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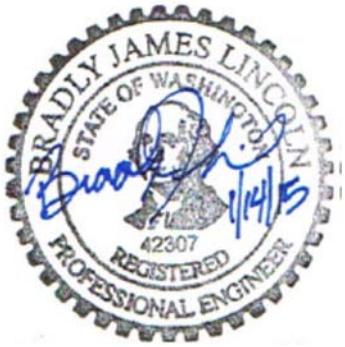
Harms Estate
Traffic Impact Analysis

Jurisdiction: City of Mill Creek

January 2015



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1. DEVELOPMENT IDENTIFICATION

Gibson Traffic Consultants, Inc. (GTC) has been retained to analyze the traffic impacts of the Harms Estate development. The Harms Estate is proposed to consist of 28 single-family homes. There is 1 existing single-family unit on-site that will be removed and credited towards the development. The analysis in this report has therefore been performed for 27 new single-family homes. The site is located north of Seattle Hill Road and east of 35th Avenue SE. The site is proposed to have access to 35th Avenue SE from an existing road-stub. A site vicinity map is included in Figure 1.

Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

2. METHODOLOGY

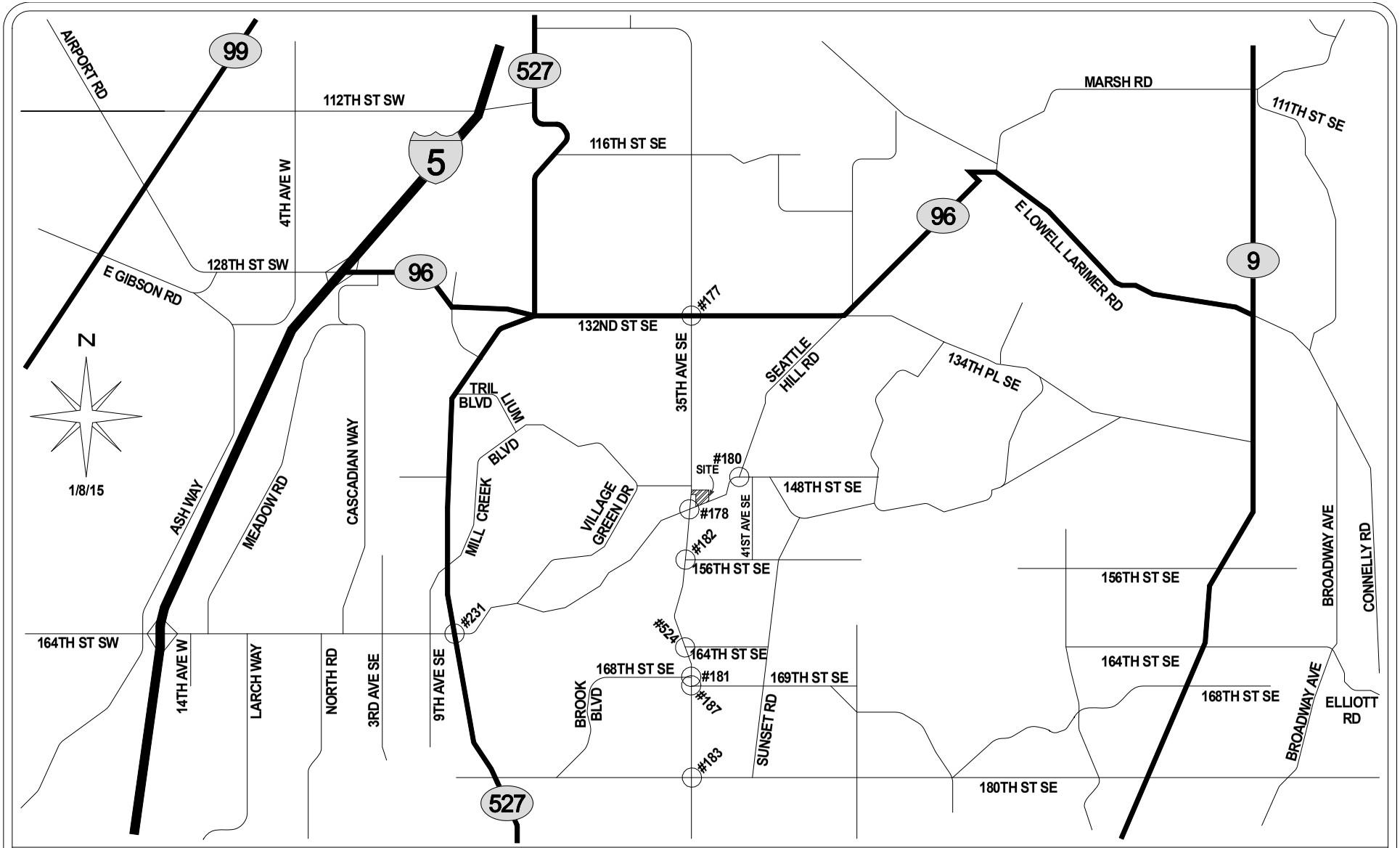
2.1 General

Trip generation for the Harms Estate development is based on data contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*. The average trip generation rates for ITE Land Use Code 210, Single-Family Detached Housing, have been used for the trip generation calculations. The distribution of trips generated by the site is based on approved distributions for similar developments in the site vicinity.

The interlocal agreement between the City of Mill Creek and Snohomish County provides for mitigation fees to Snohomish County. Mitigation fees are based on the area wide mitigation fee or specific impacts to improvement projects on Snohomish County's Transportation Needs Report.

2.2 Scope of Analysis

The adjacent signalized intersection of 35th Avenue SE at Seattle Hill Road and 35th Avenue SE at 149th Place SE, which will serve as the site access, have been analyzed as part of this report. The two study intersections will be impacted with the highest number of development trips. The intersections have been analyzed for the weekday PM peak-hour.



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DEVELOPMENT SITE

KEY INTERSECTION

FIGURE 1

SITE VICINITY MAP

3. TRIP GENERATION

The trip generation calculations for the Harms Estate development are based on the average trip generation rates for ITE Land Use Code 210, Single-Family Detached Housing, from *Trip Generation Manual, 9th Edition*. There is currently one single-family residential unit on the site that will be removed with the development of the property. A credit for this existing unit has been applied to the development's trip generation calculations to determine the number of new trips generated by the development.

The trip generation is summarized in Table 1.

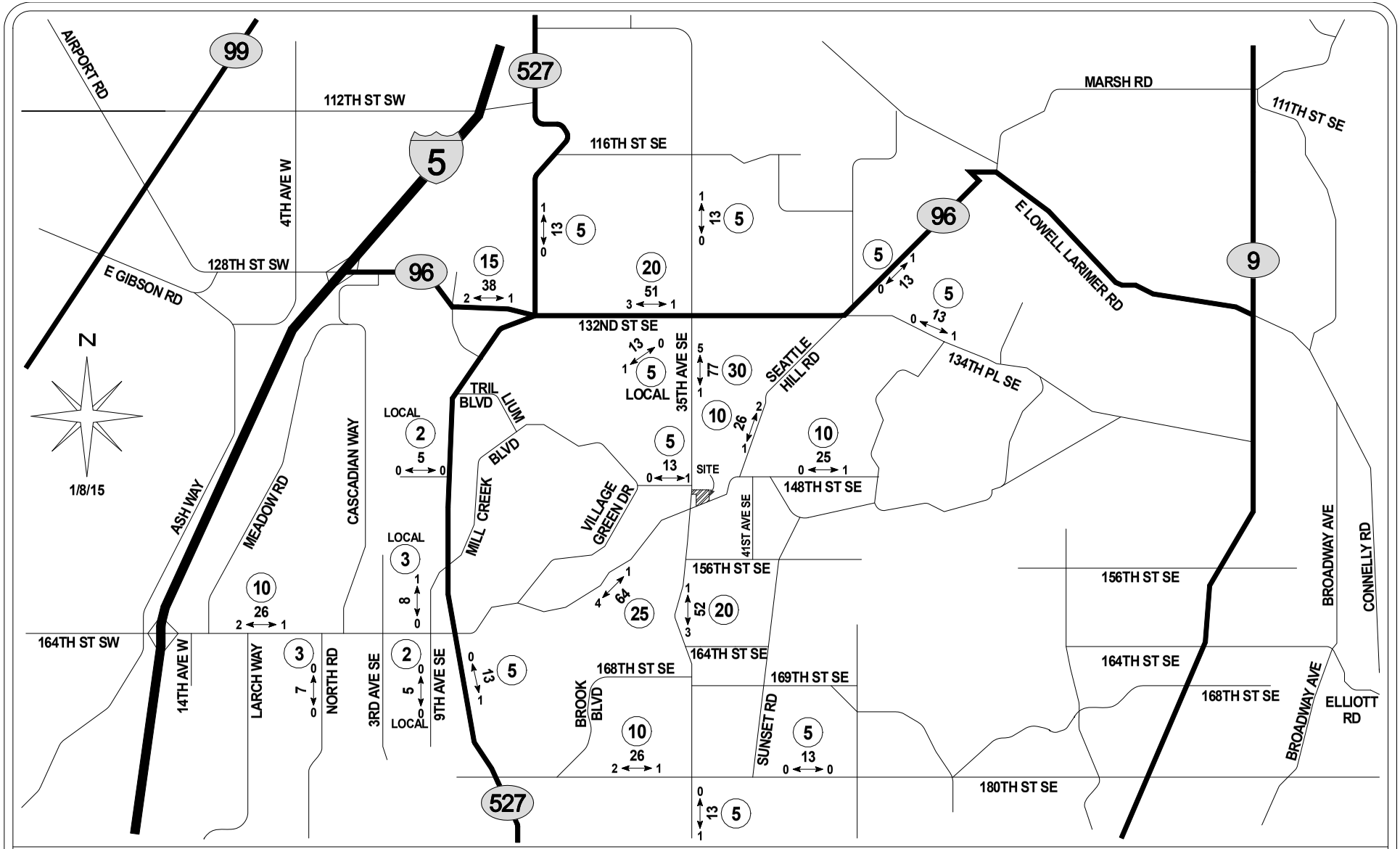
Table 1: Trip Generation Summary

Land Use	Size	Average Daily Trips	PM Peak-Hour Trips		
			Inbound	Outbound	Total
Single-Family Detached Housing ITE Land Use Code 210	28 Units	266.56	17.64	10.36	28.00
Single-Family Detached Housing ITE Land Use Code 210	-1 Unit	-9.52	-0.63	-0.37	-1.00
TOTAL		257.04	17.01	9.99	27.00

The development is anticipated to generate 257.04 new average daily trips with 27 new PM peak-hour trips. The trip generation calculations are included in the attachments.

4. TRIP DISTRIBUTION

The distribution of trips generated by the Harms Estate development is based on the distribution of other residential developments in the site vicinity. It is estimated that 45% of the development's trips will travel along Seattle Hill Road, twenty-five percent to and from the west and twenty percent to and from the east. It is anticipated that 50% of the development's trips will travel along 35th Avenue SE, thirty percent to and from the north and twenty percent to and from the south. The remaining 5% of the development's trips are anticipated to travel to and from the west along 148th Street SE. Detailed distributions of the AM and PM peak-hour trips generated by the development are shown in Figure 2 and Figure 3, respectively.



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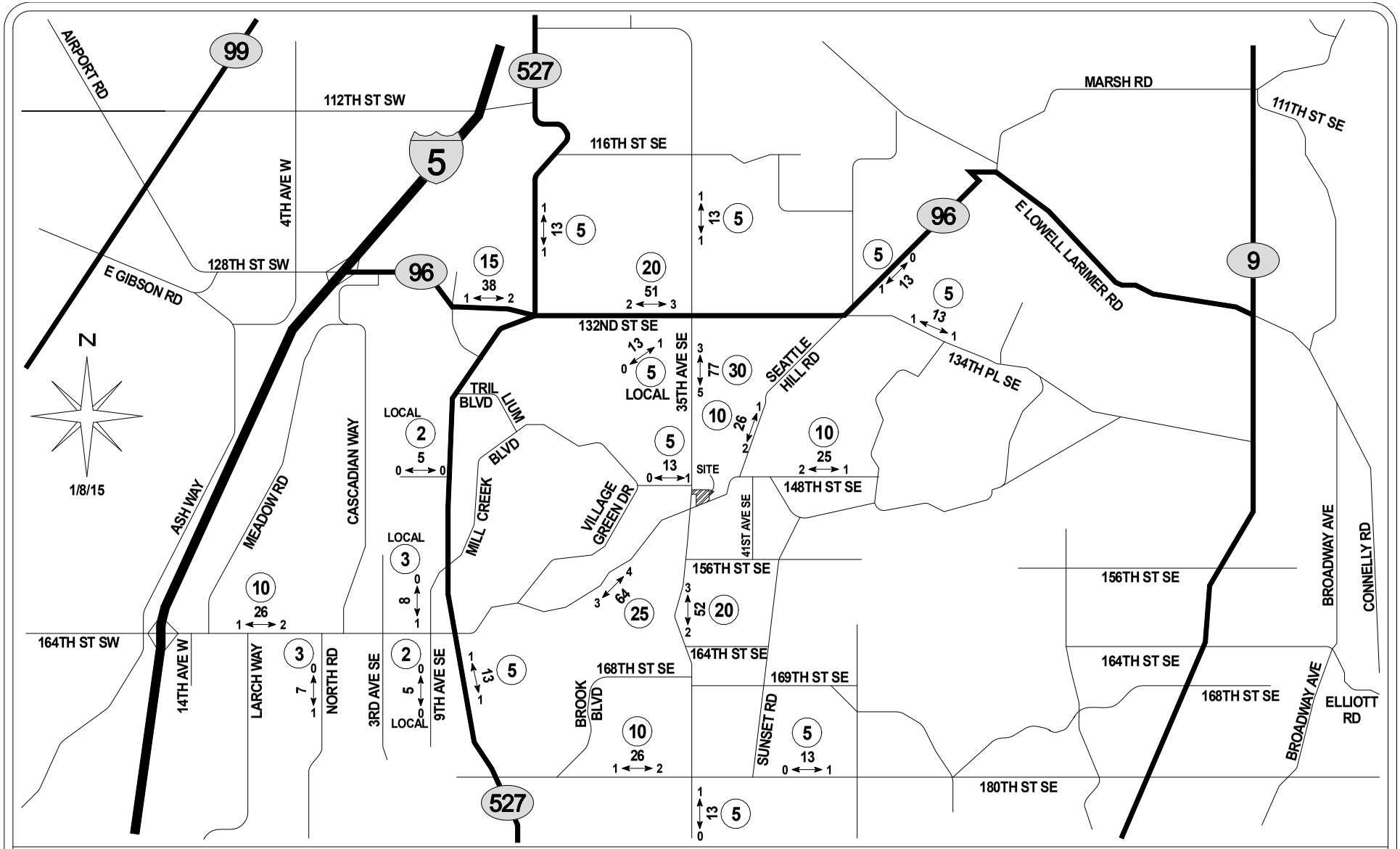
AWDT
AM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

XX — TRIP DISTRIBUTION %

FIGURE 2

DEVELOPMENT TRIP DISTRIBUTION AM-PEAK HOUR



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AWDT
PM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 3

DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR

5. INTERSECTION ANALYSIS

Intersection level of service analysis has been performed for the intersections of 35th Avenue SE at Seattle Hill Road and 35th Avenue SE at 149th Place SE (site access). The development will construct an extension 149th Place SE, which is currently a stub-road, on the east side of 35th Avenue SE. The stub-road currently extends approximately 90 feet from the edge of the traveled way on 35th Avenue SE and currently provides access to 3 existing single-family units. The intersections chosen for analysis are the intersections in the site vicinity impacted by the highest number of development trips.

Congestion at intersections is generally measured in terms of level of service (LOS). In accordance with the 2010 Highway Capacity Manual (HCM), road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service at signalized, roundabout and all-way stop-controlled intersections is based on the average delay of all approaches. The level of service for two-way stop-controlled intersections is based on average delays for the critical stopped approach. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values. A summary of the intersection level of service criteria is included in Table 2.

Table 2: Level of Service Criteria for Intersections

Level of Service[1]	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	**Signalized** Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays[2]	>50	>80

[1] **Source:** *Highway Capacity Manual* 2010.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
LOS B: Generally stable traffic flow conditions.
LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.
LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).
LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

[2] When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

The level of service thresholds for the signalized intersection of Seattle Hill Road at 35th Avenue SE and the unsignalized intersection of 35th Avenue SE at 149th Place SE are LOS F, based on the Transportation Element section of the *City of Mill Creek 2012 Comprehensive Plan*.

5.1 2015 Existing Conditions

The existing intersection level of service analysis is based on the existing channelization, signal timings, and PM peak-hour turning movement volumes taken from a September 2013 Snohomish County turning movement count. The existing turning movement volumes are shown in Figure 3.

The existing level of service analysis shows that the intersection of 35th Avenue SE at Seattle Hill currently operates at LOS D with an average 52.0 seconds of delay. The level of service calculations are included in the attachments.

5.2 2021 Baseline Conditions

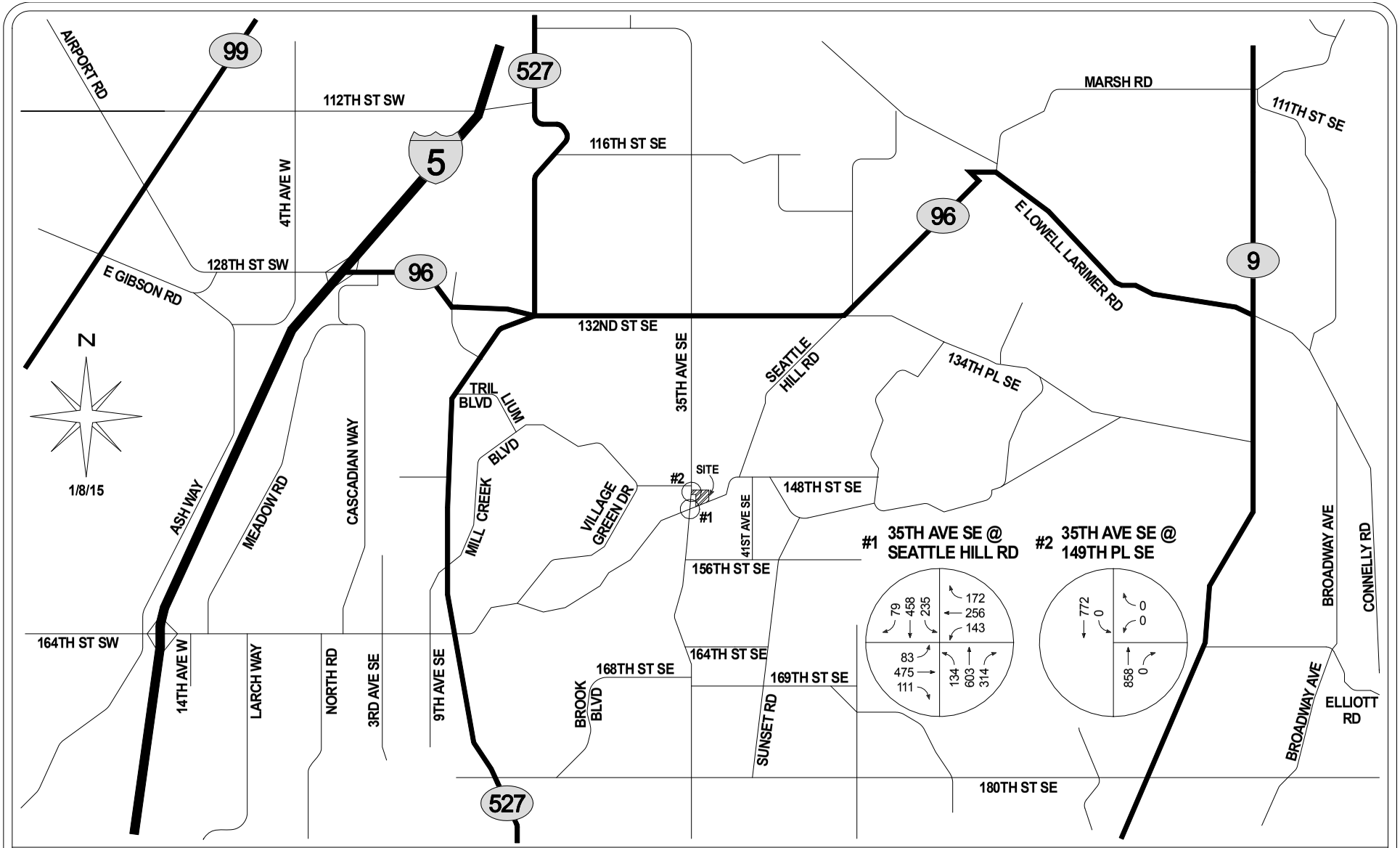
The 2021 baseline intersection level of service analysis has been performed to satisfy a 6-year concurrency period. The 2021 baseline turning movements have been calculated by adding Snohomish County Pipeline Data for the intersection to the existing turning movement volumes. The total pipeline trips added to the intersection (354 PM peak-hour trips) equates to an annual growth rate of approximately 1.4%. The 2021 baseline turning movements are shown in Figure 4.

The 2021 baseline level of service analysis assumes that the signal timings for the intersection of 35th Avenue SE at Seattle Hill Road will be optimized to accommodate future growth in trips. This is an acceptable assumption since Snohomish County constantly evaluates signal timings at the intersection to ensure the intersection operates as well as possible. The analysis shows that the intersection of 35th Avenue SE at Seattle Hill Road is expected to operate at LOS E with an average of 57.3 seconds of delay. The level of service calculations are included in the attachments.

5.3 2021 Future with Development Conditions

The 2021 future with development turning movements have been calculated by adding the trips from the Harm's Estate development to the 2021 baseline turning movements. It is important to note that the intersection of 35th Avenue SE at 149th Place SE includes the 3 existing single-family residential units and does not include the credit for the existing single-family residential unit on the site to represent the total trips that are anticipated on 149th Place SE. The 2021 future with development turning movements at the study intersections are shown in Figure 5.

The intersection of 35th Avenue SE at Seattle Hill Road is expected to operate at LOS E with 57.7 seconds of delay. Additionally, the new extension of 149th Place SE that will serve the development will operate at LOS C with 22.5 seconds of delay. The level of service calculations are included in the attachments.



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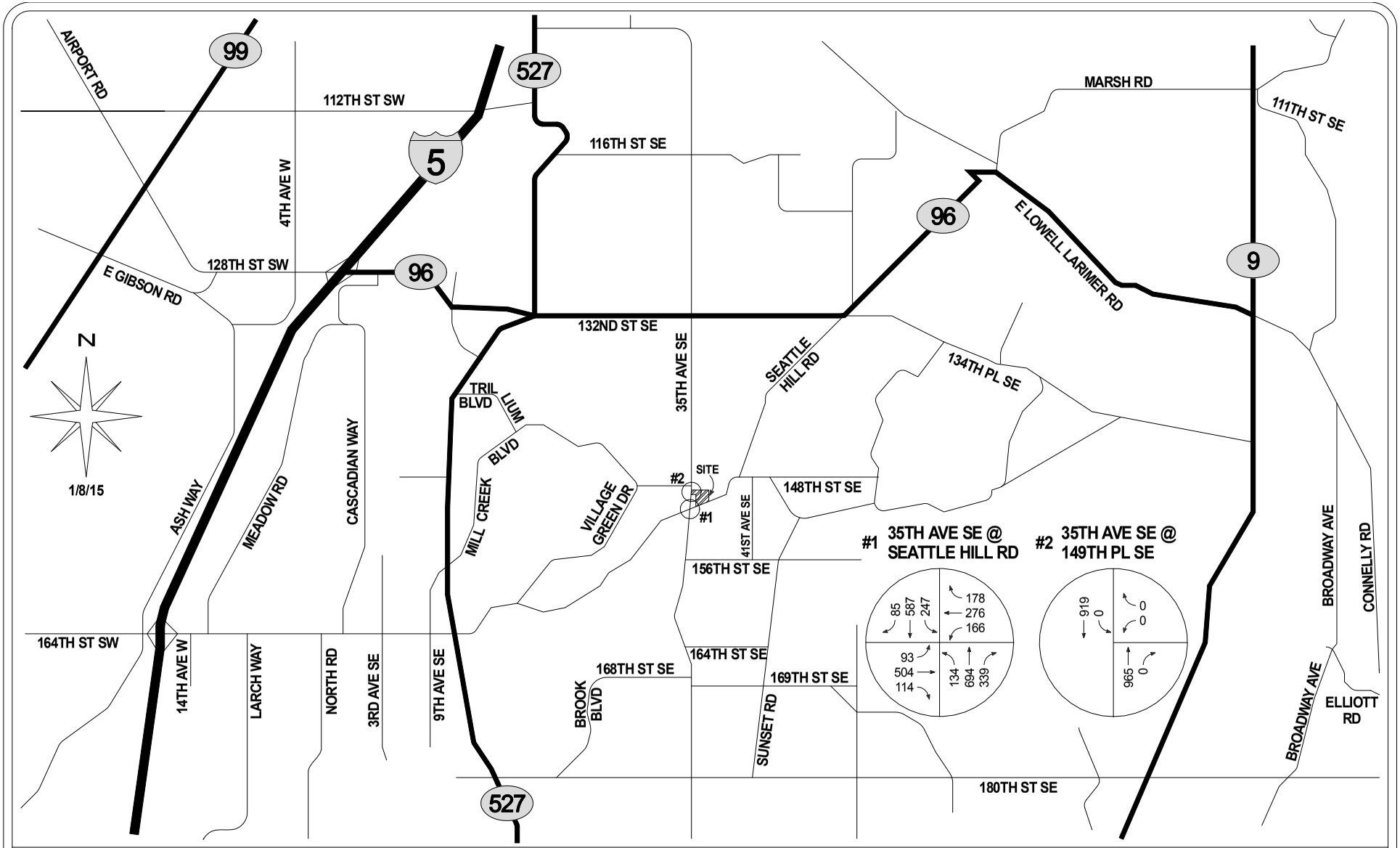
XXX → TURNING MOVEMENT VOLUMES

FIGURE 4

2015 EXISTING TURNING MOVEMENTS PM PEAK-HOUR



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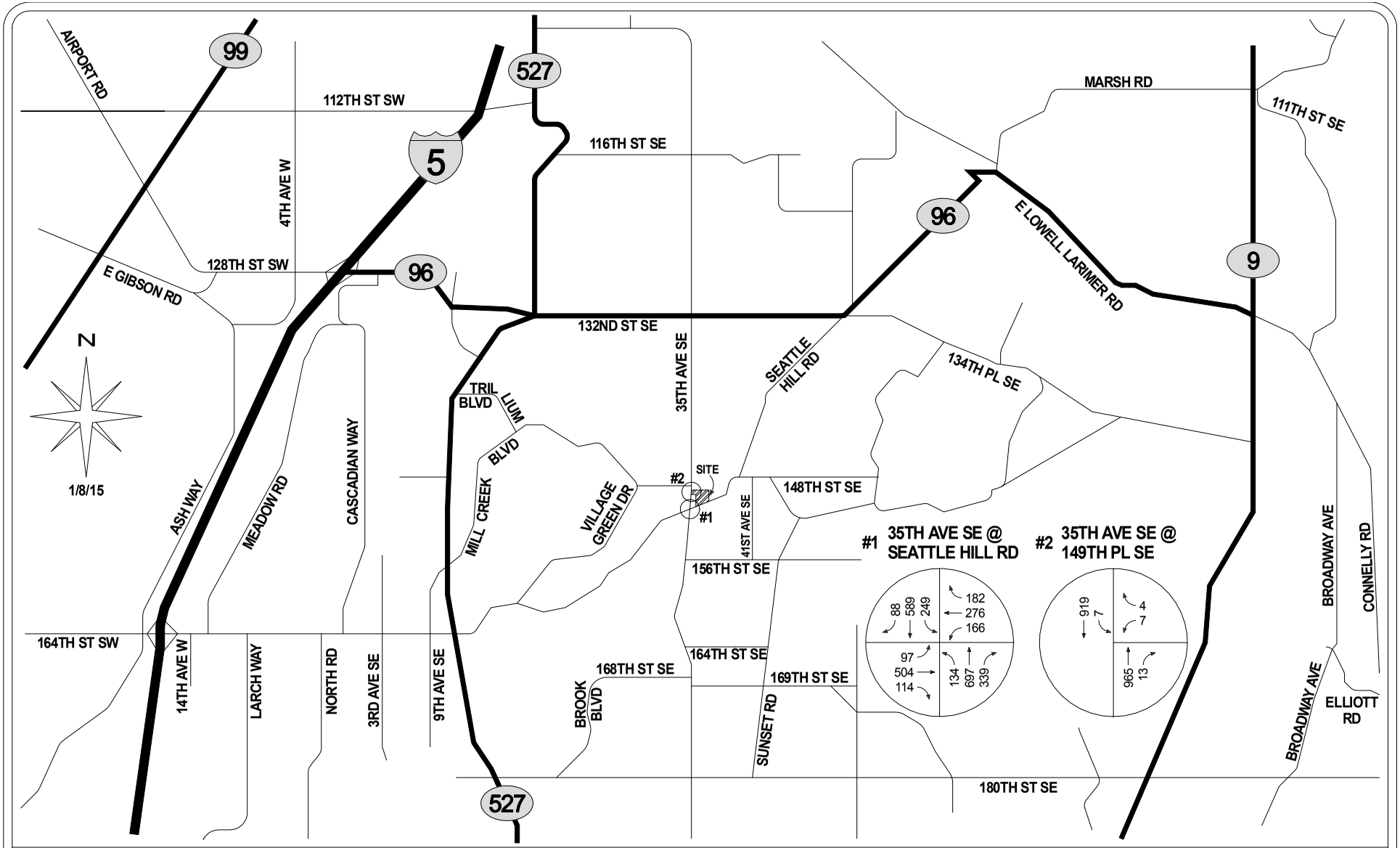
XXX → TURNING MOVEMENT VOLUMES

FIGURE 5

2021 BASELINE
TURNING MOVEMENTS
PM PEAK-HOUR



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XXX → TURNING MOVEMENT VOLUMES

FIGURE 6

2021 FUTURE W/ DEV.
TURNING MOVEMENTS
PM PEAK-HOUR

Table 3: Intersection Level of Service Summary

	Intersection	2015 Existing Conditions		2021 Baseline Conditions		2021 Future with Development Conditions	
		LOS	Delay	LOS	Delay	LOS	Delay
1	35th Avenue SE @ Seattle Hill Road	D	52.0 sec	E	57.3 sec	E	57.7 sec
2	35th Avenue SE @ 149th Place SE	-	-	-	-	C	22.5 sec

The study intersections will operate at acceptable levels under the 2021 future with development conditions. The level of service calculations at the study intersections for the PM peak-hour are included in the attachments.

6. TRAFFIC MITIGATION FEES

Developments in the City of Mill Creek are required to pay traffic mitigation fees to the City of Mill Creek. In addition, the City of Mill Creek has an interlocal agreement with Snohomish County to provides for the payment of traffic mitigation to Snohomish County for City of Mill Creek developments. The City of Mill Creek does not have an interlocal agreement with other surrounding jurisdictions, including WSDOT, for the payment of traffic mitigation fees.

6.1 City of Mill Creek

The City of Mill Creek collects traffic mitigation fees based on PM peak-hour development trips generated. The traffic mitigation fee is $3,000.00 per PM peak-hour trip generated. The Harms Estate development will generate 27 new PM peak-hour trips and will have an associated traffic mitigation fee of $81,000.00.

6.2 Snohomish County

The Harms Estate development is required to contribute a proportionate share traffic mitigation fee payment for impacts of the development to arterial capacity within Transportation Service Area D (TSA D) of Snohomish County, as identified in the interlocal agreement between the City of Mill Creek and Snohomish County. The standard impact for City of Mill Creek developments to Snohomish County arterials is 70%, which is consistent with the distribution of trips from the development. The Snohomish County traffic mitigation fee is $267 per daily trips for residential developments with the Urban Growth Area. The development will therefore have Snohomish County traffic mitigation fees of $48,040.78.

6.3 Traffic Impact Fee Summary

The Harms Estate development will generate 257.04 new average daily trips with 27 PM peak-hour trips. The traffic mitigation fees to mitigate the impacts of these trips are summarized in Table 4. It is important to note that the per unit fees are based on the total units that will be constructed.

Table 4: Traffic Mitigation Fee Summary

Jurisdiction	Fee per Trip Type	Trip Type	Trips	Mitigation Fee	
				Total	Per Unit (28 units)
City of Mill Creek	$3,000	PM Peak-Hour	27	$81,000.00	$2,892.86
Snohomish County	$267	70% of ADT	179.93	$48,040.78	$1,715.74
TOTAL				**$129,040.78**	**$4,608.60**

The Harms Estate development will have a total traffic mitigation fee of $129,040.78, equivalent to $4,608.60 per unit for the 28 units constructed on-site.

7. CONCLUSIONS

The Harms Estate development is proposed to consist of 28 single-family homes. There is one existing single-family residence on site that will be credited towards the development. The development is located on the north side of Seattle Hill Road, east of 35th Avenue SE. The development is anticipated to generate 257.04 new average daily trips with 27 new PM peak-hour, including the credit for the existing single-family residential unit on the site. The trips generated by the site are not anticipated to significantly impact any off-site intersections. The total traffic mitigation fees for the development will be $129,040.78, equivalent to $4,608.60 per unit constructed.

Trip Generation Calculations

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Trip Generation for: **Development Peak Weekday**
(a.k.a.): **Average Weekday Daily Trips (AWDT)**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Single Family (Detached)	28 Units	210	9.52	50%	50%	266.56	0%	0.00	266.56	0%	0.00	0%	0.00	266.56	0.00	0.00	0.00	0.00	133.28	133.28
Single Family (Detached) existing	-1 Units	210	9.52	50%	50%	-9.52	0%	0.00	-9.52	0%	0.00	0%	0.00	-9.52	0.00	0.00	0.00	0.00	-4.76	-4.76
Total						257.04		0.00	257.04		0.00		0.00	257.04	0.00	0.00	0.00	0.00	128.52	128.52

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Trip Generation for: **Development Peak Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 7 and 9 AM**
(a.k.a.): **Weekday AM Peak Hour**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Single Family (Detached)	28 Units	210	0.75	25%	75%	21.00	0%	0.00	21.00	0%	0.00	0%	0.00	21.00	0.00	0.00	0.00	0.00	5.25	15.75
Single Family (Detached) existing	-1 Units	210	0.75	25%	75%	-0.75	0%	0.00	-0.75	0%	0.00	0%	0.00	-0.75	0.00	0.00	0.00	0.00	-0.19	-0.56
Total						20.25		0.00	20.25		0.00		0.00	20.25	0.00	0.00	0.00	0.00	5.06	15.19

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Trip Generation for: **Development Peak Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM**
(a.k.a.): **Weekday PM Peak Hour**

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Single Family (Detached)	28 Units	210	1.00	63%	37%	28.00	0%	0.00	28.00	0%	0.00	0%	0.00	28.00	0.00	0.00	0.00	0.00	17.64	10.36
Single Family (Detached) existing	-1 Units	210	1.00	63%	37%	-1.00	0%	0.00	-1.00	0%	0.00	0%	0.00	-1.00	0.00	0.00	0.00	0.00	-0.63	-0.37
Total						27.00		0.00	27.00		0.00		0.00	27.00	0.00	0.00	0.00	0.00	17.01	9.99

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AM Peak-Hour

%	New ADT	New AM Peak Hour Trips			%	New ADT	New AM Peak Hour Trips		
		In	Out	Total			In	Out	Total
100%	257	5	15	20	100%	257	5	15	20
1%	2.57	0.05	0.15	0.20	51%	131.09	2.58	7.75	10.33
2%	5.14	0.10	0.30	0.41	52%	133.66	2.63	7.90	10.53
3%	7.71	0.15	0.46	0.61	53%	136.23	2.68	8.05	10.73
4%	10.28	0.20	0.61	0.81	54%	138.80	2.73	8.20	10.94
5%	**12.85**	**0.25**	**0.76**	**1.01**	**55%**	**141.37**	**2.78**	**8.35**	**11.14**
6%	15.42	0.30	0.91	1.22	56%	143.94	2.83	8.51	11.34
7%	17.99	0.35	1.06	1.42	57%	146.51	2.88	8.66	11.54
8%	20.56	0.40	1.22	1.62	58%	149.08	2.93	8.81	11.75
9%	23.13	0.46	1.37	1.82	59%	151.65	2.99	8.96	11.95
10%	**25.70**	**0.51**	**1.52**	**2.03**	**60%**	**154.22**	**3.04**	**9.11**	**12.15**
11%	28.27	0.56	1.67	2.23	61%	156.79	3.09	9.27	12.35
12%	30.84	0.61	1.82	2.43	62%	159.36	3.14	9.42	12.56
13%	33.42	0.66	1.97	2.63	63%	161.94	3.19	9.57	12.76
14%	35.99	0.71	2.13	2.84	64%	164.51	3.24	9.72	12.96
15%	**38.56**	**0.76**	**2.28**	**3.04**	**65%**	**167.08**	**3.29**	**9.87**	**13.16**
16%	41.13	0.81	2.43	3.24	66%	169.65	3.34	10.03	13.37
17%	43.70	0.86	2.58	3.44	67%	172.22	3.39	10.18	13.57
18%	46.27	0.91	2.73	3.65	68%	174.79	3.44	10.33	13.77
19%	48.84	0.96	2.89	3.85	69%	177.36	3.49	10.48	13.97
20%	**51.41**	**1.01**	**3.04**	**4.05**	**70%**	**179.93**	**3.54**	**10.63**	**14.18**
21%	53.98	1.06	3.19	4.25	71%	182.50	3.59	10.78	14.38
22%	56.55	1.11	3.34	4.46	72%	185.07	3.64	10.94	14.58
23%	59.12	1.16	3.49	4.66	73%	187.64	3.69	11.09	14.78
24%	61.69	1.21	3.65	4.86	74%	190.21	3.74	11.24	14.99
25%	**64.26**	**1.27**	**3.80**	**5.06**	**75%**	**192.78**	**3.80**	**11.39**	**15.19**
26%	66.83	1.32	3.95	5.27	76%	195.35	3.85	11.54	15.39
27%	69.40	1.37	4.10	5.47	77%	197.92	3.90	11.70	15.59
28%	71.97	1.42	4.25	5.67	78%	200.49	3.95	11.85	15.80
29%	74.54	1.47	4.41	5.87	79%	203.06	4.00	12.00	16.00
30%	**77.11**	**1.52**	**4.56**	**6.08**	**80%**	**205.63**	**4.05**	**12.15**	**16.20**
31%	79.68	1.57	4.71	6.28	81%	208.20	4.10	12.30	16.40
32%	82.25	1.62	4.86	6.48	82%	210.77	4.15	12.46	16.61
33%	84.82	1.67	5.01	6.68	83%	213.34	4.20	12.61	16.81
34%	87.39	1.72	5.16	6.89	84%	215.91	4.25	12.76	17.01
35%	**89.96**	**1.77**	**5.32**	**7.09**	**85%**	**218.48**	**4.30**	**12.91**	**17.21**
36%	92.53	1.82	5.47	7.29	86%	221.05	4.35	13.06	17.42
37%	95.10	1.87	5.62	7.49	87%	223.62	4.40	13.22	17.62
38%	97.68	1.92	5.77	7.70	88%	226.20	4.45	13.37	17.82
39%	100.25	1.97	5.92	7.90	89%	228.77	4.50	13.52	18.02
40%	**102.82**	**2.02**	**6.08**	**8.10**	**90%**	**231.34**	**4.55**	**13.67**	**18.23**
41%	105.39	2.07	6.23	8.30	91%	233.91	4.60	13.82	18.43
42%	107.96	2.13	6.38	8.51	92%	236.48	4.66	13.97	18.63
43%	110.53	2.18	6.53	8.71	93%	239.05	4.71	14.13	18.83
44%	113.10	2.23	6.68	8.91	94%	241.62	4.76	14.28	19.04
45%	**115.67**	**2.28**	**6.84**	**9.11**	**95%**	**244.19**	**4.81**	**14.43**	**19.24**
46%	118.24	2.33	6.99	9.32	96%	246.76	4.86	14.58	19.44
47%	120.81	2.38	7.14	9.52	97%	249.33	4.91	14.73	19.64
48%	123.38	2.43	7.29	9.72	98%	251.90	4.96	14.89	19.85
49%	125.95	2.48	7.44	9.92	99%	254.47	5.01	15.04	20.05
50%	**128.52**	**2.53**	**7.60**	**10.13**	**100%**	**257.04**	**5.06**	**15.19**	**20.25**

Harms Estate
GTC #14-286

PM Peak-Hour

%	New ADT	New PM Peak Hour Trips			%	New ADT	New PM Peak Hour Trips		
		In	Out	Total			In	Out	Total
100%	257	17	10	27	100%	257	17	10	27
1%	2.57	0.17	0.10	0.27	51%	131.09	8.68	5.09	13.77
2%	5.14	0.34	0.20	0.54	52%	133.66	8.85	5.19	14.04
3%	7.71	0.51	0.30	0.81	53%	136.23	9.02	5.29	14.31
4%	10.28	0.68	0.40	1.08	54%	138.80	9.19	5.39	14.58
5%	**12.85**	**0.85**	**0.50**	**1.35**	**55%**	**141.37**	**9.36**	**5.49**	**14.85**
6%	15.42	1.02	0.60	1.62	56%	143.94	9.53	5.59	15.12
7%	17.99	1.19	0.70	1.89	57%	146.51	9.70	5.69	15.39
8%	20.56	1.36	0.80	2.16	58%	149.08	9.87	5.79	15.66
9%	23.13	1.53	0.90	2.43	59%	151.65	10.04	5.89	15.93
10%	**25.70**	**1.70**	**1.00**	**2.70**	**60%**	**154.22**	**10.21**	**5.99**	**16.20**
11%	28.27	1.87	1.10	2.97	61%	156.79	10.38	6.09	16.47
12%	30.84	2.04	1.20	3.24	62%	159.36	10.55	6.19	16.74
13%	33.42	2.21	1.30	3.51	63%	161.94	10.72	6.29	17.01
14%	35.99	2.38	1.40	3.78	64%	164.51	10.89	6.39	17.28
15%	**38.56**	**2.55**	**1.50**	**4.05**	**65%**	**167.08**	**11.06**	**6.49**	**17.55**
16%	41.13	2.72	1.60	4.32	66%	169.65	11.23	6.59	17.82
17%	43.70	2.89	1.70	4.59	67%	172.22	11.40	6.69	18.09
18%	46.27	3.06	1.80	4.86	68%	174.79	11.57	6.79	18.36
19%	48.84	3.23	1.90	5.13	69%	177.36	11.74	6.89	18.63
20%	**51.41**	**3.40**	**2.00**	**5.40**	**70%**	**179.93**	**11.91**	**6.99**	**18.90**
21%	53.98	3.57	2.10	5.67	71%	182.50	12.08	7.09	19.17
22%	56.55	3.74	2.20	5.94	72%	185.07	12.25	7.19	19.44
23%	59.12	3.91	2.30	6.21	73%	187.64	12.42	7.29	19.71
24%	61.69	4.08	2.40	6.48	74%	190.21	12.59	7.39	19.98
25%	**64.26**	**4.25**	**2.50**	**6.75**	**75%**	**192.78**	**12.76**	**7.49**	**20.25**
26%	66.83	4.42	2.60	7.02	76%	195.35	12.93	7.59	20.52
27%	69.40	4.59	2.70	7.29	77%	197.92	13.10	7.69	20.79
28%	71.97	4.76	2.80	7.56	78%	200.49	13.27	7.79	21.06
29%	74.54	4.93	2.90	7.83	79%	203.06	13.44	7.89	21.33
30%	**77.11**	**5.10**	**3.00**	**8.10**	**80%**	**205.63**	**13.61**	**7.99**	**21.60**
31%	79.68	5.27	3.10	8.37	81%	208.20	13.78	8.09	21.87
32%	82.25	5.44	3.20	8.64	82%	210.77	13.95	8.19	22.14
33%	84.82	5.61	3.30	8.91	83%	213.34	14.12	8.29	22.41
34%	87.39	5.78	3.40	9.18	84%	215.91	14.29	8.39	22.68
35%	**89.96**	**5.95**	**3.50**	**9.45**	**85%**	**218.48**	**14.46**	**8.49**	**22.95**
36%	92.53	6.12	3.60	9.72	86%	221.05	14.63	8.59	23.22
37%	95.10	6.29	3.70	9.99	87%	223.62	14.80	8.69	23.49
38%	97.68	6.46	3.80	10.26	88%	226.20	14.97	8.79	23.76
39%	100.25	6.63	3.90	10.53	89%	228.77	15.14	8.89	24.03
40%	**102.82**	**6.80**	**4.00**	**10.80**	**90%**	**231.34**	**15.31**	**8.99**	**24.30**
41%	105.39	6.97	4.10	11.07	91%	233.91	15.48	9.09	24.57
42%	107.96	7.14	4.20	11.34	92%	236.48	15.65	9.19	24.84
43%	110.53	7.31	4.30	11.61	93%	239.05	15.82	9.29	25.11
44%	113.10	7.48	4.40	11.88	94%	241.62	15.99	9.39	25.38
45%	**115.67**	**7.65**	**4.50**	**12.15**	**95%**	**244.19**	**16.16**	**9.49**	**25.65**
46%	118.24	7.82	4.60	12.42	96%	246.76	16.33	9.59	25.92
47%	120.81	7.99	4.70	12.69	97%	249.33	16.50	9.69	26.19
48%	123.38	8.16	4.80	12.96	98%	251.90	16.67	9.79	26.46
49%	125.95	8.33	4.90	13.23	99%	254.47	16.84	9.89	26.73
50%	**128.52**	**8.51**	**5.00**	**13.50**	**100%**	**257.04**	**17.01**	**9.99**	**27.00**

Existing PM Peak-Hour Count and Turning Movement Calculations

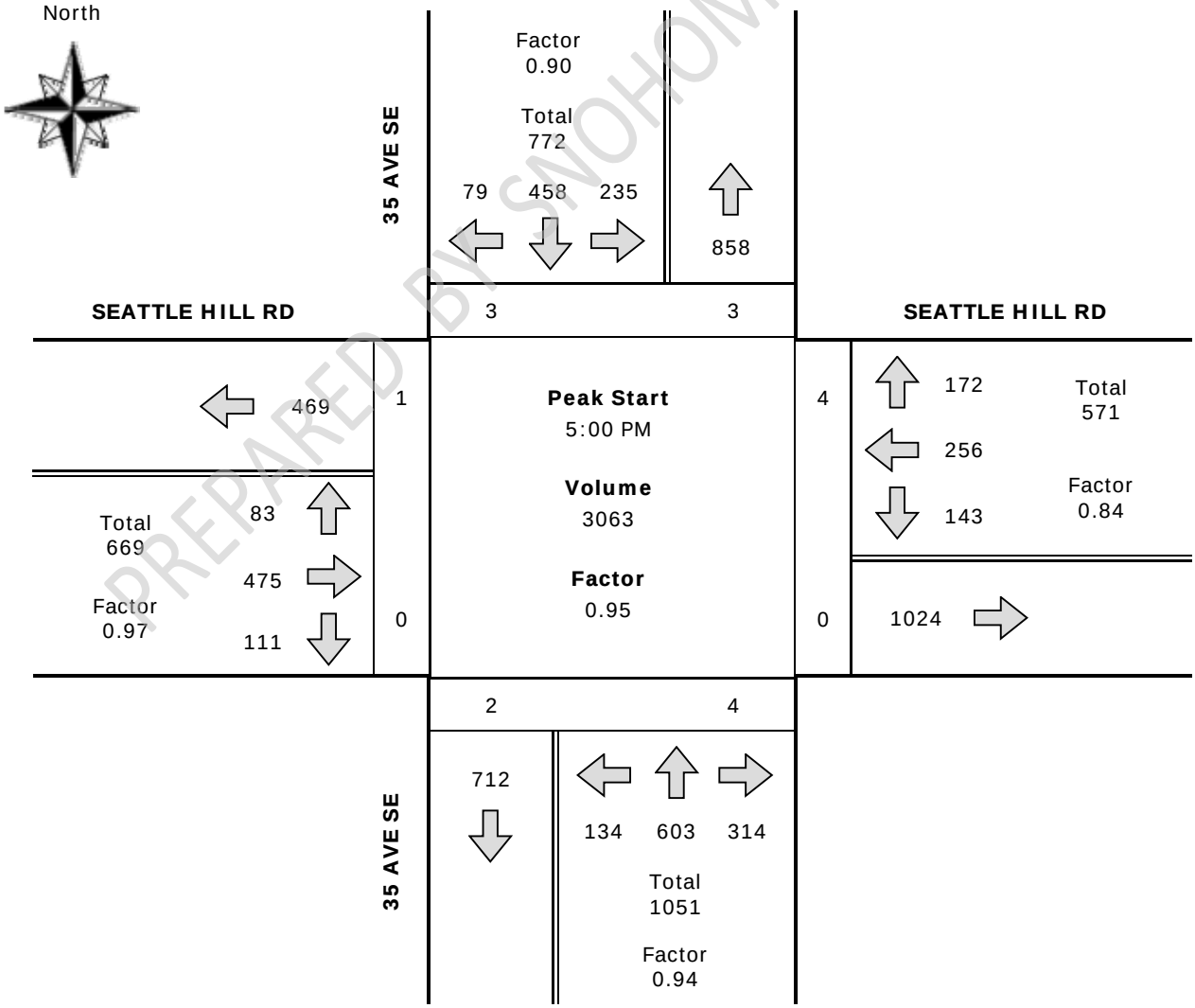
SNOHOMISH COUNTY TRAFFIC OPERATIONS
3000 Rockefeller Ave
Everett, WA 98201

LOCATION : 35 AVE SE @ SEATTLE HILL RD — Site: 91197@1.815
REQUESTOR : FORECAST — 9/26/2013 Thursday

Intersection Peak Hour

Location 35 AVE SE at SEATTLE HILL RD
Weather DRY — **Counted by** BB
File Number 09261318pA11K178 — **Prepared by** BB

	North	East	South	West
Total	1630	1595	1763	1138
Estimated ADT	16300	15950	17630	11380
AUTOS	765 99.1 %	564 98.8 %	1034 98.4 %	660 98.7 %
LT TRKS	4 0.5 %	4 0.7 %	10 1.0 %	5 0.7 %
HVY TRKS	1 0.1 %	0	4 0.4 %	2 0.3 %
BUSES	2 0.3 %	3 0.5 %	3 0.3 %	2 0.3 %



PREPARED BY SNOHOMISH COUNTY

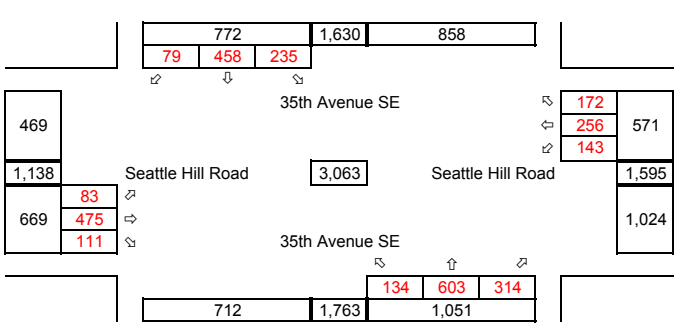
#1 35th Ave @ Seattle Hill Rd

Synchro ID: 1

Existing
Average Weekday
PM Peak Hour

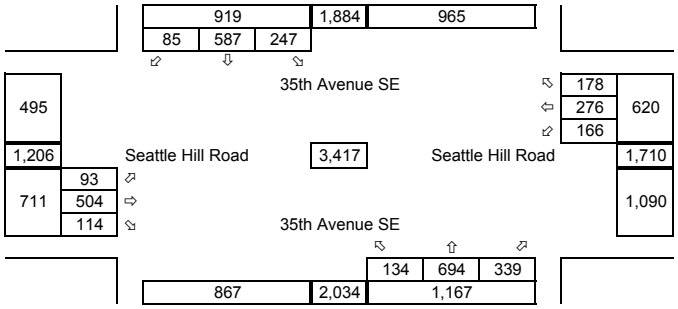
Date **9/23/2013**

Data Source: **Sno Co.**

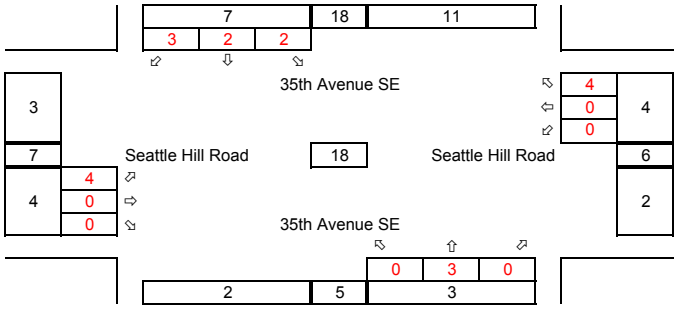


Future w/o Development
Average Weekday
PM Peak Hour

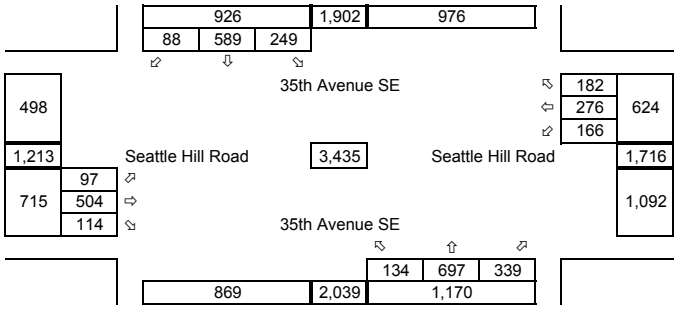
Year: 2021
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



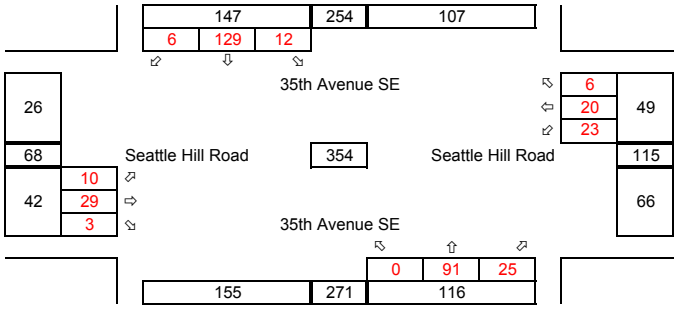
Total Development Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



Sno. Co. Pipeline
Average Weekday
PM Peak Hour



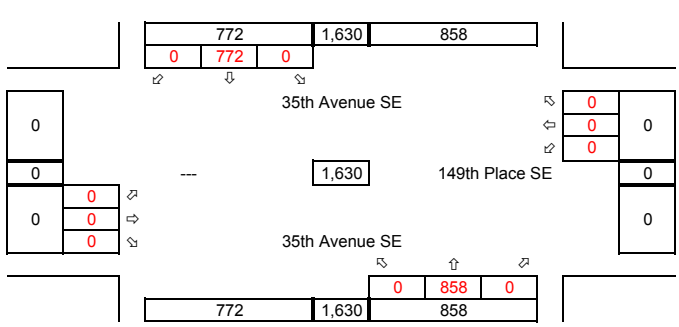
#2 149th Pl @ Seattle Hill Rd

Synchro ID: 2

Existing
Average Weekday
PM Peak Hour

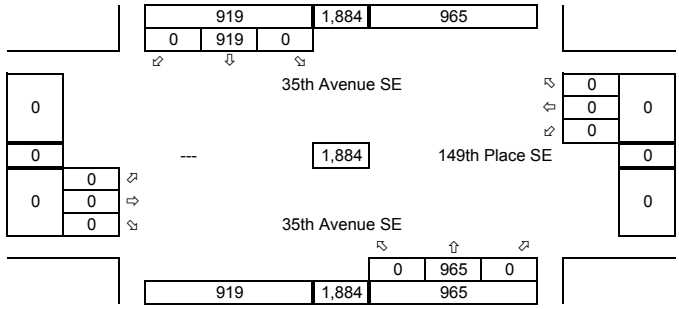
Date **9/23/2013**

Data Source: **Extrapolated**

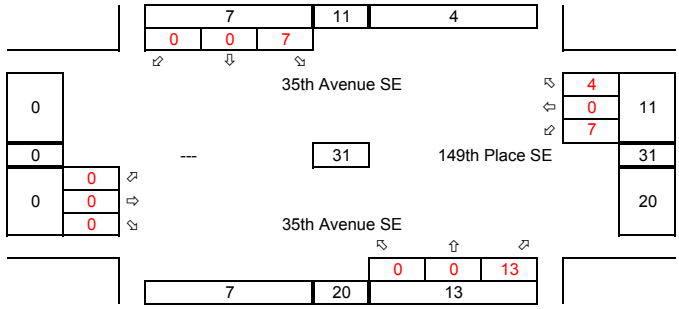


Future w/o Development
Average Weekday
PM Peak Hour

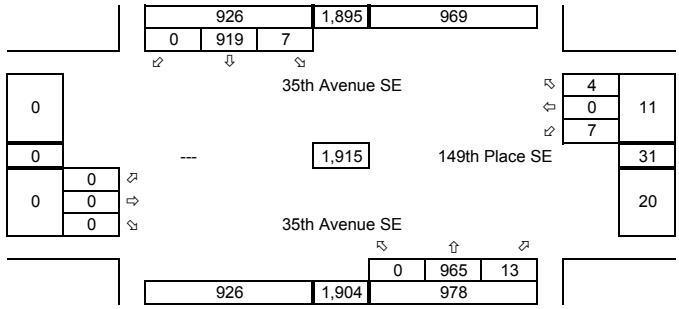
Year: 2021
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



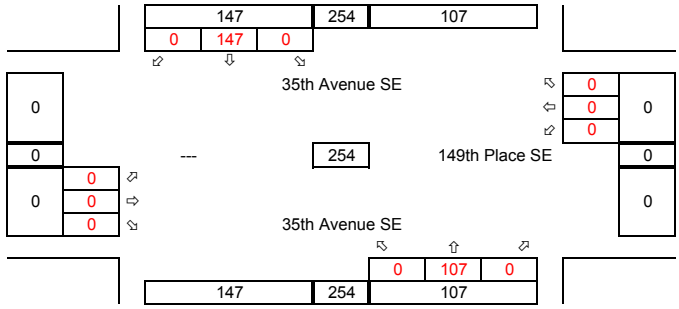
Total Development Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



Sno. Co. Pipeline
Average Weekday
PM Peak Hour



Level of Service Analysis

Lanes, Volumes, Timings
1: 35th Avenue SE & Seattle Hill Road

Harms Estates

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	475	111	143	256	172	134	603	314	235	458	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	373		255	100		415	100		200
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1829	0	1787	1881	1599	1787	1881	1599	1787	1881	1599
Flt Permitted	0.503			0.090			0.254			0.090		
Satd. Flow (perm)	946	1829	0	169	1881	1599	478	1881	1599	169	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				181			94			73
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		823			1169			477			715	
Travel Time (s)		18.7			26.6			10.8			16.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	617	0	151	269	181	141	635	331	247	482	83
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	5.0		4.0	5.0	4.0	4.0	7.0	4.0	4.0	7.0	4.0
Minimum Split (s)	8.0	30.0		8.0	28.0	8.0	8.0	28.0	8.0	8.0	27.0	8.0
Total Split (s)	30.0	45.0		38.0	48.0	20.0	20.0	35.0	38.0	20.0	50.0	30.0
Total Split (%)	19.6%	29.4%		24.8%	31.4%	13.1%	13.1%	22.9%	24.8%	13.1%	32.7%	19.6%
Yellow Time (s)	3.0	3.5		3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0	3.5	3.5	4.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	49.6	41.1		56.4	44.9	65.4	52.2	40.6	56.4	60.6	46.1	58.1
Actuated g/C Ratio	0.40	0.33		0.45	0.36	0.52	0.42	0.32	0.45	0.48	0.37	0.46
v/c Ratio	0.20	1.02		0.66	0.40	0.20	0.45	1.04	0.43	0.84	0.70	0.11
Control Delay	21.6	82.8		38.9	33.0	2.9	23.3	88.6	17.8	56.0	41.1	6.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	82.8		38.9	33.0	2.9	23.3	88.6	17.8	56.0	41.1	6.1
LOS	C	F		D	C	A	C	F	B	E	D	A
Approach Delay		75.2			25.4			59.1			42.1	
Approach LOS		E			C			E			D	
Queue Length 50th (ft)	39	~500		71	161	0	61	~549	125	142	324	4
Queue Length 95th (ft)	76	#853		146	261	39	109	#815	200	#322	515	36
Internal Link Dist (ft)		743			1089			397			635	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	100			373		255	100		415	100		200
Base Capacity (vph)	608	606		524	738	922	393	693	1047	295	693	1008
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	1.02		0.29	0.36	0.20	0.36	0.92	0.32	0.84	0.70	0.08

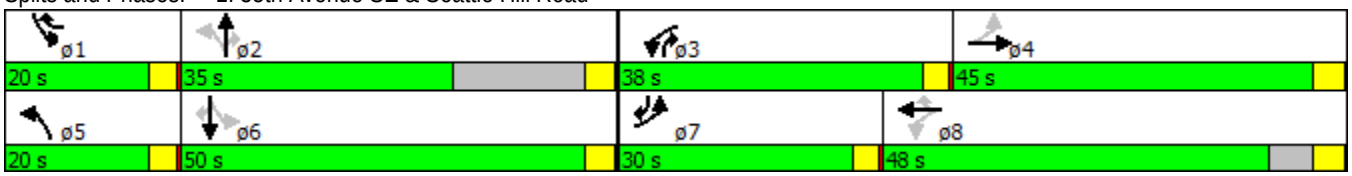
Intersection Summary

Area Type: Other
Cycle Length: 153
Actuated Cycle Length: 125.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 52.0 — Intersection LOS: D
Intersection Capacity Utilization 97.8% — ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 35th Avenue SE & Seattle Hill Road



Lanes, Volumes, Timings
1: 35th Avenue SE & Seattle Hill Road

Harms Estates

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	504	114	166	276	178	134	694	339	247	587	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	373		255	100		415	100		200
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1829	0	1787	1881	1599	1787	1881	1599	1787	1881	1599
Flt Permitted	0.454			0.105			0.174			0.090		
Satd. Flow (perm)	854	1829	0	198	1881	1599	327	1881	1599	169	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				141			120			86
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		823			1169			477			715	
Travel Time (s)		18.7			26.6			10.8			16.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	651	0	175	291	187	141	731	357	260	618	89
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	5.0		4.0	5.0	4.0	4.0	7.0	4.0	4.0	7.0	4.0
Minimum Split (s)	8.0	30.0		8.0	28.0	8.0	8.0	28.0	8.0	8.0	27.0	8.0
Total Split (s)	9.0	40.0		11.0	42.0	14.0	9.0	45.0	11.0	14.0	50.0	9.0
Total Split (%)	8.2%	36.4%		10.0%	38.2%	12.7%	8.2%	40.9%	10.0%	12.7%	45.5%	8.2%
Yellow Time (s)	3.0	3.5		3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0	3.5	3.5	4.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	42.0	36.0		46.0	38.0	52.5	47.0	41.0	52.5	55.5	46.0	55.5
Actuated g/C Ratio	0.38	0.33		0.42	0.35	0.48	0.43	0.37	0.48	0.50	0.42	0.50
v/c Ratio	0.26	1.08		0.92	0.45	0.22	0.67	1.04	0.43	1.09	0.79	0.10
Control Delay	21.2	94.5		70.9	30.6	5.6	33.4	80.3	14.0	111.3	36.4	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	94.5		70.9	30.6	5.6	33.4	80.3	14.0	111.3	36.4	3.6
LOS	C	F		E	C	A	C	F	B	F	D	A
Approach Delay		84.9			34.2			55.7			53.5	
Approach LOS		F			C			E			D	
Queue Length 50th (ft)	41	~508		76	158	17	52	~560	103	~154	371	1
Queue Length 95th (ft)	75	#735		#205	238	56	#100	#790	178	#321	522	26
Internal Link Dist (ft)		743			1089			397			635	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	100			373		255	100		415	100		200
Base Capacity (vph)	372	605		191	650	837	212	701	825	239	786	849
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	1.08		0.92	0.45	0.22	0.67	1.04	0.43	1.09	0.79	0.10

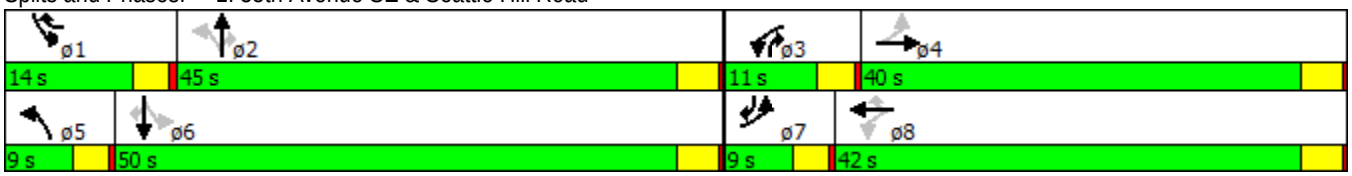
Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 57.3 Intersection LOS: E
Intersection Capacity Utilization 106.2% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 35th Avenue SE & Seattle Hill Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	504	114	166	276	182	134	697	339	249	589	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	373		255	100		415	100		200
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1829	0	1787	1881	1599	1787	1881	1599	1787	1881	1599
Flt Permitted	0.454			0.105			0.172			0.090		
Satd. Flow (perm)	854	1829	0	198	1881	1599	324	1881	1599	169	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				139			120			89
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		823			1169			477			715	
Travel Time (s)		18.7			26.6			10.8			16.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	651	0	175	291	192	141	734	357	262	620	93
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases	4			8		8	2		2	6		6
Detector Phase	7	4		3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	5.0		4.0	5.0	4.0	4.0	7.0	4.0	4.0	7.0	4.0
Minimum Split (s)	8.0	30.0		8.0	28.0	8.0	8.0	28.0	8.0	8.0	27.0	8.0
Total Split (s)	9.0	40.0		11.0	42.0	14.0	9.0	45.0	11.0	14.0	50.0	9.0
Total Split (%)	8.2%	36.4%		10.0%	38.2%	12.7%	8.2%	40.9%	10.0%	12.7%	45.5%	8.2%
Yellow Time (s)	3.0	3.5		3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.0		3.5	4.0	3.5	3.5	4.0	3.5	3.5	4.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	Max	None	None	Max	None
Act Effct Green (s)	42.0	36.0		46.0	38.0	52.5	47.0	41.0	52.5	55.5	46.0	55.5
Actuated g/C Ratio	0.38	0.33		0.42	0.35	0.48	0.43	0.37	0.48	0.50	0.42	0.50
v/c Ratio	0.27	1.08		0.92	0.45	0.23	0.67	1.05	0.43	1.10	0.79	0.11
Control Delay	21.4	94.5		70.9	30.6	6.0	33.7	81.6	14.0	114.0	36.5	3.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	94.5		70.9	30.6	6.0	33.7	81.6	14.0	114.0	36.5	3.6
LOS	C	F		E	C	A	C	F	B	F	D	A
Approach Delay		84.6			34.1			56.5			54.2	
Approach LOS		F			C			E			D	
Queue Length 50th (ft)	42	~508		76	158	20	52	~565	103	~157	373	1
Queue Length 95th (ft)	77	#735		#205	238	60	#101	#795	178	#324	524	27
Internal Link Dist (ft)		743			1089			397			635	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	100			373		255	100		415	100		200
Base Capacity (vph)	372	605		191	649	835	211	701	825	239	786	850
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.08		0.92	0.45	0.23	0.67	1.05	0.43	1.10	0.79	0.11

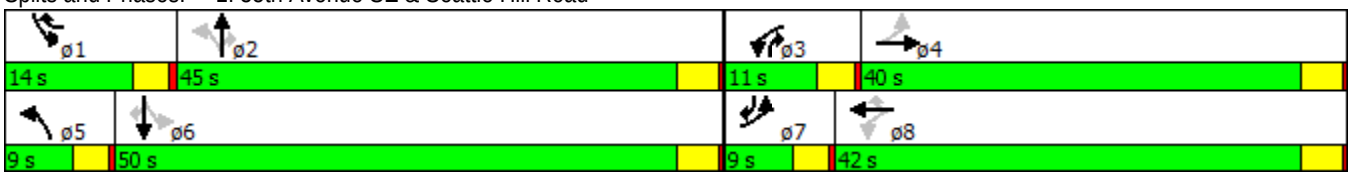
Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 57.7 Intersection LOS: E
Intersection Capacity Utilization 106.5% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 35th Avenue SE & Seattle Hill Road



Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	7	4	965	13	7	919
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	7	4	1016	14	7	967

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2005	1023	0	0	1029	0
Stage 1	1023	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	66	287	-	-	679	-
Stage 1	348	-	-	-	-	-
Stage 2	364	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	65	287	-	-	679	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	360	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	217	679	-
HCM Lane V/C Ratio	-	-	0.053	0.011	-
HCM Control Delay (s)	-	-	22.5	10.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

City of Mill Creek Intersection Level of Service Standards

Table 2

Minimum PM Peak Hour Level of Service Standards
and
2012 Level of Service

Intersection	Minimum Peak Hour Level of Service Standard	2012 Existing Level of Service
Signalized Intersections		
SR 527 @ 164th Street SE (Mill Creek Road)	E[1]	E
SR 527 @ Mill Creek Blvd	E[1]	C
SR 527 @ 153rd Street SE	E[1]	B
SR 527 @ Trillium Blvd	E[1]	B
SR 527 @ Dumas Road	E[1]	C
SR 527 @ SR 96	E[1]	E
Dumas Road @ SR 96	E[1]	D
16th Ave SE @ SR 96	E[1]	C
21st Ave SE @ SR 96	E[1]	A
25th Ave SE @ SR 96	E[1]	B
35th Ave SE @ SR 96	E[1]	E
39th Ave SE @ SR 96	E[1]	A
Dumas Road @ Park Road	F	B
Dumas Road @ North Creek Drive	F	A
Main Street @ Mill Creek Blvd	E	A
164th Street SE @ Mill Creek Blvd (9th Ave SE)	F	D
Mill Creek Road @ Village Green Drive	F	B
Mill Creek Road @ Seattle Hill Road	F	A
Seattle Hill Road @ 35th Ave SE	F	D
148th Street SE @ 35th Ave SE	F	B
Non-Signalized Intersections		
SR 527 @ Seattle Hill Road	E[1]	D
Seattle Hill Road @ 25th Ave SE	F	C
Seattle Hill Road @ 32nd Ave SE	F	B
Village Green Drive @ 148th Street SE	E	C
Village Green Drive @ Trillium Blvd SE	E	B
Mill Creek Blvd @ 153rd Street SE	E	B
Main Street @ 153rd Street SE	E	B

Source: City of Mill Creek, Department of Public Works

1. SR 527 and SR 96 are designated by PSRC as regionally significant highways. If the LOS falls below "E", PSRC recommends the implementation of mitigation measures.
2. Estimated LOS based upon existing traffic volumes and intersection delays

Table 3
Minimum Peak Hour Level of Service Standards
and
Forecast Level of Service in 2022

Intersection	Minimum Peak Hour Level of Service Standard	2022 Level of Service
Signalized Intersections		
SR 527 @ 164th Street SE (Mill Creek Road)	E[1]	E
SR 527 @ Mill Creek Blvd	E[1]	D
SR 527 @ 153rd Street SE	E[1]	C
SR 527 @ Trillium Blvd	E[1]	C
SR 527 @ Dumas Road	E[1]	C
SR 527 @ SR 96	E[1]	F
Dumas Road @ SR 96	E[1]	E
16th Ave SE @ SR 96	E[1]	C
21st Ave SE @ SR 96	E[1]	B
25th Ave SE @ SR 96	E[1]	D
35th Ave SE @ SR 96	E[1]	F
39th Ave SE @ SR 96	E[1]	D
Dumas Road @ Park Road	E	B
Dumas Road @ North Creek Drive	E	B
Main Street @ Mill Creek Blvd	E	B
164th Street SE @ Mill Creek Blvd (9th Ave SE)	F	E
Mill Creek Road @ Village Green Drive	F	B
Mill Creek Road @ Seattle Hill Road	F	B
Seattle Hill Road @ 35th Ave SE	F	E
148th Street SE @ 35th Ave SE	F	B
Non-Signalized Intersections		
SR 527 @ Seattle Hill Road	E[1]	E
Seattle Hill Road @ 25th Ave SE	E	C
Seattle Hill Road @ 32nd Ave SE	E	C
Village Green Drive @ 148th Street SE	D	C
Village Green Drive @ Trillium Blvd SE	D	C
Mill Creek Blvd @ 153rd Street SE	D	C
Main Street @ 153rd Street SE	D	C

Source: City of Mill Creek, Public Works Department

1. SR 527 and SR 96 are designated by PSRC as regionally significant highways. If LOS falls below "E," PSRC recommends the implementation of mitigation measures.
2. LOS based on Synchro analysis using projected 2022 traffic volumes and signal timing plans obtained from WSDOT and Snohomish County.

Snohomish County Pipeline Data

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 178 N-S Road Name 35 AV SE E-W Road Name SEATTLE HILL RD(MILL CK Count Date: 9/19/2013 ADT File #: 197

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Adams Court	04108788	Adams Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Anne Subdivision	05126387	Anne Subdivision	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Blk 1	96105652	Appletree Blk 1	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Blk 2 Div 3	97109528	Appletree Blk 2 Div 3	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 6	04121459	Appletree Div 6	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 7	05101904	Appletree Div 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 8	05120017	Appletree Div 8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 9	13104212	Appletree Div 9	0%	0	0	0	2	2	0	0	0	1	0	0	0	5
Appletree Division 5	98108638	Appletree Division 5	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree North	03109825	Appletree North	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Autumn Grove - Also see	06103214	Autumn Grove	0%	0	0	0	0	0	0	0	2	1	0	1	0	4
Bakerview	10101204	Bakerview	0%	1	0	0	0	0	0	0	1	0	1	4	2	9
Bear Creek II	04109468	Bear Creek II	0%	0	0	0	0	0	0	0	13	0	0	5	0	18
Bellrose	04115916	Bellrose	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bluegrass Meadows	98109323	Bluegrass Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Lane	04116315	Brookfield Lane	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bruner Addition	05128303	Bruner Addition	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Buffalo Square	00106298	Buffalo Square	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Camilla Lane	12110894	Camilla Lane	0%	0	0	0	0	0	0	0	2	1	0	1	0	4
Canton Ridge	04109198	Canton Ridge	0%	0	0	0	0	0	0	0	10	0	0	4	0	14
Canyon Creek Church	12106831	Canyon Creek Church	0%	0	3	0	1	2	0	0	0	1	0	0	0	7
Cedar Grove Estates	05101032	Cedar Grove Estates	0%	0	0	0	1	0	0	1	3	2	0	1	0	8
Cedar Meadows	02104281	Cedar Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekside Estates	97109394	Creekside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekside Manor	07104778	Creekside Manor	40%	0	0	0	0	0	0	0	1	0	0	2	1	4
Crescent Court	98116959	Crescent Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Dalanie (see 04108695)	03100649	Dalanie (see 04108695)	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Estates at Thomas Lake	04118517	Estates at Thomas Lake	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Everett Elementary Schoo	05117333	Everett Elementary School #17	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfield	04118901	Fairfield	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fernwood Hills	03101937	Fernwood Hills	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Gateway Middle School	03106729	Gateway Middle School	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Glengarry	98105816	Glengarry	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Gold Creek Community	07111379	Gold Creek Community Church	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Gold Creek Community	00106196	Gold Creek Community Church	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Harmony at Mill Creek	14113924	Harmony at Mill Creek	0%	0	1	0	0	4	5	0	0	0	0	0	0	10
Heritage Hagen 2	06103204	Heritage Hagen 2	0%	0	0	0	2	1	0	0	0	1	0	0	0	4
Heritage Hagen 3	06103206	Heritage Hagen 3	0%	0	0	0	2	1	0	0	0	1	0	0	0	4
Holly Park	00109816	Holly Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Holy Cross High School P	98100213	Holy Cross High School Phase I	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Janice	06102860	Janice	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Jewell Addition	05128235	Jewell Addition	7%	0	0	0	0	0	0	0	8	0	0	3	0	11
Kensington Park	06103915	Kensington Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
King's Corner	06129913	King's Corner	0%	0	0	0	0	0	0	0	11	2	0	3	0	16
King's Corner III	07111503	King's Corner III	0%	0	0	0	0	0	0	0	4	0	0	1	0	5
Kingsbury	14102790	Kingsbury	0%	0	1	0	3	4	3	0	0	1	2	0	0	14
Kingsridge	98101933	Kingsridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Larimer Crossing	05125316	Larimer Crossing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laural Estates	96104953	Laural Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	0	0	0	0	0	0	0	4	0	0	1	0	5
Maple View	99111523	Maple View	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mapleview Div III	03105402	Mapleview Div II	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Margate	00107036	Margate	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mayfield Estates	12104232	Mayfield Estates	0%	0	2	0	5	4	1	0	0	2	0	0	0	14
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadows	03108845	Meadows (Allen Addition 0310	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Creek Court	96109747	Mill Creek Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Creek Self Storage &	03105796	Mill Creek Self Storage & Res	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Pointe Apartments	99105422	Mill Pointe Apartments	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mrizek Estates	98109443	Mrizek Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Olson Addition	07101438	Olson Addition	0%	0	0	0	0	0	0	0	9	0	0	2	0	11
Opus Northpointe	97111501	Opus Northpointe	45%	0	2	0	0	4	0	2	0	0	0	0	2	10
Osborne Shopping Center	05124945	Osborne Shopping Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Center	04118722	Pacific Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekstone	04120938	Parkhaven fka: Creekstone	21%	0	0	0	0	0	0	0	23	0	0	8	0	31
Parkland Place	04119989	Parkland Place	0%	0	0	0	0	0	0	0	2	0	0	3	0	5
Parkwood Meadows	03100300	Parkwood Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pet Care Hospital	03108713	Pet Care Hospital	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Peterson Meadows	97106337	Peterson Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pioneer Ridge	00107621	Pioneer Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

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Presidio	02110658	Presidio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Remlinger Park	98109199	Remlinger Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Rockport/Bean Property	03109953	Rockport	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Seattle Hill Crossing	06134104	Seattle Hill Crossing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Seattle Hill Estates	95110056	Seattle Hill Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Snohomish	09101482	Sierra Snohomish	0%	2	2	0	0	0	0	0	0	0	0	0	1	5
Silva Creek	96105027	Silva Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Firs Retail Develop	02102502	Silver Firs Retail Development	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Firs Secter 4	96110766	Silver Firs Secter 4	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Hawk	05127070	Silver Hawk	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Lake Water District	04109144	Silver Lake Water District DUP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sinclair Woods	05128884	Sinclair Woods	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Sect	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish County DPW	05100812	Snohomish County DPW Cathc	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish School Distric	05118947	Snohomish School District #201	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring Haven	10100368	Spring Haven	0%	1	0	0	0	0	0	0	2	0	0	7	3	13
Springmill Place	98101154	Springmill Place	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Squires Landing	05122833	Squires Landing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Stonewater Creek 3	07111614	Stonewater Creek 3	0%	0	0	0	0	0	0	0	1	0	0	3	1	5
Sun Creek Meadows	06128688	Sun Creek Meadows	23%	0	0	0	0	0	0	0	3	0	0	1	0	4
Sun Rose	98101053	Sun Rose	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108825	Sunset Meadows Estates Div 2	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108624	Sunset Meadows Estates Divisio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Pointe	05126770	Sunset Pointe	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas Lake Court	05119918	Thomas Lake Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	0	0	0	2	0	0	0	8	5	0	3	0	18
Tsuga Stands	00105014	Tsuga Stands	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Vantage	05126998	Vantage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Websters Pond	98108094	Village At Websters Pond	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village On The Hill	98100545	Village On The Hill	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waldenwood East	96106350	Waldenwood East	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterbury Meadows	99114552	Waterbury Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Westfield (Wylie)	03102383	Westfield (Wylie)	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Whitney Lane	00107886	Whitney Lane	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Willow Tree Grove II	10102518	Willow Tree Grove II	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wynnwood Meadows	03101048	Wynnwood Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Yorkshire	05126766	Yorkshire	0%	0	0	0	0	0	0	0	3	0	0	1	0	4
Zocalo Urban Center	04110197	Zocalo Urban Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		4	11	0	18	22	9	3	110	18	3	54	10	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Adams Court	04108788	Adams Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Alexan North Creek	08106879	Alexan North Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Anne Subdivision	05126387	Anne Subdivision	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Blk 1	96105652	Appletree Blk 1	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Blk 2 Div 3	97109528	Appletree Blk 2 Div 3	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 6	04121459	Appletree Div 6	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 7	05101904	Appletree Div 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 8	05120017	Appletree Div 8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree Div 9	13104212	Appletree Div 9	0%	0	2	0	1	1	0	0	0	2	0	0	0	6
Appletree Division 5	98108638	Appletree Division 5	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Appletree North	03109825	Appletree North	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Autumn Grove - Also see	06103214	Autumn Grove	0%	0	0	0	1	0	0	0	2	0	0	3	0	6
Bakerview	10101204	Bakerview	0%	2	0	0	0	0	0	0	5	0	1	3	1	12
Bear Creek II	04109468	Bear Creek II	0%	0	0	0	0	0	0	0	8	0	0	15	0	23
Bellrose	04115916	Bellrose	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bluegrass Meadows	98109323	Bluegrass Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Lane	04116315	Brookfield Lane	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bruner Addition	05128303	Bruner Addition	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Buffalo Square	00106298	Buffalo Square	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Camilla Lane	12110894	Camilla Lane	0%	0	0	0	0	0	0	0	2	0	0	3	0	5
Canton Ridge	04109198	Canton Ridge	0%	0	0	0	0	0	0	0	7	0	0	12	0	19
Canyon Creek Church	12106831	Canyon Creek Church	0%	0	2	0	1	2	0	0	0	1	0	0	0	6
Cedar Grove Estates	05101032	Cedar Grove Estates	0%	0	0	1	2	0	0	0	2	1	0	3	0	9
Cedar Meadows	02104281	Cedar Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekside Estates	97109394	Creekside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekside Manor	07104778	Creekside Manor	40%	1	0	0	0	0	0	0	2	0	0	1	0	4
Creekside Place	05119403	Creekside Place	61%	1	0	0	0	0	0	0	1	1	0	1	0	4

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Crescent Court	98116959	Crescent Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Dalanie (see 04108695)	03100649	Dalanie (see 04108695)	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Estates at Thomas Lake	04118517	Estates at Thomas Lake	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfield	04118901	Fairfield	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fernwood Hills	03101937	Fernwood Hills	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Glengarry	98105816	Glengarry	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Gold Creek Community	07111379	Gold Creek Community Church	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Gold Creek Community	00106196	Gold Creek Community Church	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Harmony at Mill Creek	14113924	Harmony at Mill Creek	0%	0	4	0	0	2	2	0	0	0	5	0	0	13
Heritage Hagen 1	06103099	Heritage Hagen 1	0%	0	2	0	1	1	0	0	0	1	0	0	0	5
Heritage Hagen 2	06103204	Heritage Hagen 2	0%	0	1	0	1	1	0	0	0	2	0	0	0	5
Heritage Hagen 3	06103206	Heritage Hagen 3	0%	0	1	0	1	1	0	0	0	2	0	0	0	5
Heritage Paterson 1	05125681	Heritage Paterson 1	0%	0	2	0	1	1	0	0	0	1	0	0	0	5
Heritage Paterson 2	05127877	Heritage Paterson 2	0%	0	2	0	1	1	0	0	0	1	0	0	0	5
High Valley Ranch	98116989	High Valley Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Holly Park	00109816	Holly Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Holy Cross High School P	98100213	Holy Cross High School Phase I	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Janice	06102860	Janice	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Jewell Addition	05128235	Jewell Addition	7%	0	0	0	0	0	0	0	7	0	0	9	0	16
Kensington Park	06103915	Kensington Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
King's Corner	06129913	King's Corner	0%	0	0	0	2	0	0	0	6	1	0	11	0	20
King's Corner III	07111503	King's Corner III	0%	0	0	0	0	0	0	0	3	0	0	4	0	7
Kingsbury	14102790	Kingsbury	0%	0	4	0	2	3	2	0	0	3	5	0	0	19
Kingsridge	98101933	Kingsridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Larimer Crossing	05125316	Larimer Crossing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laural Estates	96104953	Laural Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	0	0	0	0	0	0	0	2	0	0	4	0	6
Maple View	99111523	Maple View	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mapleview Div III	03105402	Mapleview Div II	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Margate	00107036	Margate	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mayfield Estates	12104232	Mayfield Estates	0%	0	5	0	3	3	1	0	0	6	1	0	0	19
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadows	03108845	Meadows (Allen Addition 0310	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Creek Court	96109747	Mill Creek Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Creek Self Storage &	03105796	Mill Creek Self Storage & Res	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Pointe Apartments	99105422	Mill Pointe Apartments	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

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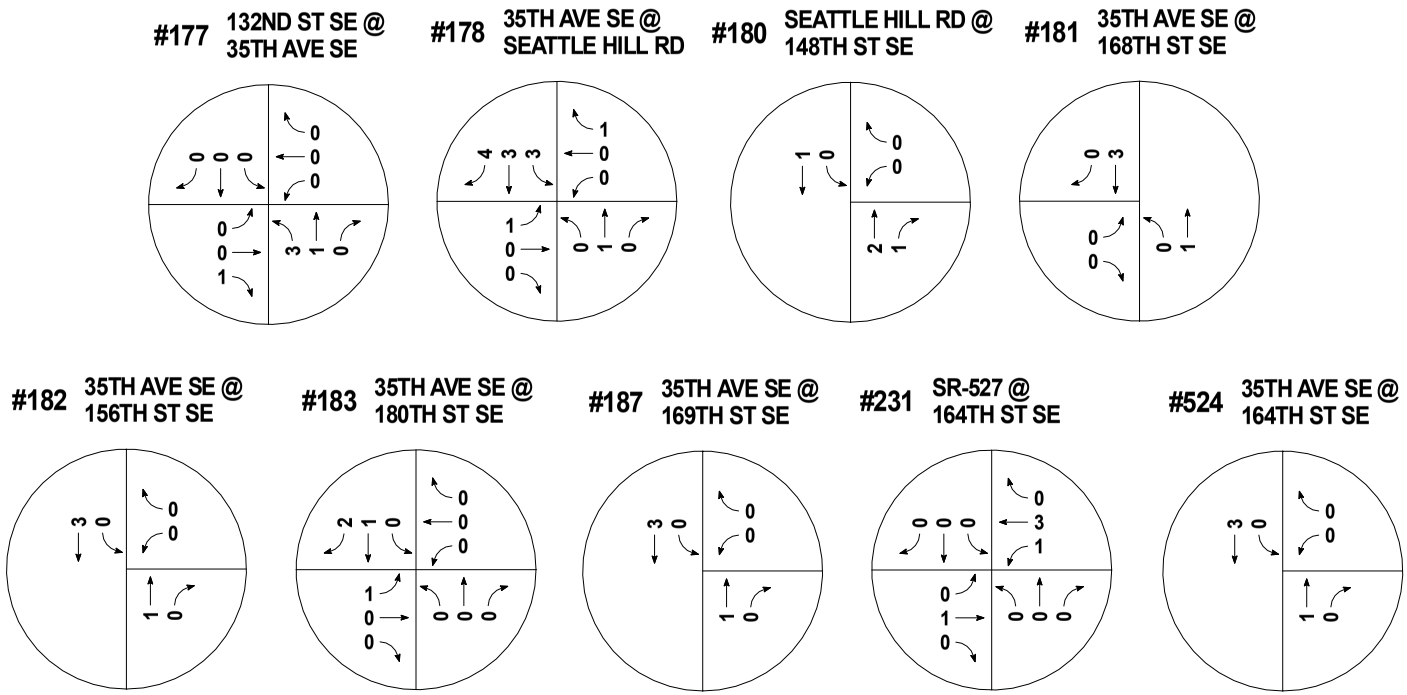
Mrizek Estates	98109443	Mrizek Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Olson Addition	07101438	Olson Addition	0%	0	0	0	0	0	0	0	5	0	0	9	0	14
Opus Northpointe	97111501	Opus Northpointe	45%	2	3	2	0	2	0	0	0	0	0	0	2	11
Osborne Shopping Center	05124945	Osborne Shopping Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Center	04118722	Pacific Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekstone	04120938	Parkhaven fka: Creekstone	21%	0	0	0	0	0	0	0	16	0	0	26	0	42
Parkland Place	04119989	Parkland Place	0%	0	0	0	0	0	1	0	3	0	0	2	0	6
Parkwood Meadows	03100300	Parkwood Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pet Care Hospital	03108713	Pet Care Hospital	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Peterson Meadows	97106337	Peterson Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pioneer Ridge	00107621	Pioneer Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Presidio	02110658	Presidio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Remlinger Park	98109199	Remlinger Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Rockport/Bean Property	03109953	Rockport	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Seattle Hill Crossing	06134104	Seattle Hill Crossing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Seattle Hill Estates	95110056	Seattle Hill Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Snohomish	09101482	Sierra Snohomish	0%	1	1	0	0	2	0	0	0	0	0	0	2	6
Silva Creek	96105027	Silva Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Firs Retail Develop	02102502	Silver Firs Retail Development	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Firs Secter 4	96110766	Silver Firs Secter 4	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Hawk	05127070	Silver Hawk	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Silver Lake Water District	04109144	Silver Lake Water District DUP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sinclair Woods	05128884	Sinclair Woods	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Sect	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish County DPW	05100812	Snohomish County DPW Cathc	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring Haven	10100368	Spring Haven	0%	2	0	0	0	0	0	0	7	0	0	5	1	15
Springmill Place	98101154	Springmill Place	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Squires Landing	05122833	Squires Landing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Stonewater Creek 3	07111614	Stonewater Creek 3	0%	1	0	0	0	0	0	0	3	0	0	2	0	6
Sun Creek Meadows	06128688	Sun Creek Meadows	23%	0	0	0	0	0	0	0	2	0	0	3	0	5
Sun Rose	98101053	Sun Rose	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108825	Sunset Meadows Estates Div 2	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108624	Sunset Meadows Estates Divisio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Pointe	05126770	Sunset Pointe	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0		0	0	0	0	0	
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas Lake Court	05119918	Thomas Lake Court	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	0	0	0	6	0	0	0	6	3	0	9	0	24
Tsuga Stands	00105014	Tsuga Stands	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Vantage	05126998	Vantage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Websters Pond	98108094	Village At Websters Pond	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village On The Hill	98100545	Village On The Hill	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wade Addition	03109628	Wade Addition	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waldenwood East	96106350	Waldenwood East	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterbury Meadows	99114552	Waterbury Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Westfield (Wylie)	03102383	Westfield (Wylie)	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Whitney Lane	00107886	Whitney Lane	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wildwood Center	05123651	Wildwood Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Willis Tucker Park Phase	10106916	Willis Tucker Park Phase 3A	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Willow Tree Grove II	10102518	Willow Tree Grove II	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wynnwood Meadows	03101048	Wynnwood Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Yorkshire	05126766	Yorkshire	0%	0	0	0	0	0	0	0	2	0	0	4	0	6
Zocalo Urban Center	04110197	Zocalo Urban Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		10	29	3	23	20	6	0	91	25	12	129	6	

Snohomish County Key Intersection Data



1/9/15

GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #14-286

HARMS ESTATE
27 NEW SFD

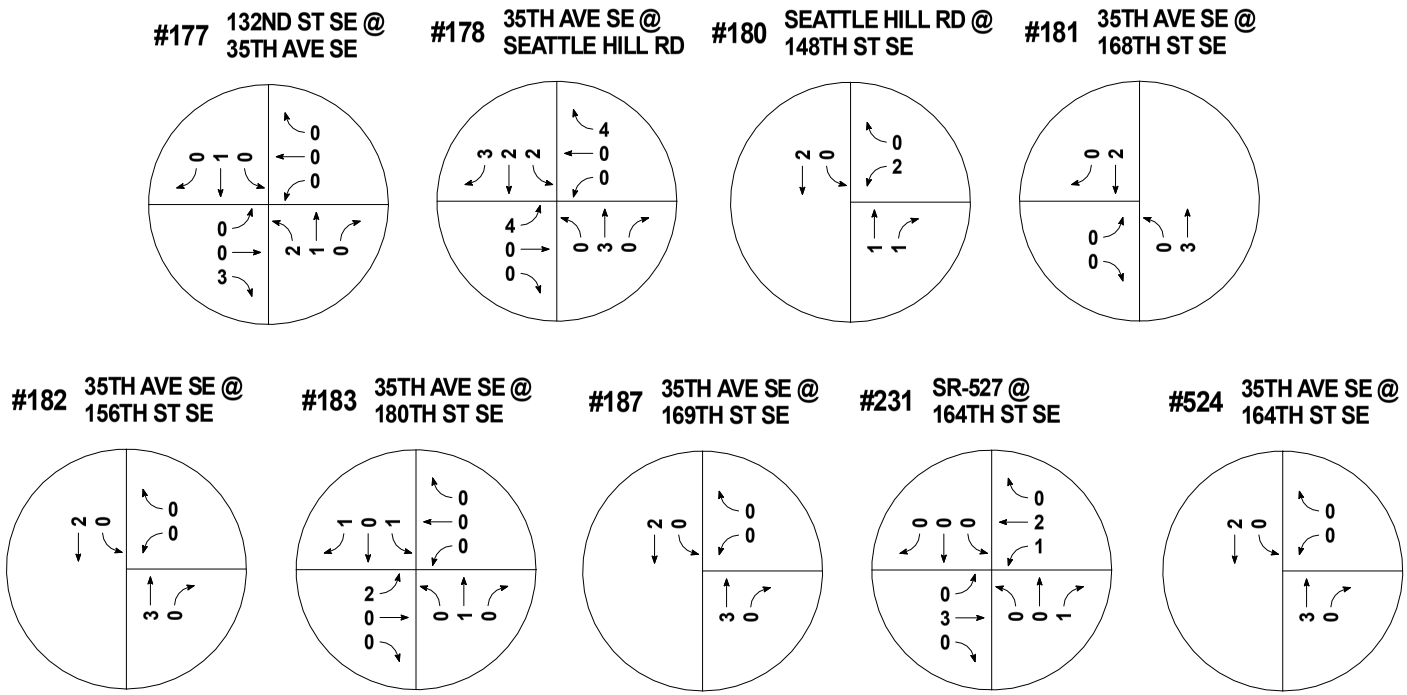
CITY OF MILL CREEK

LEGEND

XX → PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE A

DEVELOPMENT
KEY INTERSECTION VOLUMES
AM PEAK-HOUR



1/9/15

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XX → PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE B

DEVELOPMENT KEY INTERSECTION VOLUMES PM PEAK-HOUR

Table A: AM Peak-Hour Key Intersection Volumes

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#177: 132nd St SE at 35th Ave SE	0	0	1	0	0	0	3	1	0	0	0	0
#178: 35th Ave SE at Seattle Hill Rd	1	0	0	0	0	1	0	1	0	3	3	4
#180: Seattle Hill Rd at 148th St SE	N/A	N/A	N/A	0	N/A	0	N/A	2	1	0	1	N/A
#181: 35th Ave SE at 168th St SE	0	N/A	0	N/A	N/A	N/A	0	1	N/A	N/A	3	0
#182: 35th Ave SE at 156th St SE	N/A	N/A	N/A	0	N/A	0	N/A	1	0	0	3	N/A
#183: 35th Ave SE at 180th St SE	1	0	0	0	0	0	0	0	0	0	1	2
#187: 35th Ave SE at 169th St SE	N/A	N/A	N/A	0	N/A	0	N/A	1	0	0	3	N/A
#231: SR-527 at 164th St SE	0	1	0	1	3	0	0	0	0	0	0	0
#524: 35th Ave SE at 164th St SE	N/A	N/A	N/A	0	N/A	0	N/A	1	0	0	3	N/A

Table B: PM Peak-Hour Key Intersection Volumes

Intersection	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#177: 132nd St SE at 35th Ave SE	0	0	3	0	0	0	2	1	0	0	1	0
#178: 35th Ave SE at Seattle Hill Rd	4	0	0	0	0	4	0	3	0	2	2	3
#180: Seattle Hill Rd at 148th St SE	N/A	N/A	N/A	2	N/A	0	N/A	1	1	0	2	N/A
#181: 35th Ave SE at 168th St SE	0	N/A	0	N/A	N/A	N/A	0	3	N/A	N/A	2	0
#182: 35th Ave SE at 156th St SE	N/A	N/A	N/A	0	N/A	0	N/A	3	0	0	2	N/A
#183: 35th Ave SE at 180th St SE	2	0	0	0	0	0	0	1	0	1	0	1
#187: 35th Ave SE at 169th St SE	N/A	N/A	N/A	0	N/A	0	N/A	3	0	0	2	N/A
#231: SR-527 at 164th St SE	0	3	0	1	2	0	0	0	1	0	0	0
#524: 35th Ave SE at 164th St SE	N/A	N/A	N/A	0	N/A	0	N/A	3	0	0	2	N/A