### TRAFFIC ANALYSIS REPORT

### **FOR**

# LACAMAS HEIGHTS ELEMENTARY SCHOOL (w/Portables)

NE 232<sup>nd</sup> Avenue

**CAMAS SCHOOL DISTRICT, CITY OF CAMAS** 

SUBMITTED BY



January 2017

Project 15-46

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**Prepared By** 

**CHARBONNEAU Engineering LLC** 



Phone: (503) 293-1118

January 2017

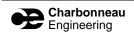
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In-Process Traffic Data
Left Turn Lane Warrants
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WSDOT Furnished Crash History Report
City TIF Projects Location Map

Capacity Analysis Printouts – Synchro v9 output (> 100 pages, furnished upon request)



#### INTRODUCTION

This traffic study was performed to determine the impacts associated with the development of the new Lacamas Heights Elementary School in the Camas School District in the City of Camas. The impact area as defined based on input received from the City staff included the school's frontage area on NE 232<sup>nd</sup> Avenue and several key intersections occurring along NE 232<sup>nd</sup> Avenue, NE 28<sup>th</sup> Street, and 267<sup>th</sup> Avenue. The school property is situated north of 9<sup>th</sup> Street on the east side of 232<sup>nd</sup> Avenue. The site location is highlighted on the vicinity map (Figure 'a') in the appendix. Site layout including placement on the school building, future portable classroom units, parking lot, sports fields, and driveway location are shown on Figure `b`.

The project proposes to construct a new elementary school to replace the existing Lacamas Heights Elementary School now located adjacent to the high school campus along SE 15<sup>th</sup> Street. The new elementary school will serve a total of 696 students (includes 600 students in the main building and 96 students in the portables). The school will operate on a standard 180 day school year during the hours of 9:00 AM to 3:30 PM. Traffic access is being planned as shown on the site plan and will include a half-street alignment on the south side of the campus.

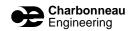
In the project scope established with the City of Camas a number of important elements were identified and considered in the study.

- Projecting site generated traffic for 696 students. This total includes the number of students that will use portable classroom units. Trip rates were applied from the ITE <u>Trip Generation Manual</u> (9<sup>th</sup> Edition, year 2012).
- Distribution of site generated trips was based on the District's service area and boundary information, traffic volume counts, circulation patterns, and engineering judgment.
- Background traffic was established from several in-process traffic projects identified by the City. Application of annual traffic growth was not necessary in the analysis as confirmed by staff.
- Documentation of pedestrian, bicycle, and transit facilities in the study area.
- Evaluation of sight distance at the new intersection of the site's connector road and 232<sup>nd</sup> Avenue.
- Determination of left turn lane requirements and peak hour signal warrants.
- Capacity analysis of five study intersections including 232<sup>nd</sup> Avenue at 9<sup>th</sup> Street, 232<sup>nd</sup> at the new school connector road, 232<sup>nd</sup> at 28<sup>th</sup> Street, 242<sup>nd</sup> Avenue at 28<sup>th</sup> Street, and 267<sup>th</sup> Avenue at 19<sup>th</sup> Street. The peak hour periods during the weekday AM, mid-afternoon, and PM were analyzed for the existing, background year 2018, and total traffic year 2018 scenarios.
- Review of the existing travel lane and traffic control conditions.
- Level of service analysis of the study intersections to confirm the locations not meeting the City's mobility standards and the required mitigation.
- Documentation of the study area streets and intersections included in the City's TIF Update (May 2012).
- Review of WSDOT furnished crash history data to assess if there have been safety issues that must be mitigated.

The Appendix to the report contains technical data including a vicinity map, site plan, traffic flow mapping, left turn lane & signal warrants, lane and traffic control plan, and the capacity analysis outputs.

### SITE DESCRIPTION, STREETS, AND CRITICAL INTERSECTIONS

The project site is located in north Camas approximately a quarter-mile north of Lacamas Lake on the east side of 232<sup>nd</sup> Avenue. The surrounding land is sparsely developed and consists mainly of



forested and farm property. The site is situated close to the District's west boundary with most of the service area extending to the east, south, and north.

Intersection sight distance at the future access road on 232<sup>nd</sup> Avenue will need to meet AASHTO's standard based on the street's 35 MPH design speed. For 35 MPH the required intersection sight distance is 390 feet.

**Northeast 232<sup>nd</sup> Avenue** is classified as an arterial and currently provides one lane in each direction. There are minimal shoulders with approximately one to two feet of width and the travel speed is posted at 40 MPH. There is a moderate uphill grade to the north from the 9<sup>th</sup> Street intersection. Appropriate school zone signing will need to be posted including school symbol signs in advance of the site access points.

The intersection of **9**<sup>th</sup> **Street at 232**<sup>nd</sup> **Avenue** is configured as a tee-shaped design with stop control on the 9<sup>th</sup> Street approach. A dead-end sign is present on 9<sup>th</sup> Street. There are no separate turn lanes at this location.

**Northeast 232**nd **Avenue at 28**th **Street** (classified as an arterial) is a four-way configuration controlled by stop signing on the northbound approach. The north leg is a private road serving several residences and is not signed for stop control. There are no separate turn lanes at the intersection. A large two-way arrow-board sign is posted on the north side of the intersection for northbound traffic.

**Northeast 28<sup>th</sup> Street at 242<sup>nd</sup> Avenue** is configured as a tee-shaped design with stop sign control established for southbound traffic. There is a private driveway approach on the south leg. There are no separate turn lanes at the intersection.

**Northeast 19**<sup>th</sup> **Street at 267**<sup>nd</sup> **Avenue** is configured as a tee-shaped design with stop sign control established for eastbound traffic. There is a private driveway approach on the west side of the intersection. There are no separate turn lanes at the intersection.

The existing lane configuration and traffic control elements are shown on Figure 'c'.

#### TRAFFIC OPERATIONAL ANALYSIS

Five intersections were analyzed for level of service (LOS) conditions as stipulated in the project scoping. LOS analyses were completed for the study intersections during the peak hour periods under several scenarios:

- Existing traffic year 2015
- Background traffic year 2018
- Total traffic year 2018

In order to perform the LOS analysis at the critical intersections video traffic counts were recorded during the AM peak (7:15-9:15 AM), mid-afternoon (1:45-3:45 PM), and PM peak (4:00-6:00 PM) traffic hours. The existing traffic volumes are shown on Figure 1 in the report's appendix.

Background traffic is comprised of the existing and the in-process traffic that was specified by the City. The in-process traffic is shown on Figure 2 and the year 2018 background traffic volumes are shown on Figure 3.



Figure 4 illustrates the trip distribution and Figure 5 shows the trip assignments for the school generated traffic in the study area covering the AM, mid-afternoon, and PM peak hours. Generated traffic was developed from the number of trips associated with 696 students.

The total traffic scenario was derived from the summation of the background and the school's site generated traffic. The total traffic scenario is depicted on Figure 6.

### **VEHICLE TRIP GENERATION**

Vehicle trip generation rates were calculated based on historical data contained in the ITE <u>Trip</u> <u>Generation</u> manual (9<sup>th</sup> Edition, 2012). Trip rates for the elementary school were applied from the manual using ITE code #520 based on 696 students.

Over a 24-hour weekday period a total of 898 trip ends are projected to occur when the school begins operation. During the AM, mid-afternoon, and PM peak hours a total of 313, 195, and 104 trips, respectively will be generated in the peak hours.

**Table 1 Trip Generation Summary** 

		Weekday												
ITE Land Use	Units (Students)	ADT	AM	Peak H	lour	_	-Afterno eak Hou	-	PM	Peak H	lour			
			Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit			
Elementary School (#520)	696													
Generation Rate <sup>1</sup>		1.29	0.45	55%	45%	0.28	45%	55%	0.15	49%	51%			
Site Trips		898	313	172	141	195	88	107	104	51	53			

<sup>&</sup>lt;sup>1</sup> Source: *Trip Generation*, 9th Edition, ITE, 2012, average rates.

#### TRAFFIC FLOW AND CAPACITY ANALYSIS RESULTS

The traffic flow maps included in the appendix showing the traffic volume data and turning movements for the weekday peak hour conditions were used in the capacity analysis. The study intersections were evaluated for the existing, year 2018 background, and year 2018 total traffic scenarios during the AM, mid-afternoon, and PM peak hours. Synchro version #9.1 software employing the year 2010 <a href="Highway Capacity Manual">Highway Capacity Manual</a> methodology was applied in performing the intersection capacity analyses.

The City's mobility standards require that a LOS 'D' and a volume to capacity (v/c) ratio of 0.90 or better be maintained for all intersections. The standards are documented in the <u>City of Camas Comprehensive Plan</u>, Transportation Element, Policy TR-20 dated March 2004.

Table 2 presents a summary of the capacity analysis results determined in the study.



**Table 2 Capacity Analysis Summary** 

							Т	raffic S	Scenari	io				
Intersection	Type of Control	Peak Hour	:	2015 E	Existing		20	18 Ba	ckgrou	nd		2018	Total	
	Control		Crit. Mov't	LOS	Delay	v/c	Crit. Mov't	LOS	Delay	v/c	Crit. Mov't	LOS	Delay	v/c
		АМ	NB	В	12.3	-	NB	С	21.5	-	NB	F	89.2	-
NE 28th Street and NE 232nd Avenue	Two-way Stop	Mid- Afternoon	NB	В	12.5	-	NB	С	17.2	-	NB	С	23.4	-
		PM		В	13.2	-	NB	Е	45.6	-	NB	F	62.7	-
		AM	-	-	-	-	-	-	-	-	EB	В	13.5	
School Access and NE 232nd Avenue	Two-way Stop	Mid- Afternoon	-	-	-	-	-	-	-	-	EB	В	10.9	-
		PM	-	-	-	-	-	-	-	-	EB	В	10.9	-
		AM	WB	Α	9.1	-	WB	В	10.1	-	WB	В	10.3	,
NE 9th Street and NE 232nd Avenue	Two-way Stop	Mid- Afternoon	WB	Α	0.0	-	WB	Α	0.0	-	WB	Α	0.0	,
		PM	WB	Α	8.5	-	WB	Α	8.8	-	WB	Α	8.8	-
NE 242nd Avenue/		AM	SB	В	12.3	-	SB	С	15.2	-	SB	С	25.3	-
driveway and NE 28th Street/	Two-way Stop	Mid- Afternoon	SB	В	13.2	-	SB	С	15.0	-	SB	С	17.8	
Dresser Road		PM	SB	В	13.2	-	SB	С	16.9	-	SB	С	17.1	-
		AM	WB	С	16.4	-	WB	С	19.3	-	WB	D	29.3	
NE 267th Avenue and NE 19th Street	Two-way Stop	Mid- Afternoon	WB	В	12.3	-	WB	В	12.8	-	WB	В	14.1	-
		PM	WB	В	13.1	-	WB	В	14.7	-	WB	С	15.2	-

Notes: 2010 Highway Capacity Manual methodology used in analysis, Synchro v9.1. NB - Northbound, SB - Southbound, WB - Westbound, Crit. Mov't - Critical movement or critical approach.

With the exception of the intersection at 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue the study intersections will operate at acceptable LOS 'D' or better during the peak hours for the existing, year 2018 background, and year 2018 total traffic scenarios.

The school access connection to 232<sup>nd</sup> Avenue will experience LOS `B` in the year 2018 total traffic scenario.

The northbound stop controlled movement at 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue is currently operating at LOS 'B'. In the year 2018 background scenario the intersection will experience LOS 'E' in the PM peak hour. For the year 2018 total traffic scenario the intersection is projected to operate at LOS 'F' in the AM and PM peak hours. However, based on Clark County Code section 40.350.020(G)(1)(c) the development shall not be required to mitigate the impacts at this location in order to obtain concurrency approval unless meeting all three of the following criteria:



- The proposed development adds at least five (5) peak period trips to a failing intersection approach:
- 2. The projected volume to capacity ratio for the worst lane movement on the approach with the highest delay exceeds nine-tenths (0.9) during the peak traffic period; and
- 3. That same movement is worsened by the proposed development.

Criterion #1 is not met as the proposed school will add only three vehicle trips to the northbound left turn movement in the AM peak hour and one trip in the PM peak hour.

Criterion #2 pertaining to the volume to capacity (v/c) ratio will not be met as the worst lane movement v/c (northbound left turn) remains below 0.9 in the peak hours. In fact the v/c equates to 0.54 for the year 2018 total traffic AM peak hour and 0.68 for the year 2018 total traffic PM peak hour. The ratios are summarized below using the LOS results contained in the Synchro v9.1 output files.

Year 2018 Total, AM Peak Hour	Year 2018 Total, PM Peak Hour
Left Turn Demand = 179	Left Turn Demand = 214
Approach Capacity = 331	Approach Capacity = 313
v/c = 0.54	v/c = 0.68

Other supporting factors to consider for not mitigating the intersection include;

- Crash history research based on WSDOT's latest database has confirmed that the
  intersection has not exceeded thresholds that would require safety improvements or warrant
  analysis.
- The City of Camas has identified a future TIF roadway and intersection project to install a roundabout at 232<sup>nd</sup> Avenue & 22<sup>nd</sup> Avenue. The future improvement will connect to Ingle Road and lessen the traffic volume on the northbound approach of 232<sup>nd</sup> Avenue at 28<sup>th</sup> Street.
- The School District would have to obtain right-of-way if additional lanes were added.

Based on these considerations it is recommended the County not require mitigation at the intersection of NE 232<sup>nd</sup> Avenue and 28<sup>th</sup> street in conjunction with the school development project.

Generally, LOS 'A', 'B', 'C', and 'D' are desirable service levels ranging from no vehicle delays to average or longer than average delays in the peak hours. Level 'E' represents long delays indicating signalization warrants need to be reviewed and signals considered only if warrants are met. Level 'F' indicates that intersection improvements, such as widening and signalization, may be required. By definition, and according to the <a href="Highway Capacity Manual">Highway Capacity Manual</a> (HCM), the following delay times are associated with the LOS at stop controlled (unsignalized) and signalized intersections.

Level of Service	criteria	defined in	Highway	Capacit	y Manual.
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Level of Service	Unsignalized Control	Signalized Control
(LOS)	Stopped Delay (sec/veh)	Stopped Delay (sec/veh)
A	≤ 10	≤ 10
В	> 10 and ≤ 15	> 10 and ≤ 20
С	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
Е	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80



#### LEFT TURN LANE REQUIREMENTS

A series of left turn lane warrant analyses were performed for the study intersections and the site access connector road at 232<sup>nd</sup> Avenue. The study revealed that a westbound left turn lane is warranted for the year 2018 total traffic scenario at the intersection of 28<sup>th</sup> Street at 232<sup>nd</sup> Avenue. Installation of the westbound left turn lane is not recommended considering the peak hour LOS and queuing results (WB approach LOS 'A', 95<sup>th</sup> percentile queue of one vehicle). It is also noted that with the future Ingle Road extension between 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue eastbound (opposing) traffic at 232nd Avenue/28<sup>th</sup> Street will decrease benefiting the westbound to southbound movement.

A northbound left turn lane on the school's access connector road at 232<sup>nd</sup> Avenue is not warranted due to low left turn volume demand. During each of the peak hours including AM, mid-afternoon, and in the PM fewer than eight vehicles will be making the northwesterly to southwesterly left turn movement.

The left turn lane data and warrants are contained in the appendix.

#### TRAFFIC SIGNAL WARRANTS

The study intersections were reviewed for signalization needs based on the peak hour signal warrant contained in the <u>Manual on Uniform Traffic Control Devices</u> (MUTCD). The peak hour warrant was met at the following locations.

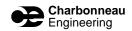
- 28<sup>th</sup> Street/232<sup>nd</sup> Avenue for the year 2018 background and total traffic scenarios the signal warrant is met. Installation is not recommended because mitigation for failing LOS conditions is not required by code. The City of Camas has identified a future TIF roadway and intersection project to install a roundabout at 232<sup>nd</sup> Avenue & 22<sup>nd</sup> Avenue. The future improvement will connect to Ingle Road and lessen the traffic volume on the northbound approach of 232<sup>nd</sup> Avenue at 28<sup>th</sup> Street.
- <u>28<sup>th</sup> Street/242<sup>nd</sup> Avenue</u> for the year 2018 total traffic scenario (future signal planned as TIF project) signal not recommended in conjunction with new elementary school development as the current stop controlled intersection will experience LOS 'C' or better through the year 2018 total traffic periods and no crashes were reported within the last five years.
- 19th Street/267th Avenue for the year 2018 total traffic scenario (signal not recommended as the current stop controlled intersection will experience LOS 'D' or better through the year 2018 total traffic periods and no reported crashes were reported within the last five years)

### PEDESTRIANS, BICYCLE, & BUSSES

The project site is situated within a sparsely developed area that does not currently provide facilities for pedestrians, bicyclists, or transit. With the project development sidewalk will be provided on site and along the street frontage adjacent to the school. Appropriate school zone signing including advance symbol signs will be placed on 232<sup>nd</sup> Avenue in conjunction with the project.

No bicycle lanes are present within the general area.

C-Tran does not provide transit service in this area of Camas.



### INTERSECTION SIGHT DISTANCE

Intersection sight distance at the future access road on 232<sup>nd</sup> Avenue will need to meet AASHTO's standard based on the street's 35 MPH design speed. For 35 MPH the required intersection sight distance is 390 feet. The preliminary Design Summary memorandum dated November 10, 2016 prepared by Robertson Engineering has established that the intersection sight distance standards will be satisfied with available sightlines that exceed the minimum requirements.

### TRAFFIC SAFETY

Accident data for the study intersections was provided by WSDOT and reviewed to help identify any traffic safety problems. The data covered a five-year study period in the years 2010 through 2014 (reference appendix).

The crash rates are presented in Table 3 and are based on the number of accidents per million entering vehicles (MEV) per year. Typically, an intersection is not considered unsafe unless the accident rate exceeds the threshold of 1.0 accident per MEV per year.

None of the study intersections have experienced a crash rate of greater than 0.46 MEV per year and as a result no safety mitigation is necessary.

**Table 3 Intersection Crash Rate Summary** 

Intersection	Accident History (Years)	Number of Accidents	Accidents per year	Annual Traffic Entering (veh/yr)	Accident rate per M.E.V.*
NE 28th Street & NE 232nd Avenue	5	1	0.2	1654537	0.12
NE 9th Street & NE 232nd Avenue	5	1	0.2	430983	0.46
NE 242nd Avenue & NE 28th St/Dresser Rd	5	0	0.0	1614361	0.00
NE 19th Street and NE 267th Avenue	5	0	0.0	2038039	0.00

<sup>\*</sup> M.E.V. - million entering vehicles.

#### SUMMARY AND RECOMMENDATIONS

The development plan for Lacamas Heights Elementary School will construct a new 70,000 square foot building and two portable classroom units providing for a total of 696 students. The traffic impact area as defined based on input received from City of Camas transportation staff included the school's immediate frontage area and analysis of several off-site intersections including NE 232<sup>nd</sup> Avenue at the future site access road, 28<sup>th</sup> Street, 9<sup>th</sup> Street and 28<sup>th</sup> Street at 242<sup>nd</sup> Avenue and 267<sup>th</sup> Avenue at 19<sup>th</sup> Street. The site location is shown on Figure 'a' in the report's appendix. Traffic access to the school will be provided on 232<sup>nd</sup> Avenue with the new site access connector road which is illustrated on the site plan (Figure 'b').

The new elementary school is projected to generate 898 trips per day. A total of 313 trips will be generated in the AM peak hour, 195 trips generated in the mid-afternoon peak hour, and 104 trips generated in the PM peak hour.

The traffic analysis documented the impacts to the existing street system and the proposed connector road alignment at 232<sup>nd</sup> Avenue and the site access. Traffic scenarios included the weekday peak traffic hours occurring during the AM, mid-afternoon, and PM periods. Year 2015 existing traffic, year 2018 background traffic, and year 2018 total traffic scenarios were evaluated in the study.

With the exception of the intersection at 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue the study intersections will operate at acceptable LOS 'D' or better during the peak hours for the existing, year 2018 background, and year 2018 total traffic scenarios. The school access connection to 232<sup>nd</sup> Avenue will experience LOS `B` in the year 2018 total traffic scenario.

The northbound stop controlled movement at 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue is currently operating at LOS 'B'. In the year 2018 background scenario the intersection will experience LOS 'E' in the PM peak hour. For the year 2018 total traffic scenario the intersection is projected to operate at LOS 'F' in the AM and PM peak hours. Based on the adopted concurrency standards for unsignalized intersections and according to Clark County Code section 40.350.020(G)(1)(c) the development shall not be required to mitigate the impacts at this location in order to obtain concurrency approval unless meeting all three of the following criteria:

- 1. The proposed development adds at least five (5) peak period trips to a failing intersection approach:
- 2. The projected volume to capacity ratio for the worst lane movement on the approach with the highest delay exceeds nine-tenths (0.9) during the peak traffic period; and
- 3. That same movement is worsened by the proposed development.

Criterion #1 is not met as the proposed school will add only three vehicle trips to the northbound left turn movement in the AM peak hour and one trip in the PM peak hour.

Criterion #2 pertaining to the volume to capacity (v/c) ratio will not be met as the worst lane movement v/c (northbound left turn) remains below 0.9 in the peak hours. In fact the v/c equates to 0.54 for the year 2018 total traffic AM peak hour and 0.68 for the year 2018 total traffic PM peak hour.

Other supporting factors to consider for not mitigating the intersection include;

- Crash history research based on WSDOT's latest database has confirmed that the intersection has not exceed thresholds that would require safety improvements.
- The City of Camas has identified a future TIF roadway and intersection project to install a roundabout at 232<sup>nd</sup> Avenue & 22<sup>nd</sup> Avenue. The future improvement will connect to Ingle Road and lessen the traffic volume on the northbound approach of 232<sup>nd</sup> Avenue at 28<sup>th</sup> Street.



• The School District would have to obtain right-of-way to widen the intersection if the northbound approach were to add another travel lane.

Based on these considerations it is recommended the County not require mitigation at the intersection of NE 232<sup>nd</sup> Avenue and 28<sup>th</sup> street in conjunction with the school development project.

The study revealed that a westbound left turn lane is warranted for the year 2018 total traffic scenario at the intersection of 28<sup>th</sup> Street at 232<sup>nd</sup> Avenue. Installation of the westbound left turn lane is not recommended considering the peak hour LOS and queuing results (WB approach LOS 'A', 95<sup>th</sup> percentile queue of one vehicle). It is also noted that with the future Ingle Road extension between 28<sup>th</sup> Street and 232<sup>nd</sup> Avenue eastbound (opposing) traffic at 232nd Avenue/28<sup>th</sup> Street will decrease benefiting the westbound to southbound movement.

A northbound left turn lane on the school's access connector road at 232<sup>nd</sup> Avenue is not warranted due to low left turn volume demand. During each of the peak hours fewer than eight vehicles will be making the northwesterly to southwesterly left turn movement.

At 28th Street and 232nd Avenue signalization is warranted for the year 2018 background and total traffic scenarios. Installation is not recommended because mitigation for failing LOS conditions is not required by code and the City of Camas has identified a future TIF roadway and intersection project to install a roundabout at 232nd Avenue & 22nd Avenue. Additionally a future road improvement project is proposed that will connect 232nd Avenue to Ingle Road south of 28th Street and will lessen the traffic volume on the northbound approach of 232nd Avenue at 28th Street.

At 28<sup>th</sup> Street and 242<sup>nd</sup> Avenue the signal warrant is met for the year 2018 total traffic scenario. The signal need has also been identified by the City as a future TIF project. However, signalization is not recommended in conjunction with new elementary school development as the intersection will experience LOS 'C' or better through the year 2018 total traffic period and no reported crashes have been reported within the last five years.

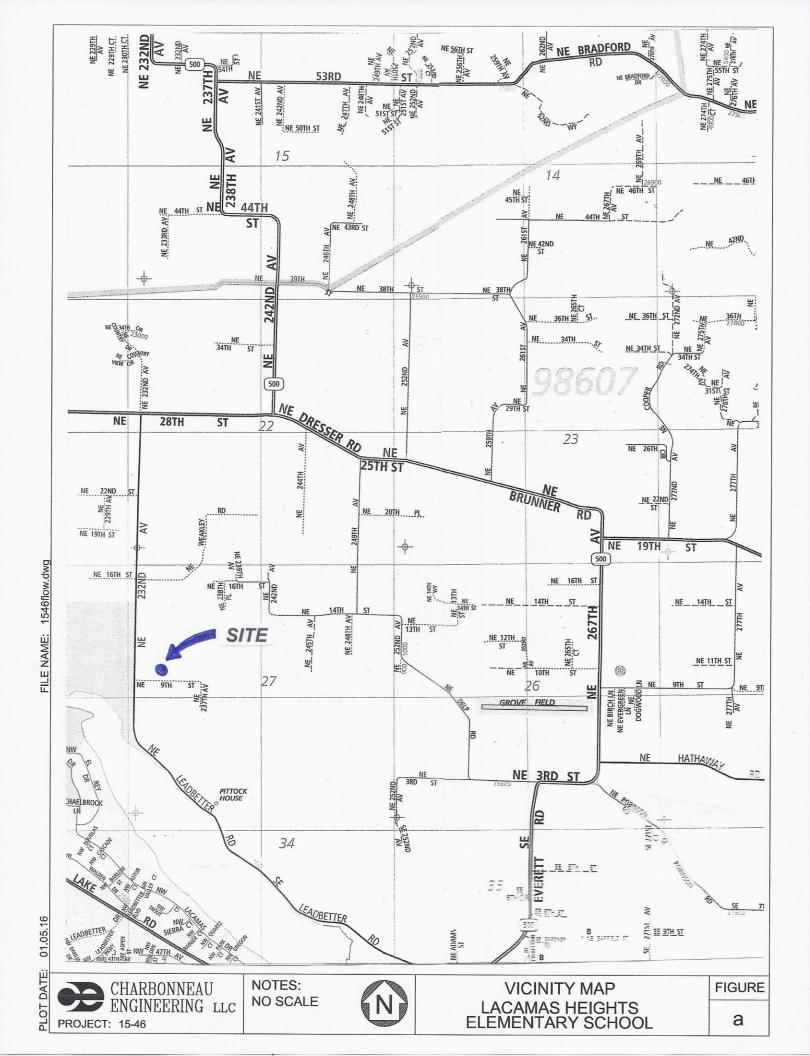
At 19<sup>th</sup> Street and 267<sup>nd</sup> Avenue the signal warrant is met for the year 2018 total traffic scenario. However, signalization is not recommended in conjunction with development as the intersection will experience LOS 'D' or better through the year 2018 total traffic periods and no reported crashes have been reported within the last five years.

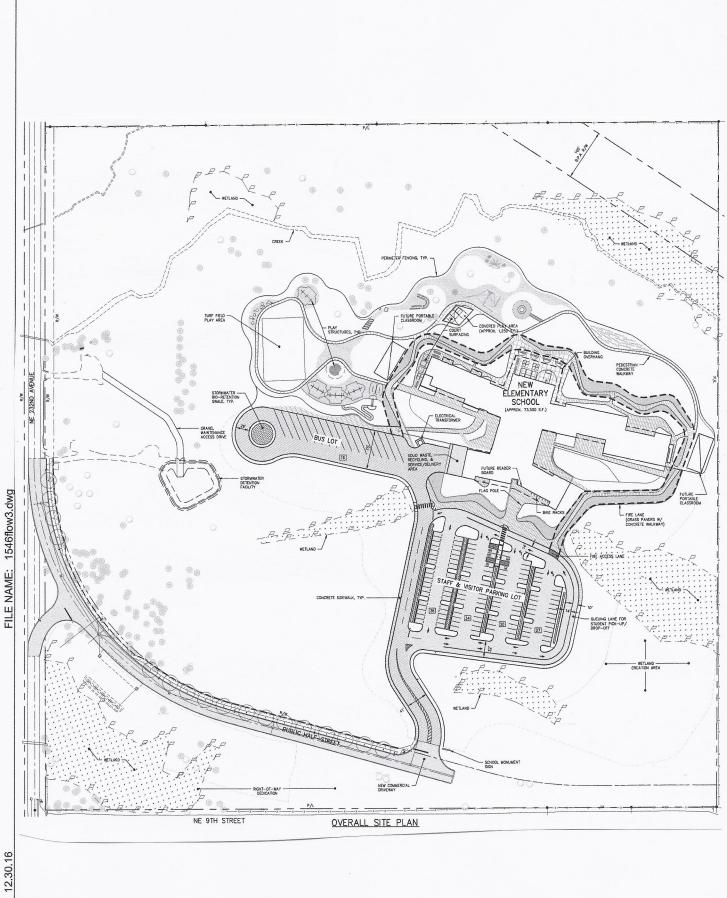


### **APPENDIX**

Vicinity Map Site Plan Lane Configuration & Traffic Control	Figure 'a' Figure 'b` Figure 'c'
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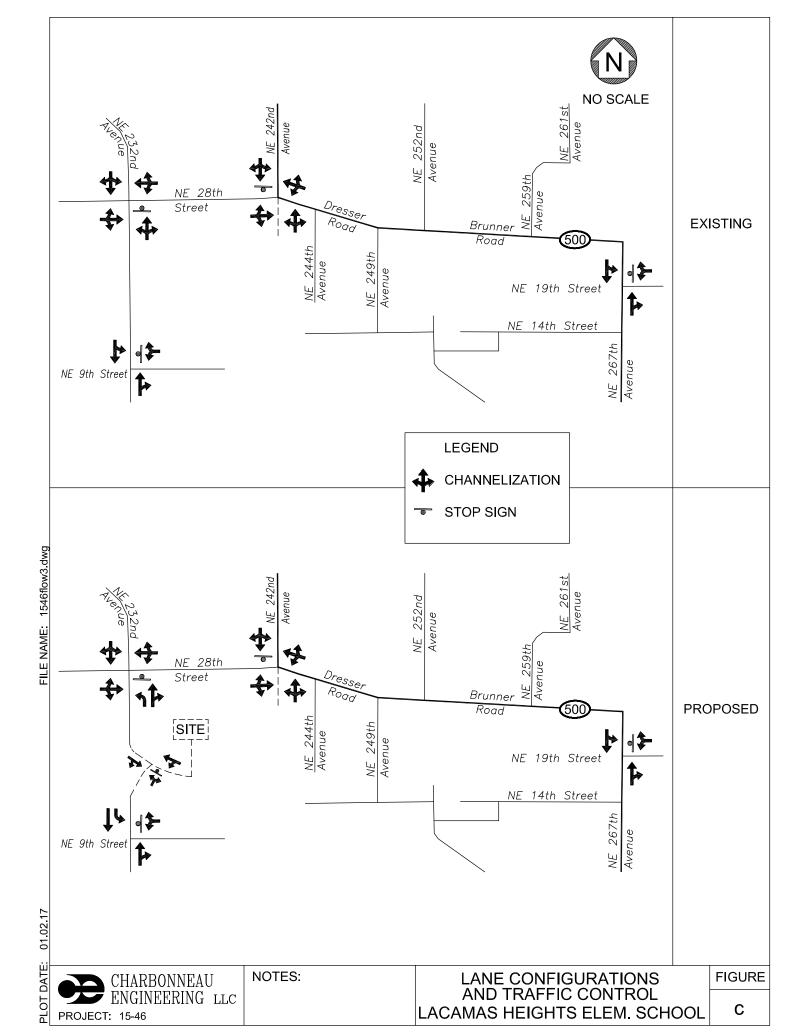
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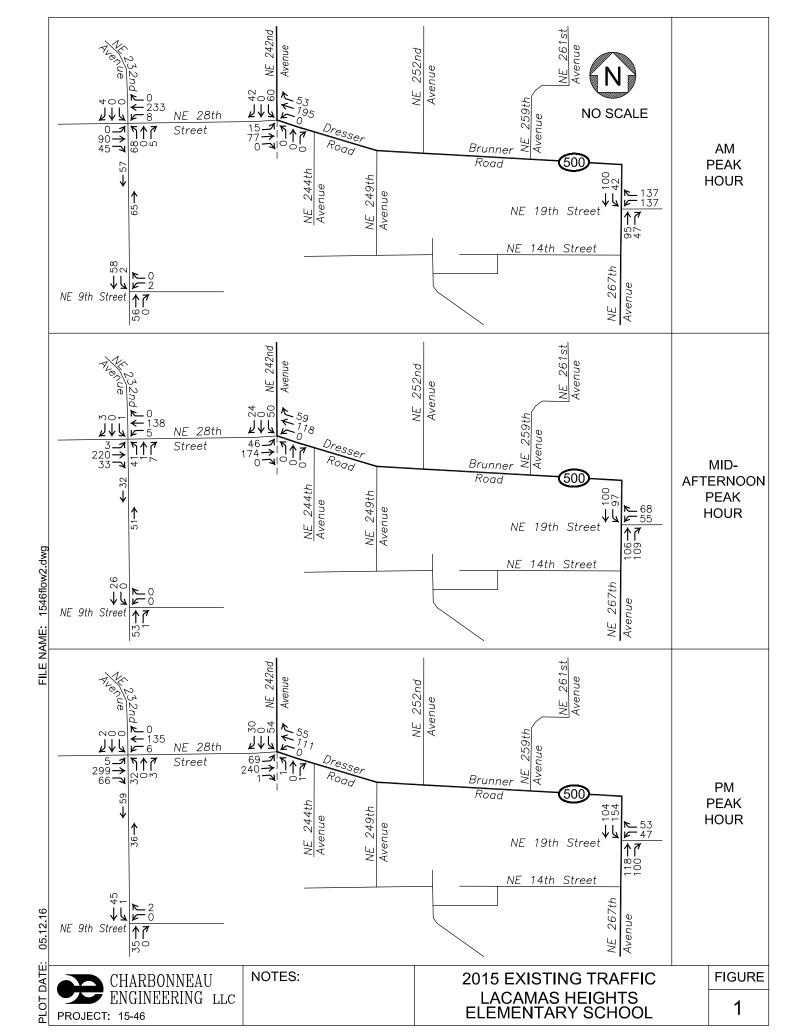
CHARBONNEAU ENGINEERING LLC PROJECT: 15-46 NOTES: NO SCALE

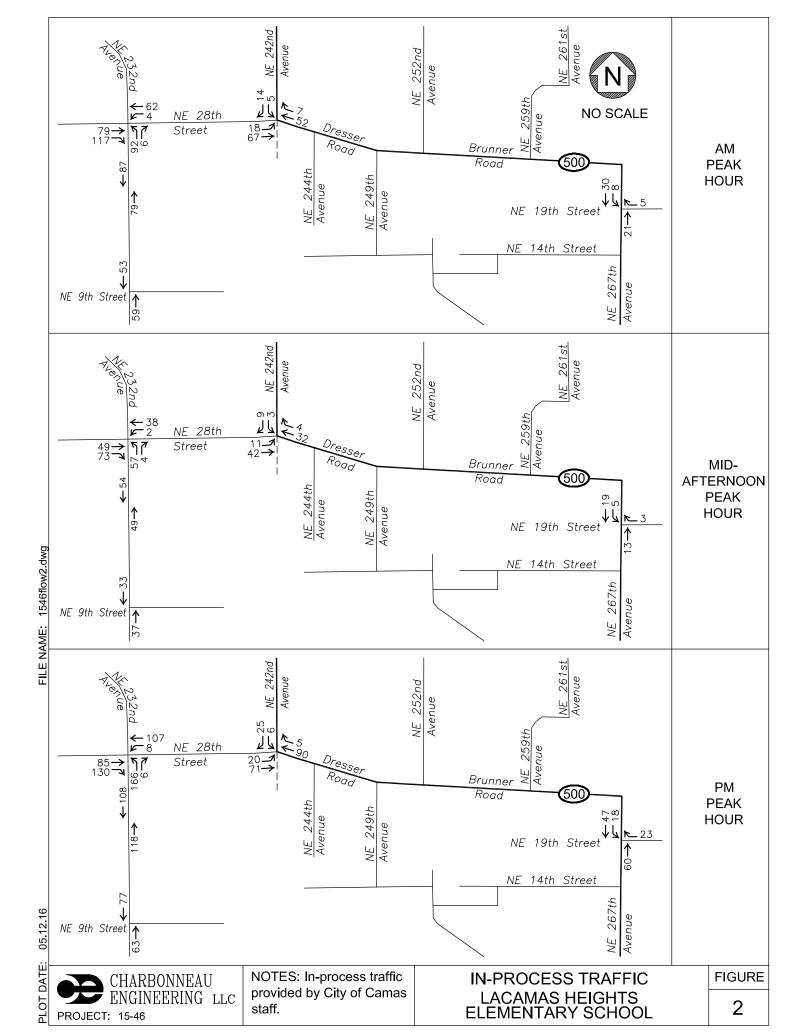


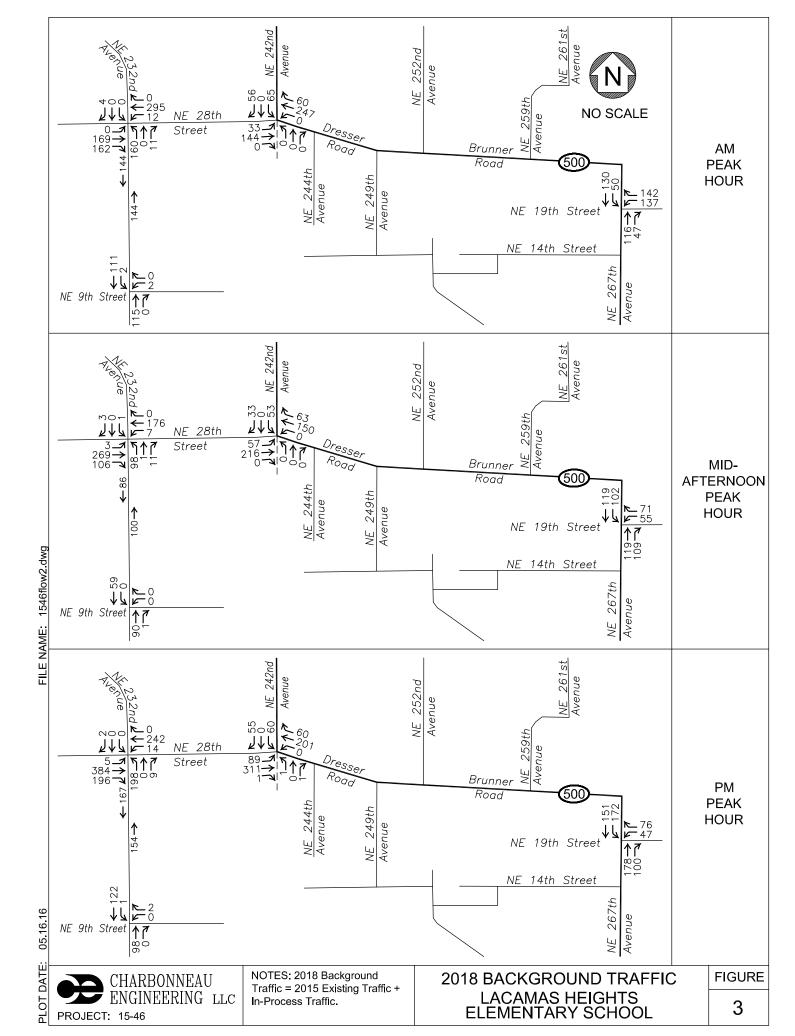
SITE PLAN LACAMAS HEIGHTS ELEMENTARY SCHOOL FIGURE

b









PLOT DATE: 01.02.17

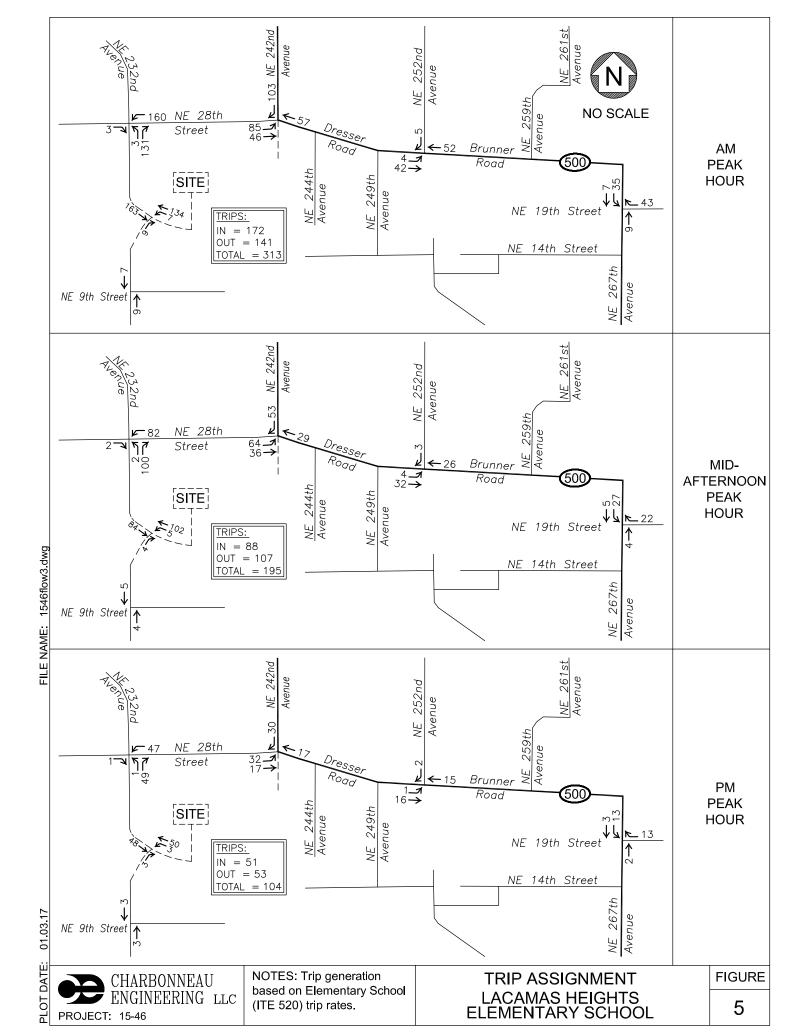
FILE NAME: 1546flow3.dwg

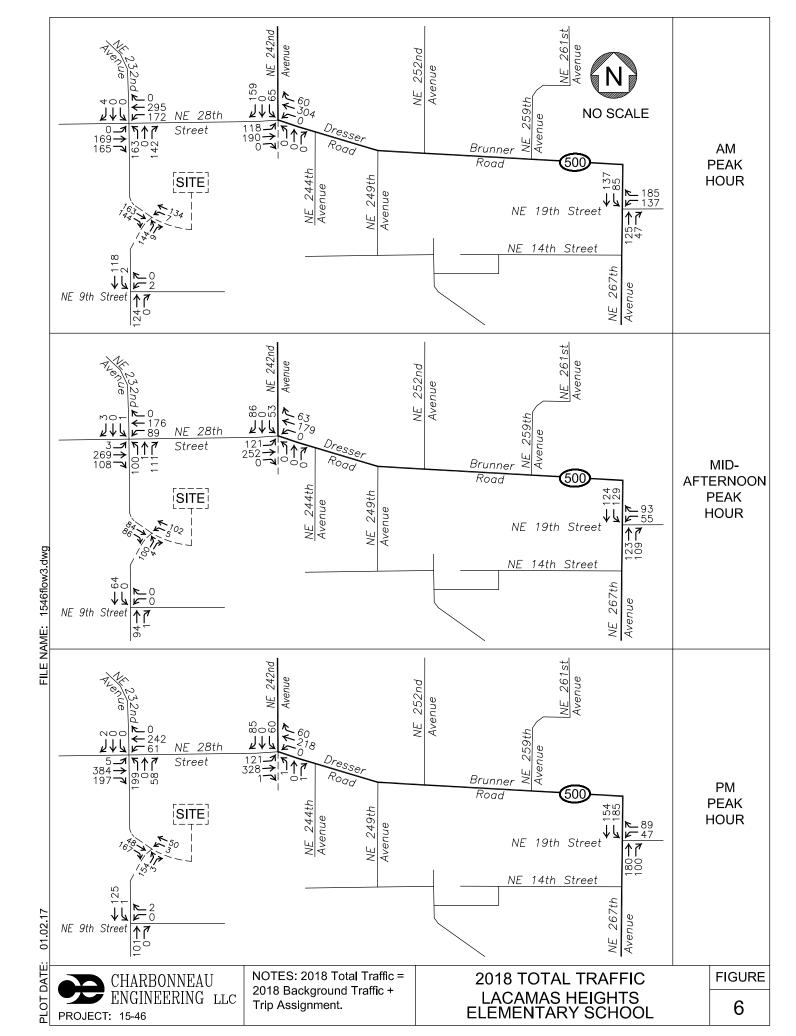
CHARBONNEAU ENGINEERING LLC PROJECT: 15-46 NOTES: Trip distribution based on the school's boundary and engineering judgement.

TRIP DISTRIBUTION
LACAMAS HEIGHTS
ELEMENTARY SCHOOL

FIGURE

4





### **Total Vehicle Summary**



### NE 232nd Ave & NE 28th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

Northbound

NE 232nd Ave

R

Т

#### 15-Minute Interval Summary 7:15 AM to 9:15 AM

15

Interval

Start

Time

7:15 AM

7:30 AM 7:45 AM

8:00 AM

8:15 AM

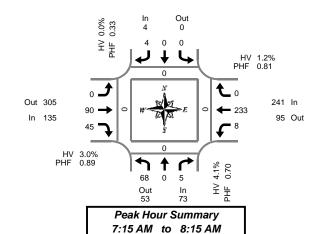
8:30 AM

8:45 AM

9:00 AM

Total

Survey



				_							
astk	ound			Westl	bound				Pedes	trians	
NE 2	8th St			NE 2	8th St		Interval		Cros	swalk	
T	R	Bikes	L	T	R	Bikes	Total	North	South	East	West
20	17	0	5	69	0	0	124	0	0	0	0
24	10	0	1	58	0	0	119	0	0	0	0
29	9	0	2	68	0	0	124	0	0	0	0
17	9	0	0	38	0	0	86	0	0	0	0
19	8	0	0	58	0	0	98	0	0	0	0
25	13	0	0	57	0	0	108	0	0	0	0
22	2	0	1	51	0	0	87	0	0	0	0
19	1	0	3	54	0	0	86	0	0	0	0

#### Peak Hour Summary 7:15 AM to 8:15 AM

By Approach			<b>bound</b> 2nd Ave				bound and Ave				oound 8th St				<b>bound</b> 8th St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	73	53	126	0	4	0	4	0	135	305	440	0	241	95	336	0	453
%HV		4.	1%			0.0	0%			3.0	0%			1.3	2%		2.2%
PHF		0.	70			0.	33			0.	89			0.	81		0.91

Southbound

NE 232nd Ave

R

		Pedes	trians										
		Crosswalk											
	North	South	East	West									
	0	0	0	0									
١,													

Bv		North	bound			South	bound			Eastb	ound			West	ound		
Movement		NE 232	nd Ave			NE 232	nd Ave			NE 2	8th St			NE 28	8th St		Total
Movement	Ы	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	68	0	5	73	0	0	4	4	0	90	45	135	8	233	0	241	453
%HV	2.9%	0.0%	20.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	4.4%	3.0%	12.5%	0.9%	0.0%	1.2%	2.2%
PHF	0.65	0.00	0.42	0.70	0.00	0.00	0.33	0.33	0.00	0.78	0.66	0.89	0.40	0.84	0.00	0.81	0.91

#### **Rolling Hour Summary** 7:15 AM to 9:15 AM

Interval Start		North NE 232	bound				bound and Ave				oound 8th St				oound 8th St		Interval		Pedes	trians swalk	
Time	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	Total	North	South	East	West
7:15 AM	68	0	5	0	0	0	4	0	0	90	45	0	8	233	0	0	453	0	0	0	0
7:30 AM	65	0	6	0	0	1	5	0	0	89	36	0	3	222	0	0	427	0	0	0	0
7:45 AM	50	1	6	0	0	1	5	0	1	90	39	0	2	221	0	0	416	0	0	0	0
8:00 AM	44	1	5	0	0	1	7	0	1	83	32	0	1	204	0	0	379	0	0	0	0
8:15 AM	33	2	3	0	0	2	4	0	2	85	24	0	4	220	0	0	379	0	0	0	0

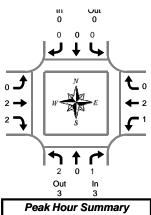
# **Heavy Vehicle Summary**



### NE 232nd Ave & NE 28th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

Heavy Vehicle 15-Minute Interval Summary 7:15 AM to 9:15 AM



Out 4

In 4

7:15 AM to 8:15 AM

Interval			bound				bound				ound				oound		
Start		NE 232	2nd Ave			NE 232	nd Ave			NE 2	8th St			NE 2	8th St		Interval
Time	L	Т	R	Total	L	T	R	Total	L	Т	R	Total	L	Т	R	Total	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	1	3
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
7:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
8:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	1	2	0	0	0	0	0	0	0	0	0	3	0	3	5
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	2	0	2	6
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
Total Survey	3	0	2	5	0	0	0	0	1	10	2	13	1	8	0	9	27

#### Heavy Vehicle Peak Hour Summary 7:15 AM to 8:15 AM

Ву			bound 2nd Ave			bound 2nd Ave			oound 8th St			bound 8th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	3	3	6	0	0	0	4	4	8	3	3	6	10
PHF	0.19	•		0.00			0.11		•	0.15		•	0.19

Bv			bound				bound				ound			Westk			
Movement		NE 232	nd Ave			NE 232	nd Ave			NE 2	8th St			NE 28	3th St		Total
Movement	٦	Т	R	Total	٦	T	R	Total	Ы	Т	R	Total	L	Т	R	Total	
Volume	2	0	1	3	0	0	0	0	0	2	2	4	1	2	0	3	10
PHF	0.25	0.00	0.13	0.19	0.00	0.00	0.00	0.00	0.00	0.06	0.25	0.11	0.25	0.10	0.00	0.15	0.19

#### Heavy Vehicle Rolling Hour Summary 7:15 AM to 9:15 AM

Interval Start			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave				ound 8th St				oound 8th St		Interval
Time	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	Total
7:15 AM	2	0	1	3	0	0	0	0	0	2	2	4	1	2	0	3	10
7:30 AM	3	0	2	5	0	0	0	0	0	2	0	2	0	5	0	5	12
7:45 AM	2	0	2	4	0	0	0	0	0	6	0	6	0	6	0	6	16
8:00 AM	1	0	2	3	0	0	0	0	0	6	0	6	0	5	0	5	14
8:15 AM	1	0	1	2	0	0	0	0	1	8	0	9	0	6	0	6	17

### **Peak Hour Summary** All Traffic Data Clay Carney (503) 833-2740 NE 232nd Ave & NE 28th St 7:15 AM to 8:15 AM Tuesday, December 15, 2015 NE 232nd Ave Bikes 0 0 0 K Peds 0 NE 28th St Bikes 0 0 305 **+** 233 241 8 7 0 135 **→** 95 90 45 Bikes 0 NE 28th St Peds 0 1 K 7 68 0 5 NE 232nd Ave 53 73 **Bikes Approach PHF** HV% Volume ΕB 0.89 3.0% 135 **WB** 0.81 1.2% 241 4.1% 73 NB 0.70 SB 0.33 0.0% 4 Intersection 0.91 2.2% 453 Count Period: 7:15 AM to 9:15 AM

# **Total Vehicle Summary**

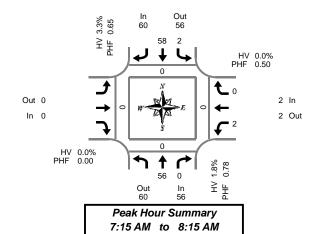


Clay Carney (503) 833-2740

### NE 232nd Ave & NE 9th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

#### 15-Minute Interval Summary 7:15 AM to 9:15 AM



Interval		bound				bound	Eastbo				ound					trians	
Start	NE 232	2nd Ave			NE 232	2nd Ave	NE 9th	n St		NE 9	th St		Interval		Cros	swalk	
Time	Т	R	Bikes	L	Т	Bikes		Bikes	s L		R	Bikes	Total	North	South	East	West
7:15 AM	13	0	0	1	22	0		0	1		0	0	37	0	0	0	0
7:30 AM	18	0	0	1	13	0		0	0		0	0	32	0	0	0	0
7:45 AM	10	0	0	0	14	0		0	0		0	0	24	0	0	0	0
8:00 AM	15	0	0	0	9	0		0	1		0	0	25	0	0	0	0
8:15 AM	7	0	0	0	10	0		0	0		0	0	17	0	0	0	0
8:30 AM	8	0	0	0	13	0		0	0		0	0	21	0	0	0	0
8:45 AM	11	1	0	0	4	0		0	0		0	0	16	0	0	0	0
9:00 AM	9	1	0	0	8	0		0	0		1	0	19	0	0	0	0
Total Survey	91	2	0	2	93	0		0	2		1	0	191	0	0	0	0

# Peak Hour Summary 7:15 AM to 8:15 AM

By Approach			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave			Eastb NE 9	ound oth St				oound Oth St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	56	60	116	0	60	56	116	0	0	0	0	0	2	2	4	0	118
%HV		1.8%				3.3	3%			0.0	0%			0.0	0%		2.5%
PHF		0.	78			0.	65			0.	00			0.	50		0.80

	Pedes	trians	
	Cross	swalk	
North	South	East	West
0	0	0	0

By Movement			<b>bound</b> 2nd Ave			South NE 232	bound and Ave				ound th St			Westl NE 9	oound Oth St		Total
Movement		Т	R	Total	L	Т		Total				Total	L		R	Total	
Volume		56	0	56	2	58		60				0	2		0	2	118
%HV	NA	1.8%	0.0%	1.8%	0.0%	3.4%	NA	3.3%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	2.5%
PHF		0.78	0.00	0.78	0.50	0.66		0.65				0.00	0.50		0.00	0.50	0.80

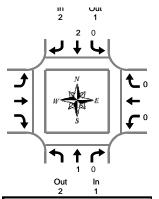
#### Rolling Hour Summary 7:15 AM to 9:15 AM

Interval Start		<b>bound</b> 2nd Ave				bound 2nd Ave			ound oth St			<b>bound</b> 9th St		Interval			strians swalk	
Time	Т	R	Bikes	L	T	Bik	ces			Bikes	L	R	Bikes	Total	North	South	East	West
7:15 AM	56	0	0	2	58	(	)			0	2	0	0	118	0	0	0	0
7:30 AM	50	0	0	1	46	(	)			0	1	0	0	98	0	0	0	0
7:45 AM	40	0	0	0	46	(	)			0	1	0	0	87	0	0	0	0
8:00 AM	41	1	0	0	36	(	)			0	1	0	0	79	0	0	0	0
8:15 AM	35	2	0	0	35	(	)			0	0	1	0	73	0	0	0	0

# **Heavy Vehicle Summary**



Out 0 In 0



Peak Hour Summary 7:15 AM to 8:15 AM

# NE 232nd Ave & NE 9th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

Heavy Vehicle 15-Minute Interval Summary

7:15 AM to 9:15 AM

Interval Start		<b>bound</b> 2nd Ave				bound 2nd Ave			oound th St			bound Oth St		Interval
Time	Т	R	Total	L	Т		Total			Total	L	R	Total	Total
7:15 AM	0	0	0	0	1		1			0	0	0	0	1
7:30 AM	0	0	0	0	1		1			0	0	0	0	1
7:45 AM	0	0	0	0	0		0			0	0	0	0	0
8:00 AM	1	0	1	0	0		0			0	0	0	0	1
8:15 AM	2	0	2	0	0		0			0	0	0	0	2
8:30 AM	0	0	0	0	0		0			0	0	0	0	0
8:45 AM	0	0	0	0	0		0			0	0	0	0	0
9:00 AM	0	0	0	0	0		0			0	0	0	0	0
Total Survey	3	0	3	0	2		2			0	0	0	0	5

### Heavy Vehicle Peak Hour Summary

7:15 AM to 8:15 AM

Ву		North	bound 2nd Ave			bound 2nd Ave		Eastb NE 9	oound oth St			oound hth St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	2	3	2	1	3	0	0	0	0	0	0	3
PHF	0.08	•		0.25	•	•	0.00		•	0.00			0.25

By Movement	North NE 232	bound and Ave				bound and Ave		Eastb NE 9			 oound Oth St		Total
Movement	Т	R	Total	L	Т		Total		Total	L	R	Total	
Volume	1	0	1	0	2		2		0	0	0	0	3
PHF	0.08	0.00	0.08	0.00	0.25		0.25		0.00	0.00	0.00	0.00	0.25

### Heavy Vehicle Rolling Hour Summary

7:15 AM to 9:15 AM

Interval Start		<b>bound</b> 2nd Ave				bound 2nd Ave		Eastb NE 9			Westl NE 9	oound Oth St		Interval
Time	Т	R	Total	L	Т		Total		Total	L		R	Total	Total
7:15 AM	1	0	1	0	2		2		0	0		0	0	3
7:30 AM	3	0	3	0	1		1		0	0		0	0	4
7:45 AM	3	0	3	0	0		0		0	0		0	0	3
8:00 AM	3	0	3	0	0		0		0	0		0	0	3
8:15 AM	2	0	2	0	0		0		0	0		0	0	2

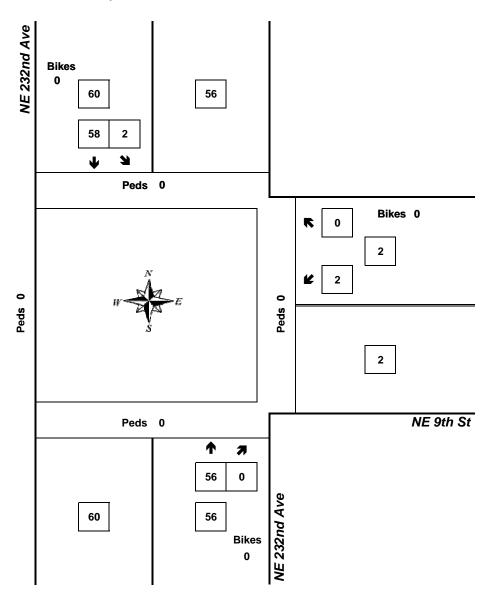
# **Peak Hour Summary**



Clay Carney (503) 833-2740

### NE 232nd Ave & NE 9th St

7:15 AM to 8:15 AM Tuesday, December 15, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.50	0.0%	2
NB	0.78	1.8%	56
SB	0.65	3.3%	60
Intersection	0.80	2.5%	118

Count Period: 7:15 AM to 9:15 AM

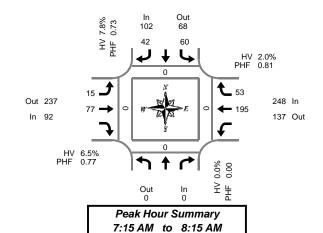
# **Total Vehicle Summary**



### NE 242nd Ave & NE 28th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

### 15-Minute Interval Summary 7:15 AM to 9:15 AM



Interval	Northb				bound				ound		Westk					Pedes		
Start	NE 242n	nd Ave		NE 242	nd Ave			NE 2	8th St		NE 28	3th St		Interval		Cross	swalk	
Time		Bikes	L		R	Bikes	L	Т		Bikes	Т	R	Bikes	Total	North	South	East	West
7:15 AM		0	21		14	0	2	19		0	60	17	0	133	0	0	0	0
7:30 AM		0	13		8	0	5	21		0	48	15	0	110	0	0	0	0
7:45 AM		0	17		13	0	4	26		0	57	14	0	131	0	0	0	0
8:00 AM		0	9		7	0	4	11		0	30	7	0	68	0	0	0	0
8:15 AM		0	12		8	0	5	19		0	49	13	0	106	0	0	0	0
8:30 AM		0	19		12	0	9	17		0	48	7	0	112	0	0	0	0
8:45 AM		0	13		14	0	0	22		0	43	14	0	106	0	0	0	0
9:00 AM		0	6		11	0	2	18		0	41	10	0	88	0	0	0	0
Total Survey		0	110		87	0	31	153		0	376	97	0	854	0	0	0	0

#### Peak Hour Summary 7:15 AM to 8:15 AM

By Approach			<b>bound</b> 2nd Ave				bound and Ave				oound 8th St				<b>bound</b> 8th St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	0	0	0	0	102	68	170	0	92	237	329	0	248	137	385	0	442
%HV		0.0	0%			7.8	3%			6.5	5%			2.0	0%		4.3%
PHF		0.	00			0.	73			0.	77			0.	81		0.83

	Pedes	trians	
	Cross	swalk	
North	South	East	West
0	0	0	0

By Movement			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave			Eastb NE 28	ound 3th St			Westl NE 28	ound 8th St		Total
Movement				Total	L		R	Total	L	Т		Total		Т	R	Total	
Volume				0	60		42	102	15	77		92		195	53	248	442
%HV	NA	NA	NA	0.0%	13.3%	NA	0.0%	7.8%	20.0%	3.9%	NA	6.5%	NA	1.0%	5.7%	2.0%	4.3%
PHF				0.00	0.71		0.75	0.73	0.75	0.74		0.77		0.81	0.78	0.81	0.83

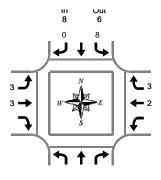
#### Rolling Hour Summary 7:15 AM to 9:15 AM

Interval Start	nbound 2nd Ave		South NE 242	bound and Ave				oound 8th St	Westk NE 28			Interval		Pedes	trians swalk	
Time	Bikes	L		R	Bikes	L	Т	Bikes	Т	R	Bikes	Total	North	South	East	West
7:15 AM	0	60		42	0	15	77	0	195	53	0	442	0	0	0	0
7:30 AM	0	51		36	0	18	77	0	184	49	0	415	0	0	0	0
7:45 AM	0	57		40	0	22	73	0	184	41	0	417	0	0	0	0
8:00 AM	0	53		41	0	18	69	0	170	41	0	392	0	0	0	0
8:15 AM	0	50		45	0	16	76	0	181	44	0	412	0	0	0	0

# **Heavy Vehicle Summary**



Out 2 In 6



Peak Hour Summary 7:15 AM to 8:15 AM

### NE 242nd Ave & NE 28th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

Heavy Vehicle 15-Minute Interval Summary

7:15 AM to 9:15 AM

Interval Start	Northb NE 242			<b>bound</b> 2nd Ave				oound 8th St		Westl NE 2			Interval
Time		Total	L	R	Total	L	Т		Total	Т	R	Total	Total
7:15 AM		0	3	0	3	0	0		0	0	1	1	4
7:30 AM		0	0	0	0	0	1		1	1	0	1	2
7:45 AM		0	2	0	2	2	2		4	1	2	3	9
8:00 AM		0	3	0	3	1	0		1	0	0	0	4
8:15 AM		0	1	1	2	1	0		1	2	0	2	5
8:30 AM		0	3	2	5	2	2		4	0	0	0	9
8:45 AM		0	0	1	1	0	1		1	0	0	0	2
9:00 AM		0	0	0	0	0	2		2	0	1	1	3
Total Survey		0	12	4	16	6	8		14	4	4	8	38

### Heavy Vehicle Peak Hour Summary

7:15 AM to 8:15 AM

Ву			bound			bound			ound			bound	T-1-1
Approach	In	Out	2nd Ave Total	In	Out	2nd Ave Total	In	Out	8th St Total	In	Out	8th St Total	Total
Volume	0	0	0	8	6	14	6	2	8	5	11	16	19
PHF	0.00		•	0.20		•	0.21		•	0.25			0.26

By Movement		bound 2nd Ave			 bound and Ave			Eastb NE 28	ound 3th St		Westl NE 28	oound 8th St		Total
Movement			Total	L	R	Total	Ы	Т		Total	Т	R	Total	
Volume			0	8	0	8	3	3		6	2	3	5	19
PHF			0.00	0.29	0.00	0.20	0.19	0.15		0.21	0.17	0.25	0.25	0.26

### Heavy Vehicle Rolling Hour Summary

7:15 AM to 9:15 AM

Interval Start	<b>bound</b> 2nd Ave			<b>bound</b> 2nd Ave				ound 8th St			oound 8th St		Interval
Time		Total	L	R	Total	L	Т		Total	Т	R	Total	Total
7:15 AM		0	8	0	8	3	3		6	2	3	5	19
7:30 AM		0	6	1	7	4	3		7	4	2	6	20
7:45 AM		0	9	3	12	6	4		10	3	2	5	27
8:00 AM		0	7	4	11	4	3		7	2	0	2	20
8:15 AM		0	4	4	8	3	5		8	2	1	3	19

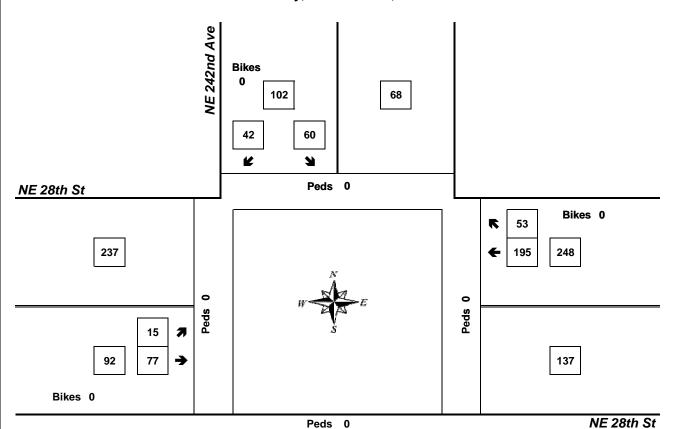
# **Peak Hour Summary**



Clay Carney (503) 833-2740

### NE 242nd Ave & NE 28th St

7:15 AM to 8:15 AM Tuesday, December 15, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.77	6.5%	92
WB	0.81	2.0%	248
NB	0.00	0.0%	0
SB	0.73	7.8%	102
Intersection	0.83	4.3%	442

Count Period: 7:15 AM to 9:15 AM

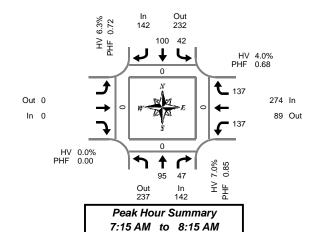
# **Total Vehicle Summary**



### NE 267th Ave & NE 19th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

#### 15-Minute Interval Summary 7:15 AM to 9:15 AM



Interval	North	bound			South	bound	Eastb	ound			Westl	ound				Pedes	strians	
Start	NE 26	7th Ave			NE 26	7th Ave	NE 19	9th St			NE 19	9th St		Interval		Cros	swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
7:15 AM	36	6	0	13	36	0			0	64		37	0	192	0	0	0	0
7:30 AM	23	12	0	7	27	0			0	26		31	0	126	0	0	0	0
7:45 AM	20	17	0	15	24	0			0	29		41	0	146	0	0	0	0
8:00 AM	16	12	0	7	13	0			0	18		28	0	94	0	0	0	0
8:15 AM	19	9	0	12	17	0			0	24		24	0	105	0	0	0	0
8:30 AM	14	10	0	12	26	0			0	29		32	0	123	0	0	0	0
8:45 AM	32	19	0	4	32	0			0	51		30	0	168	0	0	0	0
9:00 AM	28	16	0	13	17	0			0	15		17	0	106	0	0	0	0
Total Survey	188	101	0	83	192	0			0	256		240	0	1,060	0	0	0	0

#### Peak Hour Summary 7:15 AM to 8:15 AM

By Approach			bound 7th Ave				bound 7th Ave				oound 9th St				<b>bound</b> 9th St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	142	237	379	0	142	232	374	0	0	0	0	0	274	89	363	0	558
%HV		7.0	0%			6.3%				0.0	0%			4.0	0%		5.4%
PHF		0.	85			0.72				0.	00			0.	68		0.73

		Pedes	trians									
		Cross	swalk									
	North	North South East West										
	0	0	0	0								
١,												

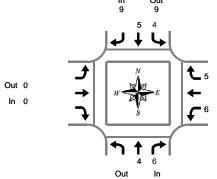
Bv		North	bound			South	bound			Eastk	ound			West	oound		
Movement		NE 267	7th Ave			NE 267	th Ave			NE 1	9th St			NE 1	9th St		Total
Movement		T	R	Total	L	Т		Total				Total	L		R	Total	
Volume		95	47	142	42	100		142				0	137		137	274	558
%HV	NA	4.2%	12.8%	7.0%	9.5%	5.0%	NA	6.3%	NA	NA	NA	0.0%	4.4%	NA	3.6%	4.0%	5.4%
PHF		0.66	0.69	0.85	0.70	0.69		0.72				0.00	0.54		0.84	0.68	0.73

#### Rolling Hour Summary 7:15 AM to 9:15 AM

Interval		bound				bound		stbou			Westl						trians	
Start	NE 26	7th Ave			NE 26	7th Ave	N	E 19th :	St		NE 19	9th St		Interval		Cros	swalk	
Time	T	R	Bikes	L	T	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
7:15 AM	95	47	0	42	100	0			0	137		137	0	558	0	0	0	0
7:30 AM	78	50	0	41	81	0			0	97		124	0	471	0	0	0	0
7:45 AM	69	48	0	46	80	0			0	100		125	0	468	0	0	0	0
8:00 AM	81	50	0	35	88	0			0	122		114	0	490	0	0	0	0
8:15 AM	93	54	0	41	92	0			0	119		103	0	502	0	0	0	0

# **Heavy Vehicle Summary**





Peak Hour Summary 7:15 AM to 8:15 AM

## NE 267th Ave & NE 19th St

Tuesday, December 15, 2015 7:15 AM to 9:15 AM

Heavy Vehicle 15-Minute Interval Summary

7:15 AM to 9:15 AM

Interval	North	bound			South	bound		Eastb	ound			West	bound		
Start	NE 26	7th Ave			NE 26	7th Ave		NE 19	9th St			NE 1	9th St		Interval
Time	Т	R	Total	L	Т		Total			Total	L		R	Total	Total
7:15 AM	2	0	2	2	1		3			0	5		0	5	10
7:30 AM	1	1	2	0	2		2			0	0		1	1	5
7:45 AM	0	2	2	1	1		2			0	1		2	3	7
8:00 AM	1	3	4	1	1		2			0	0		2	2	8
8:15 AM	1	1	2	0	1		1			0	0		1	1	4
8:30 AM	0	1	1	3	2		5			0	3		0	3	9
8:45 AM	0	0	0	1	2		3			0	2		0	2	5
9:00 AM	1	1	2	1	1		2			0	0		0	0	4
Total Survey	6	9	15	9	11		20			0	11		6	17	52

### Heavy Vehicle Peak Hour Summary

7:15 AM to 8:15 AM

Bv			bound			bound		Easth				oound	
Approach		NE 267	7th Ave		NE 267	th Ave		NE 19	9th St		NE 1	9th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	10	11	21	9	9	18	0	0	0	11	10	21	30
PHF	0.31			0.23			0.00			0.31			0.34

By Movement		<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 1	ound 9th St			Westl NE 19	oound 9th St		Total
Movement	Т	R	Total	٦	T		Total			Total	L		R	Total	
Volume	4	6	10	4	5		9			0	6		5	11	30
PHF	0.33	0.25	0.31	0.20	0.25		0.23			0.00	0.25		0.25	0.31	0.34

### Heavy Vehicle Rolling Hour Summary

7:15 AM to 9:15 AM

Interval Start	North NE 267	<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 19	ound 9th St			Westl NE 19	oound 9th St		Interval
Time	Т	R	Total	L	Т		Total			Total	L		R	Total	Total
7:15 AM	4	6	10	4	5		9			0	6		5	11	30
7:30 AM	3	7	10	2	5		7			0	1		6	7	24
7:45 AM	2	7	9	5	5		10			0	4		5	9	28
8:00 AM	2	5	7	5	6		11			0	5		3	8	26
8:15 AM	2	3	5	5	6		11			0	5		1	6	22

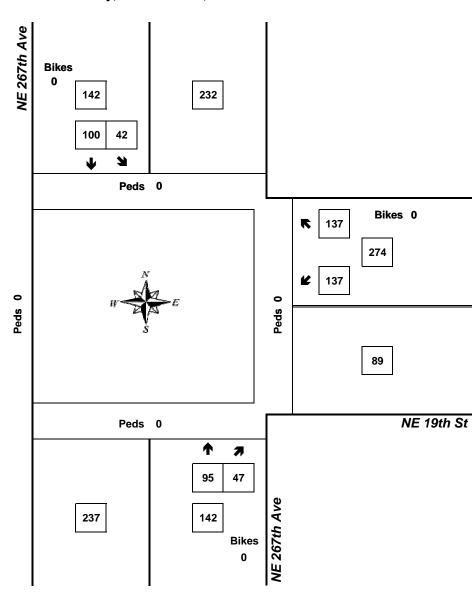
# **Peak Hour Summary**



Clay Carney (503) 833-2740

### NE 267th Ave & NE 19th St

7:15 AM to 8:15 AM Tuesday, December 15, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.68	4.0%	274
NB	0.85	7.0%	142
SB	0.72	6.3%	142
Intersection	0.73	5.4%	558

Count Period: 7:15 AM to 9:15 AM

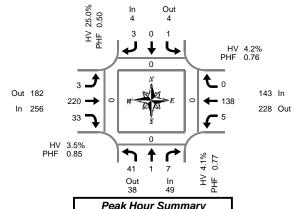
# **Total Vehicle Summary**



### NE 232nd Ave & NE 28th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

#### 15-Minute Interval Summary 1:45 PM to 3:45 PM



Peak Ho	ur S	Summary
2:45 PM	to	3:45 PM

Interval		North	bound			South	bound			Eastb	ound			Westl	ound				Pedes	trians	
Start		NE 232	2nd Ave			NE 232	2nd Ave			NE 2	8th St			NE 28	8th St		Interval		Cross	swalk	
Time	L	Т	R	Bikes	L	Т	R	Bikes	٦	Т	R	Bikes	L	Т	R	Bikes	Total	North	South	East	West
1:45 PM	8	1	3	0	0	1	0	0	2	39	8	0	1	38	0	0	101	0	0	0	0
2:00 PM	6	0	0	0	1	0	1	0	1	51	8	0	1	32	0	0	101	0	0	0	0
2:15 PM	5	0	1	0	0	0	0	0	1	31	12	0	0	38	0	0	88	0	0	0	0
2:30 PM	19	0	0	0	0	0	0	0	1	57	8	0	1	34	0	0	120	0	0	0	0
2:45 PM	9	0	1	0	0	0	0	0	1	48	8	0	0	20	0	0	87	0	0	0	0
3:00 PM	10	0	2	0	0	0	0	0	2	51	6	0	0	32	0	0	103	0	0	0	0
3:15 PM	14	1	1	0	0	0	2	0	0	55	10	0	1	46	0	0	130	0	0	0	0
3:30 PM	8	0	3	0	1	0	1	0	0	66	9	0	4	40	0	0	132	0	0	0	0
Total Survey	79	2	11	0	2	1	4	0	8	398	69	0	8	280	0	0	862	0	0	0	0

#### Peak Hour Summary 2:45 PM to 3:45 PM

By Approach			<b>bound</b> 2nd Ave				bound and Ave				ound 8th St				oound 8th St		0 452 4.0%
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	49	38	87	0	4	4	8	0	256	182	438	0	143	228	371	0	452
%HV	49   38   87   4.1%					25.	0%			3.5	5%			4.2	2%		4.0%
PHF	0.77					0.	50			0.	85			0.	76		0.86

1		Pedes	trians	
		Cross	swalk	
	North	South	East	West
	0	0	0	0

By Movement			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave				ound 8th St			Westl NE 2	oound 8th St		Total
wovement	٦	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	41	1	7	49	1	0	3	4	3	220	33	256	5	138	0	143	452
%HV	4.9%	0.0%	0.0%	4.1%	0.0%	0.0%	33.3%	25.0%	33.3%	3.6%	0.0%	3.5%	20.0%	3.6%	0.0%	4.2%	4.0%
PHF	0.73	0.25	0.58	0.77	0.25	0.00	0.38	0.50	0.38	0.83	0.83	0.85	0.31	0.75	0.00	0.76	0.86

#### Rolling Hour Summary 1:45 PM to 3:45 PM

	Interval		North	bound			South	bound			Eastb	ound			West	oound				Pedes	strians	
	Start		NE 232	2nd Ave			NE 232	2nd Ave			NE 2	8th St			NE 2	8th St		Interval		Cross	swalk	
L	Time	┙	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	Total	North	South	East	
Г	1:45 PM	38	1	4	0	1	1	1	0	5	178	36	0	3	142	0	0	410	0	0	0	Г
	2:00 PM	39	0	2	0	1	0	1	0	4	187	36	0	2	124	0	0	396	0	0	0	
	2:15 PM	43	0	4	0	0	0	0	0	5	187	34	0	1	124	0	0	398	0	0	0	
	2:30 PM	52	1	4	0	0	0	2	0	4	211	32	0	2	132	0	0	440	0	0	0	Г
	2:45 PM	41	1	7	0	1	0	3	0	3	220	33	0	5	138	0	0	452	0	0	0	

# **Heavy Vehicle Summary**



# NE 232nd Ave & NE 28th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

Out 8

In 9

Peak Hour Summary 2:45 PM to 3:45 PM

## Heavy Vehicle 15-Minute Interval Summary

1:45 PM	to	3:45 PM
Interval		Northbox

Interval		North	bound			South	bound			Eastk	ound			Westl	ound		
Start		NE 232	2nd Ave			NE 232	2nd Ave			NE 2	8th St			NE 28	Bth St		Interval
Time	١	T	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	Total
1:45 PM	0	0	0	0	0	0	0	0	1	1	1	3	0	1	0	1	4
2:00 PM	0	0	0	0	0	0	1	1	0	1	2	3	0	1	0	1	5
2:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
2:45 PM	0	0	0	0	0	0	0	0	1	3	0	4	0	1	0	1	5
3:00 PM	2	0	0	2	0	0	0	0	0	1	0	1	0	3	0	3	6
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
3:30 PM	0	0	0	0	0	0	1	1	0	2	0	2	1	0	0	1	4
Total Survey	2	0	0	2	0	0	2	2	2	17	3	22	1	8	0	9	35

#### Heavy Vehicle Peak Hour Summary 2:45 PM to 3:45 PM

By			<b>bound</b> 2nd Ave			<b>bound</b> 2nd Ave			oound 8th St			bound 8th St	Total
Approach	In Out Total		In	Out	Total	In	Out	Total	In	Out	Total	1	
Volume	2	1	3	1	1	2	9	8	17	6	8	14	18
PHF	0.25	0.25				•	0.20		•	0.30	•		0.30

Ву			bound 2nd Ave				bound and Ave				ound 8th St				oound 8th St		Total
Movement	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	2	0	0	2	0	0	1	1	1	8	0	9	1	5	0	6	18
PHF	0.25	0.00	0.00	0.25	0.00	0.00	0.25	0.25	0.25	0.20	0.00	0.20	0.25	0.25	0.00	0.30	0.30

#### Heavy Vehicle Rolling Hour Summary 1:45 PM to 3:45 PM

Interval Start			bound 2nd Ave				bound 2nd Ave				oound 8th St				oound 8th St		Interval
Time						Т	R	Total	L	Т	R	Total	L	Т	R	Total	Total
1:45 PM	0	0	0	0	0	0	1	1	1	9	3	13	0	3	0	3	17
2:00 PM	0	0	0	0	0	0	1	1	1	11	2	14	0	3	0	3	18
2:15 PM	2	0	0	2	0	0	0	0	1	11	0	12	0	5	0	5	19
2:30 PM	2	0	0	2	0	0	0	0	1	9	0	10	0	6	0	6	18
2:45 PM	2	0	0	2	0	0	1	1	1	8	0	9	1	5	0	6	18

### **Peak Hour Summary** All Traffic Data Clay Carney (503) 833-2740 NE 232nd Ave & NE 28th St 2:45 PM to 3:45 PM Tuesday, December 08, 2015 NE 232nd Ave Bikes 0 3 1 K Peds 0 NE 28th St Bikes 0 0 182 138 143 5 7 3 256 **→** 228 220 33 4 Bikes 0 NE 28th St Peds 0 1 K 7 41 1 NE 232nd Ave 38 49 **Bikes Approach PHF** HV% Volume ΕB 0.85 3.5% 256 **WB** 0.76 4.2% 143 4.1% 49 NB 0.77 SB 0.50 25.0% 4 Intersection 0.86 4.0% 452 Count Period: 1:45 PM to 3:45 PM

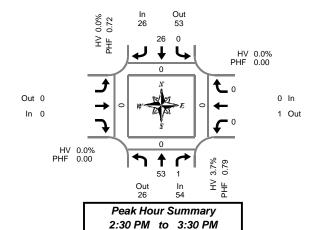
# **Total Vehicle Summary**



# NE 232nd Ave & NE 9th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

### 15-Minute Interval Summary 1:45 PM to 3:45 PM



Interval	Nor	thbound			South	bound	Easth	ound			Westl	ound				Pedes	trians	
Start	NE 2	32nd Av	е		NE 232	2nd Ave	NE 9	th St			NE 9	th St		Interval		Cross	swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
1:45 PM	9	0	0	0	2	0			0	0		0	0	11	0	0	0	0
2:00 PM	6	0	0	1	8	0			0	0		0	0	15	0	0	0	0
2:15 PM	6	1	0	0	11	0			0	0		0	0	18	0	0	0	0
2:30 PM	17	0	0	0	8	0			0	0		0	0	25	0	0	0	0
2:45 PM	11	1	0	0	6	0			0	0		0	0	18	0	0	0	0
3:00 PM	11	0	0	0	3	0			0	0		0	0	14	0	0	0	0
3:15 PM	14	0	0	0	9	0			0	0		0	0	23	0	0	0	0
3:30 PM	15	0	0	0	8	0			0	2		0	0	25	0	0	0	0
Total Survey	89	2	0	1	55	0			0	2		0	0	149	0	0	0	0

### Peak Hour Summary 2:30 PM to 3:30 PM

By Approach			<b>bound</b> 2nd Ave				bound 2nd Ave				oound Oth St				bound 9th St		Total
Approacri	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	54	26	80	0	26	53	79	0	0	0	0	0	0	1	1	0	80
%HV		3.	7%			0.0	0%			0.0	0%			0.0	0%		2.5%
PHF		0.	79			0.	72			0.	00			0.	00		0.80

	Pedes	trians	
	Cross	swalk	
North	South	East	West
0	0	0	0

By Movement			<b>bound</b> 2nd Ave			South NE 232	<b>bound</b> 2nd Ave				ound th St			Westl NE 9	oound Oth St		Total
Movement		Т	R	Total	L	Т		Total				Total	L		R	Total	
Volume		53	1	54	0	26		26				0	0		0	0	80
%HV	NA	3.8%	0.0%	3.7%	0.0%	0.0%	NA	0.0%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	2.5%
PHF		0.78	0.25	0.79	0.00	0.72		0.72				0.00	0.00		0.00	0.00	0.80

# Rolling Hour Summary

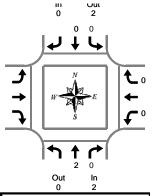
### 1:45 PM to 3:45 PM

Interval Start	North NE 232	<b>bound</b> 2nd Ave				bound and Ave		ound th St			Westl NE 9	ound th St		Interval			strians swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
1:45 PM	38	1	0	1	29	0			0	0		0	0	69	0	0	0	0
2:00 PM	40	2	0	1	33	0			0	0		0	0	76	0	0	0	0
2:15 PM	45	2	0	0	28	0			0	0		0	0	75	0	0	0	0
2:30 PM	53	1	0	0	26	0			0	0		0	0	80	0	0	0	0
2:45 PM	51	1	0	0	26	0			0	2		0	0	80	0	0	0	0

# **Heavy Vehicle Summary**



Out 0 In 0



Peak Hour Summary 2:30 PM to 3:30 PM

# NE 232nd Ave & NE 9th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

Heavy Vehicle 15-Minute Interval Summary

1:45 PM to 3:45 PM

Interval Start	North NE 232	bound 2nd Ave				bound 2nd Ave		Eastb NE 9	ound th St			bound Oth St		Interval
Time	T	R	Total	L	T	1	Total			Total	L	R	Total	Total
1:45 PM	0	0	0	0	0		0			0	0	0	0	0
2:00 PM	0	0	0	0	2		2			0	0	0	0	2
2:15 PM	0	0	0	0	0		0			0	0	0	0	0
2:30 PM	0	0	0	0	0		0			0	0	0	0	0
2:45 PM	0	0	0	0	0		0			0	0	0	0	0
3:00 PM	2	0	2	0	0		0			0	0	0	0	2
3:15 PM	0	0	0	0	0		0			0	0	0	0	0
3:30 PM	0	0	0	0	0		0			0	0	0	0	0
Total Survey	2	0	2	0	2		2			0	0	0	0	4

### Heavy Vehicle Peak Hour Summary 2:30 PM to 3:30 PM

By			bound 2nd Ave			bound 2nd Ave		Eastb NE 9	ound oth St			<b>bound</b> 9th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	0	2	0	2	2	0	0	0	0	0	0	2
PHF	0.25			0.00		•	0.00		•	0.00			0.25

By Movement		<b>bound</b> 2nd Ave				bound and Ave		Eastb NE 9			 oound oth St		Total
Movement	T	R	Total	L	T		Total		Total	L	R	Total	
Volume	2	0	2	0	0		0		0	0	0	0	2
PHF	0.25	0.00	0.25	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.25

### Heavy Vehicle Rolling Hour Summary 1:45 PM to 3:45 PM

Interval Start		<b>bound</b> 2nd Ave				bound 2nd Ave		Eastb NE 9			Westl NE 9	oound Oth St		Interval
Time	Т	R	Total	L	Т		Total		Total	L		R	Total	Total
1:45 PM	0	0	0	0	2		2		0	0		0	0	2
2:00 PM	0	0	0	0	2		2		0	0		0	0	2
2:15 PM	2	0	2	0	0		0		0	0		0	0	2
2:30 PM	2	0	2	0	0		0		0	0		0	0	2
2:45 PM	2	0	2	0	0		0		0	0		0	0	2

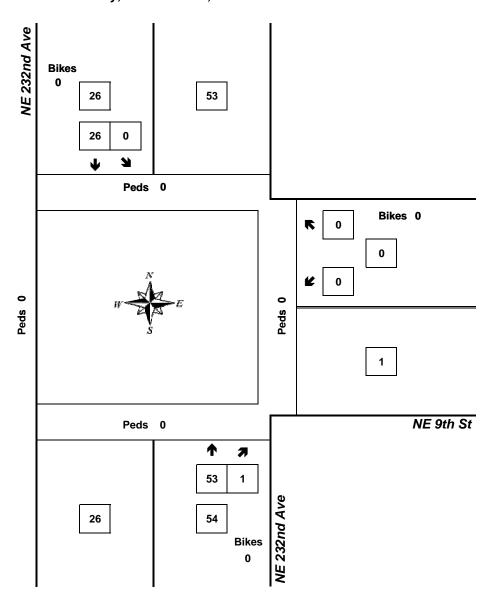
# **Peak Hour Summary**



Clay Carney (503) 833-2740

# NE 232nd Ave & NE 9th St

2:30 PM to 3:30 PM Tuesday, December 08, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.00	0.0%	0
NB	0.79	3.7%	54
SB	0.72	0.0%	26
Intersection	0.80	2.5%	80

Count Period: 1:45 PM to 3:45 PM

# **Total Vehicle Summary**



### NE 242nd Ave & NE 28th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

Northbound

NE 242nd Ave

15

15

### 15-Minute Interval Summary 1:45 PM to 3:45 PM

Interval

Start

Time 1:45 PM

2:00 PM 2:15 PM

2:30 PM

2:45 PM

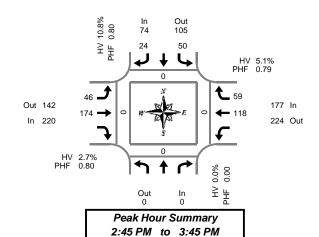
3:00 PM

3:15 PM

3:30 PM

Total

Survey



	Westl	oound				Pedes	trians	
	NE 28	8th St		Interval		Cross	swalk	
Bikes	T	R	Bikes	Total	North	South	East	West
0	35	5	0	101	0	0	0	0
0	23	5	0	99	0	0	0	0
0	34	16	0	98	0	0	0	0
0	24	10	0	110	0	0	1	0
0	14	16	0	85	0	0	0	0
0	28	12	0	111	0	0	0	0
0	40	16	0	132	0	0	0	0
0	36	15	0	143	0	0	0	0

### Peak Hour Summary 2:45 PM to 3:45 PM

Bv			bound				bound				ound				oound		
		NE 242	2nd Ave			NE 242	2nd Ave			NE 2	8th St			NE 2	8th St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	0	0	0	0	74	105	179	0	220	142	362	0	177	224	401	0	471
%HV		0.0	0%		0 74 105 179 0 220 142 362 0 177 224 401 0 10.8% 2.7% 5.1%					4.9%							
PHF		0.	00			0.	80			0.	80			0.	79		0.82

Southbound

NE 242nd Ave

R

8

9

		Pedes	trians	
		Cross	swalk	
	North	South	East	West
	0	0	0	0
١,				

Bv		North	bound			South	bound			Eastb	ound			Westl	oound		
Movement		NE 242	2nd Ave			NE 242	2nd Ave			NE 28	3th St			NE 2	8th St		Total
Movement				Total	L		R	Total	Ы	Т		Total		Т	R	Total	
Volume				0	50		24	74	46	174		220		118	59	177	471
%HV	NA	NA	NA	0.0%	14.0%	NA	4.2%	10.8%	0.0%	3.4%	NA	2.7%	NA	2.5%	10.2%	5.1%	4.9%
PHF				0.00	0.83		0.67	0.80	0.72	0.82		0.80		0.74	0.92	0.79	0.82

### **Rolling Hour Summary** 1:45 PM to 3:45 PM

Interval Start	thbound 242nd Ave			South NE 242	bound and Ave				oound 8th St	Westk NE 28			Interval			strians swalk	
Time		Bikes	L		R	Bikes	L	Т	Bikes	Т	R	Bikes	Total	North	South	East	West
1:45 PM		0	45		28	0	50	133	0	116	36	0	408	0	0	1	0
2:00 PM		0	43		28	0	43	136	0	95	47	0	392	0	0	1	0
2:15 PM		0	43		21	0	47	139	0	100	54	0	404	0	0	1	0
2:30 PM		0	43		27	0	48	160	0	106	54	0	438	0	0	1	0
2:45 PM		0	50		24	0	46	174	0	118	59	0	471	0	0	0	0

Eastbound

NE 28th St

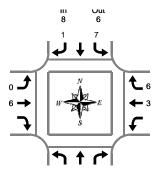
Т

23

# **Heavy Vehicle Summary**



Out 4 In 6



Peak Hour Summary 2:45 PM to 3:45 PM

Total

4

22

Interval

Total

6

8 4

6

49

# NE 242nd Ave & NE 28th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

Heavy Vehicle 15-Minute Interval Summary 1:45 PM to 3:45 PM

Interval	North	bound			South	bound			Eastb	ound		Westl	ound
Start	NE 242	2nd Ave			NE 242	2nd Ave			NE 2	8th St		NE 2	8th St
Time			Total	L		R	Total	L	Т		Total	Т	R
1:45 PM			0	0		0	0	2	0		2	2	2
2:00 PM			0	1		0	1	1	0		1	2	2
2:15 PM			0	0		0	0	2	2		4	1	2
2:30 PM			0	1		1	2	2	1		3	0	2
2:45 PM			0	2		0	2	0	2		2	0	1
3:00 PM			0	1		0	1	0	2		2	3	2
3:15 PM			0	2		0	2	0	1		1	0	1

2

11

7

9

16

8

14

### Heavy Vehicle Peak Hour Summary 2:45 PM to 3:45 PM

0

9

3:30 PM

Total

By			<b>bound</b> 2nd Ave			<b>bound</b> 2nd Ave			oound 8th St			bound 8th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	8	6	14	6	4	10	9	13	22	23
PHF	0.00			0.33			0.17			0.20			0.29

Ву		bound				bound				ound		Westk			Total
Movement	NE 242	2nd Ave			NE 242	nd Ave			NE 2	8th St		NE 2	stn St		Total
Wovement			Total	L		R	Total	L	Т		Total	Т	R	Total	
Volume			0	7		1	8	0	6		6	3	6	9	23
PHF			0.00	0.35		0.25	0.33	0.00	0.30		0.17	0.15	0.25	0.20	0.29

### Heavy Vehicle Rolling Hour Summary 1:45 PM to 3:45 PM

Interval	North	bound			South	bound			Eastb	ound			oound		
Start	NE 242	2nd Ave			NE 242	2nd Ave			NE 2	8th St		NE 28	8th St		Interval
Time			Total	L		R	Total	L	Т		Total	Т	R	Total	Total
1:45 PM			0	2		1	3	7	3		10	5	8	13	26
2:00 PM			0	4		1	5	5	5		10	3	7	10	25
2:15 PM			0	4		1	5	4	7		11	4	7	11	27
2:30 PM			0	6		1	7	2	6		8	3	6	9	24
2:45 PM			0	7		1	8	0	6		6	3	6	9	23

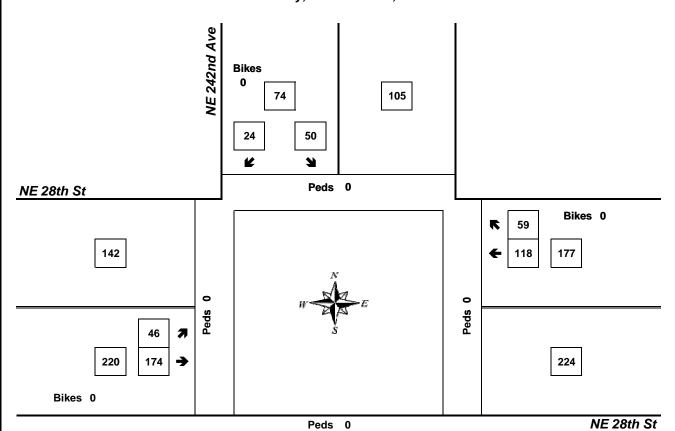
# **Peak Hour Summary**



Clay Carney (503) 833-2740

# NE 242nd Ave & NE 28th St

2:45 PM to 3:45 PM Tuesday, December 08, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.80	2.7%	220
WB	0.79	5.1%	177
NB	0.00	0.0%	0
SB	0.80	10.8%	74
Intersection	0.82	4.9%	471

Count Period: 1:45 PM to 3:45 PM

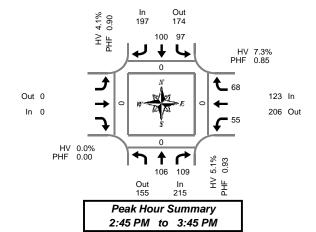
# **Total Vehicle Summary**



# NE 267th Ave & NE 19th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

### 15-Minute Interval Summary 1:45 PM to 3:45 PM



Interval Start		oound th Ave			South NE 267	bound 7th Ave			ound 9th St			Westk NE 19	oound 9th St		Interval			strians swalk	
Time	Т	R	Bikes	L	Т		Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
1:45 PM	26	18	0	18	15		0			0	12		14	0	103	0	0	0	0
2:00 PM	10	12	0	19	21		0			0	14		16	0	92	0	0	0	0
2:15 PM	26	20	0	17	22		0			0	19		18	0	122	0	0	0	0
2:30 PM	17	37	0	27	18		0			0	13		13	0	125	0	0	0	0
2:45 PM	17	31	0	16	27		0			0	19		13	0	123	0	0	0	0
3:00 PM	26	27	0	28	21		0			0	10		14	0	126	0	0	0	0
3:15 PM	39	19	0	27	28		0			0	16		20	0	149	0	0	0	0
3:30 PM	24	32	0	26	24		0			0	10		21	0	137	0	0	0	0
Total Survey	185	196	0	178	176		0			0	113		129	0	977	0	0	0	0

### Peak Hour Summary 2:45 PM to 3:45 PM

By Approach			<b>bound</b> 7th Ave				bound 7th Ave				ound 9th St				oound 9th St		Total
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	215	155	370	0	197	174	371	0	0	0	0	0	123	206	329	0	535
%HV		5.	1%			4.	1%			0.0	0%			7.3	3%		5.2%
PHF		0.	93			0.	90			0.	00			0.	85		0.90

1		Pedes	trians	
		Cross	swalk	
	North	South	East	West
1	0	0	0	0

By Movement			bound 7th Ave			South NE 267	<b>bound</b> 7th Ave			Eastb NE 19				Westl NE 1	oound 9th St		Total
Movement		Т	R	Total	٦	Т		Total				Total	L		R	Total	
Volume		106	109	215	97	100		197				0	55		68	123	535
%HV	NA	3.8%	6.4%	5.1%	3.1%	5.0%	NA	4.1%	NA	NA	NA	0.0%	9.1%	NA	5.9%	7.3%	5.2%
PHF		0.68	0.85	0.93	0.87	0.89		0.90				0.00	0.72		0.81	0.85	0.90

### Rolling Hour Summary 1:45 PM to 3:45 PM

Interval Start		bound 7th Ave				bound 7th Ave	Eastb NE 19	ound 9th St			Westb NE 19			Interval			trians swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
1:45 PM	79	87	0	81	76	0			0	58		61	0	442	0	0	0	0
2:00 PM	70	100	0	79	88	0			0	65		60	0	462	0	0	0	0
2:15 PM	86	115	0	88	88	0			0	61		58	0	496	0	0	0	0
2:30 PM	99	114	0	98	94	0			0	58		60	0	523	0	0	0	0
2:45 PM	106	109	0	97	100	0			0	55		68	0	535	0	0	0	0

# **Heavy Vehicle Summary**



ney 2740

# NE 267th Ave & NE 19th St

Tuesday, December 08, 2015 1:45 PM to 3:45 PM

Peak Hour Summary
2:45 PM to 3:45 PM

Out 0

In 0

# Heavy Vehicle 15-Minute Interval Summary 1:45 PM to 3:45 PM

Interval Start		<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 19	ound 9th St			Westl NE 19	oound 9th St		Interval
Time	Т	R	Total	L	Т		Total			Total	L		R	Total	Total
1:45 PM	2	0	2	0	0		0			0	0		0	0	2
2:00 PM	0	0	0	0	0		0			0	0		1	1	1
2:15 PM	1	0	1	1	1		2			0	0		1	1	4
2:30 PM	1	0	1	2	0		2			0	0		0	0	3
2:45 PM	0	2	2	1	2		3			0	1		0	1	6
3:00 PM	2	4	6	0	0		0			0	1		3	4	10
3:15 PM	1	1	2	0	1		1			0	1		0	1	4
3:30 PM	1	0	1	2	2		4			0	2		1	3	8
Total Survey	8	7	15	6	6		12			0	5		6	11	38

# Heavy Vehicle Peak Hour Summary 2:45 PM to 3:45 PM

By			<b>bound</b> 7th Ave			<b>bound</b> 7th Ave			oound 9th St			<b>bound</b> 9th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	11	10	21	8	8	16	0	0	0	9	10	19	28
PHF	0.28			0.29			0.00			0.28			0.32

By Movement		<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 19			Westl NE 19	oound 9th St		Total
wovement	Т	R	Total	L	T		Total		Total	L		R	Total	
Volume	4	7	11	3	5		8		0	5		4	9	28
PHF	0.25	0.25	0.28	0.19	0.42		0.29		0.00	0.31		0.25	0.28	0.32

### Heavy Vehicle Rolling Hour Summary 1:45 PM to 3:45 PM

Interval Start		ound th Ave				<b>bound</b> 7th Ave		Eastb NE 19	ound 9th St			oound 9th St		Interval
Time	Т	R	Total	L	Т		Total			Total	L	R	Total	Total
1:45 PM	4	0	4	3	1		4			0	0	2	2	10
2:00 PM	2	2	4	4	3		7			0	1	2	3	14
2:15 PM	4	6	10	4	3		7			0	2	4	6	23
2:30 PM	4	7	11	3	3		6			0	3	3	6	23
2:45 PM	4	7	11	3	5		8			0	5	4	9	28

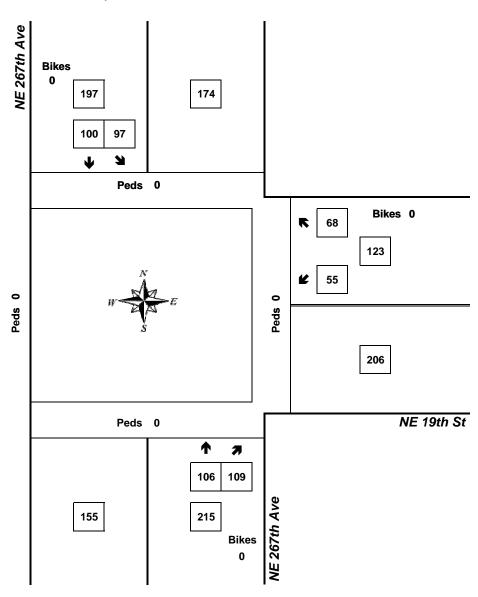
# **Peak Hour Summary**



Clay Carney (503) 833-2740

# NE 267th Ave & NE 19th St

2:45 PM to 3:45 PM Tuesday, December 08, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.85	7.3%	123
NB	0.93	5.1%	215
SB	0.90	4.1%	197
Intersection	0.90	5.2%	535

Count Period: 1:45 PM to 3:45 PM

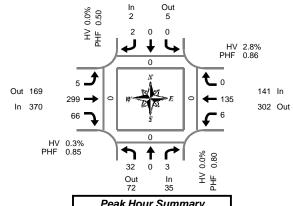
# **Total Vehicle Summary**



# NE 232nd Ave & NE 28th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

### 15-Minute Interval Summary 4:00 PM to 6:00 PM



Peak Hour Summary 4:45 PM to 5:45 PM

Interval		North	bound			South	bound			Eastb	ound			Westl	ound	,			Pedes	trians	
Start		NE 232	2nd Ave			NE 232	2nd Ave			NE 2	3th St			NE 28	8th St		Interval		Cross	swalk	
Time	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	Total	North	South	East	West
4:00 PM	19	0	2	0	0	1	2	0	0	59	10	0	2	34	0	0	129	0	0	0	0
4:15 PM	13	0	0	0	0	0	0	0	2	51	8	0	1	30	0	0	105	0	0	0	0
4:30 PM	5	1	1	0	0	1	1	0	2	82	7	0	0	38	0	0	138	0	0	0	0
4:45 PM	10	0	1	0	0	0	1	0	1	71	15	0	4	37	0	0	140	0	0	0	0
5:00 PM	6	0	1	0	0	0	1	0	0	72	11	0	1	30	0	0	122	0	0	0	0
5:15 PM	10	0	0	0	0	0	0	0	1	87	21	0	0	28	0	0	147	0	0	0	0
5:30 PM	6	0	1	0	0	0	0	0	3	69	19	0	1	40	0	0	139	0	0	0	0
5:45 PM	11	0	1	0	0	0	0	0	0	82	10	0	1	22	0	0	127	0	0	0	0
Total Survey	80	1	7	0	0	2	5	0	9	573	101	0	10	259	0	0	1,047	0	0	0	0

### Peak Hour Summary 4:45 PM to 5:45 PM

By Approach			<b>bound</b> 2nd Ave				bound 2nd Ave				oound 8th St				<b>bound</b> 8th St		Total
Approacri	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	35	72	107	0	2	5	7	0	370	169	539	0	141	302	443	0	548
%HV		0.0	0%			0.0	0%			0.3	3%			2.8	8%		0.9%
PHF		0.	80			0.	50			0.	85			0.	86		0.93

1		Pedes	trians	
		Cross	swalk	
	North	South	East	West
	0	0	0	0

By Movement		North NE 232	<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave			Eastb NE 28	ound 3th St			Westl NE 28	oound 8th St		Total
Movement	L	Т	R	Total	٦	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	32	0	3	35	0	0	2	2	5	299	66	370	6	135	0	141	548
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.3%	0.0%	3.0%	0.0%	2.8%	0.9%
PHF	0.80	0.00	0.75	0.80	0.00	0.00	0.50	0.50	0.42	0.86	0.79	0.85	0.38	0.84	0.00	0.86	0.93

### Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start			<b>bound</b> 2nd Ave			South NE 232	bound			Eastb NE 28				Westk NE 28			Interval		Pedes	strians swalk	
Time	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	Total	North	South	East	West
4:00 PM	47	1	4	0	0	2	4	0	5	263	40	0	7	139	0	0	512	0	0	0	0
4:15 PM	34	1	3	0	0	1	3	0	5	276	41	0	6	135	0	0	505	0	0	0	0
4:30 PM	31	1	3	0	0	1	3	0	4	312	54	0	5	133	0	0	547	0	0	0	0
4:45 PM	32	0	3	0	0	0	2	0	5	299	66	0	6	135	0	0	548	0	0	0	0
5:00 PM	33	0	3	0	0	0	1	0	4	310	61	0	3	120	0	0	535	0	0	0	0

# **Heavy Vehicle Summary**



# NE 232nd Ave & NE 28th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

Out 4 Peak Hour Summary

In 1

4:45 PM to 5:45 PM

### Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave				ound 8th St				oound 8th St		Interval
Time	L	Т	R	Total	L	Ţ	R	Total	L	Т	R	Total	L	Т	R	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	1	0	2	4
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Survey	0	0	0	0	0	0	0	0	0	6	1	7	1	5	0	6	13

### Heavy Vehicle Peak Hour Summary 4:45 PM to 5:45 PM

Bv		North	bound		South	bound		Eastb	ound		West	bound	
		NE 232	2nd Ave		NE 232	2nd Ave		NE 2	8th St		NE 2	8th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	0	0	0	1	4	5	4	0	4	5
PHF	0.00			0.00			0.05			0.25			0.16

Ву			bound 2nd Ave				bound 2nd Ave			Eastb NE 28	ound 3th St			Westl NE 28	oound 8th St		Total
Movement	L	T	R	Total	L	T	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	4	5
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.05	0.00	0.33	0.00	0.25	0.16

### Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval			<b>bound</b> 2nd Ave				bound and Ave			Eastb	ound 8th St			Westl NE 2	oound		Interval
Start Time	L	T T	R R	Total	L	T T	R	Total	L	T T	R	Total	L	T T	R	Total	Interval Total
4:00 PM	0	0	0	0	0	0	0	0	0	5	1	6	1	3	0	4	10
4:15 PM	0	0	0	0	0	0	0	0	0	3	1	4	1	4	0	5	9
4:30 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	3	0	3	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	4	0	4	5
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3

### **Peak Hour Summary** All Traffic Data Clay Carney (503) 833-2740 NE 232nd Ave & NE 28th St 4:45 PM to 5:45 PM Tuesday, December 08, 2015 NE 232nd Ave Bikes 0 2 5 2 0 0 K Peds 0 NE 28th St Bikes 0 0 169 135 141 6 7 5 370 **→** 302 299 66 4 Bikes 0 NE 28th St Peds 0 1 K 7 32 0 3 NE 232nd Ave 72 35 **Bikes Approach PHF** HV% Volume ΕB 0.85 0.3% 370 **WB** 0.86 2.8% 141 0.0% 35 NB 0.80 SB 0.50 0.0% 2 Intersection 0.93 0.9% 548 Count Period: 4:00 PM to 6:00 PM

# **Total Vehicle Summary**

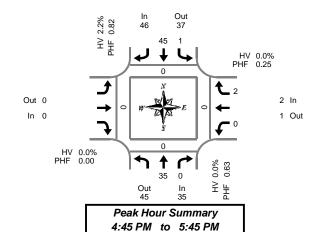


Clay Carney (503) 833-2740

# NE 232nd Ave & NE 9th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

#### 15-Minute Interval Summary 4:00 PM to 6:00 PM



4.00 F W	ιυ	0.00 F	IVI																
Interval		North	bound			South	bound	Eastb	ound			Westb	ound				Pedes	trians	
Start		NE 232	2nd Ave			NE 232	2nd Ave	NE 9	th St			NE 91	th St		Interval		Cros	swalk	
Time		Т	R	Bikes	L	T	Bikes		Bi	kes	L		R	Bikes	Total	North	South	East	West
4:00 PM		15	0	0	1	7	0			0	0		1	0	24	0	0	0	0
4:15 PM		9	0	0	0	7	0			0	1		0	0	17	0	0	0	0
4:30 PM		8	0	0	0	8	0			0	0		0	0	16	0	0	0	0
4:45 PM		14	0	0	0	10	0			0	0		0	0	24	0	0	0	0
5:00 PM		7	0	0	0	11	0			0	0		0	0	18	0	0	0	0
5:15 PM		6	0	0	0	11	0			0	0		0	0	17	0	0	0	0
5:30 PM		8	0	0	1	13	0			0	0		2	0	24	0	0	0	0
5:45 PM		12	1	0	0	8	0			0	0		0	0	21	0	0	0	0
Total Survey		79	1	0	2	75	0			0	1		3	0	161	0	0	0	0

### Peak Hour Summary 4:45 PM to 5:45 PM

By Approach			<b>bound</b> 2nd Ave				bound 2nd Ave				oound Oth St				bound 9th St		Total
Approacri	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	35	45	80	0	46	37	83	0	0	0	0	0	2	1	3	0	83
%HV		0.0	0%			2.:	2%			0.0	0%			0.0	0%		1.2%
PHF		0.	63			0.	82			0.	00			0.	25		0.86

1		Pedes	trians	
		Cross	swalk	
	North	South	East	West
1	0	0	0	0

By Movement			<b>bound</b> 2nd Ave			South NE 232	<b>bound</b> 2nd Ave				ound th St			Westl NE 9	oound Oth St		Total
Movement		Т	R	Total	L	Т		Total				Total	L		R	Total	
Volume		35	0	35	1	45		46				0	0		2	2	83
%HV	NA	0.0%	0.0%	0.0%	0.0%	2.2%	NA	2.2%	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%	1.2%
PHF		0.63	0.00	0.63	0.25	0.87		0.82				0.00	0.00		0.25	0.25	0.86

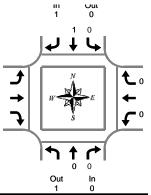
### Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start	North NE 232	<b>bound</b> 2nd Ave				bound 2nd Ave		Eastb NE 9	ound oth St			oound Oth St		Interval			strians swalk	
Time	Т	R	Bikes	L	Т	I	Bikes			Bikes	L	R	Bikes	Total	North	South	East	We
4:00 PM	46	0	0	1	32		0			0	1	1	0	81	0	0	0	0
4:15 PM	38	0	0	0	36		0			0	1	0	0	75	0	0	0	0
4:30 PM	35	0	0	0	40		0			0	0	0	0	75	0	0	0	0
4:45 PM	35	0	0	1	45		0			0	0	2	0	83	0	0	0	0
5:00 PM	33	1	0	1	43		0			0	0	2	0	80	0	0	0	0

# **Heavy Vehicle Summary**



Out 0 In 0



Peak Hour Summary 4:45 PM to 5:45 PM

# NE 232nd Ave & NE 9th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start	North NE 232	bound and Ave				bound 2nd Ave		Eastb NE 9	ound th St			bound Oth St		Interval
Time	Т	R	Total	L	Т		Total			Total	L	R	Total	Total
4:00 PM	0	0	0	0	0		0			0	0	0	0	0
4:15 PM	0	0	0	0	0		0			0	0	0	0	0
4:30 PM	0	0	0	0	0		0			0	0	0	0	0
4:45 PM	0	0	0	0	0		0			0	0	0	0	0
5:00 PM	0	0	0	0	1		1			0	0	0	0	1
5:15 PM	0	0	0	0	0		0			0	0	0	0	0
5:30 PM	0	0	0	0	0		0			0	0	0	0	0
5:45 PM	0	0	0	0	0		0			0	0	0	0	0
Total Survey	0	0	0	0	1		1			0	0	0	0	1

# Heavy Vehicle Peak Hour Summary 4:45 PM to 5:45 PM

Ву			bound			bound			ound			bound	T-1-1
Approach	In	Out	2nd Ave Total	In	Out	2nd Ave Total	In	NE 9	Total	In	Out	oth St Total	Total
Volume	0	1	1	1	0	1	0	0	0	0	0	0	1
PHF	0.00		•	0.25			0.00		•	0.00			0.25

By Movement	North NE 232	<b>bound</b> 2nd Ave				bound and Ave		Eastb NE 9			 oound Oth St		Total
Movement	Т	R	Total	٦	T		Total		Total	L	R	Total	
Volume	0	0	0	0	1		1		0	0	0	0	1
PHF	0.00	0.00	0.00	0.00	0.25		0.25		0.00	0.00	0.00	0.00	0.25

# Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start		<b>bound</b> 2nd Ave				bound and Ave		Eastb NE 9			Westl NE 9			Interval
Time	Т	R	Total	L	Т		Total		Total	L		R	Total	Total
4:00 PM	0	0	0	0	0		0		0	0		0	0	0
4:15 PM	0	0	0	0	1		1		0	0		0	0	1
4:30 PM	0	0	0	0	1		1		0	0		0	0	1
4:45 PM	0	0	0	0	1		1		0	0		0	0	1
5:00 PM	0	0	0	0	1		1		0	0		0	0	1

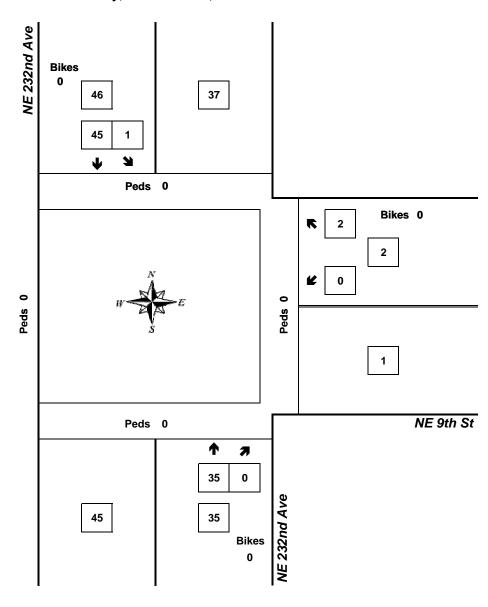
# **Peak Hour Summary**



Clay Carney (503) 833-2740

# NE 232nd Ave & NE 9th St

4:45 PM to 5:45 PM Tuesday, December 08, 2015



Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.25	0.0%	2
NB	0.63	0.0%	35
SB	0.82	2.2%	46
Intersection	0.86	1.2%	83

Count Period: 4:00 PM to 6:00 PM

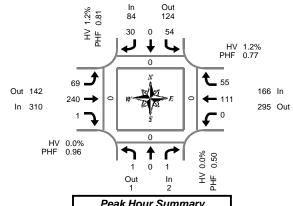
# **Total Vehicle Summary**



# NE 242nd Ave & NE 28th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

### 15-Minute Interval Summary 4:00 PM to 6:00 PM



Peak Hour Summary 4:30 PM to 5:30 PM

Interval		North	bound			South	bound			Eastb	ound			Westl	oound				Pedes	trians	
Start		NE 242	2nd Ave			NE 242	nd Ave			NE 28	3th St			NE 28	8th St		Interval		Cross	swalk	
Time	L	Т	R	Bikes	L	Т	R	Bikes	Ы	Т	R	Bikes	L	Т	R	Bikes	Total	North	South	East	West
4:00 PM	0	0	0	0	16	0	11	0	15	55	0	0	0	23	14	0	134	0	0	1	0
4:15 PM	0	0	0	0	20	0	7	0	8	45	0	0	0	27	14	0	121	0	0	0	0
4:30 PM	0	0	0	0	10	0	5	0	22	59	0	0	0	36	18	0	150	0	0	0	0
4:45 PM	1	0	0	0	16	0	10	0	18	53	0	0	0	29	16	0	143	0	0	0	0
5:00 PM	0	0	1	0	13	0	5	0	13	65	0	0	0	27	10	0	134	0	0	0	0
5:15 PM	0	0	0	0	15	0	10	0	16	63	1	0	0	19	11	0	135	0	0	0	0
5:30 PM	0	0	1	0	14	0	4	0	18	51	1	0	0	36	16	0	141	0	0	0	0
5:45 PM	1	0	0	0	7	0	2	0	13	67	0	0	0	20	11	0	121	0	0	0	0
Total Survey	2	0	2	0	111	0	54	0	123	458	2	0	0	217	110	0	1,079	0	0	1	0

### Peak Hour Summary 4:30 PM to 5:30 PM

By Approach			<b>bound</b> 2nd Ave				bound 2nd Ave				ound 8th St				oound 8th St		Total
Approacri	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	2	1	3	0	84	124	208	0	310	142	452	0	166	295	461	0	562
%HV		0.0	0%		1.2%					0.0	0%			1.2	2%		0.5%
PHF		0.	.50			0.	81			0.	96			0.	77		0.94

ſ		Pedes	trians	
ı		Cross	swalk	
I	North	South	East	West
I	0	0	0	0

By Movement			<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave			Eastb NE 28	ound 3th St			Westl NE 28	oound 8th St		Total
Movement	L	Т	R	Total	٦	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	1	0	1	2	54	0	30	84	69	240	1	310	0	111	55	166	562
%HV	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	1.2%	0.5%
PHF	0.25	0.00	0.25	0.50	0.84	0.00	0.75	0.81	0.78	0.92	0.25	0.96	0.00	0.77	0.76	0.77	0.94

### Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start			<b>bound</b> 2nd Ave			South NE 242	<b>bound</b> 2nd Ave			Eastb NE 28				Westl NE 28			Interval			strians swalk	
Time	L	Т	R	Bikes	L	T	R	Bikes	L	Т	R	Bikes	L	T	R	Bikes	Total	North	South	East	West
4:00 PM	1	0	0	0	62	0	33	0	63	212	0	0	0	115	62	0	548	0	0	1	0
4:15 PM	1	0	1	0	59	0	27	0	61	222	0	0	0	119	58	0	548	0	0	0	0
4:30 PM	1	0	1	0	54	0	30	0	69	240	1	0	0	111	55	0	562	0	0	0	0
4:45 PM	1	0	2	0	58	0	29	0	65	232	2	0	0	111	53	0	553	0	0	0	0
5:00 PM	1	0	2	0	49	0	21	0	60	246	2	0	0	102	48	0	531	0	0	0	0

# **Heavy Vehicle Summary**



ey 2740

# NE 242nd Ave & NE 28th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

Peak Hour Summary 4:30 PM to 5:30 PM

Out 2

In 0

# Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start		North NE 242	<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave				oound 8th St				oound 8th St		Interval
Time	L	Т	R	Total	L	Ţ	R	Total	L	Т	R	Total	L	Т	R	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	1	0	2	3	1	1	0	2	0	1	3	4	9
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Survey	0	0	0	0	2	0	2	4	1	4	0	5	0	3	3	6	15

# Heavy Vehicle Peak Hour Summary 4:30 PM to 5:30 PM

By			<b>bound</b> 2nd Ave			<b>bound</b> 2nd Ave			oound 8th St			<b>bound</b> 8th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	1	0	1	0	2	2	2	1	3	3
PHF	0.00			0.06			0.00			0.08			0.06

Ву		North	<b>bound</b> 2nd Ave				bound 2nd Ave			Eastb NE 28	ound 3th St			Westl NE 28			Total
Movement	L	Т	R	Total	L	Т	R	Total	L	T	R	Total	L	Т	R	Total	
Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
PHF	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.08	0.06

# Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start		North NE 242	<b>bound</b> 2nd Ave				<b>bound</b> 2nd Ave			Eastb NE 28	ound 8th St				oound 8th St		Interval
Time	L	Т	R	Total	L T R Total				L	Т	R	Total	L	Т	R	Total	Total
4:00 PM	0	0	0	0	2	0	2	4	1	3	0	4	0	3	3	6	14
4:15 PM	0	0	0	0	2	0	2	4	1	1	0	2	0	3	3	6	12
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1

### **Peak Hour Summary** All Traffic Data Clay Carney (503) 833-2740 NE 242nd Ave & NE 28th St 4:30 PM to 5:30 PM Tuesday, December 08, 2015 NE 242nd Ave Bikes 0 84 124 30 54 K Peds 0 NE 28th St Bikes 0 55 142 111 166 0 69 310 **→** 295 240 1 4 Bikes 0 NE 28th St Peds 0 1 K 7 1 0 2 **Bikes Approach PHF** HV% Volume ΕB 0.96 0.0% 310 **WB** 0.77 1.2% 166 0.0% 2 NB 0.50 SB 0.81 1.2% 84 Intersection 0.94 0.5% 562 Count Period: 4:00 PM to 6:00 PM

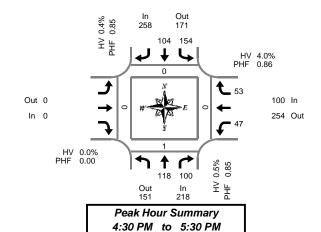
# **Total Vehicle Summary**



# NE 267th Ave & NE 19th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

### 15-Minute Interval Summary 4:00 PM to 6:00 PM



Interval	North	bound			South	bound	Eastb	ound			Westl	ound				Pedes	trians	
Start	NE 267	7th Ave			NE 26	7th Ave	NE 19	9th St			NE 19	9th St		Interval		Cros	swalk	
Time	Т	R	Bikes	٦	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
4:00 PM	25	26	0	28	32	0			0	8		14	0	133	0	0	0	0
4:15 PM	24	24	0	25	34	0			0	17		19	0	143	0	0	0	0
4:30 PM	36	28	0	41	19	0			0	10		19	0	153	0	0	0	0
4:45 PM	35	29	0	26	25	0			0	16		11	0	142	0	0	0	0
5:00 PM	15	22	0	43	33	0			0	6		12	0	131	0	1	0	0
5:15 PM	32	21	0	44	27	0			0	15		11	0	150	0	0	0	0
5:30 PM	21	27	0	32	25	0			0	15		16	0	136	0	0	0	0
5:45 PM	13	23	0	37	26	0			0	12		12	0	123	0	0	0	0
Total Survev	201	200	0	276	221	0			0	99		114	0	1,111	0	1	0	0

### Peak Hour Summary 4:30 PM to 5:30 PM

By Approach			<b>bound</b> 7th Ave				bound 7th Ave				ound 9th St				<b>bound</b> 9th St		Total
Approacri	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	218	151	369	0	258	171	429	0	0	0	0	0	100	254	354	0	576
%HV		0.	5%			0.4	4%			0.0	0%			4.0	0%		1.0%
PHF		0.	85	0.4% 0.85						0.	00			0.	86		0.94

Pedestrians Crosswalk  North South East Wes											
	Cross	swalk									
North	South	East	West								
0	1	0	0								

By Movement			bound 7th Ave			South NE 267	<b>bound</b> 7th Ave			Eastb NE 19	ound 9th St				oound 9th St		Total
Movement		Т	R	Total	٦	Т		Total				Total	L		R	Total	
Volume		118	100	218	154	104		258				0	47		53	100	576
%HV	NA	0.0%	1.0%	0.5%	0.6%	0.0%	NA	0.4%	NA	NA	NA	0.0%	4.3%	NA	3.8%	4.0%	1.0%
PHF		0.82	0.86	0.85	0.88	0.79		0.85				0.00	0.73		0.70	0.86	0.94

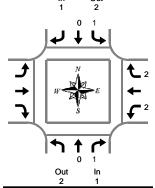
### Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start	North NE 267					<b>bound</b> 7th Ave		ound 9th St			Westb NE 19			Interval			trians swalk	
Time	T	R	Bikes	L	T	Bikes	142 1		Bikes	L	142	R	Bikes	Total	North	South	East	West
4:00 PM	120	107	0	120	110	0			0	51		63	0	571	0	0	0	0
4:15 PM	110	103	0	135	111	0			0	49		61	0	569	0	1	0	0
4:30 PM	118	100	0	154	104	0			0	47		53	0	576	0	1	0	0
4:45 PM	103	99	0	145	110	0			0	52		50	0	559	0	1	0	0
5:00 PM	81	93	0	156	111	0			0	48		51	0	540	0	1	0	0

# **Heavy Vehicle Summary**



Out 0 In 0



Peak Hour Summary 4:30 PM to 5:30 PM

# NE 267th Ave & NE 19th St

Tuesday, December 08, 2015 4:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start		<b>bound</b> 7th Ave				bound 7th Ave			ound 9th St			oound 9th St		Interval
Time	Т	R	Total	L	Ţ		Total			Total	L	R	Total	Total
4:00 PM	1	0	1	1	1		2			0	0	1	1	4
4:15 PM	0	0	0	0	2		2			0	3	3	6	8
4:30 PM	0	0	0	1	0		1			0	1	0	1	2
4:45 PM	0	0	0	0	0		0			0	1	0	1	1
5:00 PM	0	1	1	0	0		0			0	0	2	2	3
5:15 PM	0	0	0	0	0		0			0	0	0	0	0
5:30 PM	0	0	0	0	0		0			0	0	0	0	0
5:45 PM	0	0	0	0	1		1			0	0	0	0	1
Total Survey	1	1	2	2	4		6			0	5	6	11	19

# Heavy Vehicle Peak Hour Summary 4:30 PM to 5:30 PM

Ву			<b>bound</b> 7th Ave			<b>bound</b> 7th Ave			oound 9th St			oound 9th St	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Total
Volume	1	2	3	1	2	3	0	0	0	4	2	6	6
PHF	0.25			0.05			0.00			0.13			0.11

By Movement		<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 19			Westl NE 19	oound 9th St		Total
wovement	Т	R	Total	L	Т		Total		Total	L		R	Total	
Volume	0	1	1	1	0		1		0	2		2	4	6
PHF	0.00	0.25	0.25	0.13	0.00		0.05		0.00	0.10		0.13	0.13	0.11

# Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start		<b>bound</b> 7th Ave				<b>bound</b> 7th Ave		Eastb NE 19	ound 9th St			Westl NE 19	Interval		
Time	Т	R	Total	L	Т		Total			Total	L		R	Total	Total
4:00 PM	1	0	1	2	3		5			0	5		4	9	15
4:15 PM	0	1	1	1	2		3			0	5		5	10	14
4:30 PM	0	1	1	1	0		1			0	2		2	4	6
4:45 PM	0	1	1	0	0		0			0	1		2	3	4
5:00 PM	0	1	1	0	1		1			0	0		2	2	4

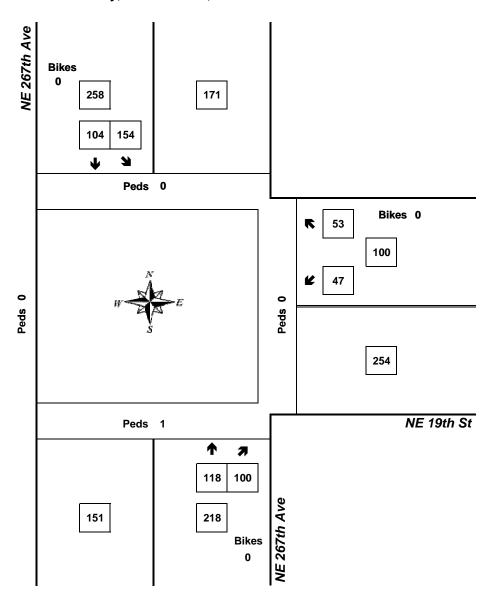
# **Peak Hour Summary**



Clay Carney (503) 833-2740

# NE 267th Ave & NE 19th St

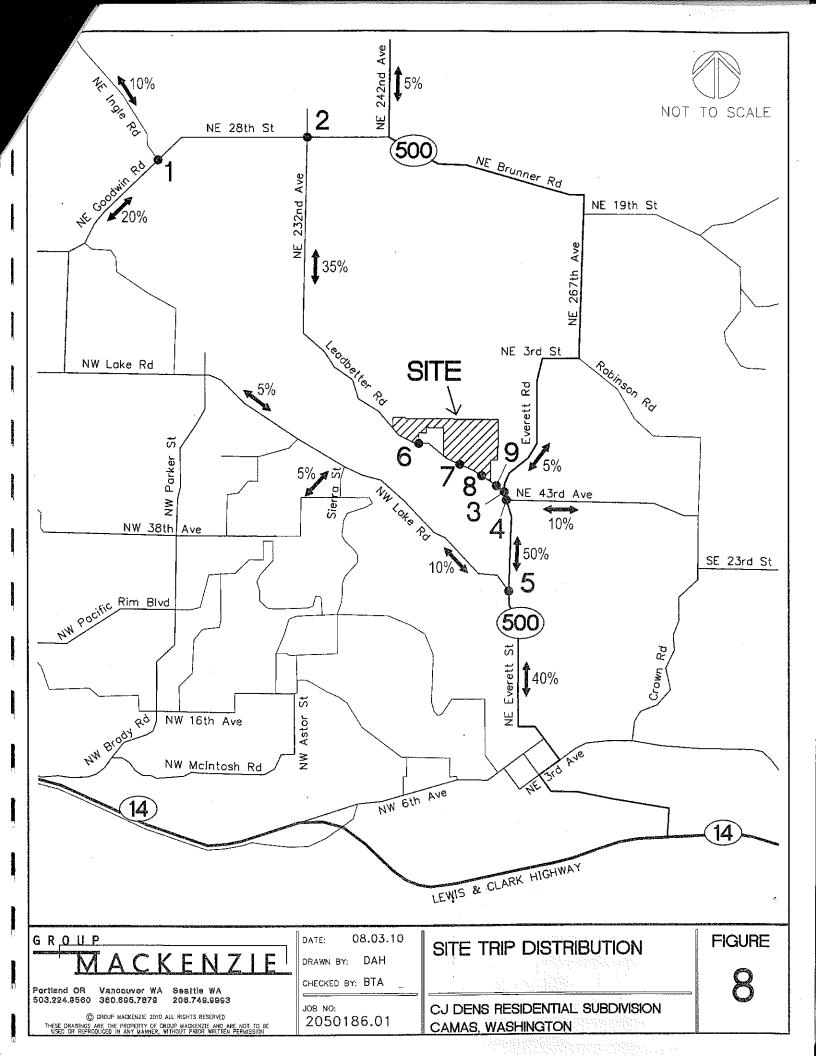
4:30 PM to 5:30 PM Tuesday, December 08, 2015

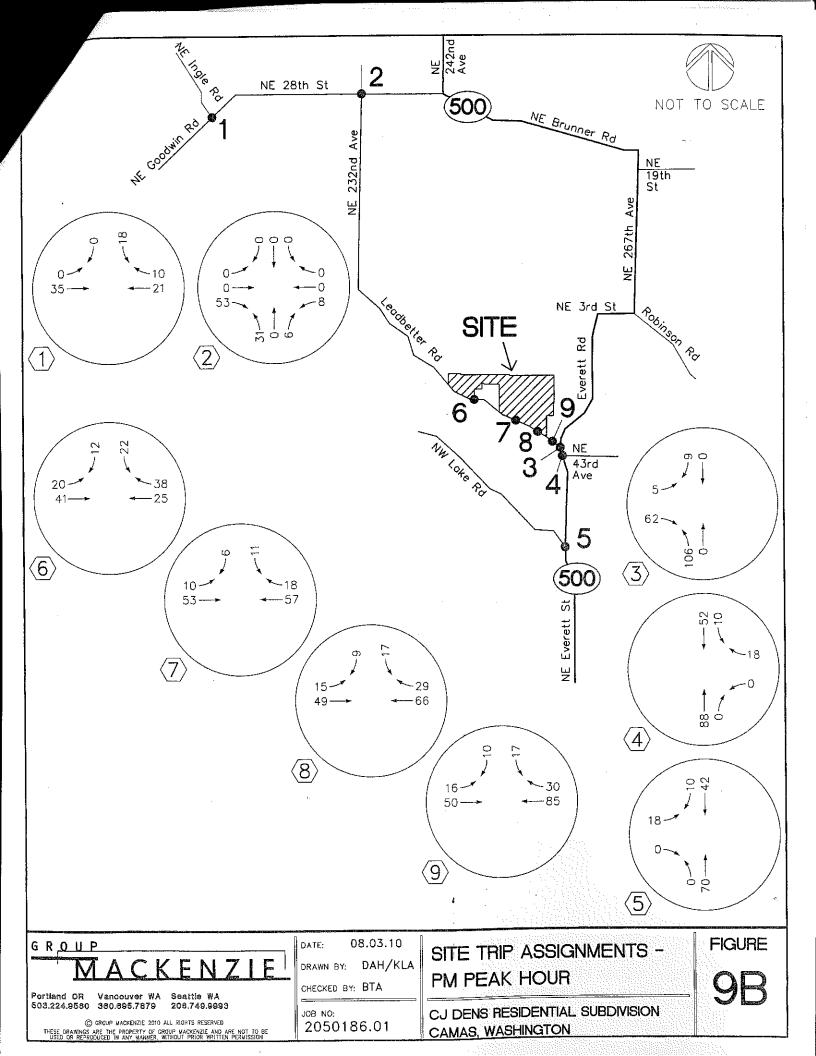


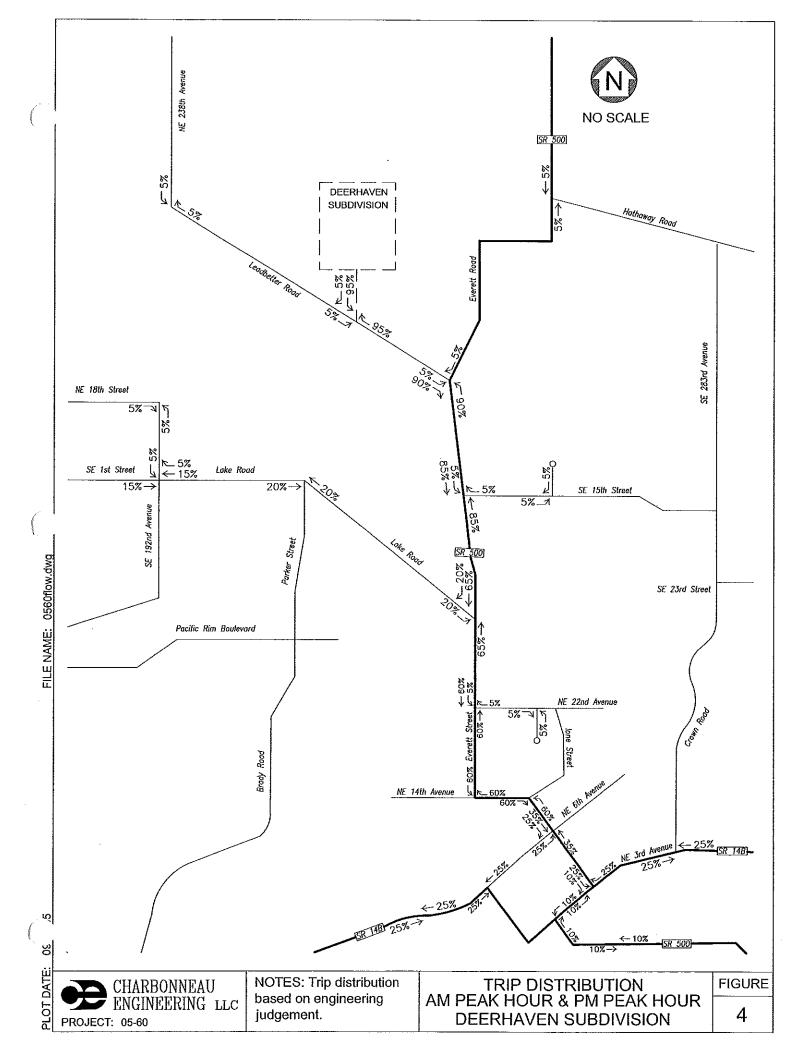
Bikes 0

Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.86	4.0%	100
NB	0.85	0.5%	218
SB	0.85	0.4%	258
Intersection	0.94	1.0%	576

Count Period: 4:00 PM to 6:00 PM







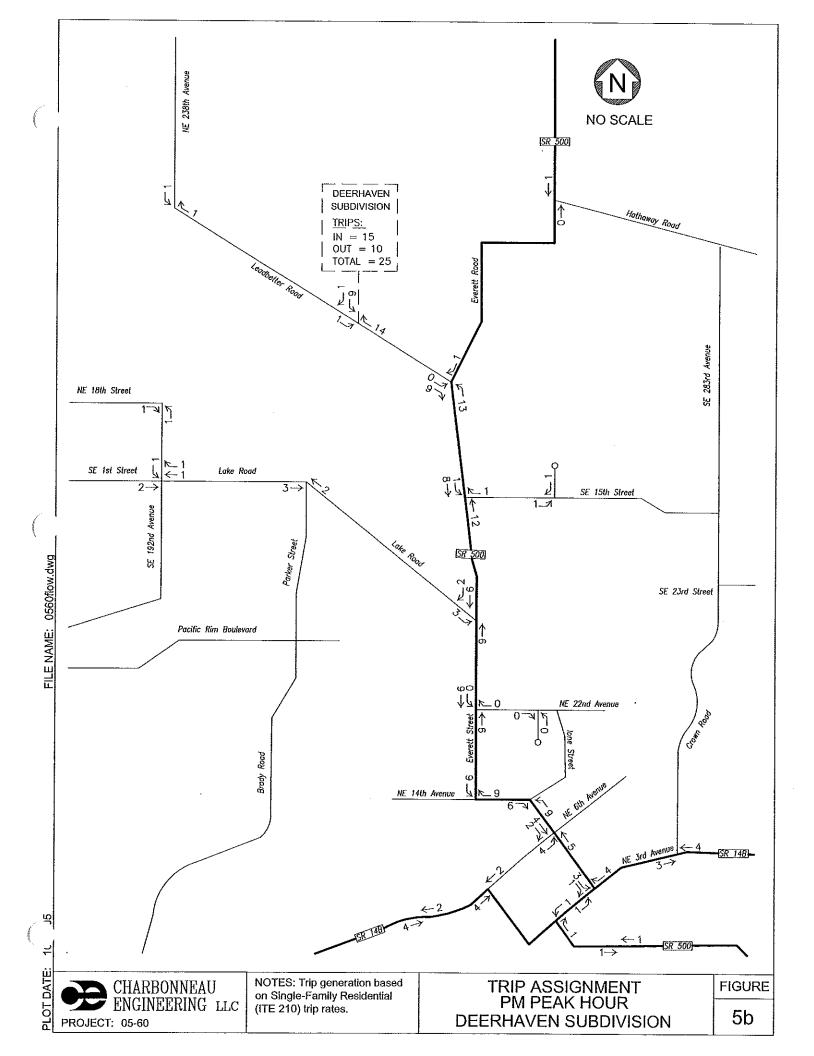


Table 4: Trip Generation Estimate - Phase 1

	175			Weekd	lay AM Pea	ık Hour	Week	day PM Pea	k Hour
Land Use	Code	Size	Daily	Total	In	Out	Total	In	Out
Single-Family Detached Housing	210	215 units	2,050	160	40	120	215	135	80

Table 5: Trip Generation Estimate - Build-out (Includes Phase 1)

	ITE			Weeko	day AM Pe	ak Hour	Week	lay PM Pe	ak Hour
Land Use	Code	Size	Daily	Total	ln	Out	Total	ln	Out
Apartment	220	536 units	3,570	275	55	220	330	215	115
Single-Family Detached Housing	210	764 units	7,270	575	145	430	765	480	285
Total Residential (1,300 units)			10,840	850	200	650	1,095	695	400
Internalization (6% Daily, 5% PM)			630	0	0	0	60	30	30
Shopping Center		90.000	6,340	145	90	55	560	270	290
Internalization (10% Daily, 11% PM)	820	square	630	o	0	0	60	30	30
Pass-By Trips (34%)		feet	1,940	50	25	25	170	85	85
1.77		Total Trips	17,180	995	290	705	1,655	965	690
	Less In	ternalization	1,260	0	0	0	120	60	60
	Less	Pass-by trips	1,940	50	25	25	170	85	85
Net New 1	rips for F	ull Build-out	13,980	945	265	680	1,365	820	545

### Trip Distribution

The distribution of site-generated trips onto the study area roadway system was estimated based on a review of surrounding roadway characteristics, existing uses, the 2035 travel demand model maintained by the Southwest Washington Regional Transportation Council (RTC), and review agency guidance. Trip distribution patterns were developed separately for the residential and retail trips. Figure 6 illustrates the trip distribution patterns for the residential and retail trips.

### Trip Assignment

The weekday a.m. and p.m. peak hour site trips shown in Tables 4 and 5 were assigned to the roadway network based on the trip distribution patterns shown in Figure 6. Figures 7 through 10 show the assignment of site-generated trips during the weekday a.m. and p.m. peak hours for Phase 1 and at Build-out. Note that the site-generated build-out volumes shown in Figures 9 and 10 include the Phase 1 site-generated trips and thus reflect the total number of trips generated. A figure showing the assignment of pass-by trips is provided in Appendix "E".

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

Figure 10

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 $\underline{\Gamma} \mathbf{F} \mathbf{Z}$ 

### Traffic Volumes

The traffic counts in this report were conducted from 7:00 to 9:00 am and 4:00 to 6:00 pm during February 2014. The AM peak hour occurred between approximately 7:15 to 8:15 am and the PM peak hour occurred between approximately 4:30 to 5:30 pm. The peak hour is the one-hour time period when traffic volumes are the highest and congestion on the adjacent streets is most likely to occur. The existing traffic volumes are shown in Figures 3a and 3b. The raw traffic count data is shown in Appendix A.

### Trip Generation/Distribution

The Green Mountain Estates subdivision could generate approximately 3,779 new trips per day, ITE <u>Trip Generation Manual</u>, 9<sup>th</sup> edition. A trip is a one-directional vehicle movement. Two hundred ninety-eight new trips could occur during the AM peak hour and 397 new trips could occur during the PM peak hour. The trip generation rates are shown in Table 1.

Table 1, Site Traffic Generation

					Trips/	Trips/
	ITE	1		Trips/	AM	PM
Land Use	code	Trip Generation	Units *	Day	Peak	Peak
Single-Family		9.52/dwell unit-Day	400 - 3 existing =		298	397
Detached	210	0.75/dwell unit-AM Peak Hour	397 new	3,779	(in-74,	(in-250,
Homes		1.00/dwell unit-PM Peak Hour	397 HCW		out-224)	out-147)

<sup>\*</sup> credit for the 3 existing homes was accounted for in the existing traffic volumes

The directional distribution of traffic generated by the development was assigned to the study area intersections. This distribution was based on the existing traffic volumes and discussions with staff from the City of Camas. The site traffic distribution and assignment are shown in Figures 7a through 7d.

## Year 2019 Traffic Volumes

The year 2019 traffic volumes at the study area intersections included in-process traffic from the Lacamas Prairie Estates PUD development. The Lacamas Prairie Estates PUD is a 176-lot development located at the NE 25<sup>th</sup> Street/NE 187<sup>th</sup> Avenue intersection in Clark County. The in-process traffic is shown in Figures 5a and 5b and was included to provide an analysis for build-out of the Green Mountain Estates subdivision, forecast year 2019 traffic conditions.

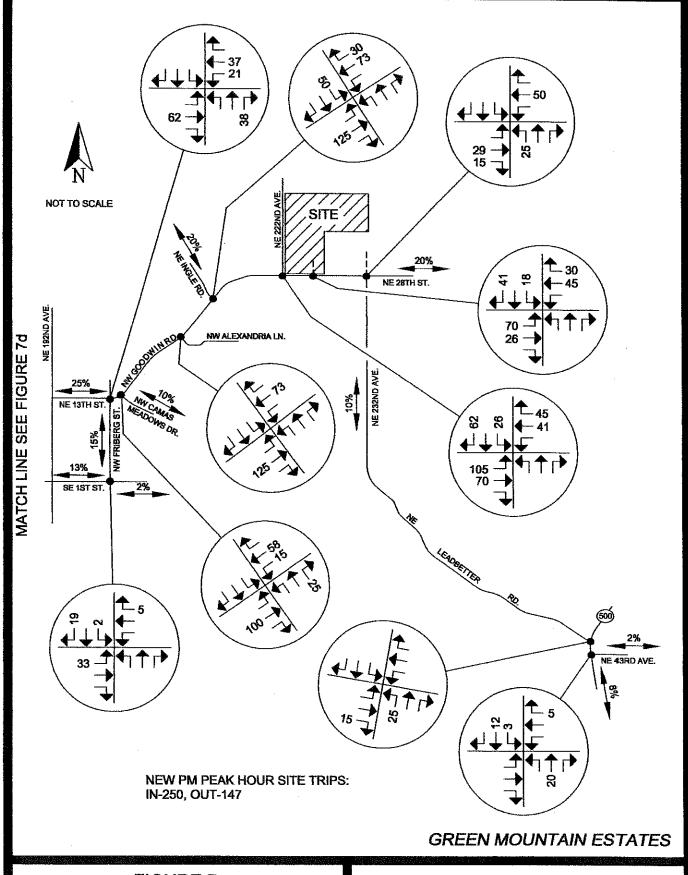
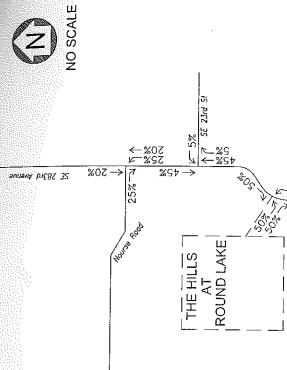


FIGURE 7c SITE TRAFFIC DISTRIBUTION/ ASSIGNMENT, PM PEAK HOUR

KELLY ENGINEERING 316 E. Fourth Plain, A-2, Vancouver, WA 98663 Phone: 360-433-7530

PLOT DATE! 04/12/07



SE 15th Street

15% V 75%

AM AND PM PEAK HOUR

SRIA

NE 3rd Avenue

4 4 R 25%

25% \_\_

SE 6th Avenue

. 52% 52%

Everett Street

%9 %9 ¬v

NE 3rd Loop

M GH Mens

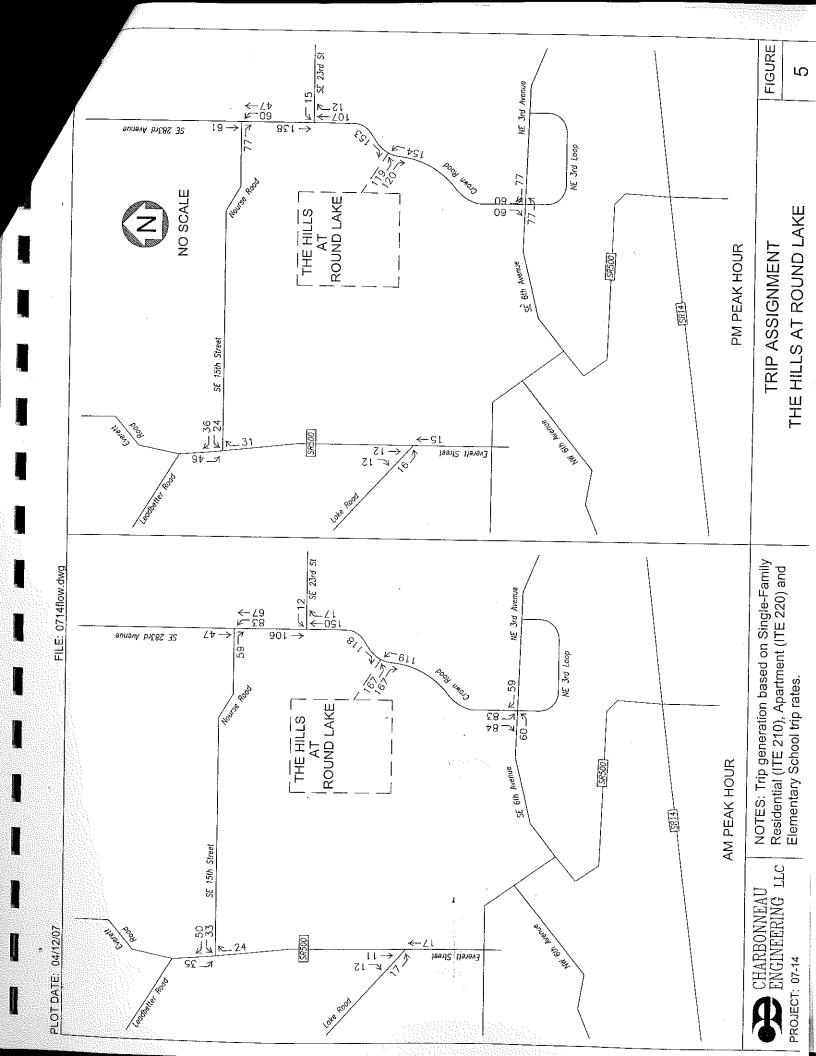
58500

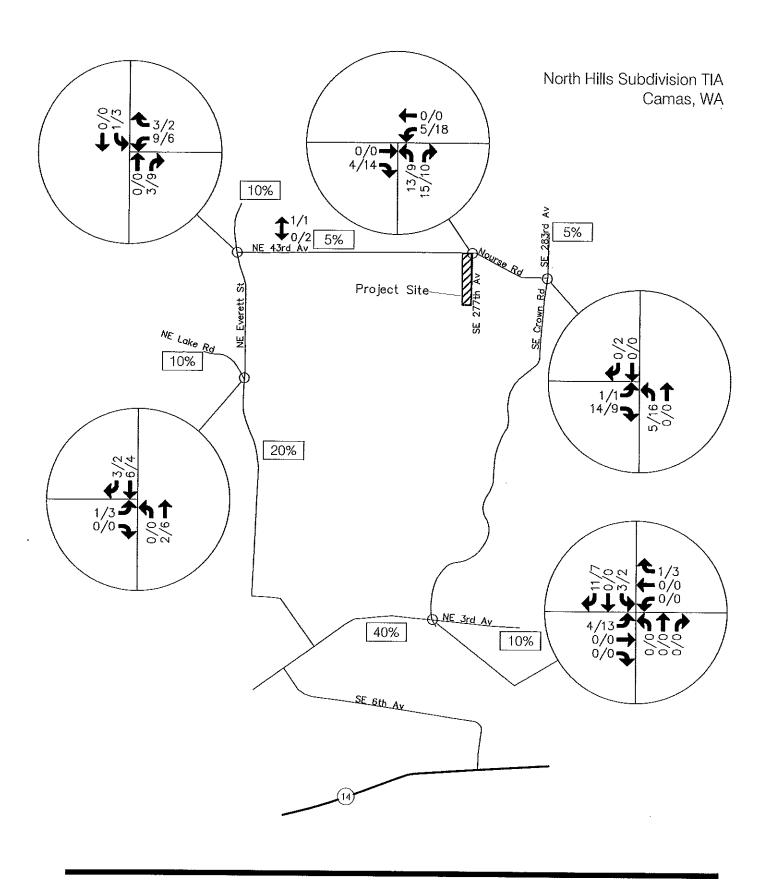
CHARBONNEAU ENGINEERING LLC PROJECT: 07-14

traffic patterns, engineering judgement, and City of Camas/DKS Associates recommendations. NOTES: Trip distribution based on existing

TRIP DISTRIBUTION AM PEAK HOUR AND PM PEAK HOUR THE HILLS AT ROUND LAKE

FIGURE





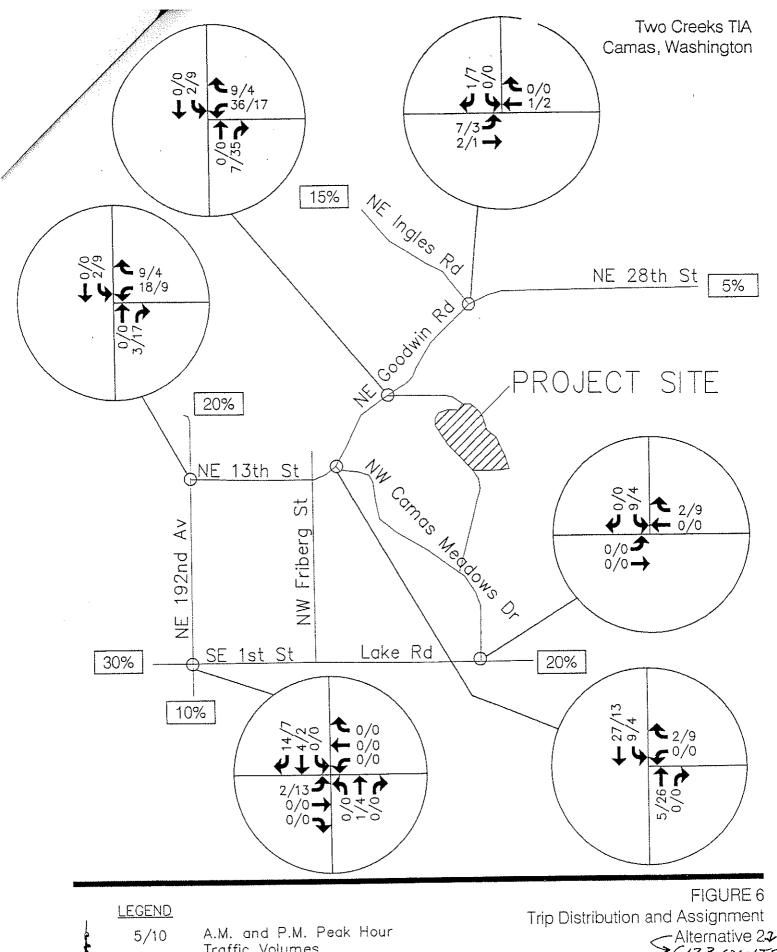


LEGEND 100/128

8%

AM/PM Peak Hour Traffic Volumes FIGURE 6 Trip Distribution and Assignment for Study Area Intersections

Inbound Peak Hour Trip Distribution



40% NOT TO SCALE

Traffic Volumes

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

—Alternative 2.7 →(123 UNITS)

ALT. # 1 WAS 112 UNITS

304031.0Figures.dwg

Figure 4 provides a summary of the existing turning-movement counts, which are rounded to the nearest five vehicles per hour for the weekday a.m. and p.m. peak hours, respectively. *Appendix "B" contains the traffic count worksheets used in this study*.

As shown in Figure 4, the study intersections operate acceptably during both study periods. *Appendix "C"* contains the existing conditions traffic operations worksheets.

### **DEVELOPMENT TRIP GENERATION**

As discussed above, the proposed development includes 179 single family units, which is a reduction of 25 units compared to the plan approved in 2006. Trip generation estimates for the currently proposed development were generated based on information provided in the standard reference manual *Trip Generation*, 9<sup>th</sup> Edition published by the Institute of Transportation Engineers (ITE – Reference 3). In the 2006 TIA, rates from the 7<sup>th</sup> Edition of the *Trip Generation* manual were utilized, which are slightly higher than those from the 9<sup>th</sup> Edition. Table 1 compares the trip generation from the current site plan with that previously proposed.

Table 1: Trip Generation Comparison

				Week	day AM Pe	ak Hour	Week	lay PM Pea	k Hour
Scenario	ITE Code	Size	Daily	In	Out	Total	ln	Out	Total
Current Site Plan	210	179 units	1,704	34	101	135	113	66	179
2006 TIA	210	204 units	2,004	38	114	152	128	75	203
Difference	-	-25 units	-300	-4	-13	-17	-15	-9	-24

As seen in the table, the current proposal results in 17 fewer trips during the a.m. peak hour and 24 fewer trips during the p.m. peak hour.

### Trip Distribution

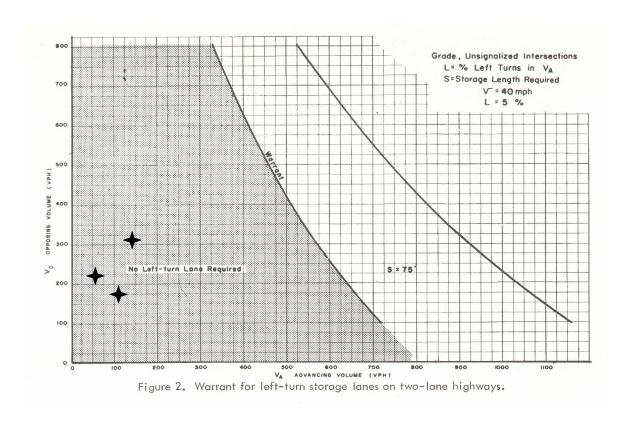
The distribution of site-generated trips onto the study area roadway system was estimated using the trip distribution pattern utilized in the 2006 TIA, accounting for the change in trip generation and new proposed access routes. The weekday a.m. and p.m. peak hour site trips shown in Table 1 were assigned to the roadway network based on the trip distribution pattern. Figure 5 shows the assignment of site-generated trips during the weekday a.m. and p.m. peak hours.

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Figure **5** 

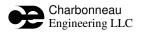
H-Vorolific Natural May 21, 2015 - 2:37pm - Meustson Tab: 5\_kip assignment



### Storage requirements for critical left-turn movements at unsignalized intersections on 2-lane roads.

Intersection	Mov't	Analysis Period	Speed V (mph)	Left Turns in Advancing Volume (vph)	Advancing Volume $V_A$ (vph)	Opposing Volume V <sub>O</sub> (vph)		Storago		
	WB LT	2018 Background - AM Peak		12	307	331	4% → 5%	None		
		2018 Total - AM Peak		172	172 467 334	334	37% → 40%	100'		
NE 28th Street and NE 232nd Ave.		2018 Bkgd Mid. Afternoon Peal		7	183	378	4% → 5%	None		
		2018 Total - Mid. Afternoon Pk	50	89	265	Volume $V_O$ (vph)       in Advancing Volume L       Str Red         331 $4\% \rightarrow 5\%$ N         334 $37\% \rightarrow 40\%$ 1         378 $4\% \rightarrow 5\%$ N         380 $33\% \rightarrow 30\%$ 5         585 $5\%$ N         586 $20\%$ N         307 $5\%$ N         170 $5\%$ N		75'		
		2018 Bkgd PM Peak		14	256	265 380 33% → 30% 256 585 5%		None		
		2018 Total - PM Peak		61	303	586	20%	75'		
School Access and NE 232nd Ave.	NB LT	2018 Total - AM Peak		7	141	307	5%	None		
		2018 Total - Mid. Afternoon Pk	45	5	107	170	5%	None		
		2018 Total - PM Peak		3	53	215	6% → 5%	None		

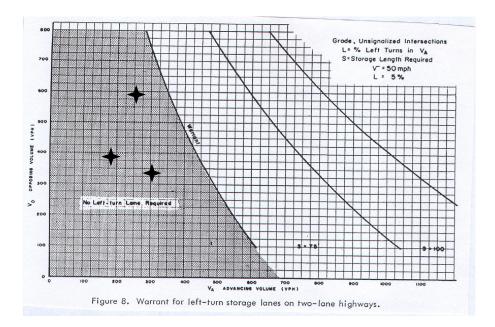
Source: Highway Research Record #211, Harmelink, M. D.

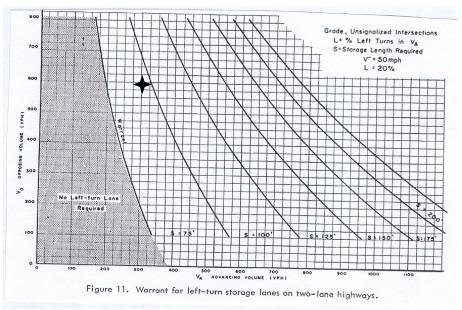


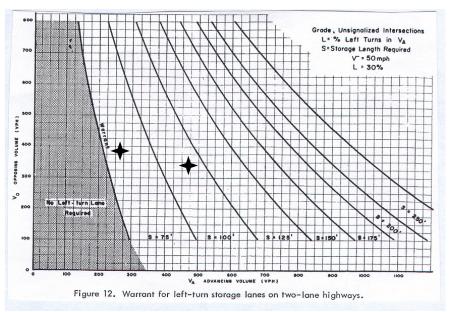
PROJECT: #15-46 Lacamas Heights Elem. School (Realigned 232nd Acc. Analysis)

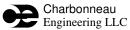
DATE: 01.03.17

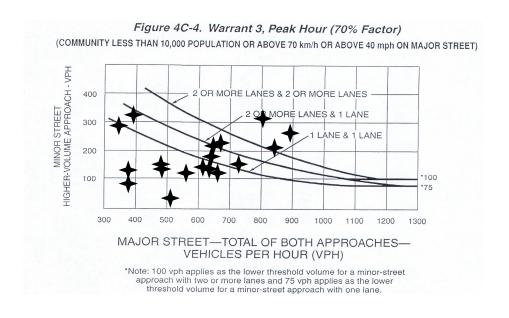
PAGE: 1 of 2







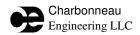




### Peak hour volume warrant for signalization data.

late ve e etie e	Analysis David	Major Street	Major Street		Minor Street High Volume Approach		Signal	
Intersection	Analysis Period	Speed (mph)	Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)	Warranted?	
	2018 Extg. AM Peak		376		73		No	
	2018 Bkgd AM Peak		638		171		Yes	
	2018 Total - AM Peak	50	801	1	305	1	Yes	
NE 28th Street	2018 Bkgd Mid. Afternoon Peak		561		110		No	
and NE 232nd Avenue	2018 Total - Mid. Afternoon Peak	30	645	'	212	'	Yes	
	2018 Extg. PM Peak		511		35		No	
	2018 Bkgd PM Peak		841		207		Yes	
	2018 Total - PM Peak		889		257		Yes	
NIC Oth Ctroot	2018 Total - AM Peak		244	1	2	1	No	
NE 9th Street and NE 232nd Avenue	2018 Total - Mid. Afternoon Peak	45	159		0		No	
	2018 Total - PM Peak		227		2		No	
NE 28th Street/ Dresser Road and NE 242nd Avenue	2018 Bkgd AM Peak		484	1	121		No	
	2018 Total - AM Peak		672		224		Yes	
	2018 Total - Mid. Afternoon Peak	50	615		139	1	No	
	2018 Bkgd PM Peak		662		115	1	No	
	2018 Total - PM Peak		728		145		Yes	
	2018 Bkgd AM Peak		343		279		No	
NE 19th Street	2018 Total - AM Peak	50	394	1	322	1	Yes	
and NE 267th Avenue	2018 Total - Mid. Afternoon Peak	50	485	'	148	'	No	
	2018 Total - PM Peak		619		136		No	

Source: Manual on Uniform Traffic Control Devices (MUTCD), 2003 Edition.



PROJECT: #15-46 Lacamas Heights Elementary School DATE: 01.03.17

# OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN THE CITY OF CAMAS 1/1/2010 - 12/31/2014

 ${\it UNDER~23~UNITED~STATES~CODE-SECTION~409,~THIS~DATA~CANNOT~BE~USED~IN~DISCOVERY~OR~AS~EVIDENCE}$ 

AT TRIAL IN ANY ACTION FOR DAMAGES AGAINST THE WSDOT, OR ANY JURISDICTIONS INVOLVED IN THE DATA

PRIMARY TRAFFICWAY	CITY OR MISC BLOCK NUMBER	CITY OR MISC DISTANCE FROM REFERENCE POINT	CITY OR MISC REFERENCE POINT MILES OR FEET	CITY OR MISC COMPASS DIRECTION FROM REFERENCE POINT	CITY OR MISC REFERENCE POINT NAME	REPORT NUMBER	DATE	# IN J		VEH 1 ACTION	MV DRIVER CONT CIRC 1 (UNIT 1)	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO
NE 232ND AVE	1000	200	F	N	NE 9TH ST	E213264	12/09/2012	0	1 Over Embankment - No Guardrail Present	Going Straight Ahead	Exceeding Reas. Safe Speed	North	South
NE 28TH ST	22800	0.19	M	W	NE 232ND AVE	3252967	09/21/2012	0	1 Domestic animal (horse, cow, sheep,	Going Straight Ahead	Other	West	East

