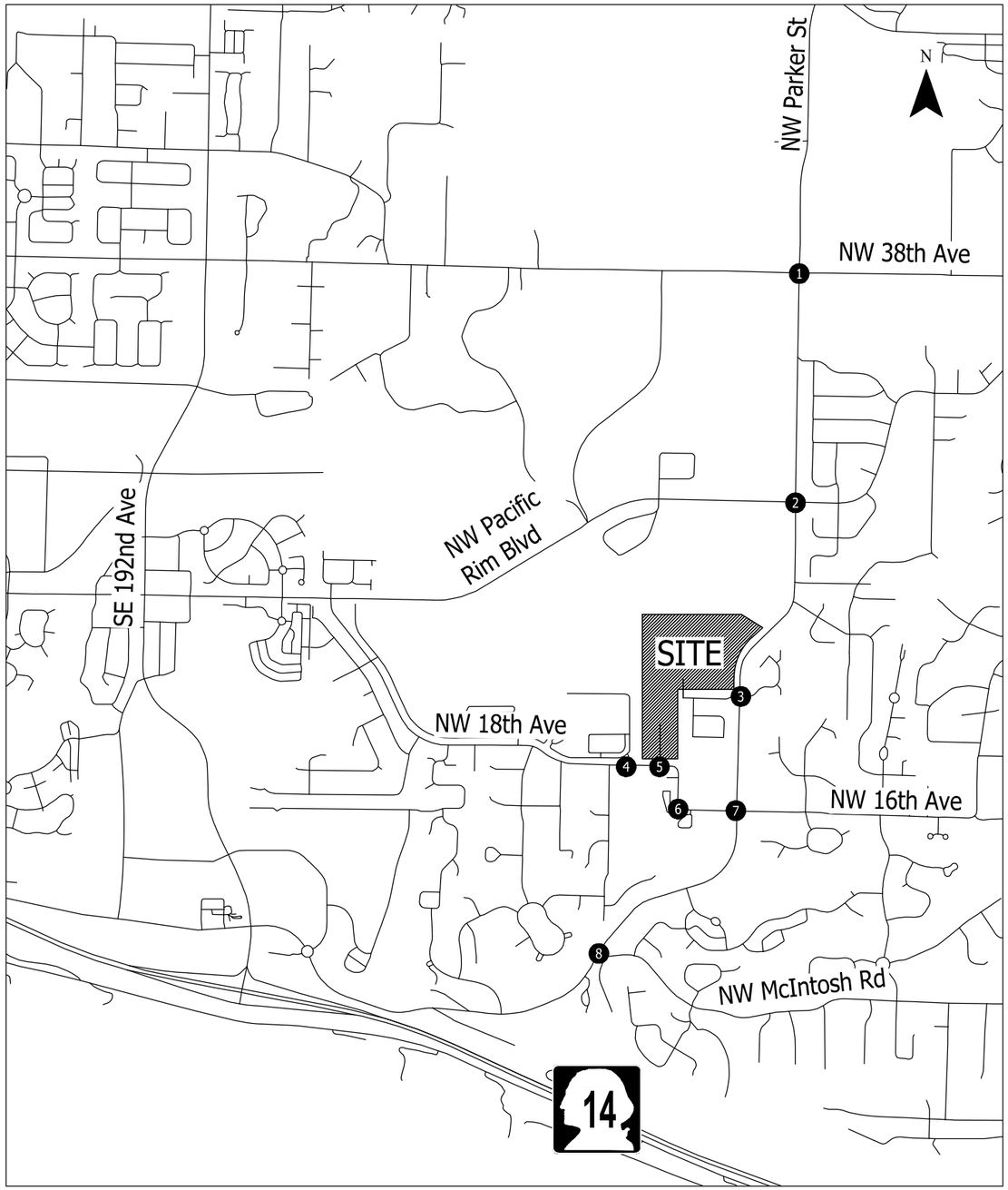
Study Intersections

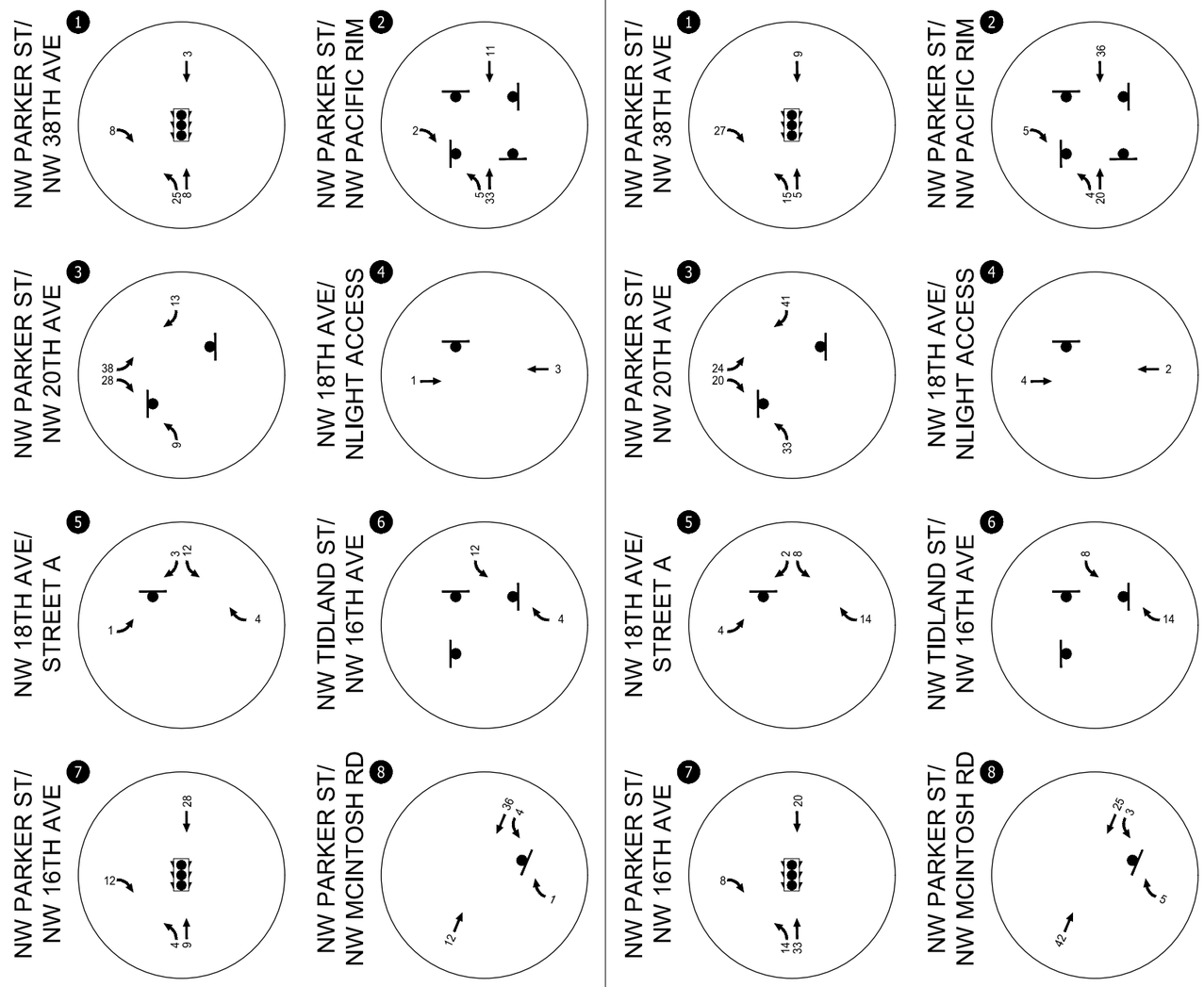
A Site Driveway

XX% Trip Distribution Percentage

Study Intersections and Trip Distribution Pattern Camas, Washington

Figure 3





Stop Sign

Traffic Signal

Study Intersections

Site-Generated Trip Assignment
Weekday AM & PM Peak Hours
Camas, Washington

Figure
4

PROPOSED STUDY INTERSECTIONS

The City of Camas requires City intersections to be included in a TIS if 20 or more peak hour trips are added from the development. Based on the 20-trip threshold, the preliminary trip distribution pattern and the trip assignments outlined above, the intersections listed in Table 2 have been identified for potential inclusion in the TIS. We request City staff review and confirm the TSI study intersections.

Table 2. Potential Study Intersections

ID	Potential Study Intersection	Traffic Control	City Facility Designation
1	NW 38th Avenue/NW Parker Street	Traffic Signal	Arterial
2	NW Pacific Rim Blvd./NW Parker Street	All Way Stop	Arterial
3	NW 20th Avenue/NW Brady Road	Two Way Stop	Arterial
4	NW 18th Avenue/NLight Inc. Access*	Two Way Stop	Collector
5	NW 18th Avenue/Future Street	Two Way Stop	Collector
6	NW Tidland Street/NW 16th Avenue	All Way Stop	Collector
7	NW 16th Avenue/NW Brady Road	Traffic Signal	Arterial
8	NW McIntosh Road/NW Brady Road	Two Way Stop	Arterial

*Potential study intersection based on proximity, not impacted by more than 20 peak hour trips. City staff direction requested as to whether to include.

City of Vancouver Proportional Share Intersections

In addition to the above list of Camas study intersections, we will track site-generated trips through impacted City of Vancouver proportional share intersections and summarize those findings in tabular form as part of the final report.

ANALYSIS METHODOLOGY

All study intersection operations analysis will be completed using Vistro software and the *Highway Capacity Manual, 7th Edition* methodologies.

MOBILITY STANDARDS

Camas uses level of service (LOS) for traffic operations. Minor and local streets must meet LOS C standards, and collector and arterial streets must meet LOS D standards. All of the proposed study intersections listed in Table 2 appear subject to the LOS D requirement.

If site traffic contributes to traffic operations that exceed the LOS D standard, then the TIS recommendations need to include mitigations or roadways improvements.

STUDY TIME PERIODS

We propose to analyze the one-hour peak within the weekday morning (7-9 AM) and weekday PM (4-6 PM) commuter peak periods. The following analysis scenarios will be analyzed assuming project buildout by the year 2029:

- Year 2025 existing traffic conditions – weekday AM and weekday PM peak hours.
- Year 2027 background traffic conditions (including background growth and identified in-process developments, but not including any site-generated traffic volumes related to the proposed development) – weekday AM and weekday PM peak hours.
- Year 2027 total traffic conditions (including site-generated traffic volumes to the proposed development) – weekday AM and weekday PM peak hours.

2027 TRAFFIC VOLUMES & IN-PROCESS DEVELOPMENTS

Based on previous development projects in Camas, we propose to add in-process development trips to the 2025 existing conditions traffic counts to develop future year 2027 traffic volumes. The following are known in-process developments for which site trips for each will be included at all impacted study intersections as background vehicular trips:

- Firestone Ridge (formerly Valley View Estates);
- Camas Woods; and,
- Camas Woods 2.

We ask that City staff please identify and provide relevant in-process developments to be included in the background traffic conditions analysis.

We also request information on any funded transportation improvement projects that should be assumed to be in place at the study intersections for the background traffic conditions analysis.

NEXT STEPS

We look forward to City staff comments regarding the proposed study intersections, intersection analysis periods, trip generation and trip distribution assumptions, etc.

Please contact us if you have any questions as you review this material.

Appendix B: WSDOT Crash Data

KAI Int #	KAI Int Name	JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT
2	NW Parker St/NW 38th Ave	City Street	Clark	Camas	NW 38TH AVE		NW PARKER ST			
2	NW Parker St/NW 38th Ave	City Street	Clark	Camas	NW 38TH AVE		NW PARKER ST			
2	NW Parker St/NW 38th Ave	City Street	Clark	Camas	NW PARKER ST	4301	NW 38TH AVE			
3	NW Parker St/ NW Pacific Rim	City Street	Clark	Camas	NW PACIFIC RIM BLVD	4000	NW PARKER ST			
3	NW Parker St/ NW Pacific Rim	City Street	Clark	Camas	NW PARKER ST	2665	NW PACIFIC RIM BLVD			
3	NW Parker St/ NW Pacific Rim	City Street	Clark	Camas	NW PARKER ST	2665	NW PACIFIC RIM BLVD			
3	NW Parker St/ NW Pacific Rim	City Street	Clark	Camas	NW PARKER ST	2800	NW PACIFIC RIM DR			
3	NW Parker St/ NW Pacific Rim	City Street	Clark	Camas	NW PARKER ST		NW PACIFIC RIM DR			
5	NW Brady Rd/NW 16th Ave	City Street	Clark	Camas	NW 16TH AVE	0	NW BRADY RD			
5	NW Brady Rd/NW 16th Ave	City Street	Clark	Camas	NW BRADY RD	0	NW 16TH AVE			
6	NW Brady Rd/NW McIntosh R	City Street	Clark	Camas	NW BRADY RD	20820	NW MCINTOSH RD			
7	NW Grand Ridge Dr/ NW Brad	City Street	Clark	Camas	SE BRADY RD	20300	SE GRAND RIDGE DR			
7	NW Grand Ridge Dr/ NW Brad	City Street	Clark	Camas	SE BRADY RD	20300		129	F	W
101	SE Bybee Rd/SE 20th St	City Street	Clark	Camas	SE 20TH ST	19782	SE BYBEE RD			

REFERENCE POINT NAME	MILEPOST	A/B	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES
				No	EE50958	02/15/2024	18:38	No Apparent Injury	0	0	3	0	0
				No	ED21294	12/31/2022	14:54	Possible Injury	2	0	2	0	0
				No	ED25221	01/15/2023	23:27	No Apparent Injury	0	0	1	0	0
				No	EB83957	10/29/2021	13:01	Suspected Minor Injury	2	0	2	0	0
				No	EA90008	12/15/2020	15:00	No Apparent Injury	0	0	2	0	0
				No	EF43043	11/27/2024	16:37	No Apparent Injury	0	0	2	0	0
				No	ED69489	06/10/2023	15:01	No Apparent Injury	0	0	2	0	0
				No	EE69287	04/14/2024	10:06	Suspected Minor Injury	2	0	2	0	0
				No	EA22449	03/10/2020	17:55	No Apparent Injury	0	0	2	0	0
				No	EA17171	02/21/2020	14:20	No Apparent Injury	0	0	2	0	0
				No	EE09430	10/14/2023	10:39	No Apparent Injury	0	0	1	0	0
				No	EC81583	09/07/2022	14:58	Possible Injury	1	0	2	0	0
SE GRAND RIDGE DR				No	EA13950	02/11/2020	14:40	No Apparent Injury	0	0	2	0	0
				No	EF36499	11/15/2024	10:58	Possible Injury	2	0	2	0	0

VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP
Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related
Not Stated	Passenger Car	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related
Passenger Car	Passenger Car	At Intersection and Related
Passenger Car		At Intersection and Related
Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related
Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection
Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related

WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK
Overcast	Dry	Dusk	From same direction - both going straight - one stopped - rear-end
Overcast	Wet	Daylight	From opposite direction - one left turn - one straight
Clear	Wet	Dark-Street Lights On	Linear Curb
Overcast	Dry	Daylight	Entering at angle
Overcast	Wet	Daylight	Same direction -- both turning left -- both moving -- sideswipe
Clear or Partly Cloudy	Dry	Daylight	Entering at angle
Clear or Partly Cloudy	Dry	Daylight	Entering at angle
Overcast	Dry	Daylight	Entering at angle
Overcast	Dry	Daylight	From opposite direction - one left turn - one straight
Clear or Partly Cloudy	Dry	Daylight	Entering at angle
Overcast	Dry	Daylight	Linear Curb
Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end
Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end
Clear	Dry	Daylight	Entering at angle

VEHICLE 1 ACTION	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)
Going Straight Ahead	Stopped at Signal or Stop Sign	West	East	Vehicle Stopped	Vehicle Stopped	Follow Too Closely
Making Left Turn	Going Straight Ahead	West	North	East	West	Did Not Grant RW to Vehicle
Making Left Turn		South	West			Exceeding Stated Speed Limit
Going Straight Ahead	Going Straight Ahead	North	South	East	West	None
Making Left Turn	Making Left Turn	West	North	West	North	Other Contributing Circ Not Listed
Going Straight Ahead	Going Straight Ahead	South	North	West	East	Did Not Grant RW to Vehicle
Going Straight Ahead	Going Straight Ahead	North	South	East	West	Operating Handheld Cell Phone
Going Straight Ahead	Going Straight Ahead	North	South	East	West	Did Not Grant RW to Vehicle
Making Left Turn	Going Straight Ahead	West	North	East	West	Did Not Grant RW to Vehicle
Making Right Turn	Going Straight Ahead	South	East	West	East	Other Contributing Circ Not Listed
Going Straight Ahead		North	South			None
Going Straight Ahead	Stopped for Traffic	Southwest	Northeast	Southwest	Northeast	Other Distractions
Going Straight Ahead	Stopped for Traffic	West	East	Vehicle Stopped	Vehicle Stopped	Follow Too Closely
Making Left Turn	Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle

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)
		None		
		None		
Disregard Traffic Sign and Signals				
		Disregard Traffic Sign and Signals		
		Exceeding Stated Speed Limit	Disregard Traffic Sign and Signals	Racing
		None		
Did Not Grant RW to Vehicle	Other Distractions	None		
		None		
		None		
		None		
		None		
		None		
		None		

FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Lane of Primary Trafficway	1141189.36	105908.28
Lane of Primary Trafficway	1141189.36	105908.28
Intersecting Trafficway	1141189.36	105908.28
Lane of Primary Trafficway	1141136.86	103418.15
Lane of Primary Trafficway	1141146.37	103378.16
Lane of Primary Trafficway	1141146.37	103378.16
Lane of Primary Trafficway	1141187.78	103413.29
Lane of Primary Trafficway	1141147.49	103418.89
Lane of Primary Trafficway	1140524.42	100033.22
Lane of Primary Trafficway	1140524.42	100033.22
Outside Shoulder of Primary Trafficway	1139002.47	98480.53
Lane of Primary Trafficway	1137955.56	97817.12
Lane of Primary Trafficway	1137828.12	97823.28
Lane of Primary Trafficway	1136720.64	106007.67

Appendix C: Traffic Count Data

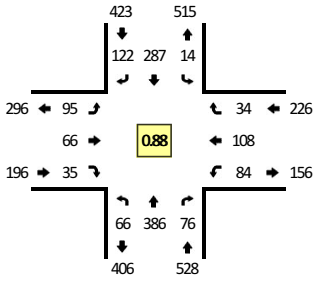
Type of peak hour being reported: Intersection Peak

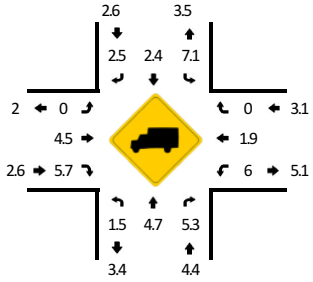
Method for determining peak hour: Total Entering Volume

LOCATION: NW Parker St -- NW 38th Ave
CITY/STATE: Camas, WA

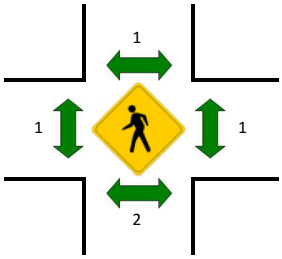
QC JOB #: 17043029
DATE: Thu, May 15 2025

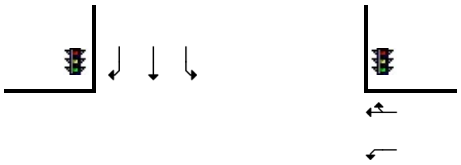
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

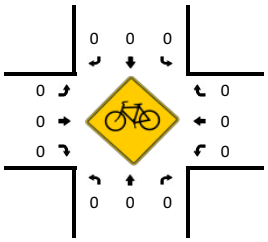


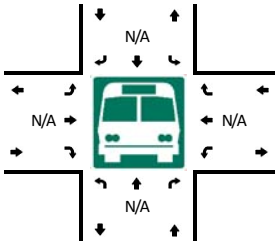


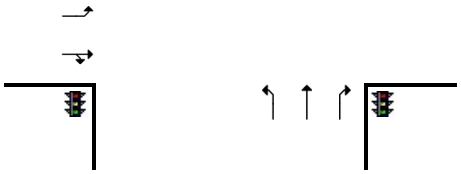
TRUE DATA TO IMPROVE MOBILITY

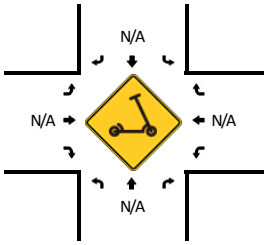












R* = RTOR

5-Min Count Period Beginning At	NW Parker St (Northbound)					NW Parker St (Southbound)					NW 38th Ave (Eastbound)					NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	1	9	1	0	1	0	9	4	0	2	3	2	3	0	0	8	11	1	0	0	55	
7:05 AM	4	12	1	0	0	0	13	5	0	3	5	1	0	0	0	9	8	0	0	0	61	
7:10 AM	2	10	1	0	1	1	10	3	0	0	1	4	0	0	1	11	4	0	0	1	50	
7:15 AM	6	20	0	0	0	0	18	4	0	0	4	1	0	0	1	6	5	0	0	0	65	
7:20 AM	5	15	1	0	0	0	14	3	0	1	1	4	2	0	1	7	10	0	0	1	65	
7:25 AM	2	14	0	0	2	1	11	5	0	2	5	2	0	0	0	9	7	0	0	0	60	
7:30 AM	2	5	1	0	2	1	7	1	0	3	5	1	1	0	0	8	9	3	0	0	49	
7:35 AM	5	25	2	0	2	2	12	5	0	0	7	3	1	0	1	7	7	1	0	1	81	
7:40 AM	7	10	4	0	0	1	17	0	0	6	7	8	4	0	1	9	16	1	0	0	91	
7:45 AM	3	26	2	0	4	2	18	5	0	4	13	5	1	0	1	10	9	2	0	1	106	
7:50 AM	7	40	1	0	3	1	17	11	0	3	15	9	7	0	0	8	7	2	0	1	132	
7:55 AM	6	45	8	0	6	1	27	6	0	1	8	8	3	0	1	7	9	1	0	0	137	952
8:00 AM	8	25	3	0	2	1	26	6	0	5	15	8	2	0	1	6	11	0	0	0	119	1016
8:05 AM	12	24	5	0	3	1	28	7	0	1	5	4	0	0	0	4	16	1	0	0	111	1066
8:10 AM	3	22	0	0	1	1	24	10	0	1	8	6	3	0	1	7	8	1	0	0	96	1112
8:15 AM	5	25	2	0	2	0	19	3	0	4	3	5	3	0	0	5	6	2	0	1	85	1132
8:20 AM	5	25	2	0	1	1	25	5	0	5	6	4	0	0	0	11	8	2	0	0	100	1167
8:25 AM	3	30	6	0	1	0	18	10	0	1	11	6	4	0	2	9	9	1	0	2	113	1220
8:30 AM	4	37	7	0	3	0	22	4	0	2	9	6	2	0	0	6	8	2	0	2	114	1285
8:35 AM	6	35	2	0	2	2	27	8	0	2	8	1	2	0	3	5	6	4	0	1	114	1318
8:40 AM	3	45	3	0	4	3	24	11	0	4	5	5	0	0	1	8	10	4	0	0	130	1357
8:45 AM	4	33	5	0	4	3	30	8	0	4	2	4	0	0	0	8	10	5	0	2	122	1373
8:50 AM	5	34	1	0	4	4	35	6	0	7	4	3	2	0	0	6	10	1	0	0	122	1363
8:55 AM	3	11	2	0	2	3	35	3	0	0	4	7	2	0	0	8	6	2	0	1	89	1315

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	84	440	92	0	44	12	280	128	0	36	152	100	56	0	8	84	108	16	0	4	1644
Heavy Trucks	4	8	8			4	4	0			0	0	0			12	4	0			44
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 5/22/2025 4:30 PM

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

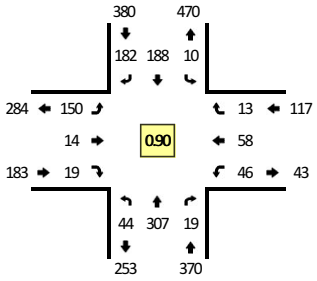
Type of peak hour being reported: Intersection Peak

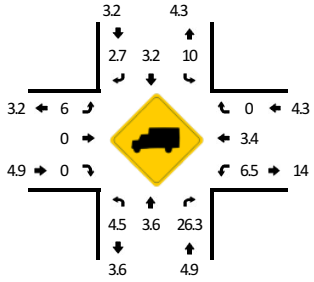
Method for determining peak hour: Total Entering Volume

LOCATION: NW Parker St -- NW Pacific Rim Dr
CITY/STATE: Camas, WA

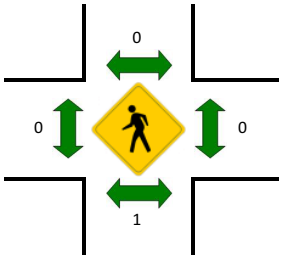
QC JOB #: 17043031
DATE: Thu, May 15 2025

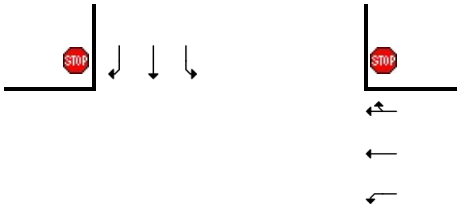
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

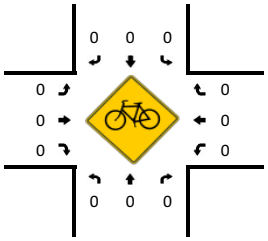


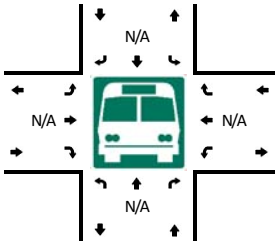


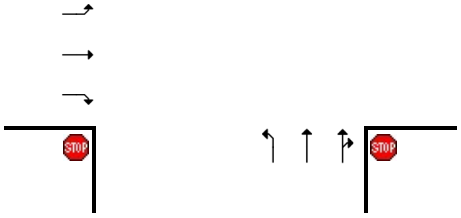
TRUE DATA TO IMPROVE MOBILITY

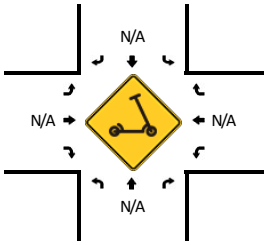












R* = RTOR

5-Min Count Period Beginning At	NW Parker St (Northbound)					NW Parker St (Southbound)					NW Pacific Rim Dr (Eastbound)					NW Pacific Rim Dr (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	4	9	1	0	0	1	14	6	0	0	3	1	2	0	0	1	2	0	0	0	44	
7:05 AM	3	8	0	0	0	1	15	2	0	0	6	1	4	0	0	4	3	1	0	0	48	
7:10 AM	5	11	1	0	0	1	15	7	0	0	7	1	2	0	0	4	3	0	0	0	57	
7:15 AM	3	13	1	0	0	0	16	7	0	0	10	1	2	0	0	2	2	0	0	0	57	
7:20 AM	2	13	0	0	0	1	13	12	0	0	4	0	1	0	0	3	2	0	0	0	51	
7:25 AM	4	11	0	0	0	0	9	9	0	0	7	0	0	0	0	2	2	0	0	0	44	
7:30 AM	6	12	3	0	0	0	15	4	0	0	3	0	0	0	0	4	0	0	0	0	47	
7:35 AM	3	10	3	0	0	0	9	8	0	0	10	2	1	0	0	4	3	2	0	0	55	
7:40 AM	6	13	1	0	0	0	20	12	0	0	7	2	2	0	0	4	6	1	0	0	74	
7:45 AM	4	26	2	0	0	0	15	12	0	0	9	0	2	0	0	4	2	0	0	0	76	
7:50 AM	9	26	1	0	0	1	14	16	0	0	23	2	1	0	0	4	5	0	0	0	102	
7:55 AM	7	30	0	0	0	0	15	19	0	0	15	1	2	0	0	5	5	4	0	0	103	758
8:00 AM	2	30	2	0	0	0	18	10	0	0	4	1	1	0	0	6	5	2	0	0	81	795
8:05 AM	6	26	1	0	0	2	11	17	0	0	11	2	1	0	0	5	4	2	0	0	88	835
8:10 AM	2	19	3	0	0	2	19	19	0	0	10	1	1	0	0	6	7	0	0	0	89	867
8:15 AM	3	17	1	0	0	1	6	12	0	0	9	0	1	0	0	0	4	2	0	0	56	866
8:20 AM	3	19	3	0	0	0	17	19	0	0	9	0	1	0	0	0	9	1	0	0	81	896
8:25 AM	3	21	3	0	0	0	17	12	0	0	13	1	3	0	0	1	5	0	0	0	79	931
8:30 AM	2	36	3	0	0	1	13	18	0	0	15	1	2	0	0	2	5	1	0	0	99	983
8:35 AM	2	28	1	0	0	0	14	13	0	0	15	2	3	0	0	6	6	0	0	0	90	1018
8:40 AM	4	36	1	0	0	2	24	13	0	0	11	0	2	0	0	6	2	1	0	0	102	1046
8:45 AM	1	19	0	0	0	1	20	14	0	0	15	3	1	0	0	5	1	0	0	0	80	1050
8:50 AM	5	24	1	0	0	0	27	7	0	0	14	5	0	0	0	2	2	2	0	0	89	1037
8:55 AM	1	12	0	0	0	1	32	13	0	0	3	1	0	0	0	1	4	0	0	0	68	1002

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	32	400	20	0	0	12	204	176	0	0	164	12	28	0	0	56	52	8	0	0	1164
Heavy Trucks	0	16	8			0	0	4			12	0	0			4	0	0			44
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 5/22/2025 4:30 PM

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

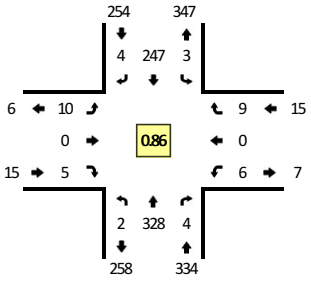
Type of peak hour being reported: Intersection Peak

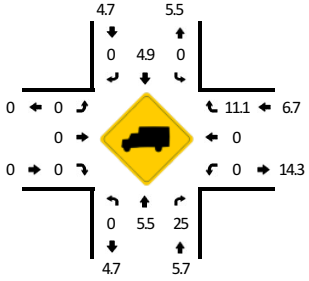
Method for determining peak hour: Total Entering Volume

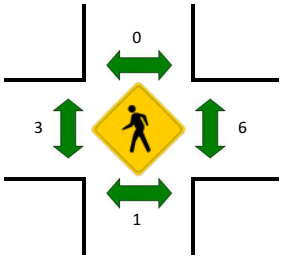
LOCATION: NW Brady Rd -- NW 20th Ave
CITY/STATE: Camas, WA

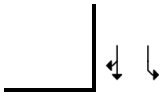
QC JOB #: 17043033
DATE: Thu, May 15 2025

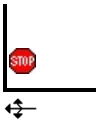
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

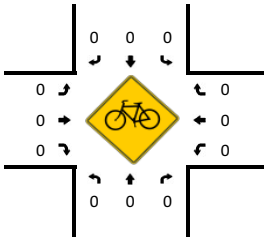


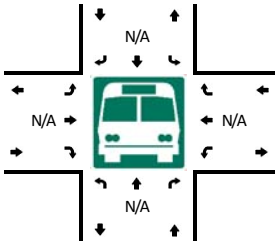


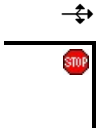


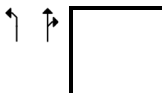


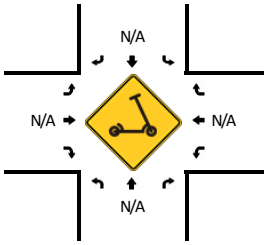












R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW 20th Ave (Eastbound)					NW 20th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	8	0	0	0	1	13	0	0	0	3	0	1	0	0	0	0	1	0	0	27	
7:05 AM	1	6	0	0	0	0	24	1	0	0	1	0	1	0	0	0	0	0	0	0	34	
7:10 AM	0	17	0	0	0	0	20	0	0	0	1	0	1	0	0	1	0	0	0	0	40	
7:15 AM	0	11	0	0	0	0	18	0	0	0	1	0	1	0	0	0	0	0	0	0	31	
7:20 AM	0	14	0	0	0	0	19	1	0	0	0	0	0	0	0	0	0	0	0	0	34	
7:25 AM	0	13	0	0	0	0	10	0	0	0	1	1	0	0	0	1	0	0	0	0	26	
7:30 AM	1	16	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	1	0	0	40	
7:35 AM	0	18	0	0	0	0	15	0	0	0	1	0	4	0	0	1	0	1	0	0	40	
7:40 AM	0	11	0	0	0	1	24	0	0	0	2	0	2	0	0	0	0	1	0	0	41	
7:45 AM	0	33	0	0	0	0	21	0	0	0	1	0	0	0	0	1	0	0	0	0	56	
7:50 AM	0	27	1	0	0	0	26	0	0	0	0	0	1	0	0	1	0	2	0	0	58	
7:55 AM	2	30	0	0	0	1	24	0	0	0	1	0	0	0	0	1	0	1	0	0	60	487
8:00 AM	0	37	1	0	0	0	22	0	0	0	0	0	2	0	0	0	0	0	0	0	62	522
8:05 AM	0	26	0	0	0	0	17	1	0	0	2	0	0	0	0	0	0	1	0	0	47	535
8:10 AM	0	22	0	0	0	0	22	1	0	0	0	0	0	0	0	1	0	0	0	0	46	541
8:15 AM	0	18	0	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	33	543
8:20 AM	0	16	0	0	0	0	13	0	0	0	2	0	0	0	0	1	0	1	0	0	33	542
8:25 AM	0	26	2	0	0	0	19	1	0	0	1	0	0	0	0	0	0	0	0	0	49	565
8:30 AM	0	31	0	0	0	0	22	0	0	0	2	0	0	0	0	1	0	1	0	0	57	582
8:35 AM	0	31	0	0	0	1	17	1	0	0	0	0	1	0	0	0	0	1	0	0	52	594
8:40 AM	0	31	0	0	0	0	30	0	0	0	1	0	1	0	0	0	0	2	0	0	65	618
8:45 AM	2	13	0	0	0	1	21	0	0	0	0	0	0	0	0	0	0	1	0	0	38	600
8:50 AM	1	24	0	0	0	1	28	0	0	0	2	0	1	0	0	0	0	1	0	0	58	600
8:55 AM	0	10	0	0	0	0	28	1	0	0	0	0	0	0	0	0	0	0	0	0	39	579

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	8	376	8	0	0	4	288	0	0	0	4	0	12	0	0	8	0	12	0	0	720
Heavy Trucks	0	12	4			0	8	0			0	0	0			0	0	4			28
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 5/22/2025 4:30 PM

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

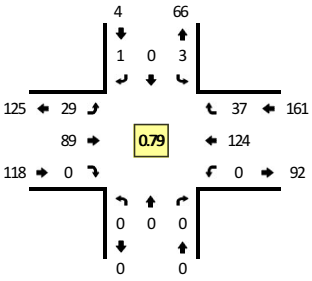
Type of peak hour being reported: Intersection Peak

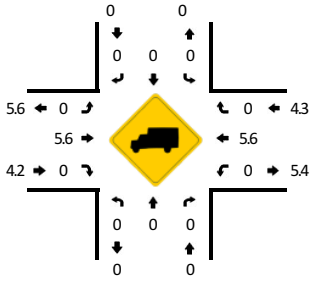
Method for determining peak hour: Total Entering Volume

LOCATION: Sharp Dr -- NW 18th Ave
CITY/STATE: Camas, WA

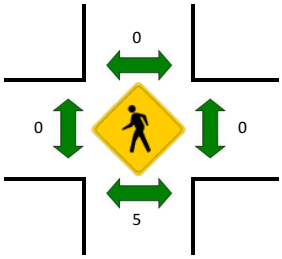
QC JOB #: 17043035
DATE: Thu, May 15 2025

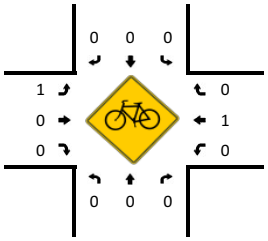
Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

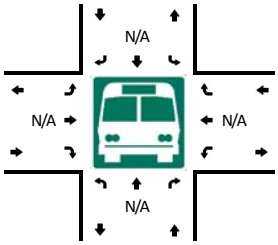


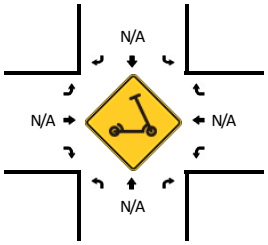


TRUE DATA TO IMPROVE MOBILITY









R* = RTOR

5-Min Count Period Beginning At	Sharp Dr (Northbound)					Sharp Dr (Southbound)					NW 18th Ave (Eastbound)					NW 18th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	6	
7:05 AM	0	0	0	0	0	0	0	0	0	0	3	7	0	0	0	0	4	1	0	0	15	
7:10 AM	0	0	0	0	0	0	0	1	0	0	2	4	0	0	0	0	3	4	0	0	14	
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	4	
7:20 AM	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4	1	0	0	9	
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	5	0	0	14	
7:30 AM	0	0	0	0	0	1	0	1	0	0	1	4	0	0	0	0	9	5	0	0	21	
7:35 AM	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	0	2	2	0	0	11	
7:40 AM	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	0	3	0	0	0	10	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	4	3	0	0	22	
7:50 AM	0	0	0	0	0	0	0	0	0	0	5	7	0	0	0	0	10	3	0	0	25	
7:55 AM	0	0	0	0	0	0	0	0	0	0	2	12	0	0	0	0	13	2	0	0	29	180
8:00 AM	0	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0	23	2	0	0	36	210
8:05 AM	0	0	0	0	0	1	0	0	0	0	4	1	0	0	0	0	7	2	0	0	15	210
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	7	4	0	0	15	211
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	4	3	0	0	13	220
8:20 AM	0	0	0	0	0	0	0	0	0	0	3	10	0	0	0	0	8	7	0	0	28	239
8:25 AM	0	0	0	0	0	0	0	0	0	0	1	12	0	0	0	0	12	2	0	0	27	252
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0	10	4	0	0	25	256
8:35 AM	0	0	0	0	0	1	0	1	0	0	1	8	0	0	0	0	10	2	0	0	23	268
8:40 AM	0	0	0	0	0	1	0	0	0	0	1	12	0	0	0	0	6	3	0	0	23	281
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	14	3	0	0	24	283
8:50 AM	0	0	0	0	0	1	0	0	0	0	2	4	0	0	0	0	6	3	0	0	16	274
8:55 AM	0	0	0	0	0	1	0	0	0	0	2	3	0	0	0	0	5	3	0	0	14	259

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	0	0	0	40	108	0	0	0	0	184	28	0	0	360
Heavy Trucks	0	0	0			0	0	0			0	4	0			0	0	0			4
Buses																					
Pedestrians		4					0					0					0				4
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

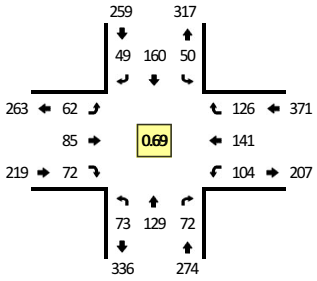
Type of peak hour being reported: Intersection Peak

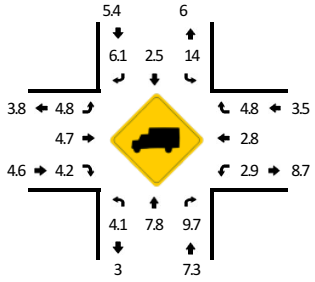
Method for determining peak hour: Total Entering Volume

LOCATION: NW Brady Rd -- NW 16th Ave
CITY/STATE: Camas, WA

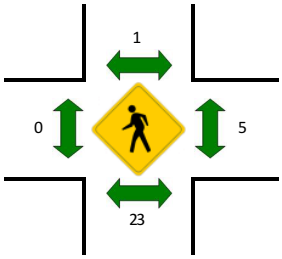
QC JOB #: 17043039
DATE: Thu, May 15 2025

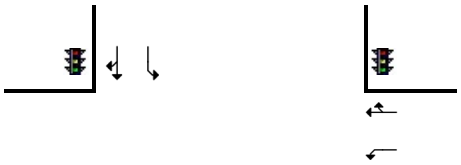
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

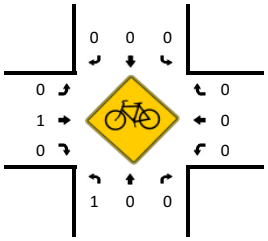


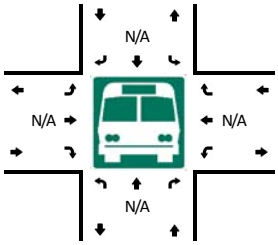


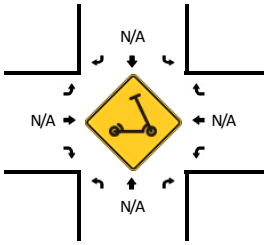
TRUE DATA TO IMPROVE MOBILITY











R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW 16th Ave (Eastbound)					NW 16th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	3	2	0	1	2	10	1	0	0	0	0	0	0	0	10	5	4	0	2	40	
7:05 AM	1	3	6	0	0	5	13	2	0	1	0	2	0	0	1	13	3	1	0	0	51	
7:10 AM	4	11	1	0	1	5	17	2	0	0	0	2	0	0	0	13	3	4	0	5	68	
7:15 AM	1	6	1	0	1	2	15	2	0	2	0	0	0	0	0	11	3	3	0	2	49	
7:20 AM	2	7	2	0	1	2	10	3	0	1	1	0	0	0	0	14	3	4	0	1	51	
7:25 AM	6	6	0	0	4	1	11	2	0	0	1	3	0	0	1	19	8	3	0	3	68	
7:30 AM	5	9	4	0	2	1	14	1	0	1	2	1	0	0	1	15	9	4	0	2	71	
7:35 AM	4	6	3	0	0	0	21	0	0	0	3	1	1	0	0	22	7	6	0	2	76	
7:40 AM	10	7	5	0	0	5	20	3	0	1	2	5	8	0	3	15	7	3	0	3	97	
7:45 AM	6	16	7	0	0	2	13	3	0	1	8	15	7	0	1	13	21	2	0	3	118	
7:50 AM	17	15	2	0	3	3	15	8	0	1	3	10	5	0	4	3	30	9	0	3	131	
7:55 AM	10	10	3	0	0	2	10	11	0	2	12	13	12	0	6	11	18	11	0	3	134	954
8:00 AM	9	12	8	0	1	4	20	4	0	1	14	16	13	0	4	14	14	4	0	3	141	1055
8:05 AM	3	12	5	0	3	8	9	2	0	0	4	3	3	0	2	7	8	9	0	3	81	1085
8:10 AM	2	6	2	0	0	5	16	1	0	0	1	2	0	0	0	5	6	7	0	4	57	1074
8:15 AM	4	8	3	0	1	2	12	1	0	0	1	3	0	0	0	5	2	6	0	3	51	1076
8:20 AM	4	9	5	0	1	3	8	3	0	0	5	1	0	0	0	13	10	3	0	0	65	1090
8:25 AM	2	15	6	0	1	3	12	0	0	1	5	8	0	0	1	6	9	6	0	8	83	1105
8:30 AM	3	10	4	0	4	8	13	4	0	1	4	6	1	0	0	9	9	6	0	6	88	1122
8:35 AM	3	9	6	0	2	5	12	1	0	0	3	3	2	0	0	3	7	14	0	7	77	1123
8:40 AM	2	12	5	0	1	6	17	5	0	0	1	8	2	0	0	10	4	8	0	6	87	1113
8:45 AM	2	9	7	0	3	6	13	1	0	1	2	7	0	0	0	12	12	2	0	1	78	1073
8:50 AM	5	11	5	0	1	9	17	1	0	1	1	4	0	0	0	13	5	7	0	5	85	1027
8:55 AM	2	7	1	0	0	10	16	2	0	0	0	2	1	0	0	11	3	1	0	3	59	952

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	144	148	68	0	16	36	180	108	0	16	116	156	176	0	56	112	248	132	0	36	1748
Heavy Trucks	0	8	4			0	4	0			0	8	8			4	0	12			48
Buses																					
Pedestrians		56					0					0					20				76
Bicycles	4	0	0			0	0	0			0	4	0			0	0	0			8
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

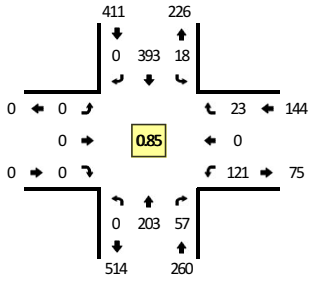
Type of peak hour being reported: Intersection Peak

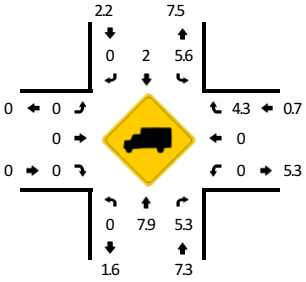
Method for determining peak hour: Total Entering Volume

LOCATION: NW Brady Rd -- NW McIntosh Rd
CITY/STATE: Camas, WA

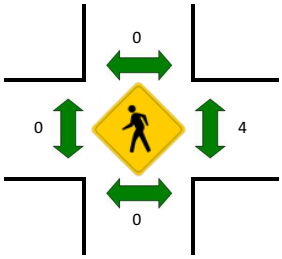
QC JOB #: 17043041
DATE: Thu, May 15 2025

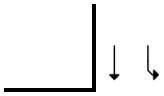
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

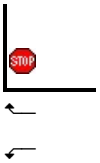


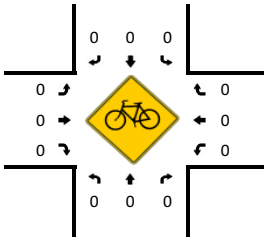


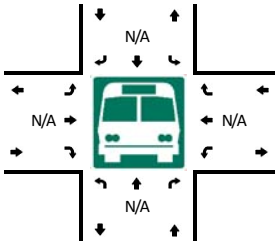
TRUE DATA TO IMPROVE MOBILITY

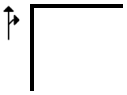


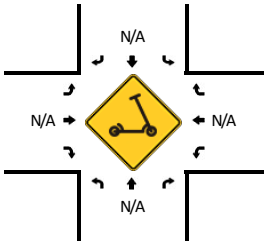












R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW McIntosh Rd (Eastbound)					NW McIntosh Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	5	5	0	0	0	16	0	0	0	0	0	0	0	0	7	0	1	0	0	34	
7:05 AM	0	11	1	0	0	1	25	0	0	0	0	0	0	0	0	9	0	0	0	0	47	
7:10 AM	0	14	3	0	0	0	33	0	0	0	0	0	0	0	0	10	0	0	0	0	60	
7:15 AM	0	13	2	0	0	2	28	0	0	0	0	0	0	0	0	7	0	1	0	0	53	
7:20 AM	0	8	1	0	0	0	26	0	0	0	0	0	0	0	0	7	0	0	0	0	42	
7:25 AM	0	15	3	0	0	3	23	0	0	0	0	0	0	0	0	12	0	1	0	0	57	
7:30 AM	0	23	5	0	0	0	35	0	0	0	0	0	0	0	0	15	0	0	0	0	78	
7:35 AM	0	12	6	0	0	0	39	0	0	0	0	0	0	0	0	11	0	0	0	0	68	
7:40 AM	0	21	5	0	0	3	46	0	0	0	0	0	0	0	0	10	0	3	0	0	88	
7:45 AM	0	23	3	0	0	1	39	0	0	0	0	0	0	0	0	10	0	0	0	0	76	
7:50 AM	0	21	7	0	0	0	23	0	0	0	0	0	0	0	0	5	0	12	0	0	68	
7:55 AM	0	16	6	0	0	4	36	0	0	0	0	0	0	0	0	9	0	3	0	0	74	745
8:00 AM	0	25	8	0	0	4	44	0	0	0	0	0	0	0	0	14	0	2	0	0	97	808
8:05 AM	0	12	8	0	0	1	21	0	0	0	0	0	0	0	0	11	0	1	0	0	54	815
8:10 AM	0	12	2	0	0	2	24	0	0	0	0	0	0	0	0	11	0	1	0	0	52	807
8:15 AM	0	10	3	0	0	2	17	0	0	0	0	0	0	0	0	5	0	1	0	0	38	792
8:20 AM	0	17	3	0	0	1	17	0	0	0	0	0	0	0	0	4	0	3	0	0	45	795
8:25 AM	0	22	2	0	0	2	21	0	0	0	0	0	0	0	0	4	0	2	0	0	53	791
8:30 AM	0	14	5	0	0	0	20	0	0	0	0	0	0	0	0	7	0	3	0	0	49	762
8:35 AM	0	18	4	0	0	3	17	0	0	0	0	0	0	0	0	7	0	1	0	0	50	744
8:40 AM	0	16	4	0	0	1	28	0	0	0	0	0	0	0	0	9	0	3	0	0	61	717
8:45 AM	0	21	6	0	0	1	28	0	0	0	0	0	0	0	0	6	0	3	0	0	65	706
8:50 AM	0	17	5	0	0	2	25	0	0	0	0	0	0	0	0	6	0	1	0	0	56	694
8:55 AM	0	9	3	0	0	4	30	0	0	0	0	0	0	0	0	8	0	0	0	0	54	674

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	248	84	0	0	32	412	0	0	0	0	0	0	0	0	112	0	68	0	0	956
Heavy Trucks	0	16	0			4	20	0			0	0	0			0	0	0			40
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 5/22/2025 4:30 PM

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

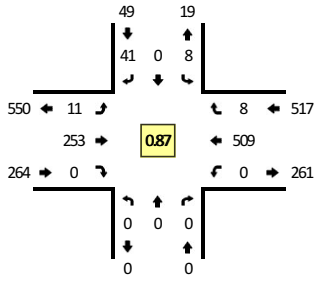
Type of peak hour being reported: Intersection Peak

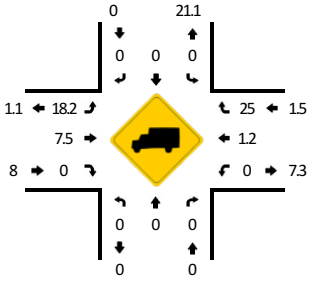
Method for determining peak hour: Total Entering Volume

LOCATION: SE Grand Ridge Dr -- NW Brady Rd
CITY/STATE: Camas, WA

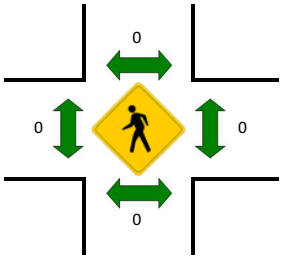
QC JOB #: 17043043
DATE: Thu, May 15 2025

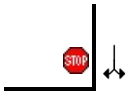
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

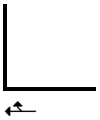


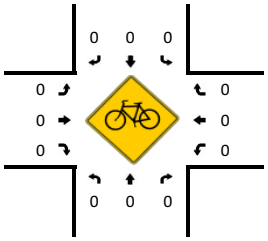


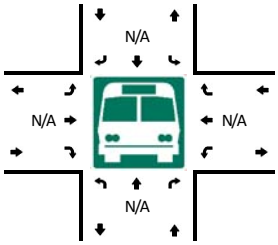
TRUE DATA TO IMPROVE MOBILITY

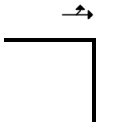


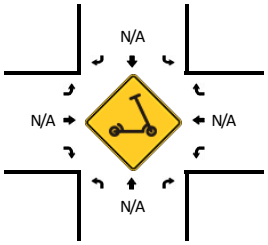












R* = RTOR

5-Min Count Period Beginning At	SE Grand Ridge Dr (Northbound)					SE Grand Ridge Dr (Southbound)					NW Brady Rd (Eastbound)					NW Brady Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	10	0	0	0	0	25	0	0	0	37	
7:05 AM	0	0	0	0	0	0	0	2	0	0	0	13	0	0	0	0	33	0	0	0	48	
7:10 AM	0	0	0	0	0	2	0	4	0	0	0	16	0	0	0	0	39	0	0	0	61	
7:15 AM	0	0	0	0	0	0	0	6	0	0	1	13	0	0	0	0	34	0	0	0	54	
7:20 AM	0	0	0	0	0	0	0	2	0	0	2	12	0	0	0	0	35	0	0	0	51	
7:25 AM	0	0	0	0	0	1	0	3	0	0	2	20	0	0	0	0	33	1	0	0	60	
7:30 AM	0	0	0	0	0	1	0	3	0	0	1	23	0	0	0	0	53	0	0	0	81	
7:35 AM	0	0	0	0	0	0	0	5	0	0	0	19	0	0	0	0	49	0	0	0	73	
7:40 AM	0	0	0	0	0	0	0	2	0	0	0	25	0	0	0	0	56	1	0	0	84	
7:45 AM	0	0	0	0	0	1	0	3	0	0	0	27	0	0	0	0	51	0	0	0	82	
7:50 AM	0	0	0	0	0	1	0	7	0	0	0	26	0	0	0	0	22	4	0	0	60	
7:55 AM	0	0	0	0	0	1	0	2	0	0	2	23	0	0	0	0	46	2	0	0	76	767
8:00 AM	0	0	0	0	0	0	0	1	0	0	3	32	0	0	0	0	54	0	0	0	90	820
8:05 AM	0	0	0	0	0	1	0	3	0	0	0	17	0	0	0	0	37	0	0	0	58	830
8:10 AM	0	0	0	0	0	0	0	6	0	0	2	15	0	0	0	0	32	2	0	0	57	826
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	13	0	0	0	0	23	0	0	0	38	810
8:20 AM	0	0	0	0	0	1	0	3	0	0	2	20	0	0	0	0	20	0	0	0	46	805
8:25 AM	0	0	0	0	0	1	0	4	0	0	1	22	0	0	0	0	27	0	0	0	55	800
8:30 AM	0	0	0	0	0	0	0	2	0	0	1	22	0	0	0	0	25	0	0	0	50	769
8:35 AM	0	0	0	0	0	1	0	1	0	0	4	18	0	0	0	0	23	0	0	0	47	743
8:40 AM	0	0	0	0	0	0	0	3	0	0	2	23	0	0	0	0	39	0	0	0	67	726
8:45 AM	0	0	0	0	0	0	0	4	0	0	4	24	0	0	0	0	35	0	0	0	67	711
8:50 AM	0	0	0	0	0	1	0	0	0	0	4	22	0	0	0	0	28	3	0	0	58	709
8:55 AM	0	0	0	0	0	0	0	3	0	0	3	12	0	0	0	0	38	0	0	0	56	689

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	4	0	40	0	0	0	284	0	0	0	0	624	4	0	0	956
Heavy Trucks	0	0	0			0	0	0			0	24	0			0	0	0			24
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 5/22/2025 4:30 PM

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

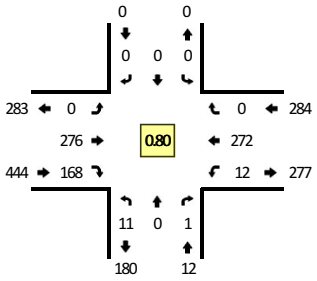
Type of peak hour being reported: Intersection Peak

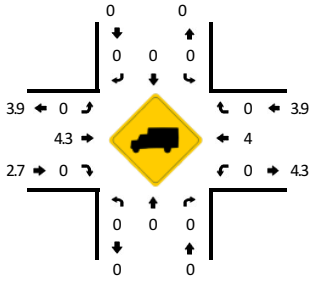
Method for determining peak hour: Total Entering Volume

LOCATION: NW Fisher Creek Dr -- SE 20th St/NW 38th Ave
CITY/STATE: Camas, WA

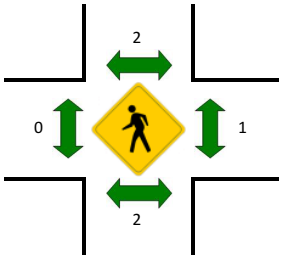
QC JOB #: 17043045
DATE: Thu, May 15 2025

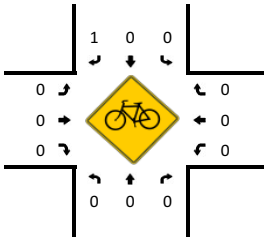
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

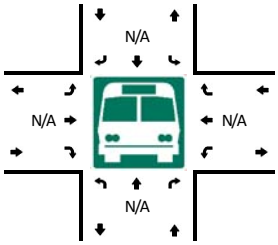


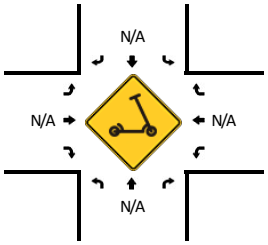


TRUE DATA TO IMPROVE MOBILITY









R* = RTOR

5-Min Count Period Beginning At	NW Fisher Creek Dr (Northbound)					NW Fisher Creek Dr (Southbound)					SE 20th St/NW 38th Ave (Eastbound)					SE 20th St/NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	2	0	0	0	0	0	0	0	0	0	0	12	41	0	2	6	8	0	0	0	71	
7:05 AM	1	0	0	0	0	0	0	0	0	0	0	12	20	0	0	2	8	0	0	0	43	
7:10 AM	1	0	0	0	0	0	0	0	0	0	0	7	16	0	0	2	11	0	0	0	37	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	10	16	0	0	0	9	0	0	0	35	
7:20 AM	2	0	0	0	0	0	0	0	0	0	0	5	12	0	0	3	16	0	0	0	38	
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	13	17	0	0	3	9	0	0	0	42	
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	11	18	0	0	3	9	0	0	0	42	
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	22	11	0	0	2	11	0	0	0	46	
7:40 AM	2	0	0	0	1	0	0	0	0	0	0	19	15	0	1	0	26	0	0	0	64	
7:45 AM	2	0	0	0	0	0	0	0	0	0	0	28	18	0	0	2	22	0	0	0	72	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	34	27	0	0	2	19	0	0	0	82	
7:55 AM	1	0	0	0	0	0	0	0	0	0	0	30	25	0	0	0	22	0	0	0	78	650
8:00 AM	1	0	0	0	0	0	0	0	0	0	0	27	12	0	1	1	26	0	0	0	68	647
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	18	13	0	0	1	33	0	0	0	65	669
8:10 AM	2	0	0	0	0	0	0	0	0	0	0	13	9	0	0	0	28	0	0	0	52	684
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	23	8	0	0	2	16	0	0	0	49	698
8:20 AM	1	0	0	0	0	0	0	0	0	0	0	18	4	0	0	0	28	0	0	0	51	711
8:25 AM	2	0	0	0	0	0	0	0	0	0	0	23	9	0	1	2	21	0	0	0	58	727
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	21	14	0	0	0	20	0	0	0	55	740
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	10	7	0	0	1	19	0	0	0	37	731
8:40 AM	1	0	0	0	0	0	0	0	0	0	0	14	2	0	0	0	23	0	0	0	40	707
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	9	3	0	0	1	25	0	0	0	39	674
8:50 AM	0	0	1	0	0	0	0	0	0	0	0	7	5	0	0	2	26	0	0	0	41	633
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	19	3	0	0	1	17	0	0	0	40	595

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	12	0	0	0	0	0	0	0	0	0	0	368	280	0	0	16	252	0	0	0	928
Heavy Trucks	0	0	0			0	0	0			0	4	0			0	4	0			8
Buses																					
Pedestrians		0					0					0					4				4
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

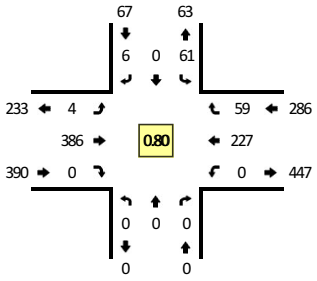
Type of peak hour being reported: Intersection Peak

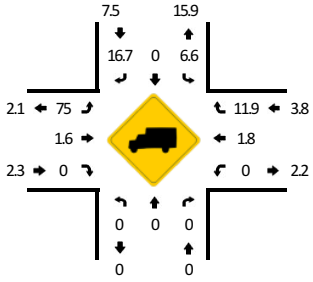
Method for determining peak hour: Total Entering Volume

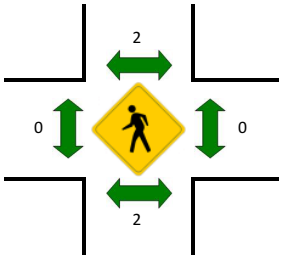
LOCATION: SE Bybee Rd -- SE 20th St/NW 38th Ave
CITY/STATE: Camas, WA

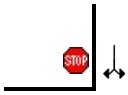
QC JOB #: 17043047
DATE: Thu, May 15 2025

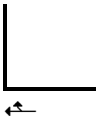
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

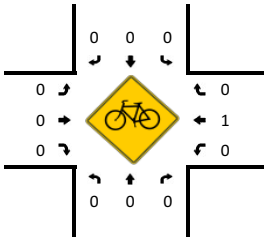


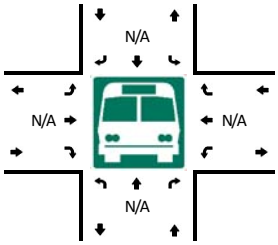


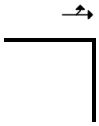


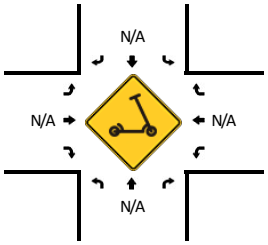












R* = RTOR

5-Min Count Period Beginning At	SE Bybee Rd (Northbound)					SE Bybee Rd (Southbound)					SE 20th St/NW 38th Ave (Eastbound)					SE 20th St/NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
7:00 AM	0	0	0	0	0	8	0	0	0	0	0	47	0	0	0	0	9	1	0	0	65	
7:05 AM	0	0	0	0	0	2	0	0	0	0	0	30	0	0	0	0	8	1	0	0	41	
7:10 AM	0	0	0	0	0	4	0	1	0	0	0	19	0	0	0	0	9	3	0	0	36	
7:15 AM	0	0	0	0	0	5	0	0	0	0	0	21	0	0	0	0	8	1	0	0	35	
7:20 AM	0	0	0	0	0	1	0	0	0	0	0	17	0	0	0	0	13	5	0	0	36	
7:25 AM	0	0	0	0	0	3	0	0	0	0	0	28	0	0	0	0	8	1	0	0	40	
7:30 AM	0	0	0	0	0	5	0	1	0	0	1	22	0	0	0	0	7	2	0	0	38	
7:35 AM	0	0	0	0	0	9	0	1	0	0	0	25	0	0	0	0	9	3	0	0	47	
7:40 AM	0	0	0	0	0	2	0	0	0	0	0	32	0	0	0	0	22	6	0	0	62	
7:45 AM	0	0	0	0	0	9	0	0	0	0	0	38	0	0	0	0	16	6	0	0	69	
7:50 AM	0	0	0	0	0	9	0	0	0	0	0	52	0	0	0	0	17	4	0	0	82	
7:55 AM	0	0	0	0	0	4	0	0	0	0	0	55	0	0	0	0	21	0	0	0	80	631
8:00 AM	0	0	0	0	0	6	0	1	0	0	0	29	0	0	0	0	19	9	0	0	64	630
8:05 AM	0	0	0	0	0	3	0	2	0	0	1	29	0	0	0	0	26	8	0	0	69	658
8:10 AM	0	0	0	0	0	4	0	1	0	0	1	20	0	0	0	0	23	8	0	0	57	679
8:15 AM	0	0	0	0	0	5	0	0	0	0	1	24	0	0	0	0	11	4	0	0	45	689
8:20 AM	0	0	0	0	0	2	0	0	0	0	0	22	0	0	0	0	24	7	0	0	55	708
8:25 AM	0	0	0	0	0	2	0	1	0	0	0	32	0	0	0	0	16	1	0	0	52	720
8:30 AM	0	0	0	0	0	6	0	0	0	0	1	28	0	0	0	0	23	3	0	0	61	743
8:35 AM	0	0	0	0	0	0	0	1	0	0	0	16	0	0	0	0	16	3	0	0	36	732
8:40 AM	0	0	0	0	0	3	0	1	0	0	0	13	0	0	0	0	18	6	0	0	41	711
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	11	0	0	0	0	19	6	0	0	37	679
8:50 AM	0	0	0	0	0	2	0	0	0	0	1	13	0	0	0	0	21	4	0	0	41	638
8:55 AM	0	0	0	0	0	3	0	0	0	0	0	17	0	0	0	0	19	1	0	0	40	598

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	88	0	0	0	0	0	580	0	0	0	0	216	40	0	0	924
Heavy Trucks	0	0	0			0	0	0			0	4	0			0	0	0			4
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 5/22/2025 4:30 PM

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

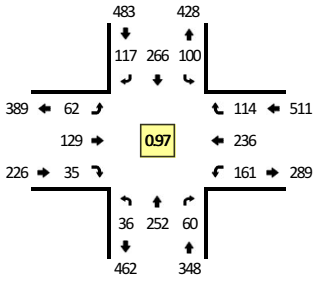
Type of peak hour being reported: Intersection Peak

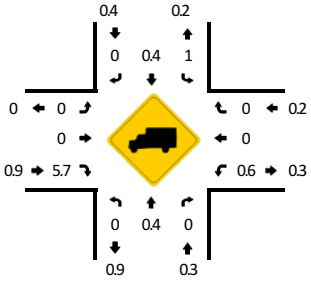
Method for determining peak hour: Total Entering Volume

LOCATION: NW Parker St -- NW 38th Ave
CITY/STATE: Camas, WA

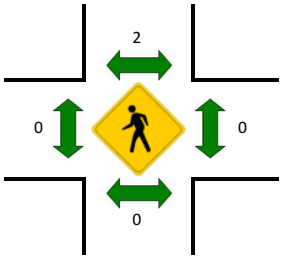
QC JOB #: 17043030
DATE: Thu, May 15 2025

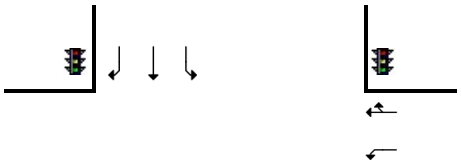
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

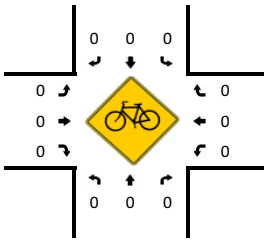


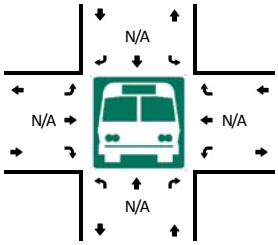


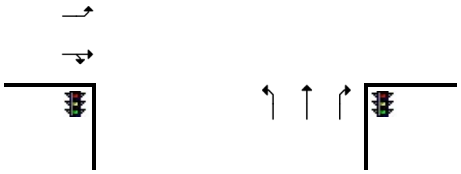
TRUE DATA TO IMPROVE MOBILITY

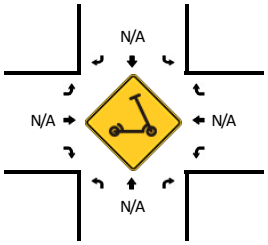












R* = RTOR

5-Min Count Period Beginning At	NW Parker St (Northbound)					NW Parker St (Southbound)					NW 38th Ave (Eastbound)					NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	3	12	0	0	2	5	21	3	0	4	9	9	0	0	0	9	14	9	0	2	102	
4:05 PM	2	16	1	0	1	2	16	7	0	3	6	16	1	0	1	10	17	3	0	1	103	
4:10 PM	1	13	6	0	3	13	16	4	0	7	5	9	1	0	0	11	13	5	0	2	109	
4:15 PM	1	9	1	0	3	3	25	3	0	3	5	16	0	0	0	12	23	9	0	2	115	
4:20 PM	1	17	4	0	3	10	16	3	0	4	5	7	1	0	1	4	11	8	0	5	100	
4:25 PM	4	12	4	0	6	4	13	3	0	2	5	11	3	0	0	9	23	8	0	2	109	
4:30 PM	1	17	4	0	2	9	22	0	0	4	4	7	1	0	0	9	16	5	0	1	102	
4:35 PM	3	11	5	0	2	7	20	3	0	3	6	11	1	0	0	11	11	8	0	0	102	
4:40 PM	3	15	0	0	2	9	23	2	0	6	5	6	4	0	0	9	16	8	0	4	112	
4:45 PM	3	24	4	0	6	3	20	3	0	4	6	8	0	0	1	13	16	9	0	1	121	
4:50 PM	4	24	1	0	2	8	18	8	0	6	4	14	1	0	1	18	21	6	0	1	137	
4:55 PM	3	18	1	0	2	9	14	3	0	4	6	12	1	0	0	17	16	10	0	5	121	1333
5:00 PM	3	28	1	0	2	8	18	2	0	6	7	13	3	0	1	13	25	10	0	2	142	1373
5:05 PM	2	28	2	0	5	3	19	2	0	3	7	14	2	0	0	14	17	4	0	1	123	1393
5:10 PM	1	15	5	0	4	8	22	1	0	4	4	11	4	0	2	19	24	12	0	2	138	1422
5:15 PM	1	17	4	0	6	7	30	5	0	7	7	11	1	0	0	11	21	8	0	0	136	1443
5:20 PM	3	13	3	0	2	15	27	6	0	6	6	9	4	0	0	9	15	8	0	3	129	1472
5:25 PM	8	21	4	0	1	9	23	6	0	7	6	6	1	0	1	12	24	9	0	3	141	1504
5:30 PM	5	20	3	0	2	11	19	4	0	6	3	8	1	0	2	18	17	8	0	2	129	1531
5:35 PM	4	18	1	0	0	5	28	1	0	11	4	10	2	0	2	6	21	8	0	1	122	1551
5:40 PM	2	24	2	0	4	6	24	3	0	6	6	14	2	0	0	13	17	3	0	2	128	1567
5:45 PM	0	26	0	0	3	11	24	7	0	3	2	7	3	0	1	11	18	5	0	1	122	1568
5:50 PM	2	21	3	0	2	5	27	3	0	5	6	14	4	0	2	13	20	9	0	0	136	1567
5:55 PM	3	27	4	0	2	3	22	3	0	5	5	10	2	0	0	7	14	6	0	1	114	1560

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	48	204	80	0	36	124	320	148	0	80	76	104	28	0	4	128	240	124	0	24	1768
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
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 5/22/2025 4:30 PM

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

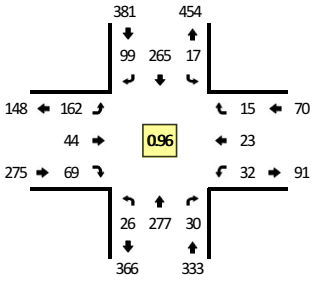
Type of peak hour being reported: Intersection Peak

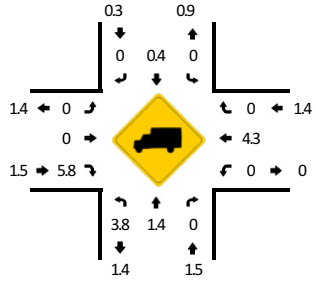
Method for determining peak hour: Total Entering Volume

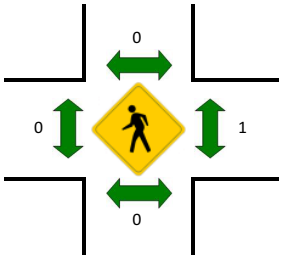
LOCATION: NW Parker St -- NW Pacific Rim Dr
CITY/STATE: Camas, WA

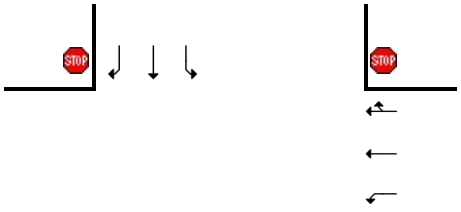
QC JOB #: 17043032
DATE: Thu, May 15 2025

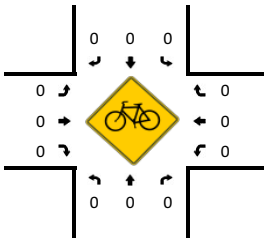
Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

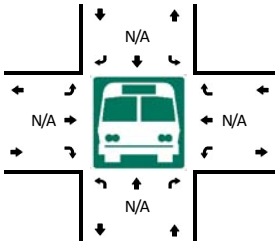


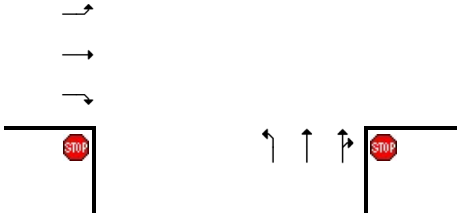


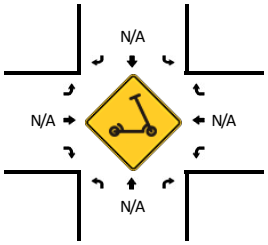












R* = RTOR

5-Min Count Period Beginning At	NW Parker St (Northbound)					NW Parker St (Southbound)					NW Pacific Rim Dr (Eastbound)					NW Pacific Rim Dr (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	3	16	0	0	0	0	23	6	0	0	14	2	3	0	0	1	2	0	0	0	70	
4:05 PM	2	17	1	0	0	0	16	11	0	0	11	7	9	0	0	1	4	2	0	0	81	
4:10 PM	3	18	1	0	0	1	17	6	0	0	17	2	4	0	0	5	2	2	0	0	78	
4:15 PM	1	18	4	0	0	1	15	7	0	0	9	0	4	0	0	1	4	1	0	0	65	
4:20 PM	3	14	2	0	0	0	14	8	0	0	10	0	3	0	0	1	2	2	0	0	59	
4:25 PM	2	18	7	0	0	0	26	7	0	0	6	1	6	0	0	0	2	2	0	0	77	
4:30 PM	0	24	1	0	0	1	16	6	0	0	9	4	6	0	0	3	2	0	0	0	72	
4:35 PM	3	21	1	0	0	0	23	4	0	0	10	4	11	0	0	0	0	0	0	0	77	
4:40 PM	2	30	0	0	0	0	16	7	0	0	5	3	6	0	0	0	3	2	0	0	74	
4:45 PM	2	23	3	0	0	2	24	9	0	0	9	5	2	0	0	1	0	0	0	0	80	
4:50 PM	0	19	3	0	0	2	21	7	0	0	17	3	7	0	0	1	1	0	0	0	81	
4:55 PM	3	19	1	0	0	1	22	9	0	0	7	2	7	0	0	4	1	0	0	0	76	890
5:00 PM	0	15	4	0	0	2	30	11	0	0	14	4	14	0	0	1	3	0	0	0	98	918
5:05 PM	1	18	4	0	0	2	24	12	0	0	10	1	9	0	0	4	3	2	0	0	90	927
5:10 PM	3	24	3	0	0	1	21	6	0	0	13	3	2	0	0	3	1	2	0	0	82	931
5:15 PM	5	25	3	0	0	2	20	13	0	0	17	5	4	0	0	2	1	2	0	0	99	965
5:20 PM	2	33	3	0	0	1	14	4	0	0	14	4	6	0	0	1	2	1	0	0	85	991
5:25 PM	0	27	0	0	0	1	28	4	0	0	7	5	3	0	0	2	0	1	0	0	78	992
5:30 PM	6	30	2	0	0	2	20	10	0	0	16	4	7	0	0	2	1	0	0	0	100	1020
5:35 PM	2	19	1	0	0	3	21	6	0	0	18	6	2	0	0	7	6	0	0	0	91	1034
5:40 PM	0	19	2	0	0	0	24	7	0	0	16	4	6	0	0	2	2	3	0	0	85	1045
5:45 PM	4	29	4	0	0	0	20	10	0	0	13	3	2	0	0	3	2	4	0	0	94	1059
5:50 PM	2	17	2	0	0	0	23	6	0	0	10	2	2	0	0	0	1	2	0	0	67	1045
5:55 PM	2	13	3	0	0	2	26	4	0	0	19	3	4	0	0	3	3	2	0	0	84	1053

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	32	272	20	0	0	20	260	92	0	0	200	56	60	0	0	44	36	12	0	0	1104
Heavy Trucks	0	8	0			0	0	0			0	0	0			0	4	0			12
Buses																					
Pedestrians		0					0					0					4				4
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

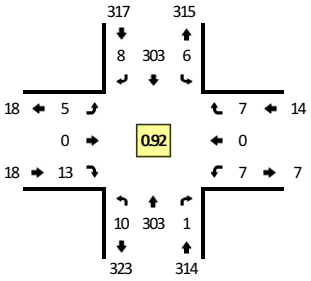
Type of peak hour being reported: Intersection Peak

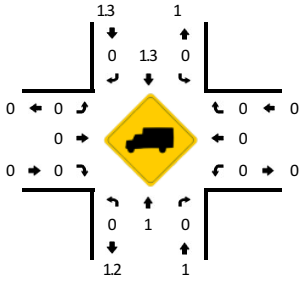
Method for determining peak hour: Total Entering Volume

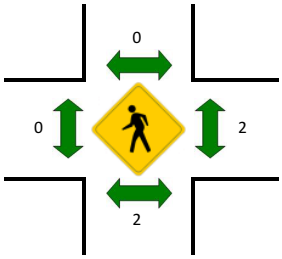
LOCATION: NW Brady Rd -- NW 20th Ave
CITY/STATE: Camas, WA

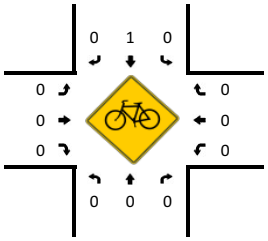
QC JOB #: 17043034
DATE: Thu, May 15 2025

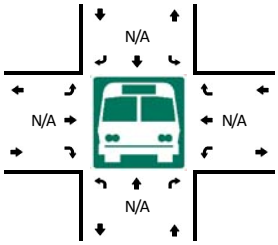
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

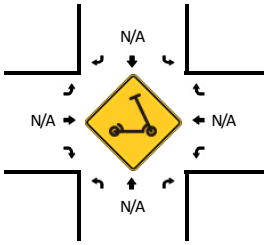












R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW 20th Ave (Eastbound)					NW 20th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	11	1	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	37	
4:05 PM	0	20	0	0	0	0	15	3	0	0	0	0	0	0	0	0	0	1	0	0	39	
4:10 PM	2	19	0	0	0	0	24	1	0	0	2	0	0	0	0	0	0	0	0	0	48	
4:15 PM	0	21	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	46	
4:20 PM	1	19	0	0	0	0	15	0	0	0	1	0	1	0	0	0	0	0	0	0	37	
4:25 PM	2	26	2	0	0	1	23	1	0	0	1	0	0	0	0	0	0	0	0	0	56	
4:30 PM	0	20	0	0	0	1	20	1	0	0	2	0	0	0	0	0	0	0	0	0	44	
4:35 PM	1	21	0	0	0	0	35	1	0	0	1	0	0	0	0	0	0	1	0	0	60	
4:40 PM	2	33	0	0	0	0	14	0	0	0	0	0	1	0	0	0	0	0	0	0	50	
4:45 PM	1	24	0	0	0	0	22	0	0	0	0	0	1	0	0	1	0	2	0	0	51	
4:50 PM	0	23	0	0	0	1	27	2	0	0	0	0	0	0	0	0	0	1	0	0	54	
4:55 PM	2	20	0	0	0	1	27	1	0	0	1	0	0	0	0	0	0	1	0	0	53	575
5:00 PM	0	17	0	0	0	3	29	0	0	0	0	0	0	0	0	1	0	0	0	0	50	588
5:05 PM	1	24	0	0	0	0	33	0	0	0	0	0	7	0	0	1	0	0	0	0	66	615
5:10 PM	1	30	1	0	0	1	24	2	0	0	0	0	1	0	0	2	0	0	0	0	62	629
5:15 PM	0	26	0	0	0	0	25	0	0	0	0	0	0	0	0	2	0	0	0	0	53	636
5:20 PM	1	31	0	0	0	0	17	1	0	0	1	0	0	0	0	0	0	2	0	0	53	652
5:25 PM	1	32	0	0	0	0	25	0	0	0	1	0	2	0	0	0	0	0	0	0	61	657
5:30 PM	0	22	0	0	0	0	25	1	0	0	1	0	1	0	0	0	0	0	0	0	50	663
5:35 PM	0	25	1	0	0	2	24	1	0	0	1	0	2	0	0	0	0	0	0	0	56	659
5:40 PM	1	20	0	0	0	0	26	1	0	0	2	0	0	0	0	0	0	1	0	0	51	660
5:45 PM	0	24	0	0	0	0	23	1	0	0	1	0	0	0	0	0	0	1	0	0	50	659
5:50 PM	2	17	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	1	0	0	43	648
5:55 PM	0	15	1	0	0	1	25	0	0	0	2	0	1	0	0	0	0	0	0	0	45	640

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	8	320	4	0	0	4	328	8	0	0	0	0	32	0	0	20	0	0	0	0	724
Heavy Trucks	0	0	0			0	8	0			0	0	0			0	0	0			8
Buses																					
Pedestrians		8					0					0					8				16
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

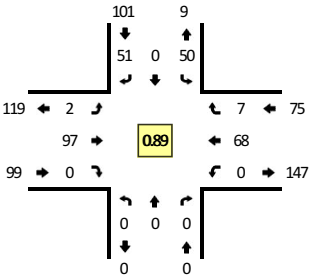
Type of peak hour being reported: Intersection Peak

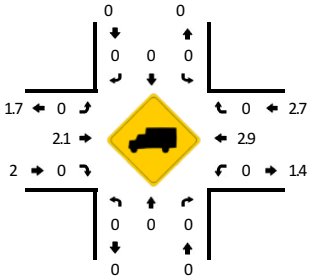
Method for determining peak hour: Total Entering Volume

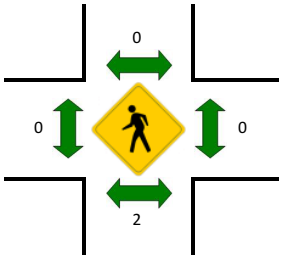
LOCATION: Sharp Dr -- NW 18th Ave
CITY/STATE: Camas, WA

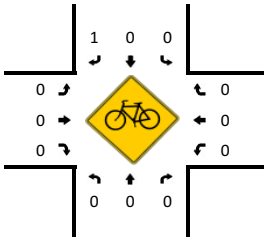
QC JOB #: 17043036
DATE: Thu, May 15 2025

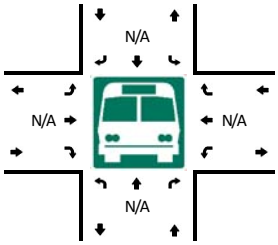
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

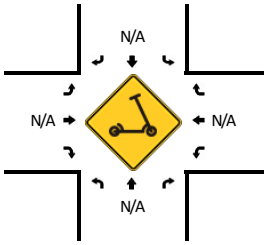












R* = RTOR

5-Min Count Period Beginning At	Sharp Dr (Northbound)					Sharp Dr (Southbound)					NW 18th Ave (Eastbound)					NW 18th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0	0	4	0	0	0	11	
4:05 PM	0	0	0	0	0	0	0	1	0	0	0	9	0	0	0	0	5	0	0	0	15	
4:10 PM	0	0	0	0	0	4	0	2	0	0	1	3	0	0	0	0	7	1	0	0	18	
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	7	0	0	0	0	4	0	0	0	12	
4:20 PM	0	0	0	0	0	3	0	0	0	0	1	8	0	0	0	0	5	0	0	0	17	
4:25 PM	0	0	0	0	0	1	0	2	0	0	0	9	0	0	0	0	6	1	0	0	19	
4:30 PM	0	0	0	0	0	2	0	7	0	0	0	8	0	0	0	0	6	1	0	0	24	
4:35 PM	0	0	0	0	0	5	0	6	0	0	1	9	0	0	0	0	5	2	0	0	28	
4:40 PM	0	0	0	0	0	2	0	4	0	0	0	9	0	0	0	0	5	0	0	0	20	
4:45 PM	0	0	0	0	0	5	0	2	0	0	0	8	0	0	0	0	7	0	0	0	22	
4:50 PM	0	0	0	0	0	2	0	2	0	0	1	12	0	0	0	0	4	1	0	0	22	
4:55 PM	0	0	0	0	0	4	0	3	0	0	0	7	0	0	0	0	6	0	0	0	20	228
5:00 PM	0	0	0	0	0	5	0	1	0	0	0	9	0	0	0	0	3	1	0	0	19	236
5:05 PM	0	0	0	0	0	5	0	3	0	0	0	10	0	0	0	0	7	0	0	0	25	246
5:10 PM	0	0	0	0	0	4	0	1	0	0	0	7	0	0	0	0	5	1	0	0	18	246
5:15 PM	0	0	0	0	0	5	0	9	0	0	0	7	0	0	0	0	5	0	0	0	26	260
5:20 PM	0	0	0	0	0	9	0	7	0	0	0	6	0	0	0	0	8	0	0	0	30	273
5:25 PM	0	0	0	0	0	2	0	6	0	0	0	5	0	0	0	0	7	1	0	0	21	275
5:30 PM	0	0	0	0	0	5	0	3	0	0	0	6	0	0	0	0	3	0	0	0	17	268
5:35 PM	0	0	0	0	0	4	0	1	0	0	0	10	0	0	0	0	3	0	0	0	18	258
5:40 PM	0	0	0	0	0	4	0	0	0	0	0	8	0	0	0	0	5	0	0	0	17	255
5:45 PM	0	0	0	0	0	2	0	1	0	0	0	7	0	0	0	0	4	0	0	0	14	247
5:50 PM	0	0	0	0	0	5	0	0	0	0	0	4	0	0	0	0	3	0	0	0	12	237
5:55 PM	0	0	0	0	0	1	0	2	0	0	0	8	0	0	0	0	3	0	0	0	14	231

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	64	0	88	0	0	0	72	0	0	0	0	80	4	0	0	308
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
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 5/22/2025 4:30 PM

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

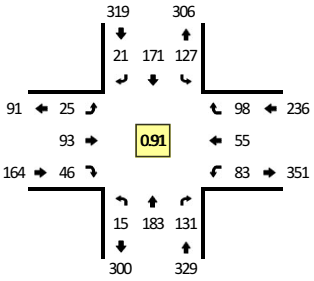
Type of peak hour being reported: Intersection Peak

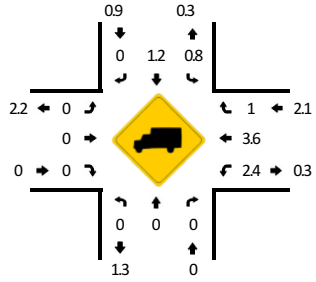
Method for determining peak hour: Total Entering Volume

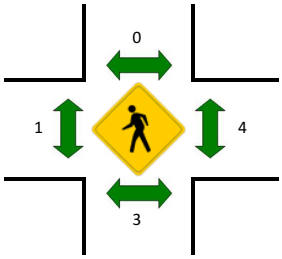
LOCATION: NW Brady Rd -- NW 16th Ave
CITY/STATE: Camas, WA

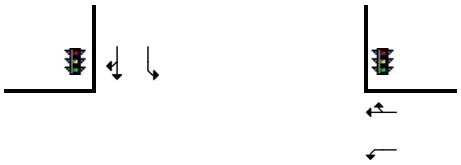
QC JOB #: 17043040
DATE: Thu, May 15 2025

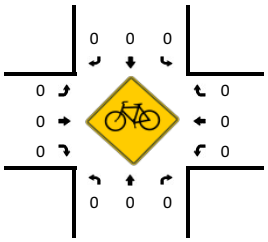
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

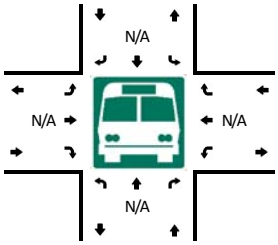


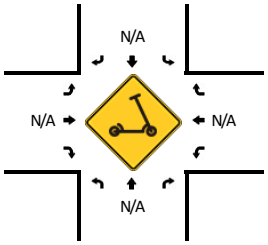












R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW 16th Ave (Eastbound)					NW 16th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	9	10	0	3	11	10	1	0	0	1	7	0	0	1	6	3	3	0	0	65	
4:05 PM	1	16	6	0	0	6	10	2	0	0	1	7	2	0	0	13	3	4	0	2	73	
4:10 PM	2	6	6	0	0	5	18	0	0	0	0	4	2	0	2	6	5	10	0	4	70	
4:15 PM	0	9	9	0	3	15	10	1	0	0	3	5	0	0	0	8	1	5	0	4	73	
4:20 PM	1	19	8	0	5	8	6	0	0	0	1	6	2	0	2	5	6	4	0	0	73	
4:25 PM	1	17	6	0	1	11	12	1	0	0	1	9	1	0	0	9	4	4	0	3	80	
4:30 PM	2	10	11	0	2	9	9	1	0	0	2	3	0	0	2	5	5	5	0	5	71	
4:35 PM	2	14	4	0	1	12	19	1	0	1	2	10	3	0	1	7	3	5	0	4	89	
4:40 PM	0	15	7	0	1	11	4	0	0	1	4	5	0	0	1	8	4	11	0	2	74	
4:45 PM	1	15	6	0	2	8	11	1	0	1	1	7	1	0	0	8	9	5	0	5	81	
4:50 PM	1	15	7	0	5	13	14	1	0	0	2	11	7	0	0	8	8	3	0	2	97	
4:55 PM	1	12	8	0	3	13	12	4	0	0	3	8	2	0	0	6	5	7	0	4	88	934
5:00 PM	1	10	10	0	1	11	14	0	0	1	0	9	3	0	0	9	3	2	0	1	75	944
5:05 PM	1	16	10	0	1	11	28	2	0	0	3	9	5	0	1	7	5	4	0	3	106	977
5:10 PM	1	17	9	0	4	15	15	0	0	0	4	11	0	0	2	6	3	8	0	3	98	1005
5:15 PM	0	20	10	0	1	10	15	2	0	0	1	5	2	0	0	6	5	1	0	5	83	1015
5:20 PM	1	17	9	0	3	7	8	0	0	1	4	7	5	0	4	10	6	5	0	8	95	1037
5:25 PM	0	16	13	0	3	9	16	2	0	0	1	3	3	0	1	7	4	6	0	4	88	1045
5:30 PM	1	13	4	0	0	9	13	1	0	1	2	5	3	0	3	5	3	7	0	2	72	1046
5:35 PM	5	17	6	0	1	12	14	2	0	0	2	10	2	0	0	6	0	5	0	3	85	1042
5:40 PM	2	15	8	0	7	9	11	1	0	1	2	8	1	0	1	5	4	4	0	1	80	1048
5:45 PM	0	10	4	0	4	9	16	1	0	0	1	6	1	0	0	6	4	6	0	6	74	1041
5:50 PM	0	14	13	0	4	7	15	0	0	0	1	9	1	0	1	7	3	3	0	1	79	1023
5:55 PM	0	10	7	0	4	9	17	2	0	0	0	6	1	0	0	6	3	7	0	0	72	1007

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	8	212	140	0	24	144	232	16	0	0	32	100	40	0	12	76	52	96	0	44	1228
Heavy Trucks	0	0	0			4	4	0			0	0	0			4	4	0			16
Buses																					
Pedestrians		4					0					4					0				8
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

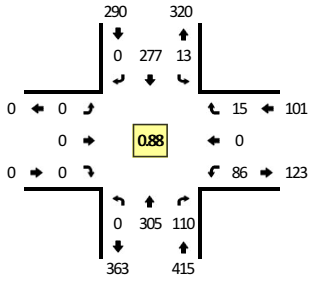
Type of peak hour being reported: Intersection Peak

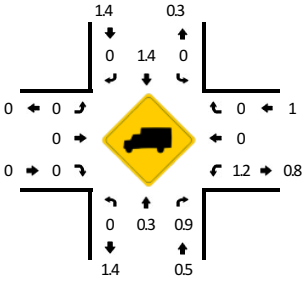
Method for determining peak hour: Total Entering Volume

LOCATION: NW Brady Rd -- NW McIntosh Rd
CITY/STATE: Camas, WA

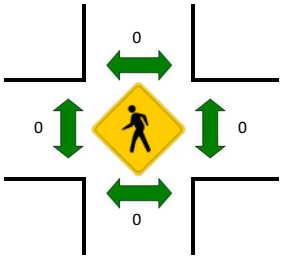
QC JOB #: 17043042
DATE: Thu, May 15 2025

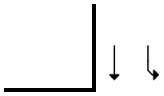
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

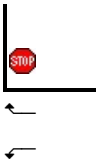


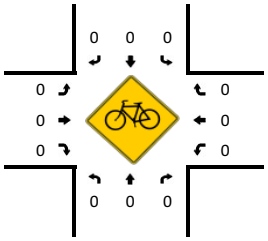


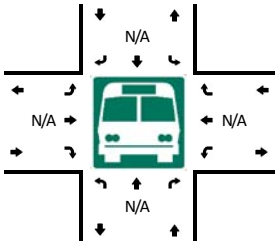
TRUE DATA TO IMPROVE MOBILITY

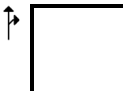


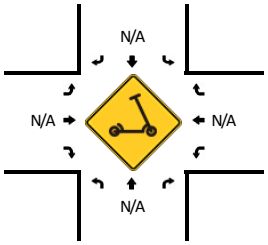












R* = RTOR

5-Min Count Period Beginning At	NW Brady Rd (Northbound)					NW Brady Rd (Southbound)					NW McIntosh Rd (Eastbound)					NW McIntosh Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	21	10	0	0	0	19	0	0	0	0	0	0	0	0	5	0	2	0	0	57	
4:05 PM	0	19	7	0	0	1	23	0	0	0	0	0	0	0	0	6	0	4	0	0	60	
4:10 PM	0	18	8	0	0	2	22	0	0	0	0	0	0	0	0	7	0	0	0	0	57	
4:15 PM	0	16	12	0	0	0	23	0	0	0	0	0	0	0	0	6	0	2	0	0	59	
4:20 PM	0	32	5	0	0	3	11	0	0	0	0	0	0	0	0	11	0	2	0	0	64	
4:25 PM	0	20	11	0	0	0	19	0	0	0	0	0	0	0	0	9	0	2	0	0	61	
4:30 PM	0	23	11	0	0	0	17	0	0	0	0	0	0	0	0	6	0	1	0	0	58	
4:35 PM	0	17	2	0	0	1	25	0	0	0	0	0	0	0	0	8	0	5	0	0	58	
4:40 PM	0	24	12	0	0	1	18	0	0	0	0	0	0	0	0	4	0	0	0	0	59	
4:45 PM	0	23	6	0	0	0	20	0	0	0	0	0	0	0	0	9	0	2	0	0	60	
4:50 PM	0	31	12	0	0	2	26	0	0	0	0	0	0	0	0	7	0	3	0	0	81	
4:55 PM	0	15	8	0	0	1	19	0	0	0	0	0	0	0	0	5	0	1	0	0	49	723
5:00 PM	0	23	12	0	0	0	20	0	0	0	0	0	0	0	0	5	0	1	0	0	61	727
5:05 PM	0	25	14	0	0	3	33	0	0	0	0	0	0	0	0	2	0	0	0	0	77	744
5:10 PM	0	30	11	0	0	2	27	0	0	0	0	0	0	0	0	7	0	2	0	0	79	766
5:15 PM	0	27	12	0	0	0	22	0	0	0	0	0	0	0	0	10	0	1	0	0	72	779
5:20 PM	0	31	4	0	0	1	21	0	0	0	0	0	0	0	0	13	0	1	0	0	71	786
5:25 PM	0	27	8	0	0	1	28	0	0	0	0	0	0	0	0	6	0	1	0	0	71	796
5:30 PM	0	21	5	0	0	1	21	0	0	0	0	0	0	0	0	6	0	2	0	0	56	794
5:35 PM	0	23	10	0	0	0	21	0	0	0	0	0	0	0	0	8	0	1	0	0	63	799
5:40 PM	0	29	8	0	0	2	19	0	0	0	0	0	0	0	0	8	0	0	0	0	66	806
5:45 PM	0	19	8	0	0	2	18	0	0	0	0	0	0	0	0	8	0	0	0	0	55	801
5:50 PM	0	33	13	0	0	1	20	0	0	0	0	0	0	0	0	5	0	1	0	0	73	793
5:55 PM	0	18	8	0	0	0	23	0	0	0	0	0	0	0	0	5	0	1	0	0	55	799

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	328	148	0	0	20	328	0	0	0	0	0	0	0	0	76	0	12	0	0	912
Heavy Trucks	0	0	4			0	8	0			0	0	0			0	0	0			12
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 5/22/2025 4:30 PM

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

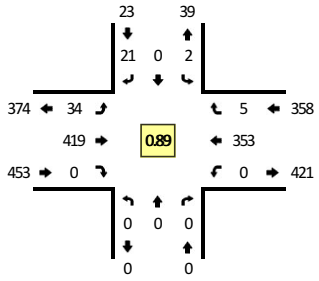
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

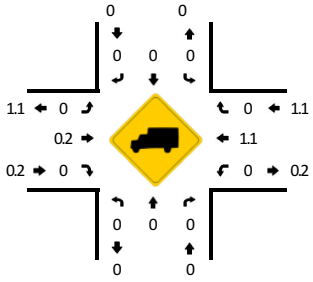
LOCATION: SE Grand Ridge Dr -- NW Brady Rd
CITY/STATE: Camas, WA

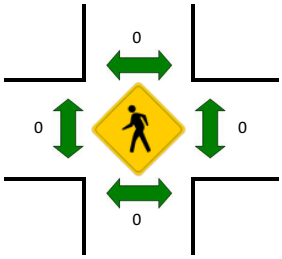
QC JOB #: 17043044
DATE: Thu, May 15 2025

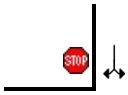
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

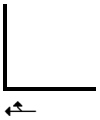


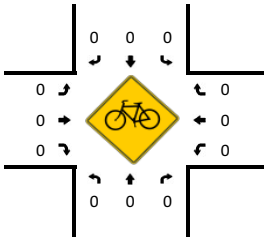
TRUE DATA TO IMPROVE MOBILITY

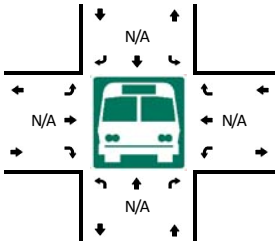


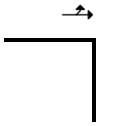


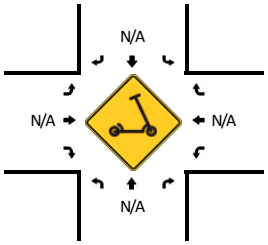












R* = RTOR

5-Min Count Period Beginning At	SE Grand Ridge Dr (Northbound)					SE Grand Ridge Dr (Southbound)					NW Brady Rd (Eastbound)					NW Brady Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	1	0	2	0	0	3	30	0	0	0	0	24	0	0	0	60	
4:05 PM	0	0	0	0	0	0	0	2	0	0	2	21	0	0	0	0	29	0	0	0	54	
4:10 PM	0	0	0	0	0	0	0	3	0	0	2	27	0	0	0	0	29	0	0	0	61	
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	32	0	0	0	0	29	0	0	0	62	
4:20 PM	0	0	0	0	0	0	0	1	0	0	3	34	0	0	0	0	21	1	0	0	60	
4:25 PM	0	0	0	0	0	0	0	0	0	0	1	33	0	0	0	0	29	0	0	0	63	
4:30 PM	0	0	0	0	0	0	0	2	0	0	5	31	0	0	0	0	22	0	0	0	60	
4:35 PM	0	0	0	0	0	0	0	2	0	0	6	22	0	0	0	0	35	0	0	0	65	
4:40 PM	0	0	0	0	0	0	0	4	0	0	3	37	0	0	0	0	21	0	0	0	65	
4:45 PM	0	0	0	0	0	0	0	3	0	0	2	27	0	0	0	0	29	0	0	0	61	
4:50 PM	0	0	0	0	0	0	0	3	0	0	1	41	0	0	0	0	34	0	0	0	79	
4:55 PM	0	0	0	0	0	0	0	1	0	0	1	27	0	0	0	0	23	0	0	0	52	742
5:00 PM	0	0	0	0	0	1	0	0	0	0	5	34	0	0	0	0	25	0	0	0	65	747
5:05 PM	0	0	0	0	0	0	0	0	0	0	5	40	0	0	0	0	32	1	0	0	78	771
5:10 PM	0	0	0	0	0	0	0	0	0	0	3	41	0	0	0	0	38	0	0	0	82	792
5:15 PM	0	0	0	0	0	0	0	2	0	0	3	36	0	0	0	0	32	0	0	0	73	803
5:20 PM	0	0	0	0	0	0	0	2	0	0	0	36	0	0	0	0	34	1	0	0	73	816
5:25 PM	0	0	0	0	0	0	0	2	0	0	0	35	0	0	0	0	34	0	0	0	71	824
5:30 PM	0	0	0	0	0	1	0	2	0	0	3	29	0	0	0	0	25	1	0	0	61	825
5:35 PM	0	0	0	0	0	0	0	3	0	0	1	37	0	0	0	0	31	0	0	0	72	832
5:40 PM	0	0	0	0	0	0	0	4	0	0	4	29	0	0	0	0	24	1	0	0	62	829
5:45 PM	0	0	0	0	0	0	0	6	0	0	2	27	0	0	0	0	26	1	0	0	62	830
5:50 PM	0	0	0	0	0	0	0	0	0	0	5	45	0	0	0	0	25	0	0	0	75	826
5:55 PM	0	0	0	0	0	0	0	0	0	0	3	30	0	0	0	0	27	0	0	0	60	834

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	8	0	0	44	468	0	0	0	0	408	4	0	0	932
Heavy Trucks	0	0	0			0	0	0			0	4	0			0	8	0			12
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 5/22/2025 4:30 PM

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

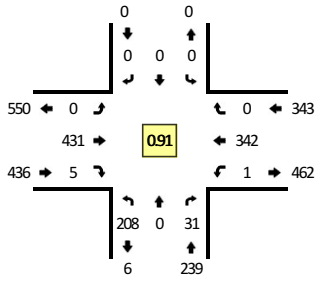
Type of peak hour being reported: Intersection Peak

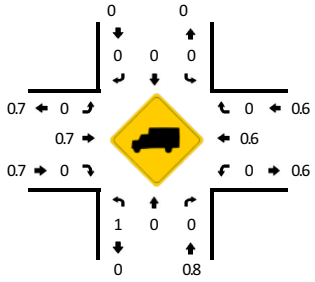
Method for determining peak hour: Total Entering Volume

LOCATION: NW Fisher Creek Dr -- SE 20th St/NW 38th Ave
CITY/STATE: Camas, WA

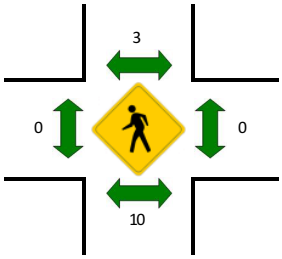
QC JOB #: 17043046
DATE: Thu, May 15 2025

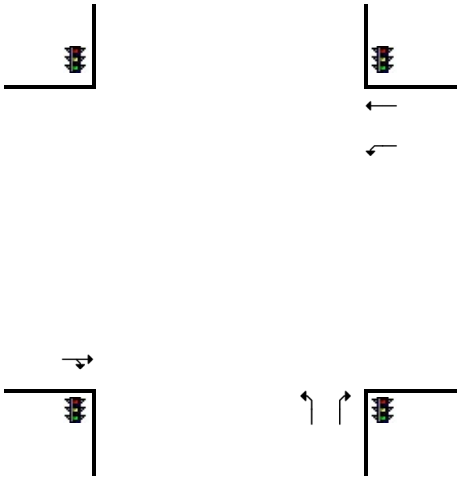
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

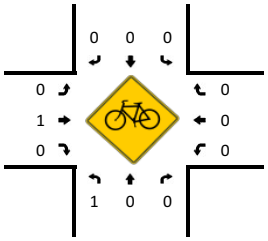


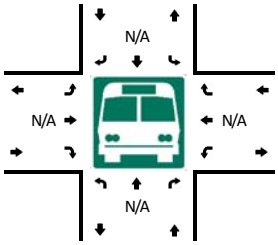


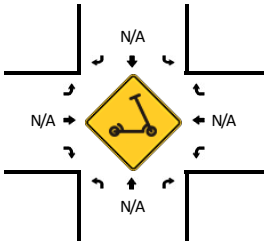
TRUE DATA TO IMPROVE MOBILITY











R* = RTOR

5-Min Count Period Beginning At	NW Fisher Creek Dr (Northbound)					NW Fisher Creek Dr (Southbound)					SE 20th St/NW 38th Ave (Eastbound)					SE 20th St/NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	30	0	4	0	1	0	0	0	0	0	0	22	0	0	0	0	27	0	0	0	84	
4:05 PM	36	0	2	0	1	0	0	0	0	0	0	26	0	0	0	0	24	0	0	0	89	
4:10 PM	27	0	0	0	2	0	0	0	0	0	0	27	0	0	0	0	33	0	0	0	89	
4:15 PM	15	0	2	0	1	0	0	0	0	0	0	31	0	0	0	0	31	0	0	0	80	
4:20 PM	18	0	0	0	1	0	0	0	0	0	0	41	1	0	0	0	28	0	0	0	89	
4:25 PM	14	0	1	0	1	0	0	0	0	0	0	29	0	0	0	0	28	0	0	0	73	
4:30 PM	13	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	25	0	0	0	76	
4:35 PM	24	0	0	0	2	0	0	0	0	0	0	29	1	0	0	0	33	0	0	0	89	
4:40 PM	14	0	1	0	0	0	0	0	0	0	0	27	0	0	0	0	23	0	0	0	65	
4:45 PM	14	0	1	0	1	0	0	0	0	0	0	38	0	0	0	0	25	0	0	0	79	
4:50 PM	17	0	2	0	3	0	0	0	0	0	0	52	2	0	0	0	23	0	0	0	99	
4:55 PM	10	0	2	0	3	0	0	0	0	0	0	43	1	0	0	1	29	0	0	0	89	1001
5:00 PM	18	0	2	0	1	0	0	0	0	0	0	32	0	0	0	0	35	0	0	0	88	1005
5:05 PM	32	0	2	0	2	0	0	0	0	0	0	33	0	0	0	0	29	0	0	0	98	1014
5:10 PM	19	0	1	0	2	0	0	0	0	0	0	38	0	0	0	0	33	0	0	0	93	1018
5:15 PM	12	0	0	0	1	0	0	0	0	0	0	30	1	0	0	0	29	0	0	0	73	1011
5:20 PM	11	0	1	0	1	0	0	0	0	0	0	44	1	0	0	0	25	0	0	0	83	1005
5:25 PM	8	0	1	0	4	0	0	0	0	0	0	37	0	0	0	1	30	0	0	0	81	1013
5:30 PM	7	0	1	0	0	0	0	0	0	0	0	41	0	0	0	0	32	0	0	0	81	1018
5:35 PM	10	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	23	0	0	0	64	993
5:40 PM	2	0	3	0	0	0	0	0	0	0	0	35	0	0	0	0	21	0	0	0	61	989
5:45 PM	5	0	0	0	1	0	0	0	0	0	0	39	0	0	0	0	27	0	0	0	72	982
5:50 PM	1	0	0	0	0	0	0	0	0	0	0	34	0	0	0	0	20	0	0	0	55	938
5:55 PM	1	0	0	0	1	0	0	0	0	0	0	27	0	0	0	0	24	0	0	0	53	902

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	276	0	40	0	20	0	0	0	0	0	0	412	0	0	0	0	388	0	0	0	1136
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Buses																					
Pedestrians		12					8					0					0				20
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

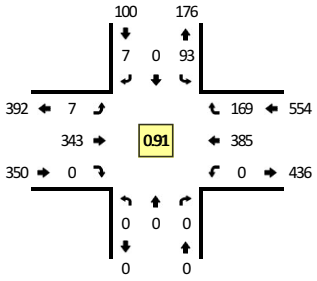
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

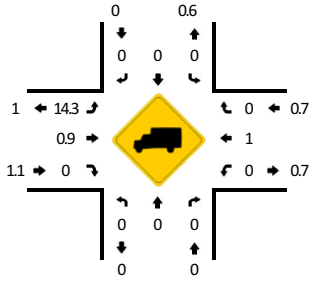
LOCATION: SE Bybee Rd -- SE 20th St/NW 38th Ave
CITY/STATE: Camas, WA

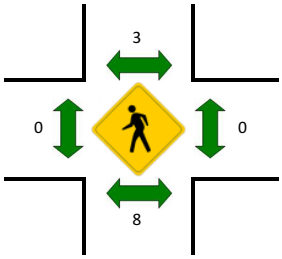
QC JOB #: 17043048
DATE: Thu, May 15 2025

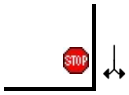
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

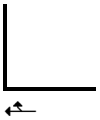


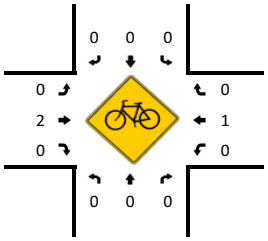
TRUE DATA TO IMPROVE MOBILITY

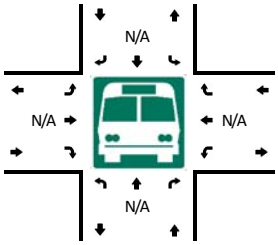


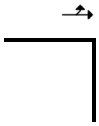


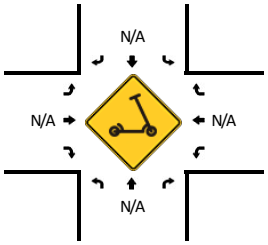












R* = RTOR

5-Min Count Period Beginning At	SE Bybee Rd (Northbound)					SE Bybee Rd (Southbound)					SE 20th St/NW 38th Ave (Eastbound)					SE 20th St/NW 38th Ave (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	2	0	0	0	0	1	23	0	0	0	0	38	18	0	0	82	
4:05 PM	0	0	0	0	0	6	0	0	0	0	1	16	0	0	0	0	45	15	0	0	83	
4:10 PM	0	0	0	0	0	6	0	0	0	0	2	23	0	0	0	0	45	15	0	0	91	
4:15 PM	0	0	0	0	0	10	0	0	0	0	0	20	0	0	0	0	35	12	0	0	77	
4:20 PM	0	0	0	0	0	9	0	0	0	0	1	34	0	0	0	0	31	15	0	0	90	
4:25 PM	0	0	0	0	0	3	0	2	0	0	2	25	0	0	0	0	32	11	0	0	75	
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	37	0	0	0	0	28	10	0	0	76	
4:35 PM	0	0	0	0	0	5	0	0	0	0	0	25	0	0	0	0	40	17	0	0	87	
4:40 PM	0	0	0	0	0	3	0	1	0	0	0	24	0	0	0	0	25	11	0	0	64	
4:45 PM	0	0	0	0	0	12	0	0	0	0	3	30	0	0	0	0	26	13	0	0	84	
4:50 PM	0	0	0	0	0	14	0	0	0	0	0	38	0	0	0	0	27	13	0	0	92	
4:55 PM	0	0	0	0	0	14	0	0	0	0	0	29	0	0	0	0	27	14	0	0	84	985
5:00 PM	0	0	0	0	0	3	0	2	0	0	1	27	0	0	0	0	36	16	0	0	85	988
5:05 PM	0	0	0	0	0	6	0	0	0	0	0	28	0	0	0	0	44	18	0	0	96	1001
5:10 PM	0	0	0	0	0	13	0	2	0	0	0	26	0	0	0	0	34	19	0	0	94	1004
5:15 PM	0	0	0	0	0	4	0	0	0	0	1	25	0	0	0	0	30	11	0	0	71	998
5:20 PM	0	0	0	0	0	14	0	1	0	0	1	32	0	0	0	0	26	9	0	0	83	991
5:25 PM	0	0	0	0	0	6	0	0	0	0	1	32	0	0	0	0	26	12	0	0	77	993
5:30 PM	0	0	0	0	0	13	0	0	0	0	0	27	0	0	0	0	24	16	0	0	80	997
5:35 PM	0	0	0	0	0	8	0	2	0	0	0	23	0	0	0	0	23	10	0	0	66	976
5:40 PM	0	0	0	0	0	8	0	0	0	0	0	27	0	0	0	0	18	5	0	0	58	970
5:45 PM	0	0	0	0	0	9	0	0	0	0	0	30	0	0	0	0	25	8	0	0	72	958
5:50 PM	0	0	0	0	0	6	0	1	0	0	0	30	0	0	0	0	14	7	0	0	58	924
5:55 PM	0	0	0	0	0	6	0	0	0	0	0	21	0	0	0	0	21	5	0	0	53	893

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	88	0	16	0	0	4	324	0	0	0	0	456	212	0	0	1100
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Buses																					
Pedestrians		8					4					0					0				12
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			0
Scooters																					

Comments:

Report generated on 5/22/2025 4:30 PM

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

Appendix D: Existing Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	11	0	1	0	0	0	0	278	169	12	275	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	0	1	0	0	0	0	278	169	12	275	0
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	0	0	0	0	0	87	53	4	86	0
Total Analysis Volume [veh/h]	14	0	1	0	0	0	0	348	211	15	344	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	7	1	9	0	20	16	22	17
g / C, Green / Cycle	0.17	0.02	0.22	0.00	0.48	0.38	0.53	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.00	0.00	0.00	0.32	0.01	0.19
s, saturation flow rate [veh/h]	1708	1615	1699	1900	1185	1725	1048	1840
c, Capacity [veh/h]	558	30	551	0	695	660	566	736
d1, Uniform Delay [s]	14.29	20.06	0.00	0.00	0.00	11.73	6.40	9.22
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.45	0.00	0.00	0.00	3.11	0.02	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.03	0.00	0.00	0.00	0.85	0.03	0.47
d, Delay for Lane Group [s/veh]	14.30	20.52	0.00	0.00	0.00	14.84	6.41	9.68
Lane Group LOS	B	C	A	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	0.01	0.00	0.00	0.00	3.71	0.03	1.62
50th-Percentile Queue Length [ft/ln]	2.49	0.31	0.00	0.00	0.00	92.65	0.86	40.41
95th-Percentile Queue Length [veh/ln]	0.18	0.02	0.00	0.00	0.00	6.67	0.06	2.91
95th-Percentile Queue Length [ft/ln]	4.48	0.56	0.00	0.00	0.00	166.78	1.54	72.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.30	20.52	20.52	0.00	0.00	0.00	0.00	14.84	14.84	6.41	9.68	9.68
Movement LOS	B	C	C	A	A	A	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	14.72			0.00			14.84			9.55		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	12.80											
Intersection LOS	B											
Intersection V/C	0.473											

Emissions

Vehicle Miles Traveled [mph]	0.57	0.04	0.00	0.00	0.00	27.29	0.36	8.17
Stops [stops/h]	8.63	1.08	0.00	0.00	0.00	321.27	2.97	140.12
Fuel consumption [US gal/h]	0.10	0.01	0.00	0.00	0.00	5.82	0.06	2.35
CO [g/h]	6.97	0.71	0.00	0.00	0.00	406.94	4.30	164.05
NOx [g/h]	1.36	0.14	0.00	0.00	0.00	79.18	0.84	31.92
VOC [g/h]	1.61	0.16	0.00	0.00	0.00	94.31	1.00	38.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	11.22	9.80	10.50	9.80
l_p,int, Pedestrian LOS Score for Intersectio	1.969	1.889	2.290	2.196
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1445	1445	2167	2167
d_b, Bicycle Delay [s]	1.60	1.60	0.15	0.15
l_b,int, Bicycle LOS Score for Intersection	1.584	1.560	1.410	1.080
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	66	386	76	14	287	122	95	66	35	84	108	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	9.00	7.00	2.00	3.00	0.00	5.00	8.00	6.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	76	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	386	0	14	287	122	95	66	35	84	108	34
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	110	0	4	82	35	27	19	10	24	31	10
Total Analysis Volume [veh/h]	75	439	0	16	326	139	108	75	40	95	123	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	26	16	27	26	17	27	17	6	16	7
g / C, Green / Cycle	0.48	0.30	0.49	0.48	0.31	0.49	0.31	0.11	0.30	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.24	0.00	0.01	0.17	0.09	0.07	0.07	0.06	0.09
s, saturation flow rate [veh/h]	1286	1825	1500	1279	1870	1577	1652	1719	1607	1794
c, Capacity [veh/h]	517	543	735	452	590	781	464	188	464	219
d1, Uniform Delay [s]	14.57	17.75	0.00	16.48	15.51	7.63	16.60	23.23	16.22	23.16
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	2.93	0.00	0.03	0.84	0.11	0.25	3.22	0.22	4.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.81	0.00	0.04	0.55	0.18	0.23	0.61	0.20	0.74
d, Delay for Lane Group [s/veh]	14.70	20.68	0.00	16.51	16.34	7.73	16.86	26.45	16.43	28.05
Lane Group LOS	B	C	A	B	B	A	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	4.80	0.00	0.08	3.01	0.72	0.86	1.42	0.76	2.07
50th-Percentile Queue Length [ft/ln]	9.79	119.92	0.00	2.00	75.17	17.88	21.43	35.53	18.88	51.79
95th-Percentile Queue Length [veh/ln]	0.71	8.39	0.00	0.14	5.41	1.29	1.54	2.56	1.36	3.73
95th-Percentile Queue Length [ft/ln]	17.63	209.72	0.00	3.60	135.31	32.18	38.57	63.96	33.98	93.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.70	20.68	0.00	16.51	16.34	7.73	16.86	26.45	26.45	16.43	28.05	28.05
Movement LOS	B	C	A	B	B	A	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.81			13.86			21.80			23.76		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.86											
Intersection LOS	B											
Intersection V/C	0.552											

Emissions

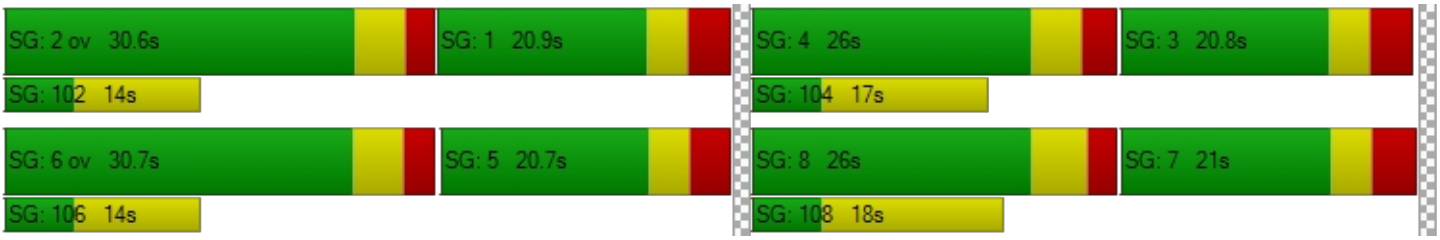
Vehicle Miles Traveled [mph]	2.62	15.36	0.00	0.38	7.71	3.29	6.47	6.89	4.35	7.41
Stops [stops/h]	25.86	316.74	0.00	5.29	198.55	47.22	56.60	93.85	49.85	136.79
Fuel consumption [US gal/h]	0.52	4.82	0.00	0.11	2.87	0.70	1.16	1.79	0.96	2.53
CO [g/h]	36.27	336.59	0.00	7.55	200.74	48.88	80.97	124.98	67.33	177.13
NOx [g/h]	7.06	65.49	0.00	1.47	39.06	9.51	15.75	24.32	13.10	34.46
VOC [g/h]	8.41	78.01	0.00	1.75	46.52	11.33	18.77	28.97	15.60	41.05

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.00	19.00	19.00	19.00
l_p,int, Pedestrian LOS Score for Intersectio	2.617	2.530	2.243	2.117
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	917	917	734	734
d_b, Bicycle Delay [s]	7.99	7.99	10.93	10.93
l_b,int, Bicycle LOS Score for Intersection	1.247	2.353	1.928	0.697
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.374

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	44	307	19	10	188	182	150	14	19	46	58	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	4.00	26.00	10.00	3.00	3.00	6.00	0.00	0.00	7.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	307	19	10	188	182	150	14	19	46	58	13
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	85	5	3	52	51	42	4	5	13	16	4
Total Analysis Volume [veh/h]	49	341	21	11	209	202	167	16	21	51	64	14
Pedestrian Volume [ped/h]	1			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	511	551	556	511	559	624	489	531	590	471	508	526
Degree of Utilization, x	0.10	0.33	0.33	0.02	0.37	0.32	0.34	0.03	0.04	0.11	0.08	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	1.42	1.41	0.07	1.73	1.40	1.50	0.09	0.11	0.36	0.25	0.24
95th-Percentile Queue Length [ft]	7.91	35.61	35.17	1.65	43.18	34.99	37.41	2.32	2.77	9.04	6.21	5.98
Approach Delay [s/veh]	12.12			12.04			12.99			10.64		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.08											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	2	328	4	3	247	4	10	0	5	6	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.00	25.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	328	4	3	247	4	10	0	5	6	0	9
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	95	1	1	72	1	3	0	1	2	0	3
Total Analysis Volume [veh/h]	2	381	5	3	287	5	12	0	6	7	0	10
Pedestrian Volume [ped/h]	0			0			3			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	7.83	0.00	0.00	8.08	0.00	0.00	15.56	15.26	10.17	15.43	15.17	10.94
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.00	0.00	0.13	0.13	0.13	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.12	0.00	0.00	0.19	0.00	0.00	3.28	3.28	3.28	2.75	2.75	2.75
d_A, Approach Delay [s/veh]	0.04			0.08			13.76			12.79		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.70											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.718

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	73	129	72	50	160	49	62	85	72	104	141	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	8.00	12.00	14.00	2.00	7.00	5.00	5.00	6.00	3.00	3.00	8.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	129	72	50	160	49	62	85	72	104	141	126
Peak Hour Factor	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900	0.6900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	47	26	18	58	18	22	31	26	38	51	46
Total Analysis Volume [veh/h]	106	187	104	72	232	71	90	123	104	151	204	183
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	26	17	26	16	26	15	26	17
g / C, Green / Cycle	0.41	0.26	0.41	0.25	0.41	0.24	0.41	0.27
(v / s)_i Volume / Saturation Flow Rate	0.11	0.22	0.14	0.21	0.13	0.14	0.11	0.23
s, saturation flow rate [veh/h]	1005	1345	525	1418	680	1670	1357	1712
c, Capacity [veh/h]	398	355	414	354	486	404	594	457
d1, Uniform Delay [s]	13.54	21.98	13.18	22.76	13.11	21.14	12.48	22.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	4.71	0.20	5.97	0.18	1.23	0.22	4.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.82	0.17	0.86	0.19	0.56	0.25	0.85
d, Delay for Lane Group [s/veh]	13.89	26.69	13.38	28.72	13.29	22.37	12.70	26.48
Lane Group LOS	B	C	B	C	B	C	B	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.88	4.13	0.58	4.48	0.75	2.95	1.30	5.69
50th-Percentile Queue Length [ft/ln]	21.95	103.18	14.48	112.06	18.76	73.69	32.61	142.23
95th-Percentile Queue Length [veh/ln]	1.58	7.43	1.04	7.95	1.35	5.31	2.35	9.60
95th-Percentile Queue Length [ft/ln]	39.50	185.72	26.06	198.87	33.77	132.65	58.69	240.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.89	26.69	26.69	13.38	28.72	28.72	13.29	22.37	22.37	12.70	26.48	26.48
Movement LOS	B	C	C	B	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	23.27			25.78			19.79			22.61		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	22.95											
Intersection LOS	C											
Intersection V/C	0.718											

Emissions

Vehicle Miles Traveled [mph]	4.34	11.91	2.56	10.77	3.41	8.60	3.59	9.19
Stops [stops/h]	49.85	234.35	32.88	254.54	42.62	167.39	74.06	323.07
Fuel consumption [US gal/h]	0.84	3.80	0.54	4.10	0.56	2.06	0.84	3.74
CO [g/h]	58.71	265.43	37.80	286.31	39.17	144.17	58.42	261.30
NOx [g/h]	11.42	51.64	7.36	55.71	7.62	28.05	11.37	50.84
VOC [g/h]	13.61	61.52	8.76	66.35	9.08	33.41	13.54	60.56

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.65	21.65	21.65	21.65
l_p,int, Pedestrian LOS Score for Intersectio	2.314	2.272	2.152	2.174
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1262	1262	946	946
d_b, Bicycle Delay [s]	4.32	4.32	8.80	8.80
l_b,int, Bicycle LOS Score for Intersection	2.215	1.321	1.225	1.590
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	203	57	18	395	122	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	5.00	6.00	2.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	203	57	18	395	122	23
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	17	5	116	36	7
Total Analysis Volume [veh/h]	239	67	21	465	144	27
Pedestrian Volume [ped/h]	0		0		4	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.40	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.99	0.00	21.71	9.95
Movement LOS	A	A	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.00	1.89	0.11
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.31	0.00	47.27	2.78
d_A, Approach Delay [s/veh]	0.00		0.35		19.85	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.70					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	8	41	11	253	509	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	18.00	8.00	1.00	25.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	41	11	253	509	8
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	12	3	73	146	2
Total Analysis Volume [veh/h]	9	47	13	291	585	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.09	0.01	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	17.27	12.94	9.02	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.40	0.40	0.04	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.00	10.00	1.09	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.64		0.39		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	0	0	0	92	161	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	6.00	6.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	92	161	0
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	29	51	0
Total Analysis Volume [veh/h]	0	0	0	116	204	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.31	9.28	7.61	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.79		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 101: SE Bybee Rd/ SE 20th St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1,956.135

Intersection Setup

Name	SE Bybee Rd		SE 20th St		SE 20th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	2.00		2.00		-2.00	
Crosswalk	Yes		No		No	

Volumes

Name	SE Bybee Rd		SE 20th St		SE 20th St	
Base Volume Input [veh/h]	61	6	4	386	227	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.00	17.00	75.00	2.00	2.00	12.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	6	4	386	227	59
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	2	1	121	71	18
Total Analysis Volume [veh/h]	76	8	5	483	284	74
Pedestrian Volume [ped/h]	2		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1956.13	0.07	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10000.00	10000.00	9.07	0.00	0.00	0.00
Movement LOS	F	F	A	A	A	A
95th-Percentile Queue Length [veh/ln]	12.93	12.93	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	323.27	323.27	0.21	0.21	0.00	0.00
d_A, Approach Delay [s/veh]	10000.00		0.09		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	903.27					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	209	0	31	0	0	0	0	431	5	1	345	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	0	31	0	0	0	0	431	5	1	345	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	0	9	0	0	0	0	118	1	0	95	0
Total Analysis Volume [veh/h]	230	0	34	0	0	0	0	474	5	1	379	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	13	7	15	0	17	14	19	14
g / C, Green / Cycle	0.30	0.15	0.34	0.00	0.39	0.31	0.43	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.00	0.00	0.00	0.25	0.00	0.20
s, saturation flow rate [veh/h]	1740	1579	1572	1900	1180	1881	1093	1885
c, Capacity [veh/h]	757	239	676	0	524	581	496	581
d1, Uniform Delay [s]	12.71	16.49	0.00	0.00	0.00	14.35	8.47	13.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.27	0.00	0.00	0.00	3.02	0.00	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.14	0.00	0.00	0.00	0.82	0.00	0.65
d, Delay for Lane Group [s/veh]	12.94	16.76	0.00	0.00	0.00	17.37	8.47	14.66
Lane Group LOS	B	B	A	A	A	B	A	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.65	0.29	0.00	0.00	0.00	3.86	0.00	2.69
50th-Percentile Queue Length [ft/ln]	41.20	7.29	0.00	0.00	0.00	96.40	0.10	67.32
95th-Percentile Queue Length [veh/ln]	2.97	0.52	0.00	0.00	0.00	6.94	0.01	4.85
95th-Percentile Queue Length [ft/ln]	74.16	13.12	0.00	0.00	0.00	173.52	0.18	121.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.94	16.76	16.76	0.00	0.00	0.00	0.00	17.37	17.37	8.47	14.66	14.66
Movement LOS	B	B	B	A	A	A	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	13.43			0.00			17.37			14.65		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.52											
Intersection LOS	B											
Intersection V/C	0.516											

Emissions

Vehicle Miles Traveled [mph]	9.43	1.39	0.00	0.00	0.00	23.39	0.02	9.00
Stops [stops/h]	132.91	23.51	0.00	0.00	0.00	310.98	0.32	217.16
Fuel consumption [US gal/h]	1.54	0.27	0.00	0.00	0.00	5.59	0.01	3.59
CO [g/h]	107.62	18.79	0.00	0.00	0.00	390.45	0.40	250.71
NOx [g/h]	20.94	3.66	0.00	0.00	0.00	75.97	0.08	48.78
VOC [g/h]	24.94	4.36	0.00	0.00	0.00	90.49	0.09	58.11

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.67	11.21	11.93	11.21
l_p,int, Pedestrian LOS Score for Intersectio	1.973	1.894	2.383	2.279
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1344	1344	2016	2016
d_b, Bicycle Delay [s]	2.40	2.40	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	1.995	1.560	1.278	1.115
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	36	252	60	100	266	117	62	129	35	161	236	114
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	8.00	1.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	60	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	252	0	100	266	117	62	129	35	161	236	114
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	65	0	26	69	30	16	33	9	41	61	29
Total Analysis Volume [veh/h]	37	260	0	103	274	121	64	133	36	166	243	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	61	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	24	14	25	24	15	25	26	15	26	16
g / C, Green / Cycle	0.39	0.23	0.40	0.39	0.24	0.41	0.42	0.24	0.42	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.00	0.07	0.14	0.07	0.05	0.09	0.11	0.20
s, saturation flow rate [veh/h]	1371	1900	1615	1461	1900	1615	1402	1831	1507	1796
c, Capacity [veh/h]	426	431	650	450	461	658	423	449	562	460
d1, Uniform Delay [s]	19.04	21.15	0.00	19.37	20.47	11.61	19.52	19.17	16.66	21.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.23
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.36	0.00	0.26	1.23	0.13	0.16	0.52	0.29	6.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.60	0.00	0.23	0.59	0.18	0.15	0.38	0.30	0.79
d, Delay for Lane Group [s/veh]	19.13	22.51	0.00	19.62	21.70	11.74	19.69	19.70	16.95	27.30
Lane Group LOS	B	C	A	B	C	B	B	B	B	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	3.17	0.00	0.83	3.28	0.93	0.45	1.83	1.23	4.98
50th-Percentile Queue Length [ft/ln]	7.17	79.37	0.00	20.66	81.90	23.35	11.17	45.72	30.86	124.49
95th-Percentile Queue Length [veh/ln]	0.52	5.71	0.00	1.49	5.90	1.68	0.80	3.29	2.22	8.64
95th-Percentile Queue Length [ft/ln]	12.91	142.87	0.00	37.18	147.42	42.03	20.11	82.30	55.54	215.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.13	22.51	0.00	19.62	21.70	11.74	19.69	19.70	19.70	16.95	27.30	27.30
Movement LOS	B	C	A	B	C	B	B	B	B	B	C	C
d_A, Approach Delay [s/veh]	22.08			18.85			19.69			24.04		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	21.35											
Intersection LOS	C											
Intersection V/C	0.546											

Emissions

Vehicle Miles Traveled [mph]	1.29	9.10	0.00	2.44	6.48	2.86	3.84	10.13	7.60	16.52
Stops [stops/h]	16.91	187.13	0.00	48.69	193.08	55.05	26.33	107.79	72.75	293.49
Fuel consumption [US gal/h]	0.32	2.94	0.00	0.87	2.91	0.81	0.65	2.10	1.56	5.48
CO [g/h]	22.41	205.85	0.00	60.84	203.37	56.78	45.61	146.74	109.00	383.10
NOx [g/h]	4.36	40.05	0.00	11.84	39.57	11.05	8.87	28.55	21.21	74.54
VOC [g/h]	5.19	47.71	0.00	14.10	47.13	13.16	10.57	34.01	25.26	88.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.20	22.20	22.20	22.20
l_p,int, Pedestrian LOS Score for Intersectio	2.622	2.453	2.240	2.397
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	819	819	655	655
d_b, Bicycle Delay [s]	10.66	10.66	13.81	13.81
l_b,int, Bicycle LOS Score for Intersection	0.862	2.381	1.944	1.143
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	26	277	30	17	265	99	162	44	69	32	23	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	277	30	17	265	99	162	44	69	32	23	15
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	72	8	4	69	26	42	11	18	8	6	4
Total Analysis Volume [veh/h]	27	289	31	18	276	103	169	46	72	33	24	16
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	517	560	572	532	573	643	507	544	597	490	519	576
Degree of Utilization, x	0.05	0.29	0.28	0.03	0.48	0.16	0.33	0.08	0.12	0.07	0.05	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.16	1.17	1.14	0.10	2.60	0.57	1.45	0.28	0.41	0.22	0.15	0.09
95th-Percentile Queue Length [ft]	4.12	29.30	28.49	2.62	65.12	14.19	36.29	6.90	10.23	5.40	3.63	2.14
Approach Delay [s/veh]	11.43			13.08			11.83			10.07		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.04											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	10	303	1	6	303	8	5	0	13	7	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	303	1	6	303	8	5	0	13	7	0	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	82	0	2	82	2	1	0	4	2	0	2
Total Analysis Volume [veh/h]	11	329	1	7	329	9	5	0	14	8	0	8
Pedestrian Volume [ped/h]	0			0			0			2		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.02	0.02	0.00	0.01
d_M, Delay for Movement [s/veh]	7.95	0.00	0.00	7.93	0.00	0.00	15.64	15.25	10.28	15.88	15.36	10.33
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.02	0.00	0.00	0.11	0.11	0.11	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.68	0.00	0.00	0.43	0.00	0.00	2.64	2.64	2.64	2.70	2.70	2.70
d_A, Approach Delay [s/veh]	0.26			0.16			11.69			13.11		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.80											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	15	183	131	127	171	21	25	93	46	83	55	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	2.00	4.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	183	131	127	171	21	25	93	46	83	55	98
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	50	36	35	47	6	7	26	13	23	15	27
Total Analysis Volume [veh/h]	16	201	144	140	188	23	27	102	51	91	60	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	26	15	26	19	18	9	18	11
g / C, Green / Cycle	0.46	0.28	0.47	0.34	0.33	0.16	0.33	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.10	0.14	0.03	0.09	0.06	0.10
s, saturation flow rate [veh/h]	1035	1459	1421	1464	963	1794	1454	1652
c, Capacity [veh/h]	562	404	664	504	531	294	579	338
d1, Uniform Delay [s]	8.35	19.03	8.75	13.94	12.83	21.23	13.27	19.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	5.23	0.16	0.55	0.04	1.43	0.13	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.85	0.21	0.42	0.05	0.52	0.16	0.50
d, Delay for Lane Group [s/veh]	8.37	24.26	8.90	14.50	12.87	22.66	13.40	20.69
Lane Group LOS	A	C	A	B	B	C	B	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	4.22	0.82	1.80	0.21	1.83	0.75	1.90
50th-Percentile Queue Length [ft/ln]	2.15	105.41	20.53	45.03	5.36	45.63	18.81	47.46
95th-Percentile Queue Length [veh/ln]	0.16	7.58	1.48	3.24	0.39	3.29	1.35	3.42
95th-Percentile Queue Length [ft/ln]	3.88	189.60	36.95	81.05	9.64	82.14	33.86	85.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.37	24.26	24.26	8.90	14.50	14.50	12.87	22.66	22.66	13.40	20.69	20.69
Movement LOS	A	C	C	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	23.56			12.26			21.19			18.13		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	18.52											
Intersection LOS	B											
Intersection V/C	0.596											

Emissions

Vehicle Miles Traveled [mph]	0.65	14.12	4.98	7.50	1.02	5.80	2.16	3.99
Stops [stops/h]	5.60	273.90	53.33	117.00	13.92	118.57	48.88	123.33
Fuel consumption [US gal/h]	0.09	4.30	0.84	1.79	0.17	1.42	0.53	1.36
CO [g/h]	6.59	300.68	59.03	125.00	11.89	99.35	37.25	95.05
NOx [g/h]	1.28	58.50	11.48	24.32	2.31	19.33	7.25	18.49
VOC [g/h]	1.53	69.69	13.68	28.97	2.76	23.03	8.63	22.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.80	17.80	17.80	17.80
l_p,int, Pedestrian LOS Score for Intersectio	2.201	2.181	1.997	2.088
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1444	1444	1083	1083
d_b, Bicycle Delay [s]	2.15	2.15	5.83	5.83
l_b,int, Bicycle LOS Score for Intersection	2.155	1.281	0.999	1.129
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	18.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.263

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	305	110	13	277	86	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	305	110	13	277	86	15
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	87	31	4	79	24	4
Total Analysis Volume [veh/h]	347	125	15	315	98	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.26	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.32	0.00	18.06	10.72
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	1.04	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.04	0.00	25.95	2.02
d_A, Approach Delay [s/veh]	0.00		0.38		16.97	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.26					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	2	21	34	419	353	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	21	34	419	353	5
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	10	118	99	1
Total Analysis Volume [veh/h]	2	24	38	471	397	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.35	10.71	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.36	3.36	2.52	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.22		0.61		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.64					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	0	0	0	147	75	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	3.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	147	75	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8900	0.8900	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	41	21	0
Total Analysis Volume [veh/h]	0	0	0	165	84	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.87	8.69	7.38	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.28		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 101: SE Bybee Rd/ SE 20th St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	8,492.890

Intersection Setup

Name	SE Bybee Rd		SE 20th St		SE 20th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	2.00		2.00		-2.00	
Crosswalk	Yes		No		No	

Volumes

Name	SE Bybee Rd		SE 20th St		SE 20th St	
Base Volume Input [veh/h]	93	7	7	343	385	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	14.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	7	7	343	385	169
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	2	2	94	106	46
Total Analysis Volume [veh/h]	102	8	8	377	423	186
Pedestrian Volume [ped/h]	3		0		0	

Intersection Settings

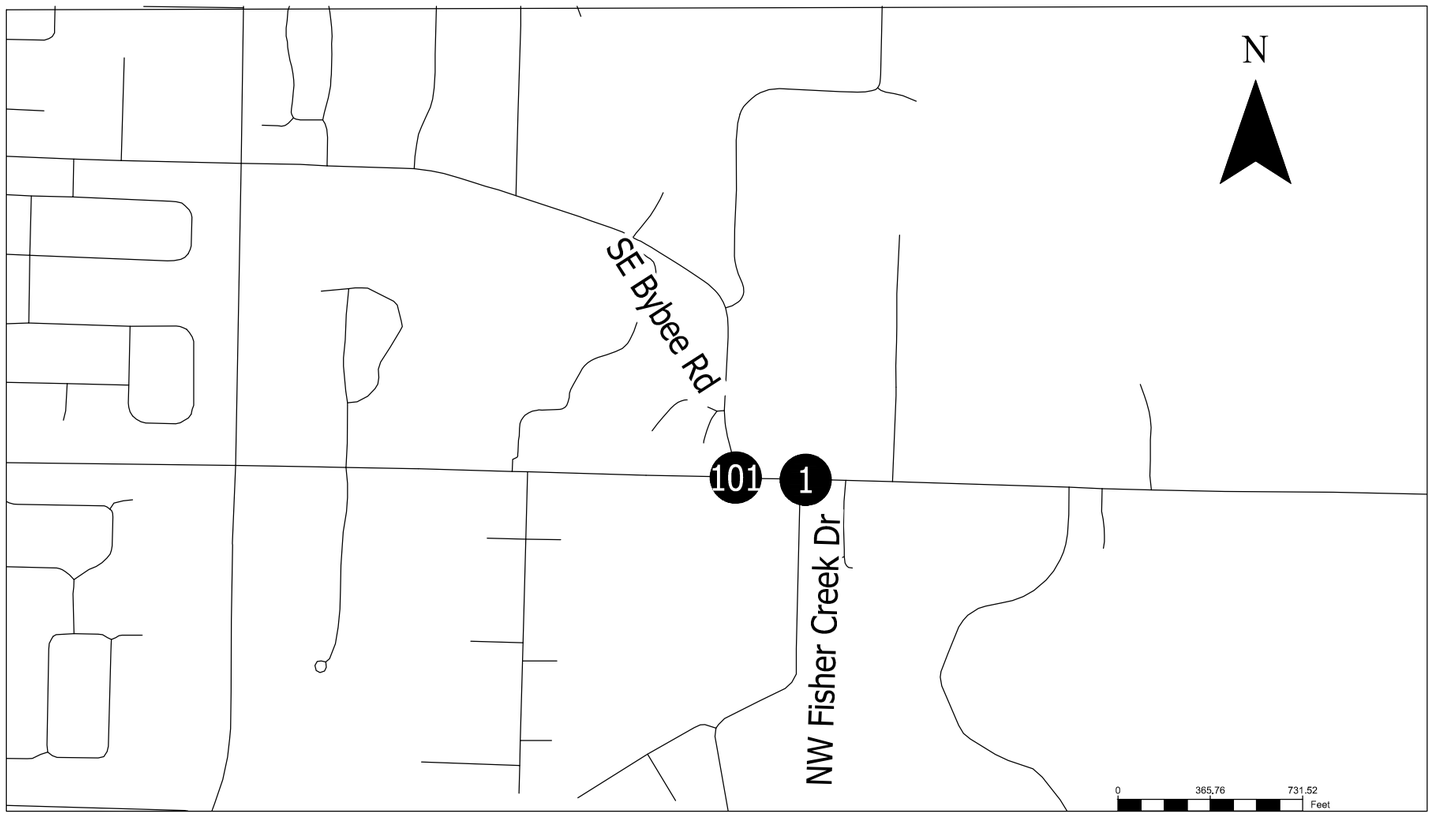
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

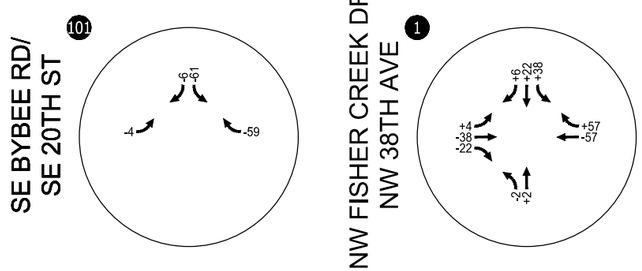
V/C, Movement V/C Ratio	8492.89	0.26	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10000.00	10000.00	8.97	0.00	0.00	0.00
Movement LOS	F	F	A	A	A	A
95th-Percentile Queue Length [veh/ln]	16.28	16.28	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	407.05	407.05	0.33	0.33	0.00	0.00
d_A, Approach Delay [s/veh]	10000.00		0.19		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	996.44					
Intersection LOS	F					

Appendix E: In-Process Data

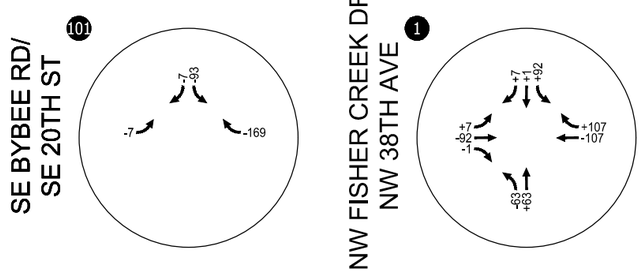
Stella Ridge *September 2025*



WEEKDAY AM PEAK HOUR



WEEKDAY PM PEAK HOUR

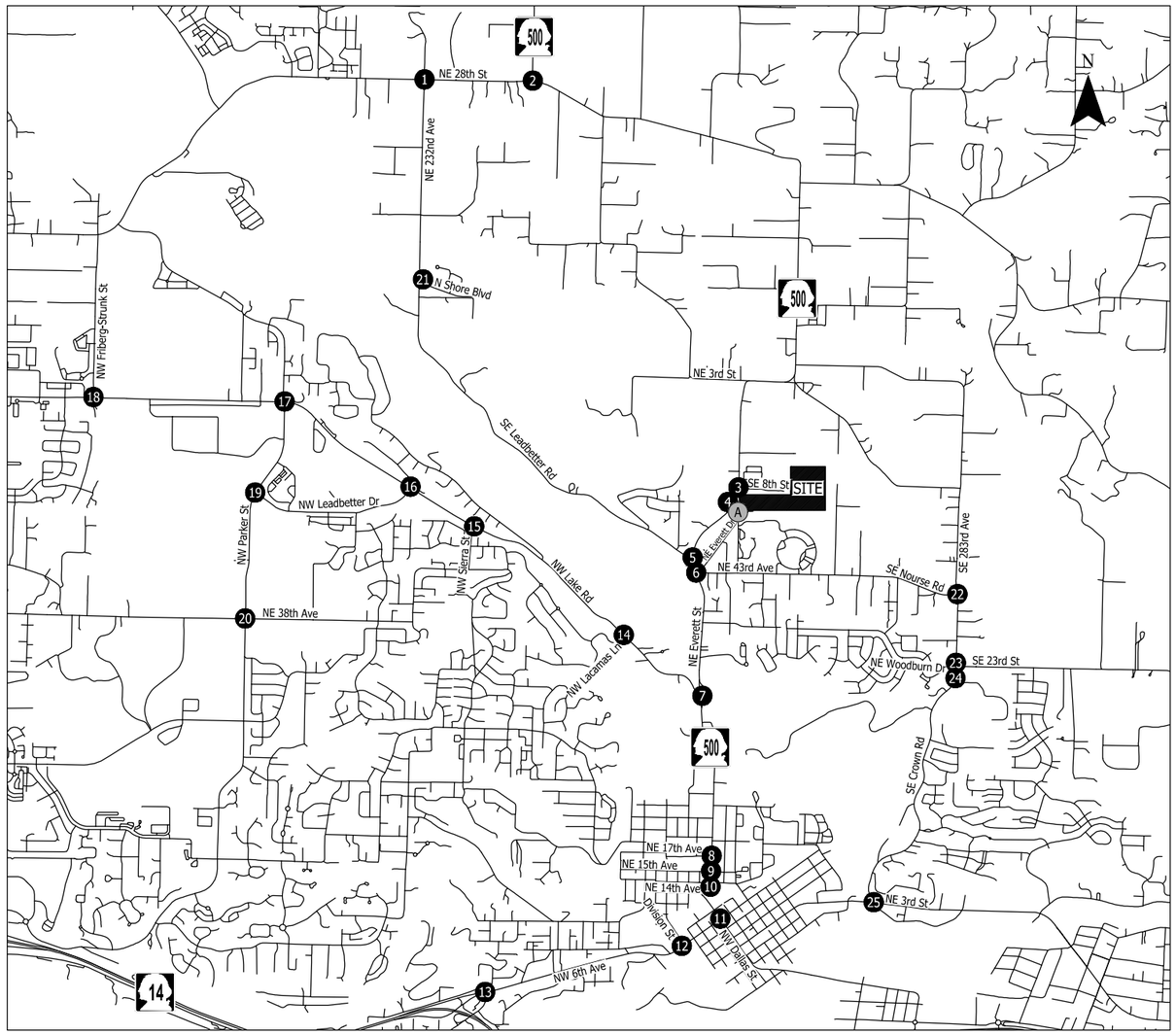


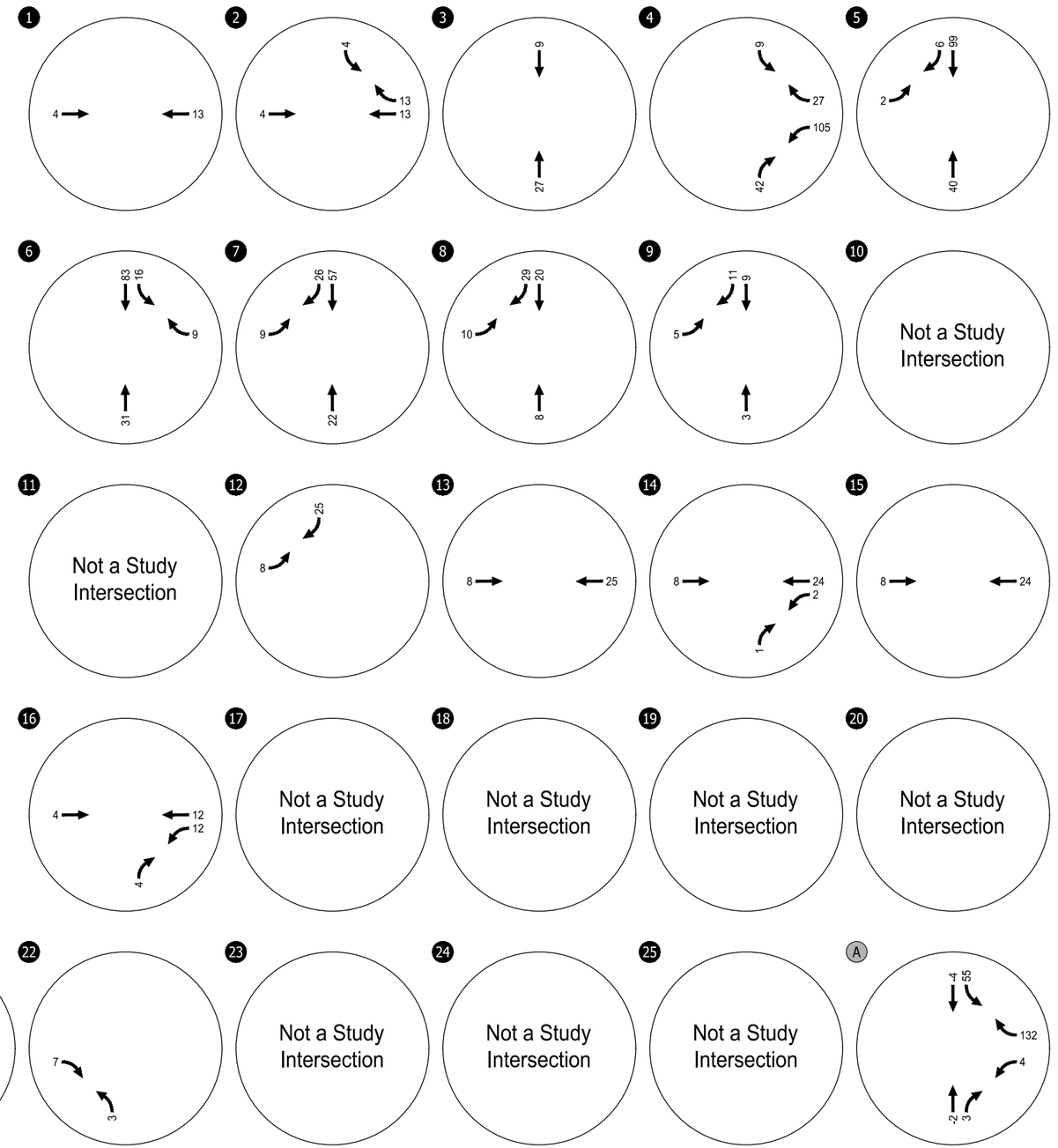
SE Bybee Road/NW Fisher Creek Drive
Trip Reassignment
Camas, Washington

Figure
E1

0% Build-Out

Camas Woods *October 2024*





Note: Negative volumes reflact pass-by trips

(#) Study Intersections

(A) Site Driveway

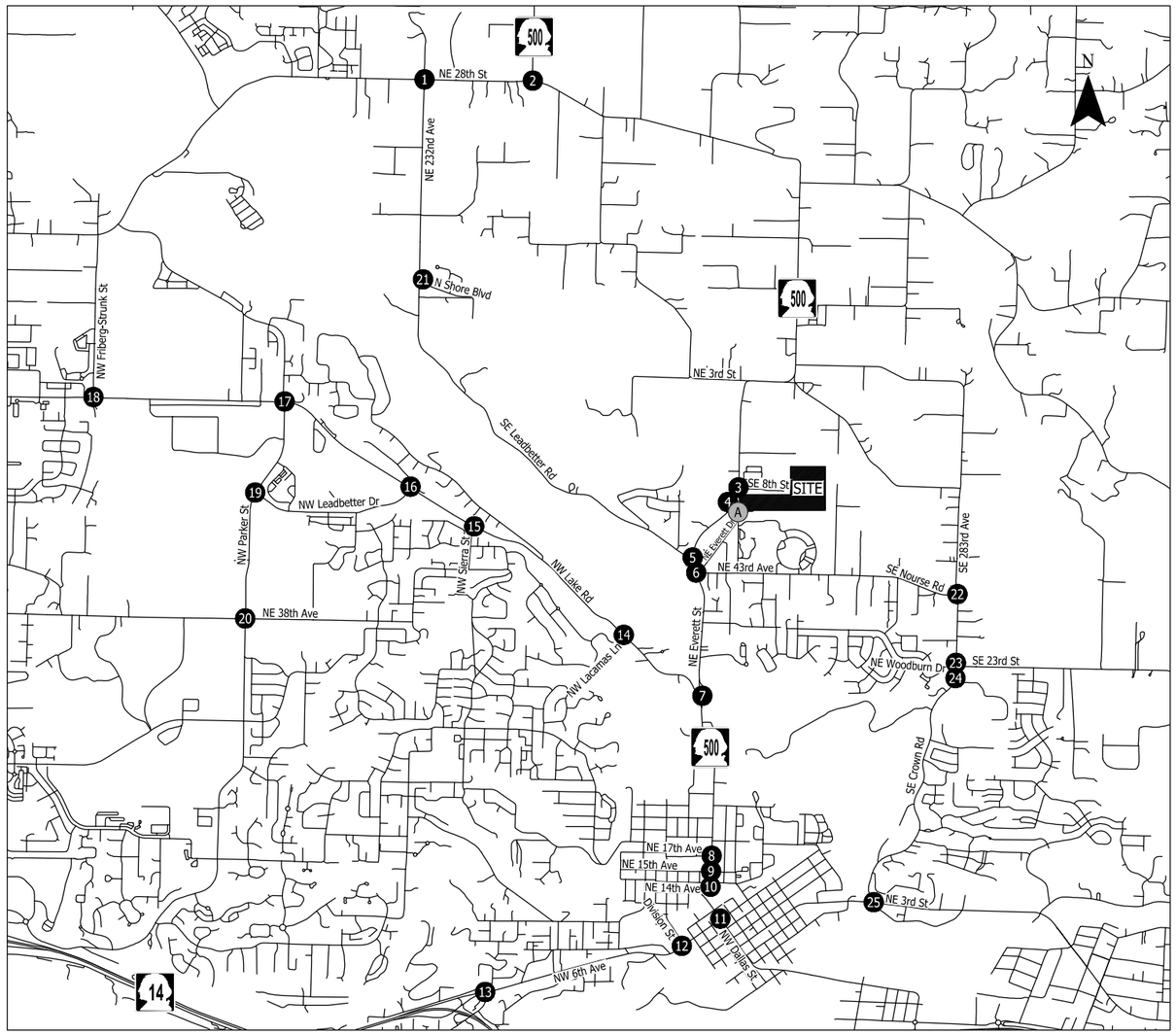
Weekday AM Peak Hour
Site-Generated Trip Assignment
Camas, Washington

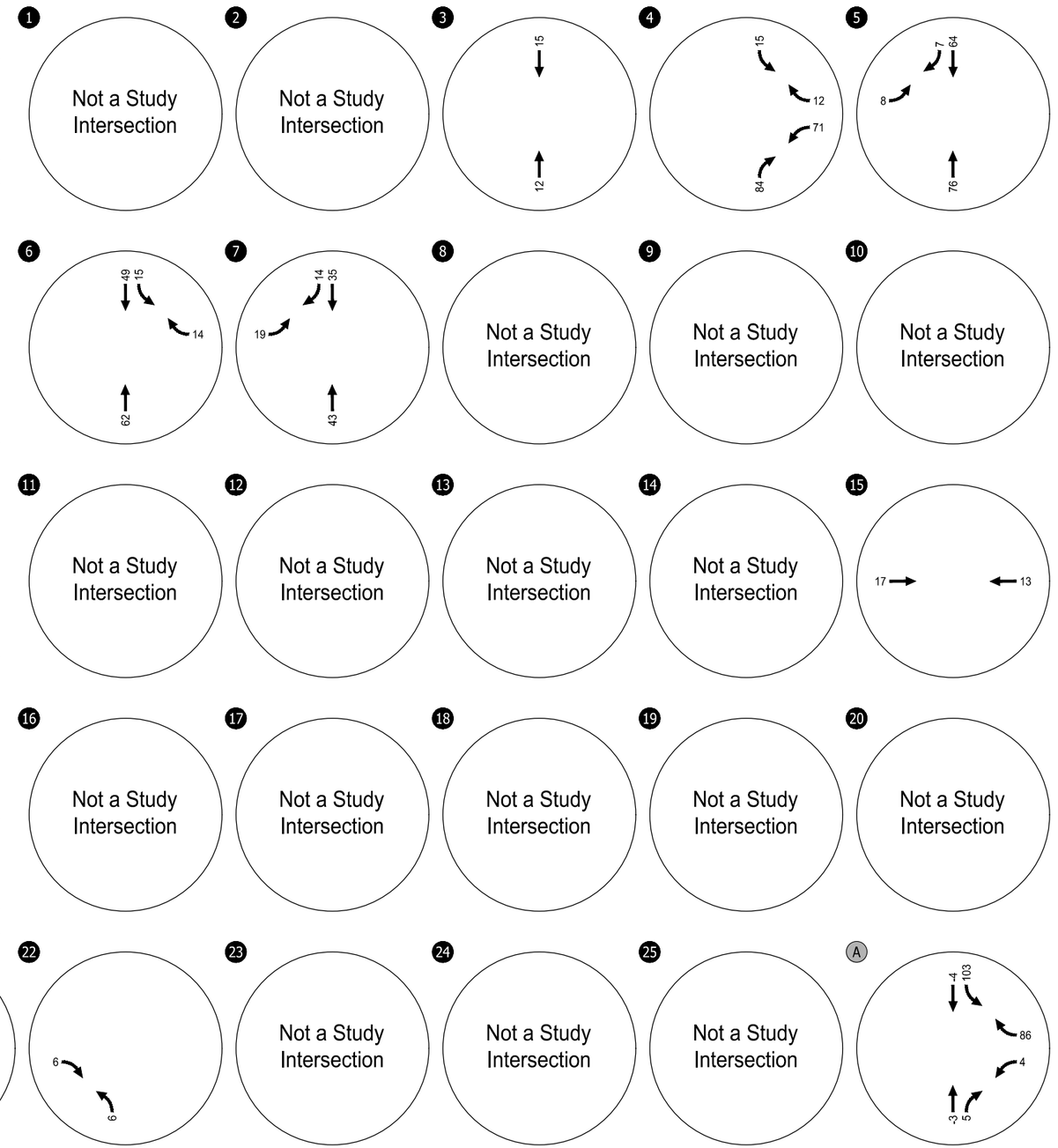
Figure
12

KITTELSON & ASSOCIATES

0% Build-Out

Camas Woods *October 2024*





Note: Negative volumes reflact pass-by trips

(#) Study Intersections

(A) Site Driveway

Weekday School PM Peak Hour
Site-Generated Trip Assignment
Camas, Washington

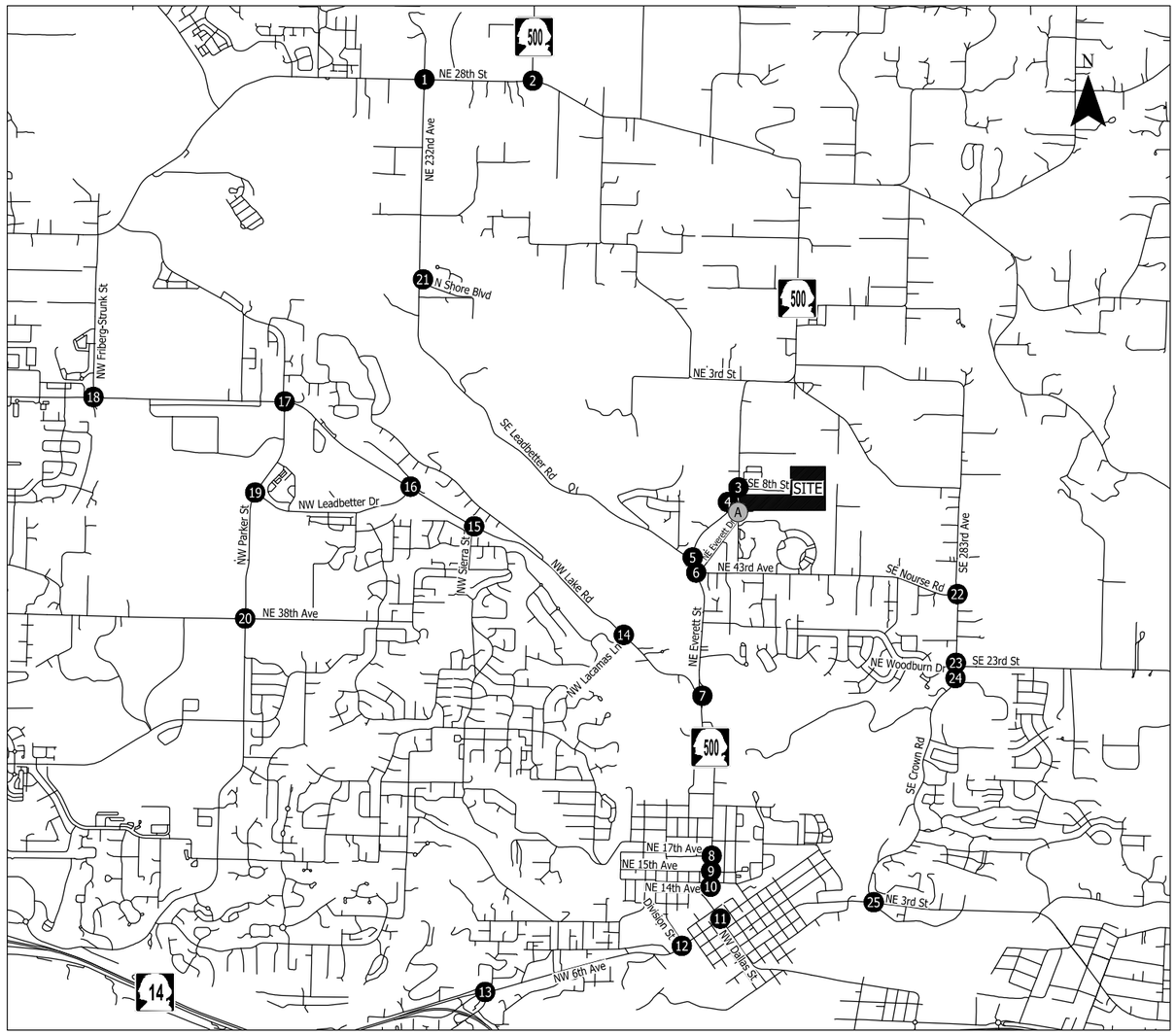
Figure
13

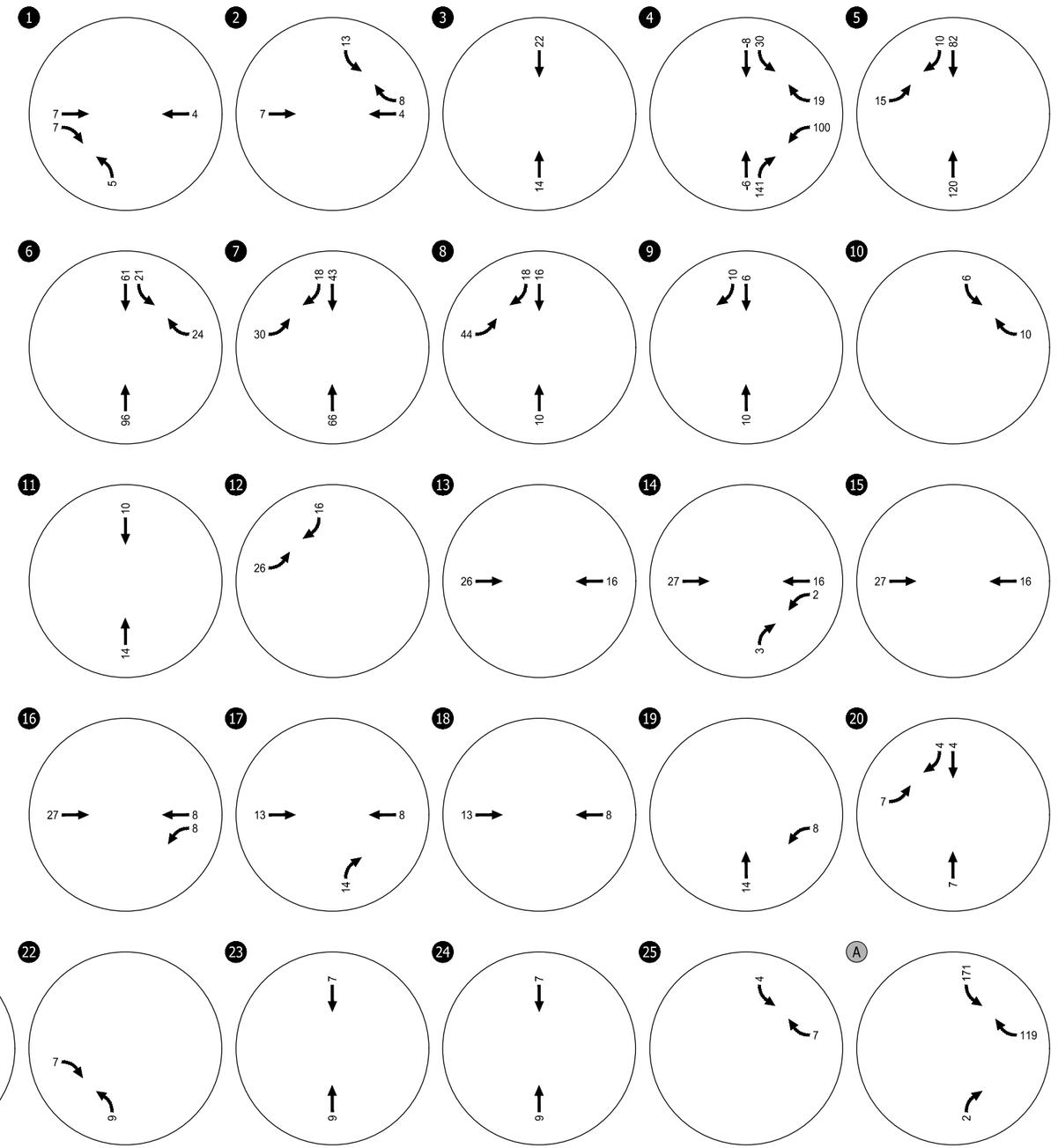
KITTELSON & ASSOCIATES

Camas Woods

0% Build-Out

October 2024





Note: Negative volumes reflact pass-by trips

Study Intersections

A Site Driveway

Weekday PM Peak Hour
Site-Generated Trip Assignment
Camas, Washington

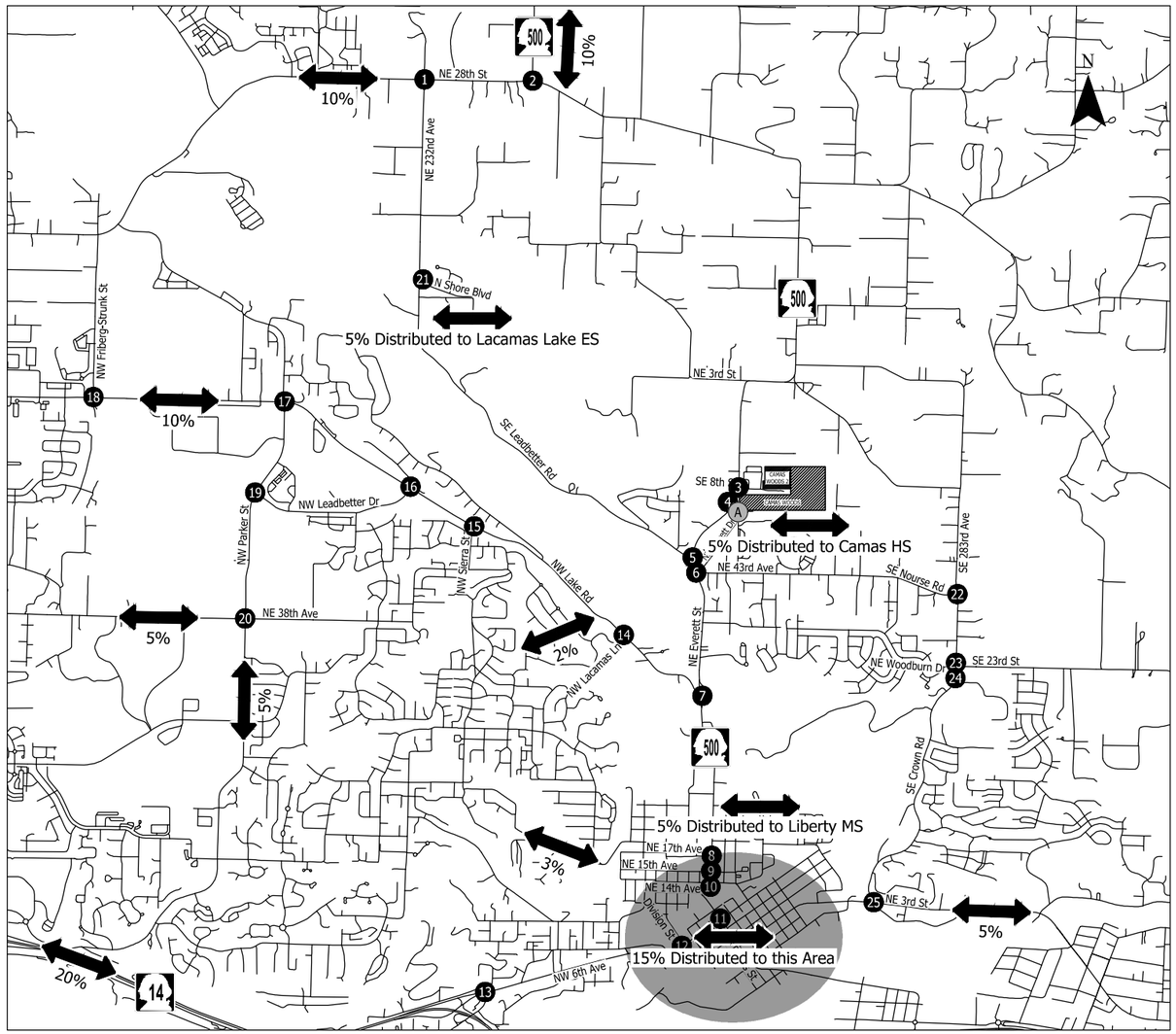
Figure
14

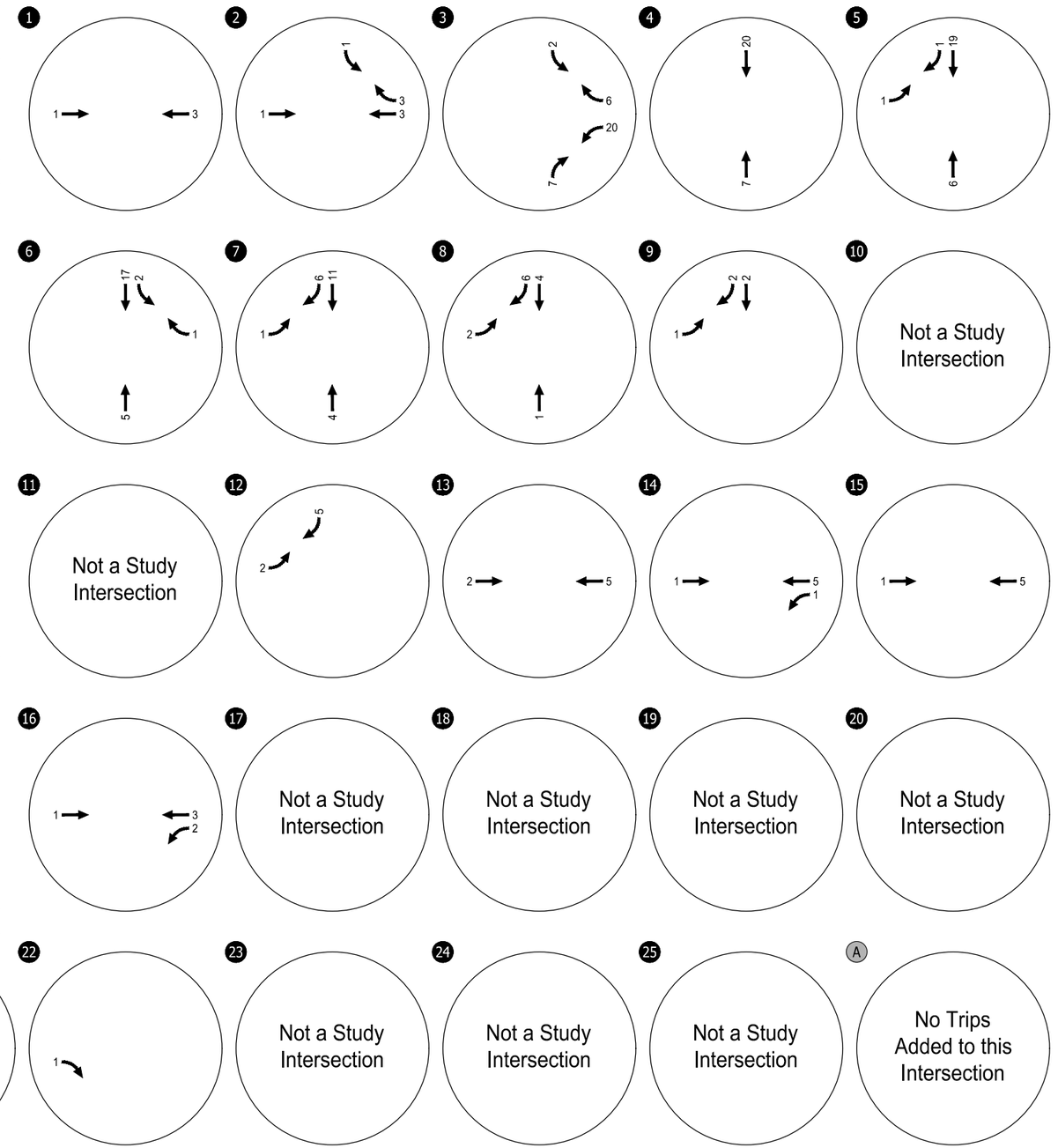
KITTELSON & ASSOCIATES

Camas Woods 2

0% Build-Out

March 2025





Site-Generated Trip Assignment
Weekday AM Peak Hour
Camas, Washington

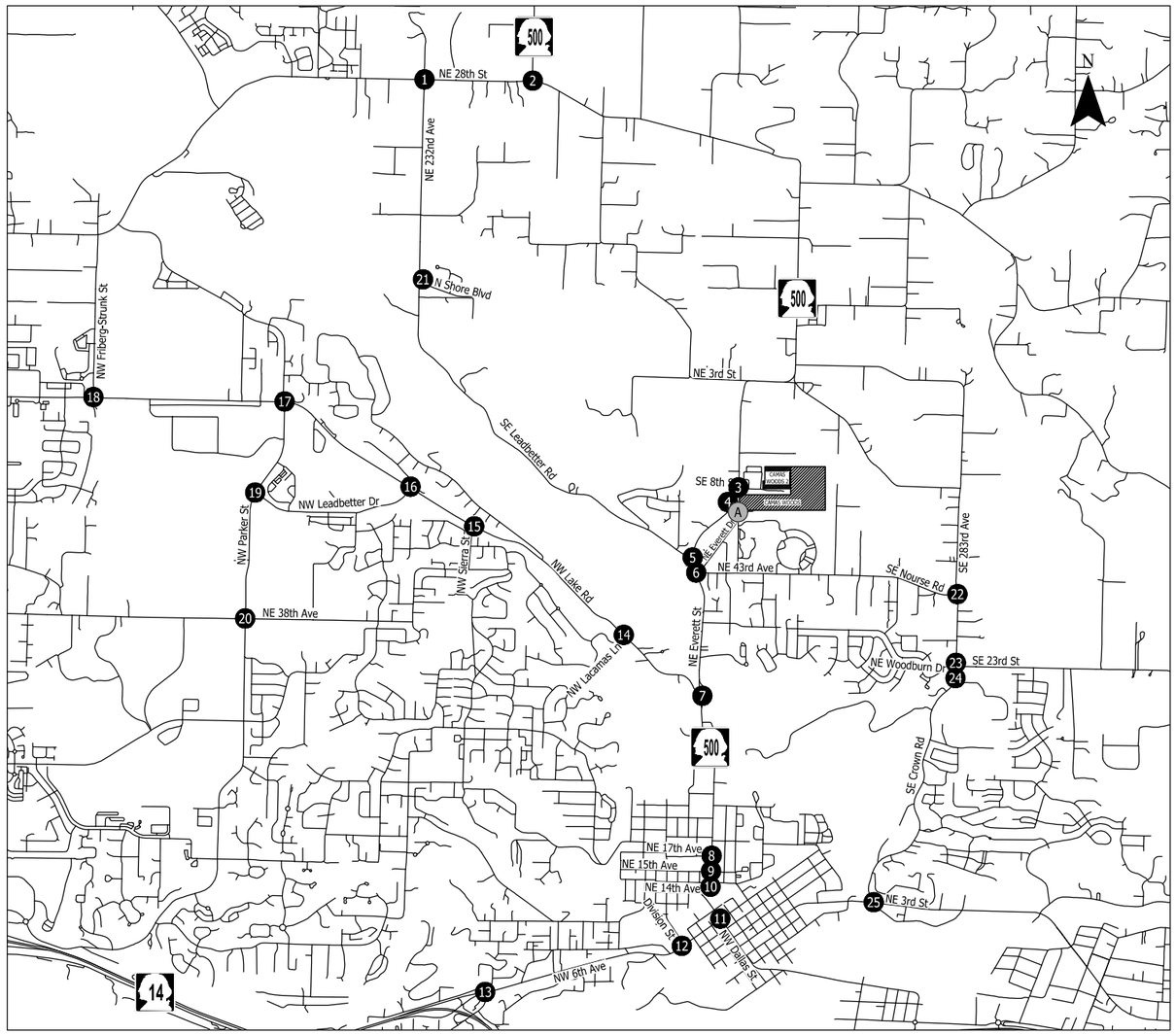
Figure 3

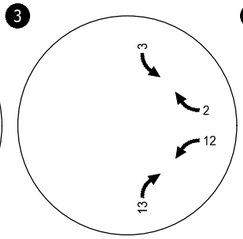
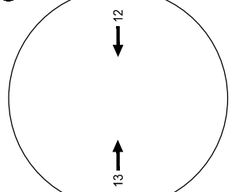
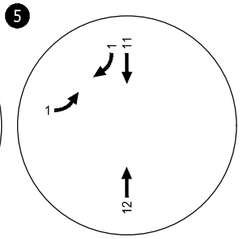
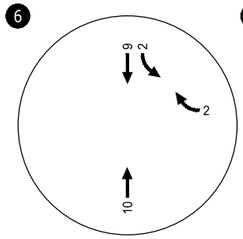
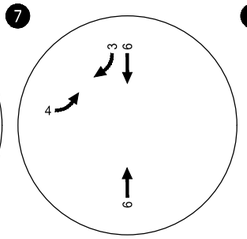
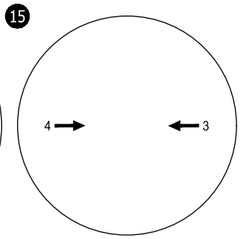
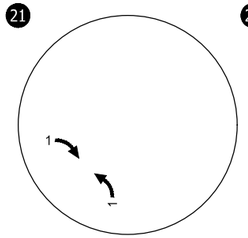
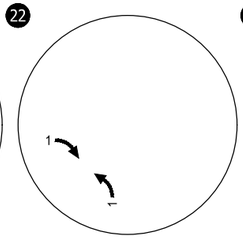
- # Study Intersections
- A Site Driveway
- XX% Trip Distribution Percentage

KITTELSON & ASSOCIATES

0% Build-Out

Camas Woods 2 *March 2025*



1 Not a Study Intersection	2 Not a Study Intersection	3 	4 	5 
6 	7 	8 Not a Study Intersection	9 Not a Study Intersection	10 Not a Study Intersection
11 Not a Study Intersection	12 Not a Study Intersection	13 Not a Study Intersection	14 Not a Study Intersection	15 
16 Not a Study Intersection	17 Not a Study Intersection	18 Not a Study Intersection	19 Not a Study Intersection	20 Not a Study Intersection
21 	22 	23 Not a Study Intersection	24 Not a Study Intersection	25 Not a Study Intersection
				A No Trips Added to this Intersection

Study Intersections

A Site Driveway

XX% Trip Distribution Percentage

Site-Generated Trip Assignment
Weekday School PM Peak Hour
Camas, Washington

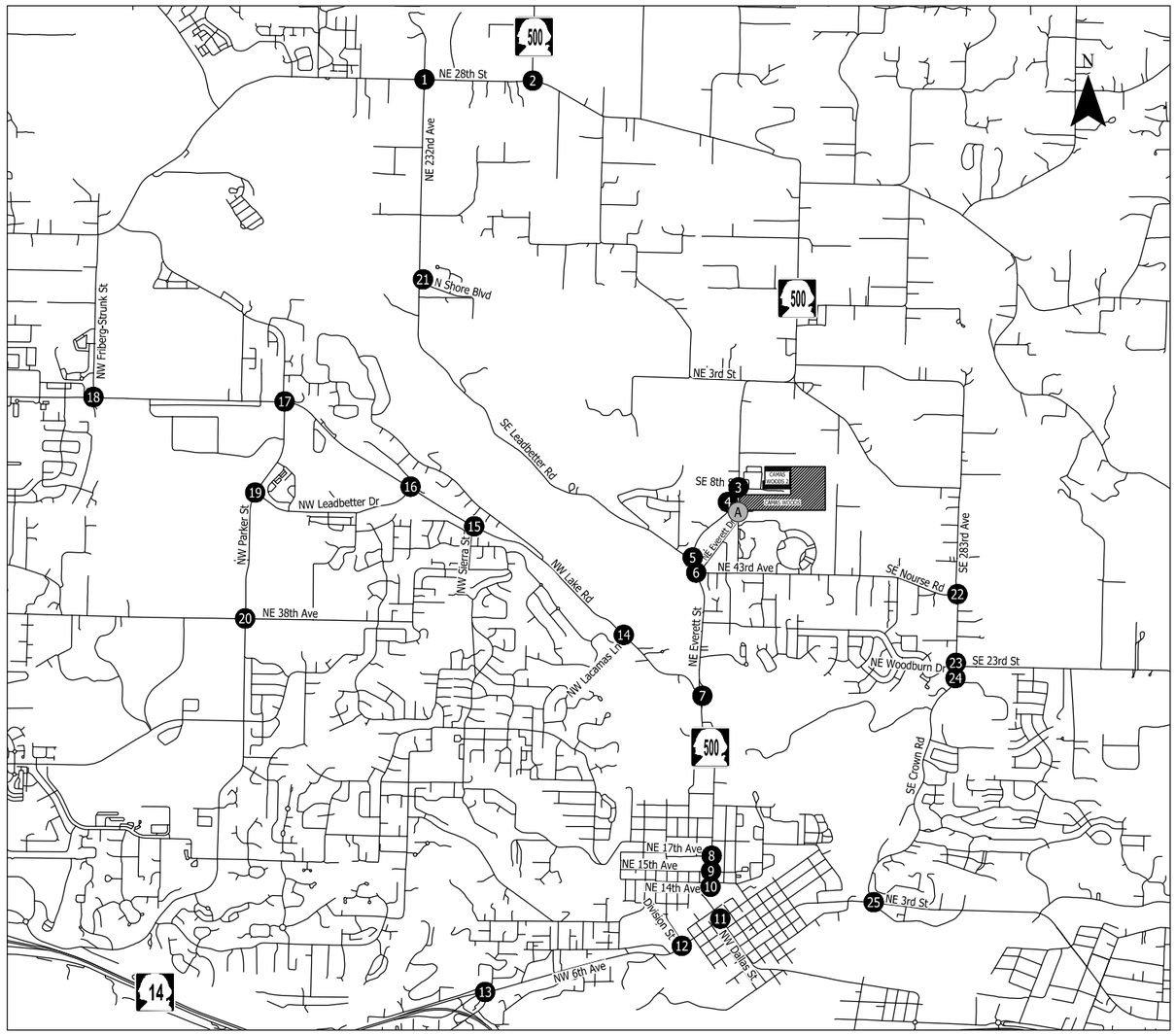
Figure
4

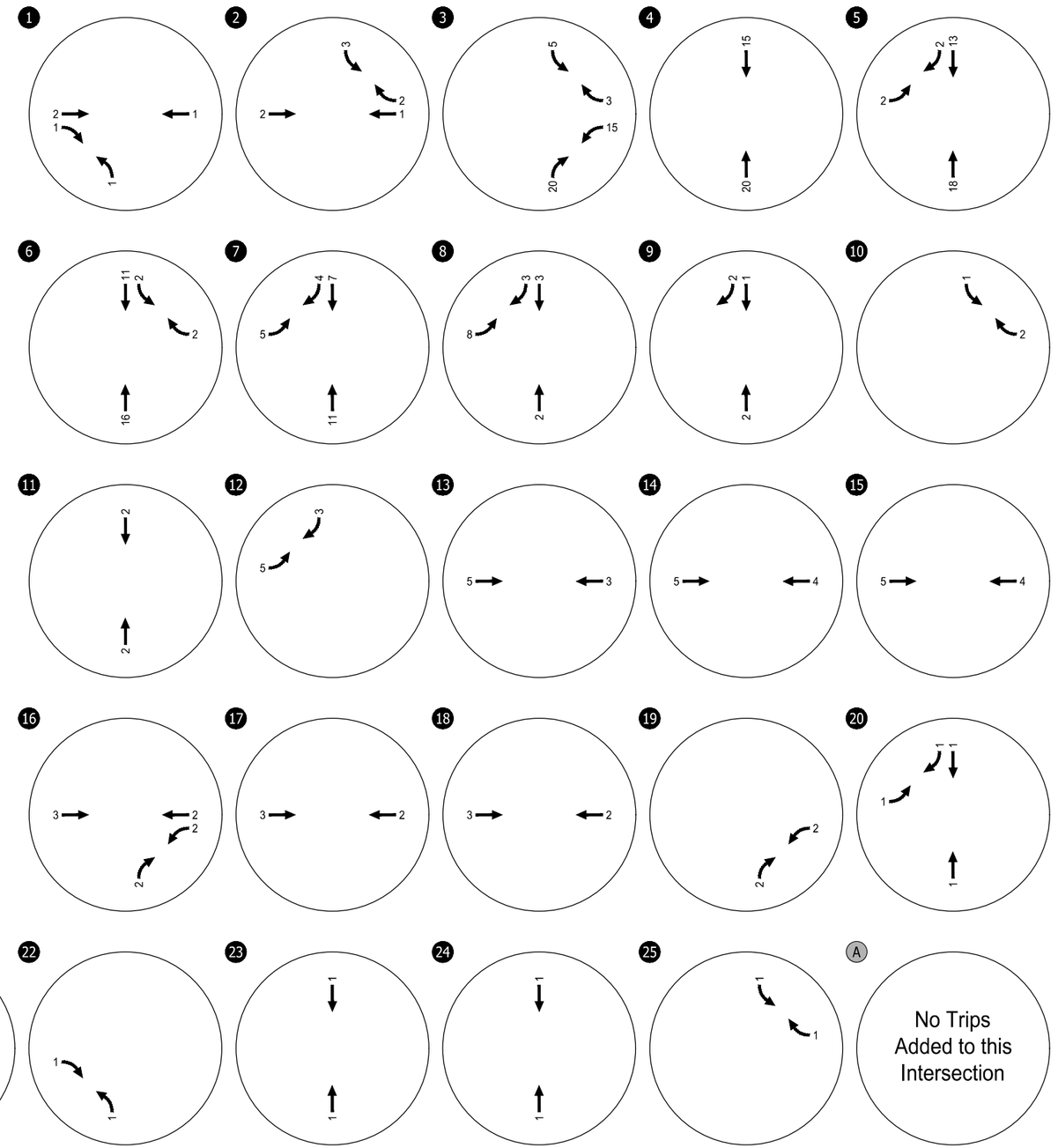
KITTELSON & ASSOCIATES

Camas Woods 2

0% Build-Out

March 2025





Site-Generated Trip Assignment
Weekday PM Peak Hour
Camas, Washington

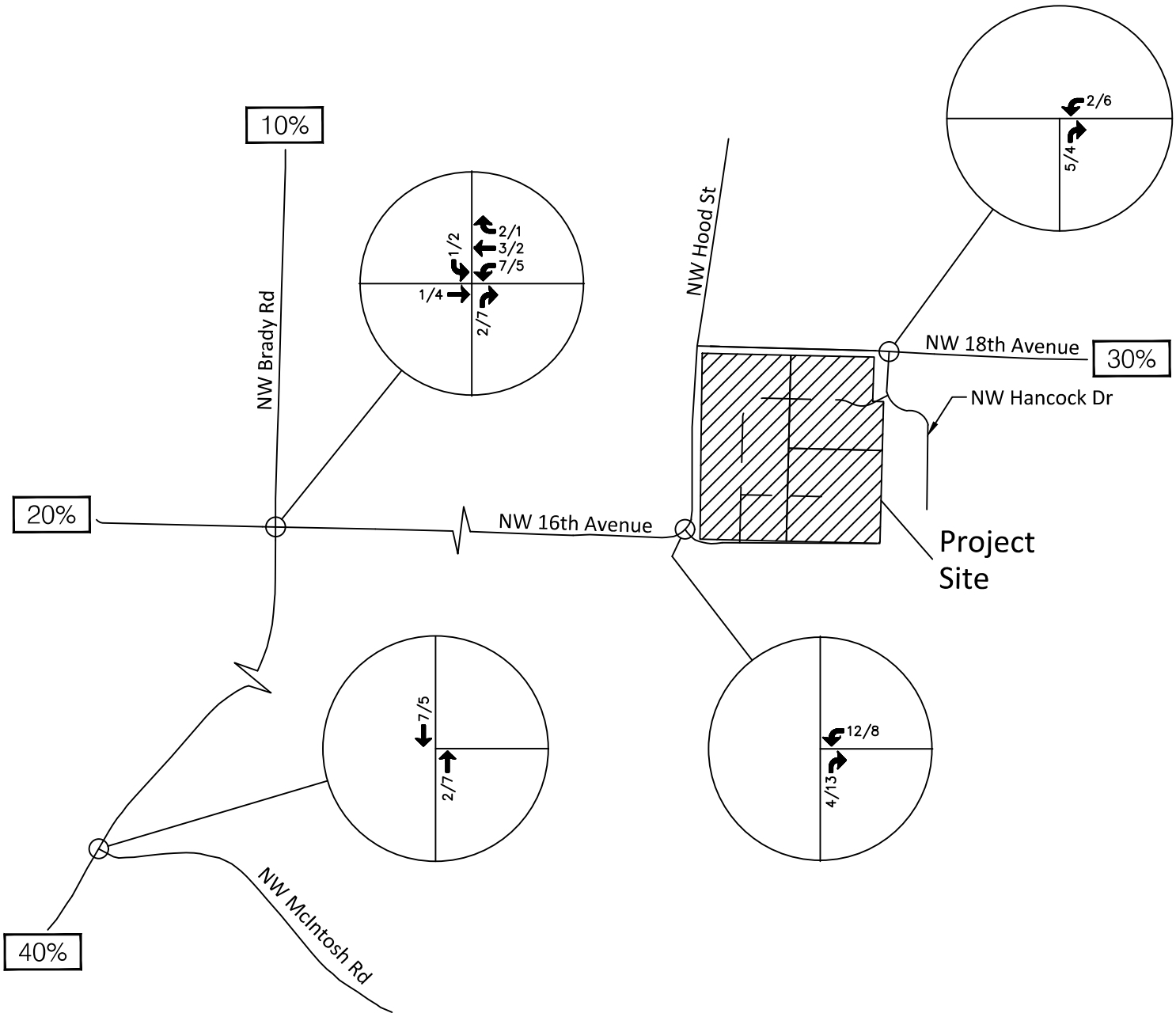
Figure 5

- # Study Intersections
- A Site Driveway
- XX% Trip Distribution Percentage

KITTELSON & ASSOCIATES

0% Build-Out

18th Avenue Subdivision TIA
Camas, WA



LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

10% Peak Hour Trip Distribution

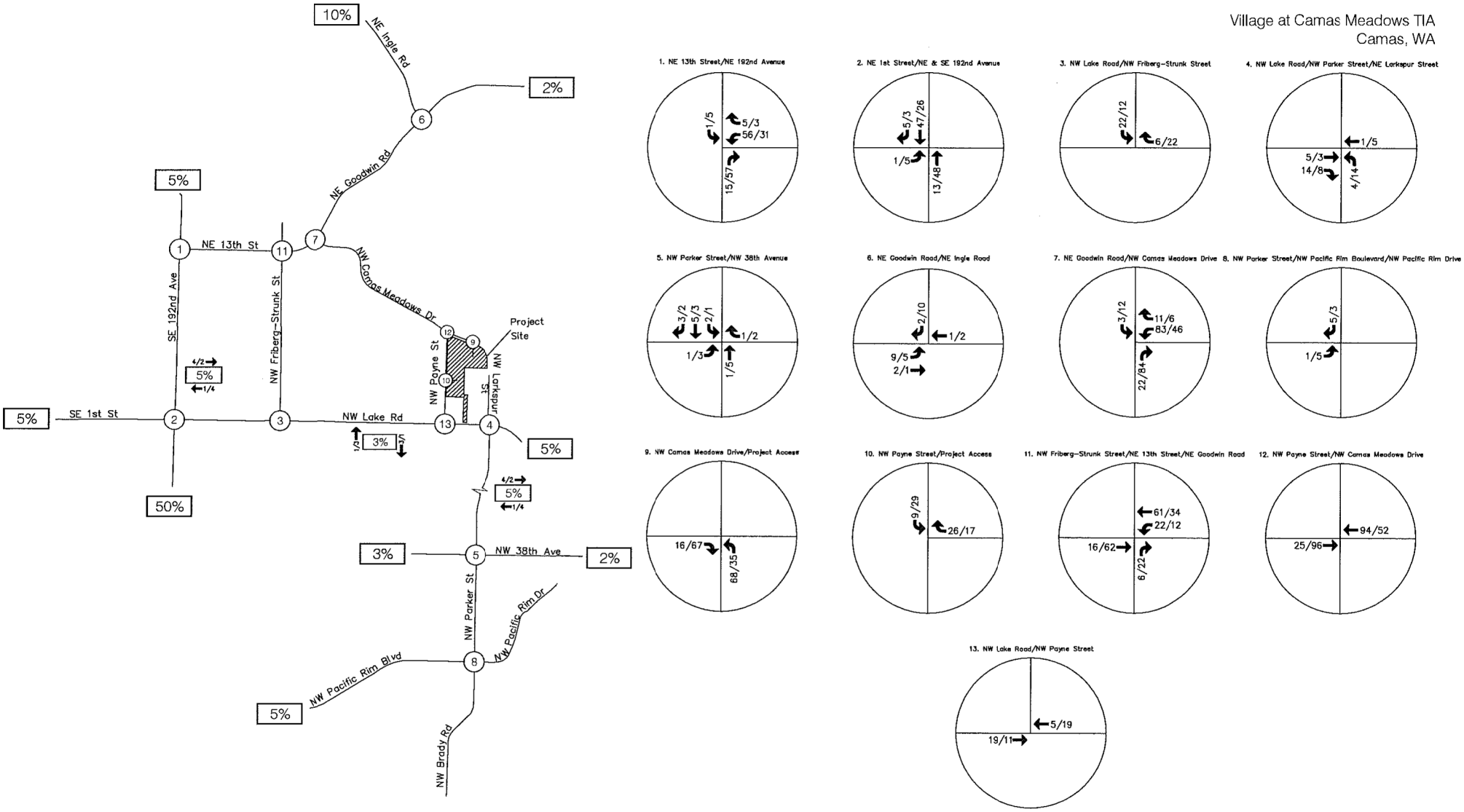
NOT TO SCALE

FIGURE 6
Trip Distribution and Assignment
Traffic Volumes

21048_Figures.Dwg

50% Build-Out

Village at Camas Meadows TIA
Camas, WA



NOT TO SCALE

LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

10% A.M. and P.M. Peak Hour Trip Distribution

FIGURE 1
Trip Distribution and Assignment
Traffic Volumes

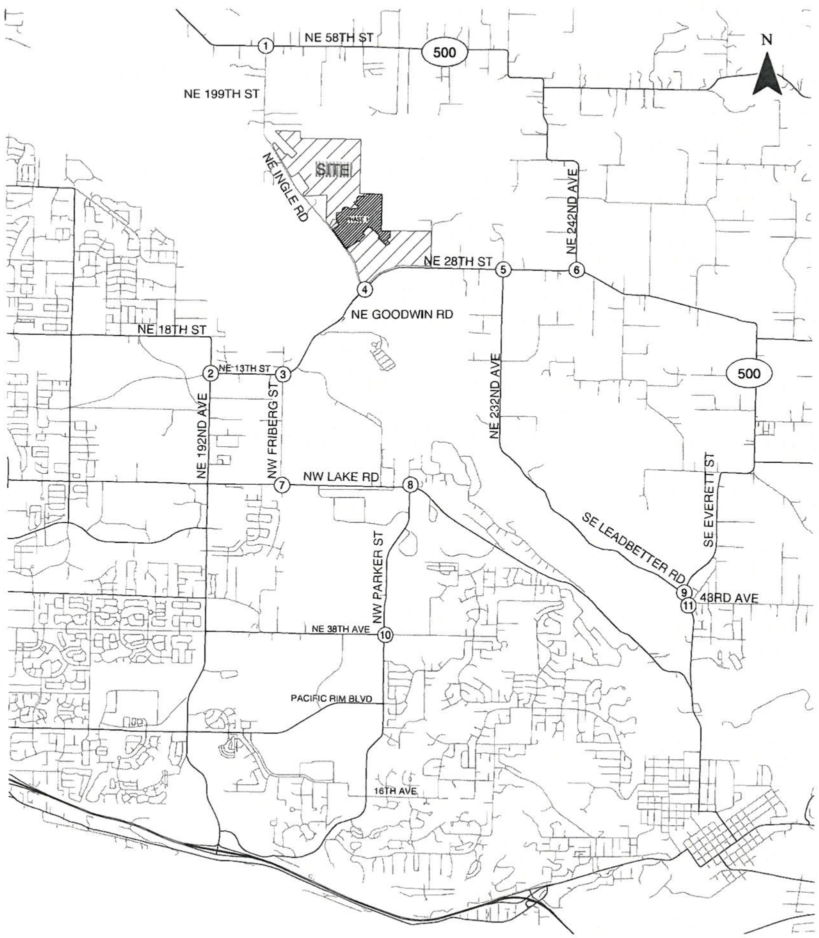
16025_Figures.Dwg

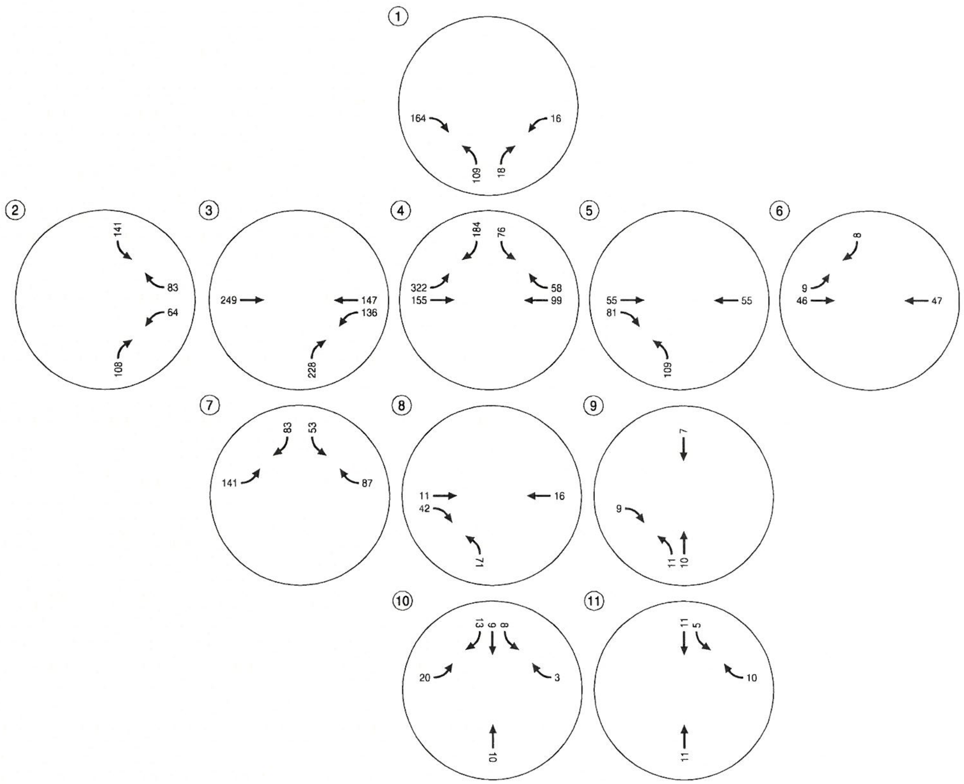
80% Build-Out

Total Estimated Trip Assignment - Full Build-Out
Weekday AM Peak Hour
Camas, Washington

Figure
9

80% Build-Out

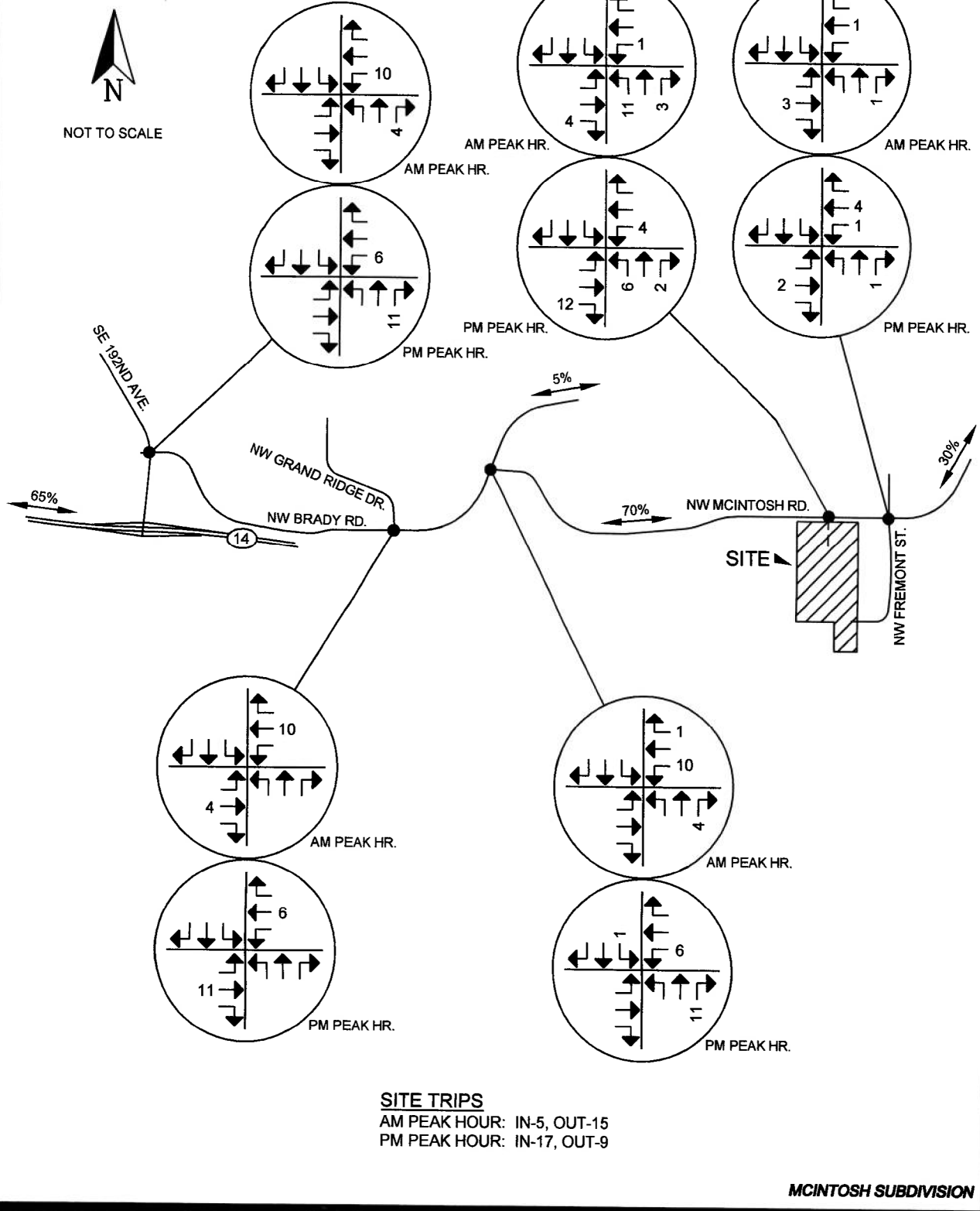




Total Estimated Trip Assignment - Full Build-Out
Weekday PM Peak Hour
Camas, Washington

Figure 10

0% Build-Out



SITE TRIPS
AM PEAK HOUR: IN-5, OUT-15
PM PEAK HOUR: IN-17, OUT-9

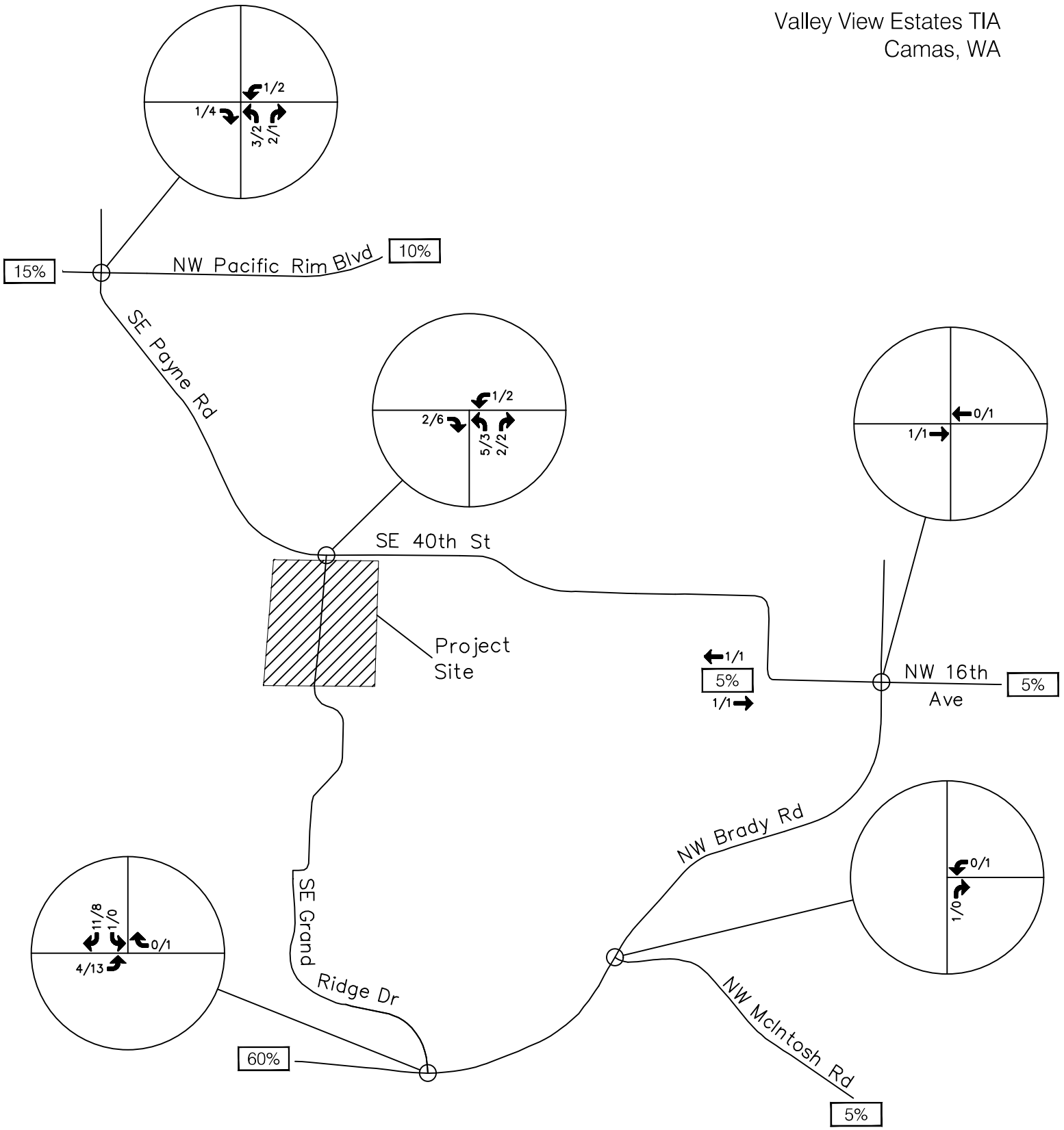
MCINTOSH SUBDIVISION

FIGURE 5
SITE TRAFFIC DISTRIBUTION/ ASSIGNMENT

KELLY ENGINEERING
1805 NE 94th St. No. 19, Vancouver, WA 98665
Phone: 360-433-7530

40% Build-Out

Valley View Estates TIA
Camas, WA



LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

10% Peak Hour Trip Distribution

NOT TO SCALE

FIGURE 6
Trip Distribution and Assignment
Traffic Volumes

18006_Figures.Dwg

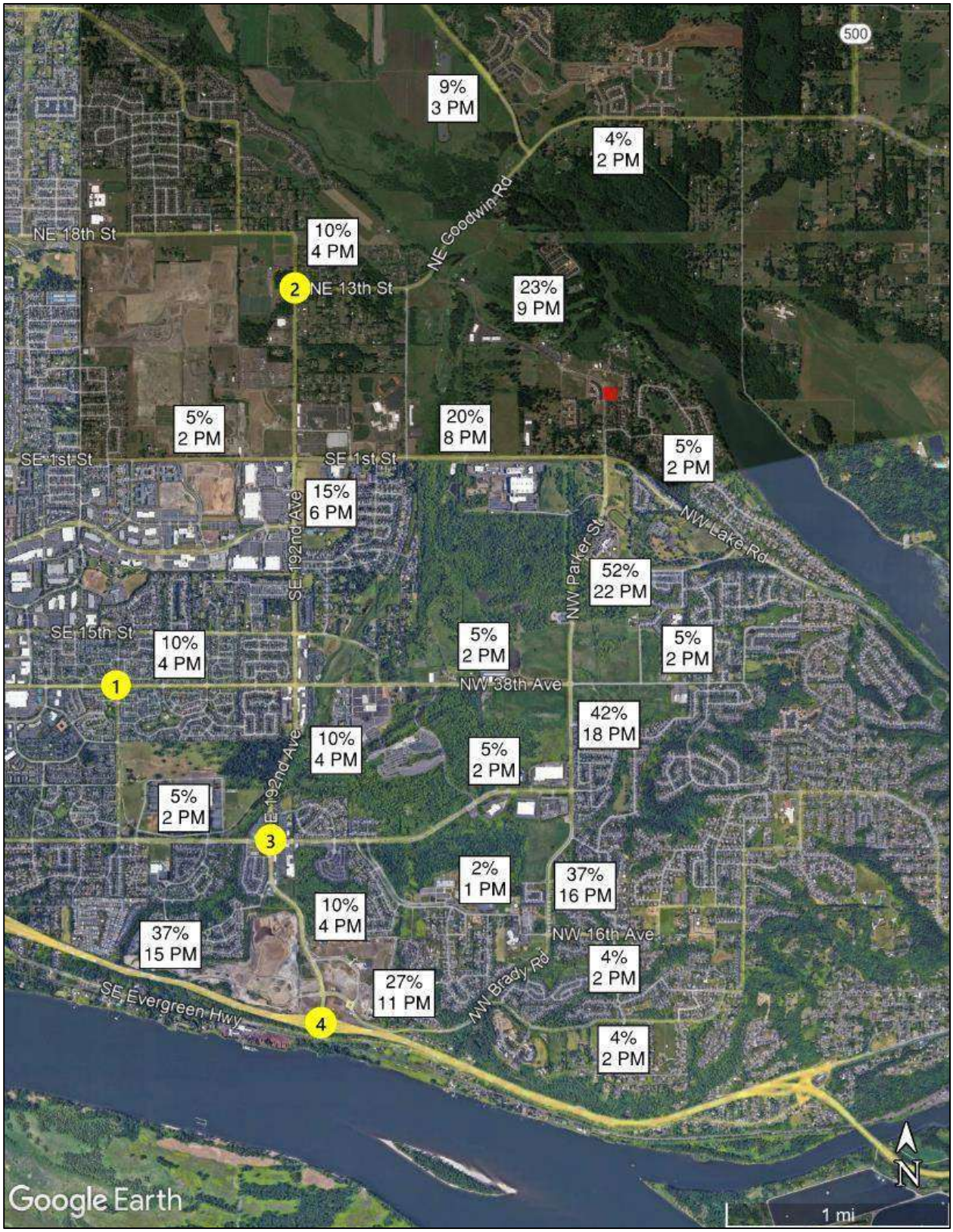
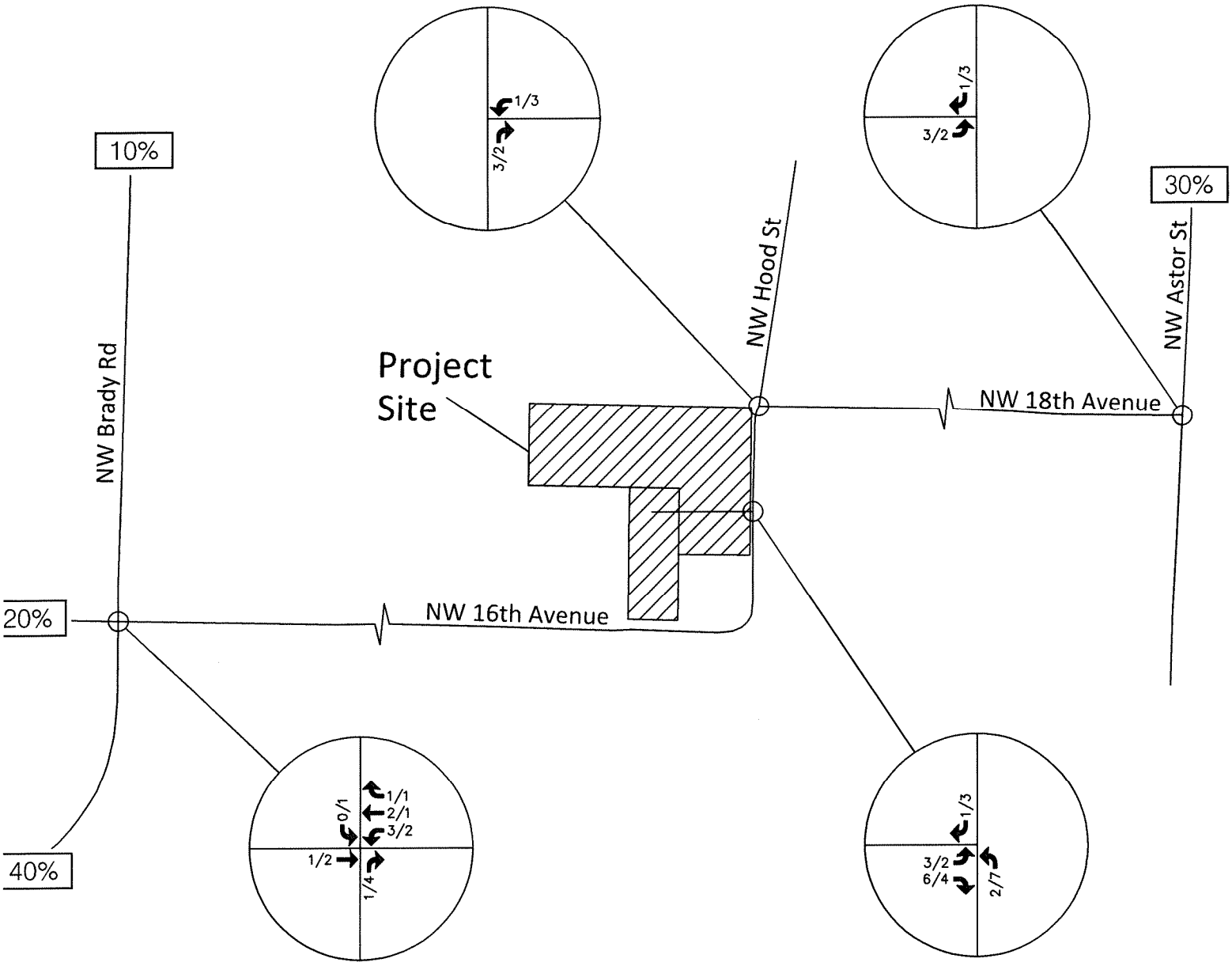


Figure 2: Trip Distribution and Assignment

0% Build-Out

Hood Street Subdivision TIA
Camas, WA



LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

10% Peak Hour Trip Distribution

NOT TO SCALE

FIGURE 6
Trip Distribution and Assignment
Traffic Volumes

20033_Figures.Dwg

Appendix F: Year 2030 Background Traffic Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	9	2	1	38	22	6	4	246	147	12	234	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	2	1	38	22	6	4	246	147	12	234	57
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	0	12	7	2	1	77	46	4	73	18
Total Analysis Volume [veh/h]	11	3	1	48	28	8	5	308	184	15	293	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	9	0	11	2	18	14	20	15
g / C, Green / Cycle	0.21	0.01	0.26	0.04	0.44	0.34	0.49	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.03	0.02	0.00	0.29	0.01	0.20
s, saturation flow rate [veh/h]	1633	1820	1733	1815	1193	1726	1107	1779
c, Capacity [veh/h]	584	10	625	78	624	593	568	629
d1, Uniform Delay [s]	12.94	20.61	13.20	19.44	5.86	12.55	6.81	10.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	21.44	0.05	4.17	0.01	3.08	0.02	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.38	0.08	0.46	0.01	0.83	0.03	0.58
d, Delay for Lane Group [s/veh]	12.95	42.06	13.25	23.61	5.86	15.63	6.82	11.78
Lane Group LOS	B	D	B	C	A	B	A	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.10	0.32	0.40	0.01	3.43	0.04	2.04
50th-Percentile Queue Length [ft/ln]	1.82	2.44	8.12	9.96	0.33	85.68	1.03	50.90
95th-Percentile Queue Length [veh/ln]	0.13	0.18	0.58	0.72	0.02	6.17	0.07	3.66
95th-Percentile Queue Length [ft/ln]	3.28	4.39	14.61	17.92	0.60	154.22	1.85	91.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.95	42.06	42.06	13.25	23.61	23.61	5.86	15.63	15.63	6.82	11.78	11.78
Movement LOS	B	D	D	B	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	20.71			17.69			15.53			11.58		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	14.26											
Intersection LOS	B											
Intersection V/C	0.524											

Emissions

Vehicle Miles Traveled [mph]	0.45	0.16	1.14	0.85	0.24	24.02	0.36	8.64
Stops [stops/h]	6.33	8.46	28.16	34.55	1.16	297.30	3.56	176.61
Fuel consumption [US gal/h]	0.07	0.07	0.29	0.34	0.03	5.35	0.07	2.92
CO [g/h]	5.14	5.18	20.17	24.04	1.82	373.71	4.79	203.90
NOx [g/h]	1.00	1.01	3.93	4.68	0.35	72.71	0.93	39.67
VOC [g/h]	1.19	1.20	4.68	5.57	0.42	86.61	1.11	47.26

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	11.21	9.79	10.48	9.79
l_p,int, Pedestrian LOS Score for Intersectio	1.968	1.936	2.244	2.212
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1446	1446	2169	2169
d_b, Bicycle Delay [s]	1.59	1.59	0.15	0.15
l_b,int, Bicycle LOS Score for Intersection	1.584	1.698	1.308	1.113
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	68	409	76	16	303	136	101	66	35	84	108	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	9.00	7.00	2.00	3.00	0.00	5.00	8.00	6.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	76	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	409	0	16	303	136	101	66	35	84	108	36
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	116	0	5	86	39	29	19	10	24	31	10
Total Analysis Volume [veh/h]	77	465	0	18	344	155	115	75	40	95	123	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	27	17	28	27	18	28	17	6	17	7
g / C, Green / Cycle	0.49	0.31	0.50	0.49	0.32	0.50	0.30	0.11	0.30	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.00	0.01	0.18	0.10	0.07	0.07	0.06	0.09
s, saturation flow rate [veh/h]	1257	1825	1500	1256	1870	1577	1647	1719	1602	1791
c, Capacity [veh/h]	509	560	746	442	608	793	457	190	456	220
d1, Uniform Delay [s]	15.03	18.07	0.00	17.10	15.67	7.69	17.20	23.77	16.83	23.76
k, delay calibration	0.11	0.11	0.11	0.11	0.14	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	3.24	0.00	0.04	1.11	0.12	0.29	3.06	0.22	4.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.83	0.00	0.04	0.57	0.20	0.25	0.60	0.21	0.75
d, Delay for Lane Group [s/veh]	15.17	21.32	0.00	17.13	16.77	7.81	17.49	26.83	17.05	28.71
Lane Group LOS	B	C	A	B	B	A	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.41	5.29	0.00	0.09	3.31	0.82	0.96	1.46	0.79	2.16
50th-Percentile Queue Length [ft/ln]	10.29	132.33	0.00	2.31	82.67	20.56	23.89	36.43	19.66	54.11
95th-Percentile Queue Length [veh/ln]	0.74	9.07	0.00	0.17	5.95	1.48	1.72	2.62	1.42	3.90
95th-Percentile Queue Length [ft/ln]	18.51	226.66	0.00	4.15	148.81	37.00	43.00	65.57	35.40	97.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.17	21.32	0.00	17.13	16.77	7.81	17.49	26.83	26.83	17.05	28.71	28.71
Movement LOS	B	C	A	B	B	A	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	20.44			14.10			22.16			24.44		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	19.25											
Intersection LOS	B											
Intersection V/C	0.576											

Emissions

Vehicle Miles Traveled [mph]	2.69	16.27	0.00	0.43	8.14	3.67	6.89	6.89	4.35	7.50
Stops [stops/h]	26.45	340.25	0.00	5.93	212.57	52.86	61.42	93.67	50.56	139.12
Fuel consumption [US gal/h]	0.54	5.20	0.00	0.12	3.08	0.78	1.26	1.80	0.98	2.59
CO [g/h]	37.69	363.24	0.00	8.64	215.52	54.79	88.04	125.47	68.65	181.31
NOx [g/h]	7.33	70.67	0.00	1.68	41.93	10.66	17.13	24.41	13.36	35.28
VOC [g/h]	8.74	84.18	0.00	2.00	49.95	12.70	20.40	29.08	15.91	42.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.73	19.73	19.73	19.73
l_p,int, Pedestrian LOS Score for Intersectio	2.633	2.560	2.258	2.123
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	893	893	714	714
d_b, Bicycle Delay [s]	8.58	8.58	11.57	11.57
l_b,int, Bicycle LOS Score for Intersection	1.293	2.413	1.939	0.701
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.395

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	44	325	19	10	196	190	157	14	19	46	58	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	4.00	26.00	10.00	3.00	3.00	6.00	0.00	0.00	7.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	325	19	10	196	190	157	14	19	46	58	13
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	90	5	3	54	53	44	4	5	13	16	4
Total Analysis Volume [veh/h]	49	361	21	11	218	211	174	16	21	51	64	14
Pedestrian Volume [ped/h]	1			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	505	544	549	506	552	616	484	524	581	465	500	518
Degree of Utilization, x	0.10	0.35	0.35	0.02	0.40	0.34	0.36	0.03	0.04	0.11	0.08	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	1.57	1.55	0.07	1.88	1.52	1.62	0.09	0.11	0.37	0.25	0.24
95th-Percentile Queue Length [ft]	8.01	39.18	38.71	1.67	46.91	37.99	40.41	2.36	2.81	9.18	6.32	6.09
Approach Delay [s/veh]	12.54			12.45			13.41			10.78		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.47											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	2	346	4	3	255	4	10	0	5	6	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.00	25.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	346	4	3	255	4	10	0	5	6	0	9
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	101	1	1	74	1	3	0	1	2	0	3
Total Analysis Volume [veh/h]	2	402	5	3	297	5	12	0	6	7	0	10
Pedestrian Volume [ped/h]	0			0			3			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	7.85	0.00	0.00	8.14	0.00	0.00	16.09	15.71	10.27	15.95	15.61	11.12
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.00	0.00	0.14	0.14	0.14	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.12	0.00	0.00	0.20	0.00	0.00	3.42	3.42	3.42	2.87	2.87	2.87
d_A, Approach Delay [s/veh]	0.04			0.08			14.15			13.11		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.69											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	73	143	75	51	167	49	63	88	72	114	146	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	8.00	12.00	14.00	2.00	7.00	5.00	5.00	6.00	3.00	3.00	8.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	143	75	51	167	49	63	88	72	114	146	129
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	50	26	18	59	17	22	31	25	40	51	45
Total Analysis Volume [veh/h]	103	201	106	72	235	69	89	124	101	161	206	182
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	64	64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	26	17	26	16	26	15	26	17
g / C, Green / Cycle	0.41	0.26	0.41	0.25	0.41	0.24	0.41	0.27
(v / s)_i Volume / Saturation Flow Rate	0.10	0.23	0.14	0.21	0.13	0.13	0.12	0.23
s, saturation flow rate [veh/h]	1001	1348	502	1420	666	1673	1366	1713
c, Capacity [veh/h]	397	357	409	359	483	397	598	459
d1, Uniform Delay [s]	13.54	22.35	13.43	22.70	13.17	21.47	12.61	22.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	6.06	0.20	5.56	0.18	1.27	0.24	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.86	0.18	0.85	0.18	0.57	0.27	0.85
d, Delay for Lane Group [s/veh]	13.89	28.41	13.63	28.27	13.35	22.75	12.84	26.48
Lane Group LOS	B	C	B	C	B	C	B	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.85	4.54	0.58	4.47	0.75	2.96	1.41	5.72
50th-Percentile Queue Length [ft/ln]	21.37	113.43	14.55	111.68	18.65	73.96	35.19	143.04
95th-Percentile Queue Length [veh/ln]	1.54	8.03	1.05	7.93	1.34	5.33	2.53	9.64
95th-Percentile Queue Length [ft/ln]	38.47	200.77	26.19	198.34	33.57	133.13	63.34	241.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.89	28.41	28.41	13.63	28.27	28.27	13.35	22.75	22.75	12.84	26.48	26.48
Movement LOS	B	C	C	B	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	24.76			25.46			20.09			22.48		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.27											
Intersection LOS	C											
Intersection V/C	0.768											

Emissions

Vehicle Miles Traveled [mph]	4.22	12.57	2.56	10.80	3.37	8.53	3.82	9.21
Stops [stops/h]	48.32	256.49	32.90	252.53	42.18	167.23	79.57	323.42
Fuel consumption [US gal/h]	0.82	4.18	0.54	4.06	0.56	2.07	0.90	3.75
CO [g/h]	56.98	292.37	38.07	283.77	38.82	144.46	62.77	261.85
NOx [g/h]	11.09	56.88	7.41	55.21	7.55	28.11	12.21	50.95
VOC [g/h]	13.21	67.76	8.82	65.77	9.00	33.48	14.55	60.69

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.79	21.79	21.79	21.79
l_p,int, Pedestrian LOS Score for Intersectio	2.326	2.276	2.150	2.179
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1256	1256	942	942
d_b, Bicycle Delay [s]	4.41	4.40	8.91	8.91
l_b,int, Bicycle LOS Score for Intersection	2.236	1.322	1.220	1.608
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	218	62	18	412	132	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	5.00	6.00	2.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	62	18	412	132	26
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	18	5	121	39	8
Total Analysis Volume [veh/h]	256	73	21	485	155	31
Pedestrian Volume [ped/h]	0		0		4	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.46	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	8.05	0.00	24.32	10.11
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.00	2.30	0.13
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.34	0.00	57.60	3.30
d_A, Approach Delay [s/veh]	0.00		0.33		21.95	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.16					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	9	48	13	271	536	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	18.00	8.00	1.00	25.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	48	13	271	536	8
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	4	78	154	2
Total Analysis Volume [veh/h]	10	55	15	311	616	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.11	0.02	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	18.45	13.53	9.14	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.50	0.50	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.46	12.46	1.29	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.29		0.42		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.05					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	0	0	0	96	166	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	6.00	6.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	96	166	0
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	30	53	0
Total Analysis Volume [veh/h]	0	0	0	122	210	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.40	9.31	7.62	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.85		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	146	63	31	92	1	7	7	350	4	1	246	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	63	31	92	1	7	7	350	4	1	246	107
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	17	9	25	0	2	2	96	1	0	68	29
Total Analysis Volume [veh/h]	160	69	34	101	1	8	8	385	4	1	270	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	14	4	16	3	18	12	18	12
g / C, Green / Cycle	0.31	0.08	0.36	0.06	0.41	0.28	0.41	0.27
(v / s)_i Volume / Saturation Flow Rate	0.10	0.06	0.06	0.01	0.00	0.21	0.00	0.22
s, saturation flow rate [veh/h]	1666	1795	1630	1604	1810	1882	1171	1789
c, Capacity [veh/h]	764	151	681	98	628	531	538	484
d1, Uniform Delay [s]	11.30	19.48	10.97	19.38	8.54	14.21	8.44	14.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	5.39	0.10	0.40	0.01	1.98	0.00	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.68	0.15	0.09	0.01	0.73	0.00	0.80
d, Delay for Lane Group [s/veh]	11.43	24.87	11.07	19.78	8.55	16.19	8.44	18.02
Lane Group LOS	B	C	B	B	A	B	A	B
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.02	1.15	0.62	0.09	0.03	2.93	0.00	3.15
50th-Percentile Queue Length [ft/ln]	25.55	28.72	15.59	2.24	0.80	73.13	0.10	78.84
95th-Percentile Queue Length [veh/ln]	1.84	2.07	1.12	0.16	0.06	5.27	0.01	5.68
95th-Percentile Queue Length [ft/ln]	45.99	51.69	28.07	4.04	1.45	131.63	0.18	141.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.43	24.87	24.87	11.07	19.78	19.78	8.55	16.19	16.19	8.44	18.02	18.02
Movement LOS	B	C	C	B	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	16.70			11.78			16.04			17.99		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.44											
Intersection LOS	B											
Intersection V/C	0.554											

Emissions

Vehicle Miles Traveled [mph]	6.56	4.22	2.39	0.21	0.39	18.99	0.02	9.21
Stops [stops/h]	84.35	94.81	51.49	7.41	2.65	241.46	0.33	260.30
Fuel consumption [US gal/h]	0.99	1.08	0.53	0.07	0.05	4.33	0.01	4.31
CO [g/h]	69.27	75.15	37.22	5.19	3.77	302.97	0.41	301.26
NOx [g/h]	13.48	14.62	7.24	1.01	0.73	58.95	0.08	58.61
VOC [g/h]	16.05	17.42	8.63	1.20	0.87	70.22	0.09	69.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.19	10.74	11.46	10.74
l_p,int, Pedestrian LOS Score for Intersectio	1.971	1.979	2.281	2.305
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1376	1376	2064	2064
d_b, Bicycle Delay [s]	2.12	2.13	0.02	0.02
l_b,int, Bicycle LOS Score for Intersection	1.994	1.741	1.143	1.129
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	36	268	60	105	286	125	70	129	38	161	236	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	8.00	0.00	0.00	1.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	60	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	268	0	105	286	125	70	129	38	161	236	116
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	69	0	27	74	32	18	33	10	41	61	30
Total Analysis Volume [veh/h]	37	276	0	108	295	129	72	133	39	166	243	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	25	15	26	25	16	26	26	15	26	16
g / C, Green / Cycle	0.39	0.24	0.41	0.40	0.25	0.41	0.42	0.25	0.42	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.00	0.07	0.16	0.08	0.05	0.09	0.11	0.20
s, saturation flow rate [veh/h]	1342	1900	1615	1453	1900	1602	1399	1827	1513	1795
c, Capacity [veh/h]	419	450	659	449	480	665	417	451	557	458
d1, Uniform Delay [s]	19.63	21.36	0.00	19.95	20.72	11.65	20.17	19.63	17.23	21.79
k, delay calibration	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.36	0.00	0.27	1.42	0.14	0.19	0.53	0.30	6.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.61	0.00	0.24	0.61	0.19	0.17	0.38	0.30	0.79
d, Delay for Lane Group [s/veh]	19.72	22.72	0.00	20.22	22.14	11.79	20.36	20.16	17.53	28.61
Lane Group LOS	B	C	A	C	C	B	C	C	B	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	3.45	0.00	0.88	3.64	1.02	0.53	1.92	1.29	5.24
50th-Percentile Queue Length [ft/ln]	7.30	86.31	0.00	22.11	91.11	25.50	13.21	48.08	32.22	131.03
95th-Percentile Queue Length [veh/ln]	0.53	6.21	0.00	1.59	6.56	1.84	0.95	3.46	2.32	9.00
95th-Percentile Queue Length [ft/ln]	13.15	155.37	0.00	39.80	164.01	45.89	23.77	86.55	57.99	224.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.72	22.72	0.00	20.22	22.14	11.79	20.36	20.16	20.16	17.53	28.61	28.61
Movement LOS	B	C	A	C	C	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	22.37			19.24			20.22			25.13		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	21.92											
Intersection LOS	C											
Intersection V/C	0.562											

Emissions

Vehicle Miles Traveled [mph]	1.29	9.66	0.00	2.56	6.98	3.05	4.32	10.31	7.60	16.61
Stops [stops/h]	16.79	198.41	0.00	50.82	209.44	58.61	30.36	110.53	74.06	301.19
Fuel consumption [US gal/h]	0.32	3.14	0.00	0.92	3.17	0.87	0.75	2.16	1.59	5.67
CO [g/h]	22.65	219.25	0.00	64.59	221.61	60.59	52.51	151.05	111.27	396.14
NOx [g/h]	4.41	42.66	0.00	12.57	43.12	11.79	10.22	29.39	21.65	77.07
VOC [g/h]	5.25	50.81	0.00	14.97	51.36	14.04	12.17	35.01	25.79	91.81

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.97	22.97	22.97	22.97
l_p,int, Pedestrian LOS Score for Intersectio	2.636	2.481	2.250	2.407
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	798	798	639	639
d_b, Bicycle Delay [s]	11.31	11.31	14.51	14.51
l_b,int, Bicycle LOS Score for Intersection	0.889	2.437	1.962	1.146
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	26	286	30	17	282	105	169	44	69	32	23	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	286	30	17	282	105	169	44	69	32	23	15
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	74	8	4	73	27	44	11	18	8	6	4
Total Analysis Volume [veh/h]	27	298	31	18	294	109	176	46	72	33	24	16
Pedestrian Volume [ped/h]	1			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	515	554	565	527	568	636	500	537	587	483	511	567
Degree of Utilization, x	0.05	0.30	0.29	0.03	0.52	0.17	0.35	0.09	0.12	0.07	0.05	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.17	1.24	1.20	0.11	2.96	0.61	1.57	0.28	0.42	0.22	0.15	0.09
95th-Percentile Queue Length [ft]	4.14	30.89	30.07	2.64	74.03	15.35	39.19	7.00	10.40	5.48	3.69	2.18
Approach Delay [s/veh]	11.66			13.80			12.17			10.18		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.48											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	10	312	1	6	320	8	5	0	13	7	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	312	1	6	320	8	5	0	13	7	0	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	85	0	2	87	2	1	0	4	2	0	2
Total Analysis Volume [veh/h]	11	339	1	7	348	9	5	0	14	8	0	8
Pedestrian Volume [ped/h]	0			0			3			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.01
d_M, Delay for Movement [s/veh]	8.01	0.00	0.00	7.97	0.00	0.00	16.22	15.83	10.46	16.52	15.95	10.47
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.02	0.00	0.00	0.11	0.11	0.11	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.69	0.00	0.00	0.43	0.00	0.00	2.76	2.76	2.76	2.82	2.82	2.82
d_A, Approach Delay [s/veh]	0.25			0.15			11.97			13.49		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.78											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.621

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	15	188	142	131	184	21	26	100	46	90	59	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	2.00	4.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	188	142	131	184	21	26	100	46	90	59	101
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	52	39	36	51	6	7	27	13	25	16	28
Total Analysis Volume [veh/h]	16	207	156	144	202	23	29	110	51	99	65	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	57	57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	27	17	27	21	19	9	19	12
g / C, Green / Cycle	0.48	0.29	0.48	0.36	0.33	0.16	0.33	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.10	0.15	0.03	0.09	0.07	0.11
s, saturation flow rate [veh/h]	1020	1442	1435	1465	938	1785	1450	1656
c, Capacity [veh/h]	557	420	687	527	511	288	559	334
d1, Uniform Delay [s]	8.32	19.29	8.69	13.93	13.49	22.22	14.01	20.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	5.44	0.15	0.55	0.05	1.70	0.15	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.86	0.21	0.43	0.06	0.56	0.18	0.53
d, Delay for Lane Group [s/veh]	8.34	24.73	8.84	14.48	13.54	23.92	14.16	21.78
Lane Group LOS	A	C	A	B	B	C	B	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.09	4.61	0.86	1.97	0.24	2.03	0.87	2.10
50th-Percentile Queue Length [ft/ln]	2.20	115.17	21.54	49.22	6.08	50.73	21.72	52.50
95th-Percentile Queue Length [veh/ln]	0.16	8.13	1.55	3.54	0.44	3.65	1.56	3.78
95th-Percentile Queue Length [ft/ln]	3.95	203.17	38.78	88.60	10.95	91.32	39.09	94.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.34	24.73	24.73	8.84	14.48	14.48	13.54	23.92	23.92	14.16	21.78	21.78
Movement LOS	A	C	C	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	24.04			12.28			22.33			19.04		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.06											
Intersection LOS	B											
Intersection V/C	0.621											

Emissions

Vehicle Miles Traveled [mph]	0.65	14.86	5.12	8.00	1.10	6.10	2.35	4.18
Stops [stops/h]	5.52	289.23	54.11	123.61	15.28	127.41	54.54	131.84
Fuel consumption [US gal/h]	0.09	4.57	0.86	1.90	0.19	1.55	0.60	1.47
CO [g/h]	6.54	319.34	60.18	132.64	13.14	108.12	41.96	103.03
NOx [g/h]	1.27	62.13	11.71	25.81	2.56	21.04	8.16	20.05
VOC [g/h]	1.52	74.01	13.95	30.74	3.04	25.06	9.73	23.88

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.72	18.72	18.72	18.72
l_p,int, Pedestrian LOS Score for Intersectio	2.220	2.195	2.004	2.101
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1395	1395	1046	1046
d_b, Bicycle Delay [s]	2.62	2.62	6.52	6.52
l_b,int, Bicycle LOS Score for Intersection	2.185	1.311	1.016	1.156
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	20.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	320	121	15	295	93	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	121	15	295	93	16
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	34	4	84	26	5
Total Analysis Volume [veh/h]	364	138	17	335	106	18
Pedestrian Volume [ped/h]	0		0		4	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.31	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.43	0.00	19.95	10.97
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.00	1.27	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.22	0.00	31.82	2.23
d_A, Approach Delay [s/veh]	0.00		0.41		18.65	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.51					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	2	26	42	445	377	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	26	42	445	377	6
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	7	12	125	106	2
Total Analysis Volume [veh/h]	2	29	47	500	424	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.04	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	18.78	10.98	8.30	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.13	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.17	4.17	3.22	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.48		0.71		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.74					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	0	0	0	155	79	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	155	79	0
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	44	22	0
Total Analysis Volume [veh/h]	0	0	0	174	89	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.93	8.69	7.37	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.31		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Appendix G: Year 2030 Total Traffic Conditions Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	9	2	1	42	22	6	4	249	147	12	243	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	4.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	2	1	42	22	6	4	249	147	12	243	69
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	0	13	7	2	1	78	46	4	76	22
Total Analysis Volume [veh/h]	11	3	1	53	28	8	5	311	184	15	304	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	9	0	11	2	19	14	21	15
g / C, Green / Cycle	0.22	0.01	0.26	0.05	0.44	0.34	0.49	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.03	0.02	0.00	0.29	0.01	0.22
s, saturation flow rate [veh/h]	1628	1820	1734	1815	1172	1727	1103	1771
c, Capacity [veh/h]	585	10	627	85	601	595	563	628
d1, Uniform Delay [s]	12.97	20.79	13.27	19.45	6.02	12.64	6.88	11.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	21.58	0.06	3.32	0.01	3.11	0.02	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.38	0.08	0.42	0.01	0.83	0.03	0.62
d, Delay for Lane Group [s/veh]	12.98	42.37	13.33	22.77	6.03	15.75	6.90	12.21
Lane Group LOS	B	D	B	C	A	B	A	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.07	0.10	0.36	0.39	0.01	3.49	0.04	2.26
50th-Percentile Queue Length [ft/ln]	1.84	2.45	9.06	9.70	0.34	87.33	1.04	56.60
95th-Percentile Queue Length [veh/ln]	0.13	0.18	0.65	0.70	0.02	6.29	0.08	4.08
95th-Percentile Queue Length [ft/ln]	3.31	4.42	16.30	17.45	0.61	157.20	1.88	101.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.98	42.37	42.37	13.33	22.77	22.77	6.03	15.75	15.75	6.90	12.21	12.21
Movement LOS	B	D	D	B	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	20.82			17.15			15.65			12.01		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	14.40											
Intersection LOS	B											
Intersection V/C	0.528											

Emissions

Vehicle Miles Traveled [mph]	0.45	0.16	1.25	0.85	0.24	24.17	0.36	9.26
Stops [stops/h]	6.32	8.44	31.16	33.36	1.17	300.46	3.59	194.74
Fuel consumption [US gal/h]	0.07	0.07	0.32	0.33	0.03	5.40	0.07	3.21
CO [g/h]	5.14	5.19	22.35	23.28	1.85	377.74	4.83	224.65
NOx [g/h]	1.00	1.01	4.35	4.53	0.36	73.49	0.94	43.71
VOC [g/h]	1.19	1.20	5.18	5.40	0.43	87.54	1.12	52.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	11.37	9.95	10.65	9.95
l_p,int, Pedestrian LOS Score for Intersectio	1.969	1.942	2.250	2.227
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1434	1434	2150	2150
d_b, Bicycle Delay [s]	1.68	1.68	0.12	0.12
l_b,int, Bicycle LOS Score for Intersection	1.584	1.706	1.313	1.156
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	93	418	76	16	306	136	101	66	43	84	108	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	5.00	9.00	7.00	2.00	3.00	0.00	5.00	8.00	6.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	76	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	418	0	16	306	136	101	66	43	84	108	36
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	119	0	5	87	39	29	19	12	24	31	10
Total Analysis Volume [veh/h]	106	475	0	18	348	155	115	75	49	95	123	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	29	19	30	29	20	30	17	7	17	7
g / C, Green / Cycle	0.50	0.33	0.51	0.51	0.34	0.51	0.30	0.11	0.29	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.26	0.00	0.01	0.19	0.10	0.07	0.07	0.06	0.09
s, saturation flow rate [veh/h]	1249	1825	1500	1227	1870	1577	1641	1706	1586	1791
c, Capacity [veh/h]	523	601	762	446	628	800	440	197	431	220
d1, Uniform Delay [s]	15.50	17.78	0.00	17.46	15.84	7.86	18.27	24.64	18.11	24.76
k, delay calibration	0.11	0.13	0.11	0.11	0.17	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	2.92	0.00	0.04	1.18	0.12	0.31	3.27	0.25	5.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.79	0.00	0.04	0.55	0.19	0.26	0.63	0.22	0.75
d, Delay for Lane Group [s/veh]	15.68	20.71	0.00	17.50	17.02	7.98	18.58	27.91	18.36	29.77
Lane Group LOS	B	C	A	B	B	A	B	C	B	C
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	5.48	0.00	0.09	3.48	0.86	1.03	1.65	0.85	2.27
50th-Percentile Queue Length [ft/ln]	14.67	136.89	0.00	2.35	87.04	21.59	25.66	41.31	21.13	56.77
95th-Percentile Queue Length [veh/ln]	1.06	9.31	0.00	0.17	6.27	1.55	1.85	2.97	1.52	4.09
95th-Percentile Queue Length [ft/ln]	26.40	232.84	0.00	4.22	156.67	38.86	46.18	74.35	38.03	102.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.68	20.71	0.00	17.50	17.02	7.98	18.58	27.91	27.91	18.36	29.77	29.77
Movement LOS	B	C	A	B	B	A	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.79			14.35			23.42			25.58		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.50											
Intersection LOS	B											
Intersection V/C	0.573											

Emissions

Vehicle Miles Traveled [mph]	3.71	16.62	0.00	0.43	8.23	3.67	6.89	7.43	4.35	7.50
Stops [stops/h]	36.20	337.86	0.00	5.79	214.82	53.29	63.32	101.95	52.14	140.12
Fuel consumption [US gal/h]	0.75	5.18	0.00	0.12	3.14	0.79	1.30	1.97	1.02	2.64
CO [g/h]	52.56	361.81	0.00	8.66	219.14	55.37	91.14	137.85	71.50	184.45
NOx [g/h]	10.23	70.39	0.00	1.68	42.64	10.77	17.73	26.82	13.91	35.89
VOC [g/h]	12.18	83.85	0.00	2.01	50.79	12.83	21.12	31.95	16.57	42.75

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.87	20.87	20.87	20.87
l_p,int, Pedestrian LOS Score for Intersectio	2.651	2.567	2.310	2.125
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	857	857	686	686
d_b, Bicycle Delay [s]	9.53	9.53	12.60	12.60
l_b,int, Bicycle LOS Score for Intersection	1.357	2.419	1.954	0.701
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	49	359	19	10	207	190	157	14	21	46	58	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	4.00	26.00	10.00	3.00	3.00	6.00	0.00	0.00	7.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	359	19	10	207	190	157	14	21	46	58	13
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	100	5	3	58	53	44	4	6	13	16	4
Total Analysis Volume [veh/h]	54	399	21	11	230	211	174	16	23	51	64	14
Pedestrian Volume [ped/h]	1			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	502	540	544	499	545	606	477	516	571	458	492	509
Degree of Utilization, x	0.11	0.39	0.39	0.02	0.42	0.35	0.36	0.03	0.04	0.11	0.08	0.08

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.36	1.83	1.81	0.07	2.09	1.55	1.65	0.10	0.13	0.37	0.26	0.25
95th-Percentile Queue Length [ft]	8.99	45.71	45.19	1.69	52.15	38.84	41.29	2.40	3.15	9.34	6.43	6.20
Approach Delay [s/veh]	13.17			12.91			13.61			10.92		
Approach LOS	B			B			B			B		
Intersection Delay [s/veh]	12.92											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.179

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	12	346	4	3	255	17	49	0	34	6	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.00	25.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	346	4	3	255	17	49	0	34	6	0	9
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	101	1	1	74	5	14	0	10	2	0	3
Total Analysis Volume [veh/h]	14	402	5	3	297	20	57	0	40	7	0	10
Pedestrian Volume [ped/h]	0			0			3			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.05	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	8.14	0.00	0.00	18.97	18.49	12.55	17.51	16.31	11.17
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.01	0.00	0.00	0.90	0.90	0.90	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.85	0.00	0.00	0.20	0.00	0.00	22.41	22.41	22.41	3.10	3.10	3.10
d_A, Approach Delay [s/veh]	0.26			0.08			16.32			13.78		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	2.28											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.886

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	77	153	75	51	196	49	63	88	85	114	146	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	8.00	12.00	14.00	2.00	7.00	5.00	5.00	6.00	3.00	3.00	8.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	77	153	75	51	196	49	63	88	85	114	146	129
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	54	26	18	69	17	22	31	30	40	51	45
Total Analysis Volume [veh/h]	108	215	106	72	276	69	89	124	120	161	206	182
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	29	20	29	19	27	16	27	18
g / C, Green / Cycle	0.43	0.29	0.43	0.28	0.40	0.23	0.40	0.26
(v / s)_i Volume / Saturation Flow Rate	0.11	0.24	0.15	0.24	0.14	0.15	0.12	0.23
s, saturation flow rate [veh/h]	969	1352	492	1426	638	1660	1353	1713
c, Capacity [veh/h]	379	394	393	394	457	386	556	454
d1, Uniform Delay [s]	14.04	22.28	13.47	23.40	14.39	23.38	13.94	23.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	4.10	0.22	6.24	0.21	1.71	0.28	4.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.81	0.18	0.88	0.19	0.63	0.29	0.85
d, Delay for Lane Group [s/veh]	14.45	26.38	13.69	29.64	14.60	25.09	14.23	28.34
Lane Group LOS	B	C	B	C	B	C	B	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.93	4.74	0.60	5.45	0.82	3.54	1.56	6.18
50th-Percentile Queue Length [ft/ln]	23.34	118.47	15.08	136.27	20.60	88.57	38.90	154.47
95th-Percentile Queue Length [veh/ln]	1.68	8.31	1.09	9.28	1.48	6.38	2.80	10.26
95th-Percentile Queue Length [ft/ln]	42.01	207.72	27.14	231.99	37.09	159.43	70.02	256.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.45	26.38	26.38	13.69	29.64	29.64	14.60	25.09	25.09	14.23	28.34	28.34
Movement LOS	B	C	C	B	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	23.38			26.89			22.29			24.20		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.28											
Intersection LOS	C											
Intersection V/C	0.886											

Emissions

Vehicle Miles Traveled [mph]	4.42	13.14	2.56	12.26	3.37	9.25	3.82	9.21
Stops [stops/h]	49.75	252.54	32.14	290.49	43.92	188.81	82.92	329.28
Fuel consumption [US gal/h]	0.86	4.12	0.54	4.73	0.58	2.39	0.96	3.92
CO [g/h]	60.13	288.24	37.74	330.84	40.86	166.79	66.84	273.67
NOx [g/h]	11.70	56.08	7.34	64.37	7.95	32.45	13.00	53.25
VOC [g/h]	13.94	66.80	8.75	76.67	9.47	38.65	15.49	63.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.67	23.67	23.67	23.67
l_p,int, Pedestrian LOS Score for Intersectio	2.358	2.300	2.165	2.185
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1184	1184	888	888
d_b, Bicycle Delay [s]	5.62	5.62	10.44	10.44
l_b,int, Bicycle LOS Score for Intersection	2.267	1.390	1.251	1.608
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	231	62	22	450	132	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	8.00	5.00	6.00	2.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	231	62	22	450	132	27
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	18	6	132	39	8
Total Analysis Volume [veh/h]	272	73	26	529	155	32
Pedestrian Volume [ped/h]	0		0		4	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.01	0.51	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	8.11	0.00	28.21	10.23
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.00	2.69	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.68	0.00	67.27	3.48
d_A, Approach Delay [s/veh]	0.00		0.38		25.13	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.52					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	9	48	13	284	574	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	18.00	8.00	1.00	25.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	48	13	284	574	8
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	4	82	165	2
Total Analysis Volume [veh/h]	10	55	15	326	660	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.12	0.02	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.62	14.14	9.31	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.53	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.37	13.37	1.35	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.98		0.41		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	13	4	1	96	166	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	6.00	6.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	4	1	96	166	4
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	0	30	53	1
Total Analysis Volume [veh/h]	16	5	1	122	210	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.59	9.48	7.63	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.33	2.33	0.04	0.04	0.00	0.00
d_A, Approach Delay [s/veh]	10.33		0.06		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.63					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: NW Fisher Creek Dr/ NW 38th Ave

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Fisher Creek Dr			NW Fisher Creek Dr			SE 20th St			NW 38th Ave		
Base Volume Input [veh/h]	146	63	31	106	1	7	7	360	4	1	251	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	63	31	106	1	7	7	360	4	1	251	116
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	17	9	29	0	2	2	99	1	0	69	32
Total Analysis Volume [veh/h]	160	69	34	116	1	8	8	396	4	1	276	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	30	0	20	30	0	25	45	0	25	45	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	3.5	3.5	0.0	3.5	3.5	0.0	2.5	1.6	0.0	2.5	1.7	0.0
Walk [s]	9	9	0	0	8	0	0	7	0	0	9	0
Pedestrian Clearance [s]	13	13	0	0	12	0	0	10	0	0	13	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.5	4.5	0.0	4.5	4.5	0.0	3.5	3.6	0.0	3.5	3.7	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	14	9	0	9	9	0	9	14	0	9	14	0
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	8	0	5	8	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	6.50	6.50	4.50	6.50	5.60	5.60	5.70	5.70
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	4.50	0.00	4.50	0.00	3.60	0.00	3.70
g_i, Effective Green Time [s]	14	4	16	3	18	13	18	12
g / C, Green / Cycle	0.31	0.08	0.36	0.07	0.41	0.29	0.41	0.28
(v / s)_i Volume / Saturation Flow Rate	0.10	0.06	0.07	0.01	0.00	0.21	0.00	0.23
s, saturation flow rate [veh/h]	1662	1795	1632	1604	1810	1882	1157	1786
c, Capacity [veh/h]	759	150	677	106	617	546	530	498
d1, Uniform Delay [s]	11.53	19.94	11.29	19.63	8.67	14.32	8.53	15.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	5.41	0.12	0.34	0.01	1.92	0.00	3.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.68	0.17	0.08	0.01	0.73	0.00	0.81
d, Delay for Lane Group [s/veh]	11.67	25.35	11.41	19.97	8.68	16.24	8.53	18.26
Lane Group LOS	B	C	B	B	A	B	A	B
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.05	1.18	0.75	0.09	0.03	3.07	0.00	3.37
50th-Percentile Queue Length [ft/ln]	26.35	29.44	18.64	2.27	0.82	76.77	0.10	84.16
95th-Percentile Queue Length [veh/ln]	1.90	2.12	1.34	0.16	0.06	5.53	0.01	6.06
95th-Percentile Queue Length [ft/ln]	47.43	52.99	33.55	4.08	1.48	138.18	0.19	151.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.67	25.35	25.35	11.41	19.97	19.97	8.68	16.24	16.24	8.53	18.26	18.26
Movement LOS	B	C	C	B	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	17.02			12.03			16.09			18.23		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.59											
Intersection LOS	B											
Intersection V/C	0.572											

Emissions

Vehicle Miles Traveled [mph]	6.56	4.22	2.74	0.21	0.39	19.53	0.02	9.57
Stops [stops/h]	85.02	94.99	60.15	7.32	2.66	247.70	0.34	271.55
Fuel consumption [US gal/h]	1.00	1.09	0.62	0.07	0.05	4.45	0.01	4.51
CO [g/h]	69.98	75.89	43.59	5.19	3.79	311.40	0.41	315.08
NOx [g/h]	13.61	14.76	8.48	1.01	0.74	60.59	0.08	61.30
VOC [g/h]	16.22	17.59	10.10	1.20	0.88	72.17	0.10	73.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	13.0	12.0	13.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.67	11.21	11.93	11.21
l_p,int, Pedestrian LOS Score for Intersectio	1.973	1.987	2.291	2.327
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1344	1344	2017	2017
d_b, Bicycle Delay [s]	2.40	2.40	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	1.994	1.766	1.161	1.154
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: NW Parker Street/ NW 38th Avenue

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	130.00	100.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW 38th Ave			NW 38th Ave		
Base Volume Input [veh/h]	53	273	60	105	296	125	70	129	67	161	236	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	8.00	1.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	273	60	105	296	125	70	129	67	161	236	116
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	70	15	27	76	32	18	33	17	41	61	30
Total Analysis Volume [veh/h]	55	281	62	108	305	129	72	133	69	166	243	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	7	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Maximum Green [s]	15	25	15	15	25	15	15	20	0	15	20	0
Amber [s]	3.0	3.6	3.0	3.0	3.6	3.0	3.0	4.0	0.0	3.0	3.6	0.0
All red [s]	2.9	2.1	3.0	2.7	2.0	2.8	2.8	2.0	0.0	3.0	2.4	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	9	0	0	9	0	0	13	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.9	3.7	4.0	3.7	3.6	3.8	3.8	4.0	0.0	4.0	4.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	9	9	14	9	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No		No	No	
Maximum Recall	No	No	No	No	No	No	No	No		No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Calculated Cycle Length [s]	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	5.80	5.70	5.70	5.65	5.60	5.60	5.90	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	0.00	3.60	0.00	0.00	4.00	0.00	4.00
g_i, Effective Green Time [s]	27	17	28	27	18	29	29	18	29	18
g / C, Green / Cycle	0.40	0.25	0.41	0.40	0.27	0.42	0.43	0.27	0.42	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.04	0.08	0.16	0.08	0.05	0.11	0.11	0.20
s, saturation flow rate [veh/h]	1310	1900	1615	1377	1900	1615	1378	1792	1458	1795
c, Capacity [veh/h]	411	483	667	440	508	685	420	477	529	481
d1, Uniform Delay [s]	21.34	22.15	12.16	21.57	21.70	12.23	22.02	20.59	19.08	22.78
k, delay calibration	0.11	0.11	0.11	0.11	0.17	0.11	0.11	0.11	0.11	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.11	0.06	0.29	1.77	0.13	0.19	0.60	0.34	6.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.58	0.09	0.25	0.60	0.19	0.17	0.42	0.31	0.75
d, Delay for Lane Group [s/veh]	21.49	23.27	12.22	21.85	23.48	12.36	22.21	21.19	19.42	29.04
Lane Group LOS	C	C	B	C	C	B	C	C	B	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.48	3.75	0.52	0.97	4.13	1.11	0.58	2.47	1.42	5.59
50th-Percentile Queue Length [ft/ln]	12.03	93.82	13.06	24.25	103.28	27.76	14.51	61.72	35.53	139.68
95th-Percentile Queue Length [veh/ln]	0.87	6.76	0.94	1.75	7.44	2.00	1.05	4.44	2.56	9.46
95th-Percentile Queue Length [ft/ln]	21.65	168.88	23.51	43.64	185.90	49.97	26.13	111.09	63.96	236.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.49	23.27	12.22	21.85	23.48	12.36	22.21	21.19	21.19	19.42	29.04	29.04
Movement LOS	C	C	B	C	C	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	21.30			20.51			21.46			26.02		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.51											
Intersection LOS	C											
Intersection V/C	0.555											

Emissions

Vehicle Miles Traveled [mph]	1.92	9.83	2.17	2.56	7.22	3.05	4.32	12.11	7.60	16.61
Stops [stops/h]	25.55	199.27	27.74	51.49	219.35	58.96	30.83	131.08	75.47	296.67
Fuel consumption [US gal/h]	0.51	3.20	0.45	0.96	3.38	0.88	0.78	2.59	1.67	5.65
CO [g/h]	35.37	223.96	31.14	67.45	236.41	61.81	54.72	181.22	116.69	395.25
NOx [g/h]	6.88	43.57	6.06	13.12	46.00	12.03	10.65	35.26	22.70	76.90
VOC [g/h]	8.20	51.91	7.22	15.63	54.79	14.32	12.68	42.00	27.04	91.60

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.50	25.50	25.50	25.50
l_p,int, Pedestrian LOS Score for Intersectio	2.577	2.490	2.297	2.414
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	737	737	590	590
d_b, Bicycle Delay [s]	13.51	13.51	16.85	16.85
l_b,int, Bicycle LOS Score for Intersection	0.930	2.454	2.012	1.146
Bicycle LOS	A	B	B	A

Sequence

Ring 1	2	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	8	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 3: NW Parker St/ NW Pacific Rim

Control Type:	All-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

Intersection Setup

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	155.00	100.00	100.00	145.00	100.00	100.00	130.00	100.00	100.00	75.00	100.00	75.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Parker St			NW Parker St			NW Pacific Rim			NW Pacific Rim		
Base Volume Input [veh/h]	29	308	30	17	321	105	169	44	74	32	23	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	4.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	308	30	17	321	105	169	44	74	32	23	15
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	80	8	4	84	27	44	11	19	8	6	4
Total Analysis Volume [veh/h]	30	321	31	18	334	109	176	46	77	33	24	16
Pedestrian Volume [ped/h]	1			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	501	541	551	522	561	627	487	522	570	472	500	552
Degree of Utilization, x	0.06	0.33	0.32	0.03	0.60	0.17	0.36	0.09	0.14	0.07	0.05	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.19	1.40	1.37	0.11	3.88	0.62	1.63	0.29	0.47	0.22	0.15	0.09
95th-Percentile Queue Length [ft]	4.77	35.08	34.19	2.68	97.09	15.62	40.69	7.22	11.63	5.61	3.78	2.24
Approach Delay [s/veh]	12.24			15.79			12.52			10.36		
Approach LOS	B			C			B			B		
Intersection Delay [s/veh]	13.54											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: NW Brady Rd/ NW 20th Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.121

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 20th Ave			NW 20th Ave		
Base Volume Input [veh/h]	44	312	1	6	320	52	30	0	33	7	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	312	1	6	320	52	30	0	33	7	0	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	85	0	2	87	14	8	0	9	2	0	2
Total Analysis Volume [veh/h]	48	339	1	7	348	57	33	0	36	8	0	8
Pedestrian Volume [ped/h]	0			0			3			6		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.01	0.00	0.00	0.12	0.00	0.05	0.03	0.00	0.01
d_M, Delay for Movement [s/veh]	8.24	0.00	0.00	7.97	0.00	0.00	20.12	19.39	12.29	19.64	18.38	10.59
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.02	0.00	0.00	0.63	0.63	0.63	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	3.24	0.00	0.00	0.43	0.00	0.00	15.64	15.64	15.64	3.36	3.36	3.36
d_A, Approach Delay [s/veh]	1.02			0.14			16.04			15.11		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	2.03											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: NW Brady Rd/ NW 16th Ave

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	13.00	13.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	140.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	2.00			2.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW Brady Rd			NW Brady Rd			NW 16th Ave			NW 16th Ave		
Base Volume Input [veh/h]	29	222	142	131	204	21	26	100	55	90	59	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	2.00	4.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	222	142	131	204	21	26	100	55	90	59	101
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	61	39	36	56	6	7	27	15	25	16	28
Total Analysis Volume [veh/h]	32	244	156	144	224	23	29	110	60	99	65	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20	40	0	20	40	0	20	30	0	20	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.6	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	2.7	2.7	0.0	2.6	2.0	0.0	2.3	1.9	0.0	2.6	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	11	0	0	9	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.7	3.7	0.0	3.6	3.6	0.0	3.3	3.5	0.0	3.6	3.6	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	9	14	0	9	14	0	9	14	0	9	14	0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	5.70	5.70	5.60	5.60	5.50	5.50	5.60	5.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.70	0.00	3.60	0.00	3.50	0.00	3.60
g_i, Effective Green Time [s]	29	19	30	22	19	9	19	12
g / C, Green / Cycle	0.49	0.31	0.50	0.36	0.32	0.16	0.32	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.28	0.10	0.17	0.03	0.10	0.07	0.11
s, saturation flow rate [veh/h]	1015	1453	1421	1468	925	1773	1443	1656
c, Capacity [veh/h]	556	456	704	536	490	279	529	325
d1, Uniform Delay [s]	8.32	19.45	8.48	14.49	14.45	23.51	15.04	21.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	5.52	0.14	0.62	0.05	2.14	0.17	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.88	0.20	0.46	0.06	0.61	0.19	0.54
d, Delay for Lane Group [s/veh]	8.37	24.97	8.62	15.11	14.50	25.64	15.21	23.04
Lane Group LOS	A	C	A	B	B	C	B	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.18	5.27	0.87	2.30	0.26	2.29	0.93	2.23
50th-Percentile Queue Length [ft/ln]	4.50	131.85	21.81	57.48	6.54	57.37	23.34	55.73
95th-Percentile Queue Length [veh/ln]	0.32	9.04	1.57	4.14	0.47	4.13	1.68	4.01
95th-Percentile Queue Length [ft/ln]	8.10	226.01	39.26	103.47	11.77	103.27	42.02	100.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.37	24.97	24.97	8.62	15.11	15.11	14.50	25.64	25.64	15.21	23.04	23.04
Movement LOS	A	C	C	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	23.74			12.72			24.02			20.22		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	19.71											
Intersection LOS	B											
Intersection V/C	0.652											

Emissions

Vehicle Miles Traveled [mph]	1.31	16.37	5.12	8.78	1.10	6.44	2.35	4.18
Stops [stops/h]	10.85	317.72	52.56	138.52	15.75	138.26	56.25	134.30
Fuel consumption [US gal/h]	0.19	5.05	0.84	2.14	0.20	1.71	0.63	1.53
CO [g/h]	13.00	352.72	58.92	149.30	13.66	119.34	43.89	106.83
NOx [g/h]	2.53	68.63	11.46	29.05	2.66	23.22	8.54	20.79
VOC [g/h]	3.01	81.75	13.66	34.60	3.17	27.66	10.17	24.76

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.89	19.89	19.89	19.89
l_p,int, Pedestrian LOS Score for Intersectio	2.253	2.219	2.022	2.103
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1339	1339	1004	1004
d_b, Bicycle Delay [s]	3.27	3.27	7.41	7.41
l_b,int, Bicycle LOS Score for Intersection	2.272	1.347	1.030	1.156
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: NW Brady Rd/NW McIntosh Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	10.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	80.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.02		-0.02		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	NW Brady Rd		NW Brady Rd		NW McIntosh Rd	
Base Volume Input [veh/h]	363	121	18	321	93	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	0.00	1.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	363	121	18	321	93	21
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	34	5	91	26	6
Total Analysis Volume [veh/h]	413	138	20	365	106	24
Pedestrian Volume [ped/h]	0		0		4	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.35	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	8.59	0.00	22.80	11.44
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.00	1.49	0.13
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.50	0.00	37.36	3.21
d_A, Approach Delay [s/veh]	0.00		0.45		20.70	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.69					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: NW Grand Ridge Dr/ NW Brady Rd

Control Type:	Two-way stop	Delay (sec / veh):	20.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	10.00	10.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	80.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	-0.01		0.03		-0.03	
Crosswalk	No		No		No	

Volumes

Name	NW Grand Ridge Dr		NW Brady Rd		NW Brady Rd	
Base Volume Input [veh/h]	2	26	42	488	403	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	26	42	488	403	6
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	7	12	137	113	2
Total Analysis Volume [veh/h]	2	29	47	548	453	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.04	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	20.27	11.22	8.38	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.13	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.38	4.38	3.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.80		0.66		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Future Street/ NW 18th Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name			NW 18th Ave		NW 18th Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			NW 18th Ave		NW 18th Ave	
Base Volume Input [veh/h]	9	3	4	155	79	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	3	4	155	79	14
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	1	44	22	4
Total Analysis Volume [veh/h]	10	3	4	174	89	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.13	8.81	7.41	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.31	1.31	0.17	0.17	0.00	0.00
d_A, Approach Delay [s/veh]	9.83		0.17		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	B					