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7C's Swim School
Traffic Impact Analysis

Jurisdiction: City of Mill Creek

January 2019

GTC #18-262

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ATTACHMENTS

1. DEVELOPMENT IDENTIFICATION

Gibson Traffic Consultants, Inc. (GTC) has been retained to analyze the traffic impacts of the 7C's Swim School development. The 7C's Swim School development is proposing a 10,000 SF facility that will house a 50-foot by 70-foot pool. It is anticipated that there will be approximately 29 family visits during the PM peak-hour on a normal basis when the facility is operating at its maximum capacity. The site is located on the east side of N Creek Drive, south of Dumas Road. The site access will be located on the opposite side of N Creek Road from the southern driveway to Heatherwood Apartments. A site vicinity map is included in Figure 1.

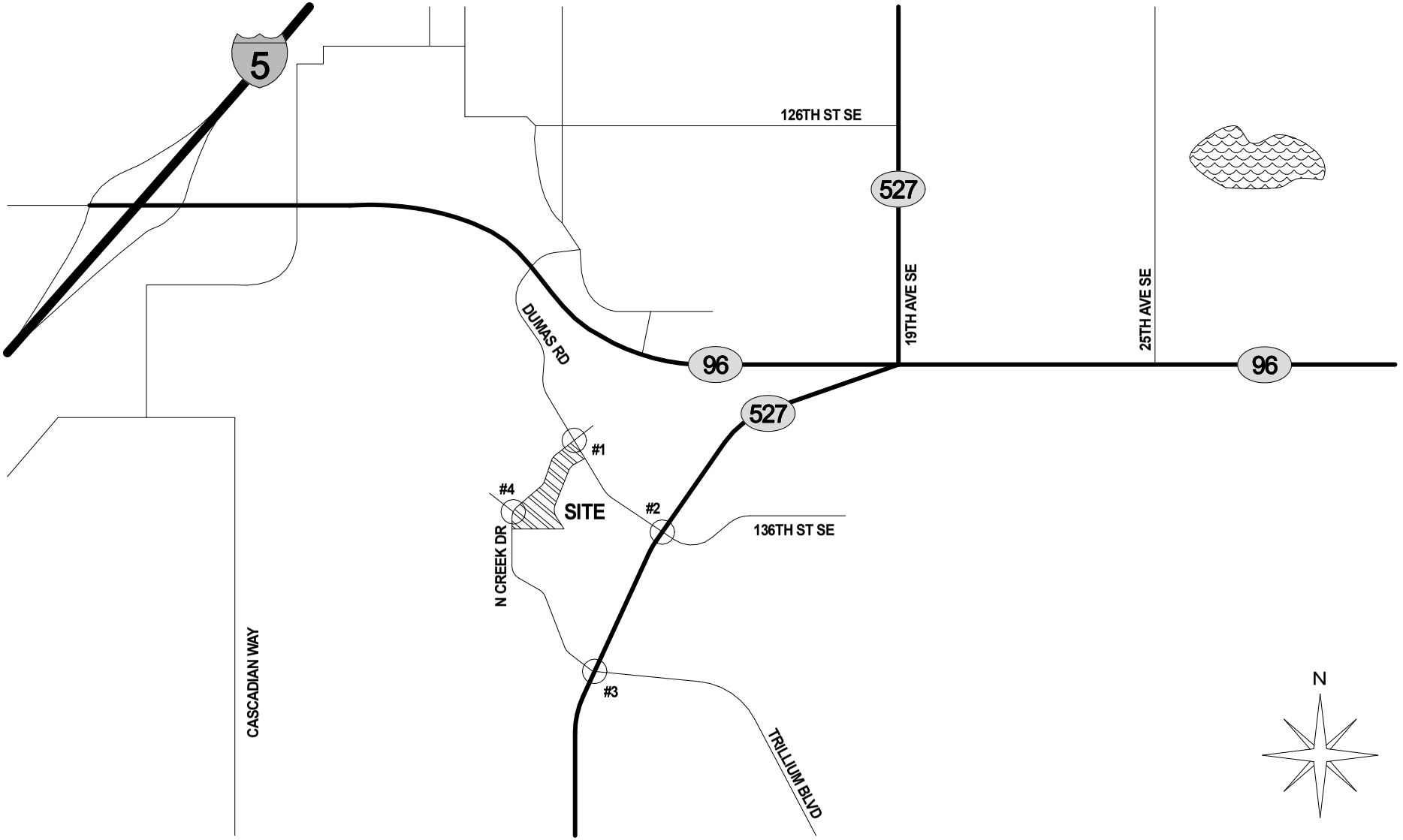
Matthew Palmer, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

2. METHODOLOGY

2.1 General

Trip generation for the 7C's Swim School development is based on data provided by the client on the existing site location and a count of the existing facility.

The distribution of trips generated by the site is based on turning movement counts at the study intersections and the location of residential neighborhoods.



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TRAFFIC IMPACT STUDY
GTC #18-262

7C'S SWIM SCHOOL

CITY OF MILL CREEK

LEGEND

DEVELOPMENT SITE

STUDY INTERSECTION

FIGURE 1

SITE VICINITY MAP

3. TRIP GENERATION

The trip generation calculations are based on data provided by the client and a count of their existing facility. Based on a year's worth of data, there are approximately 1.89 PM peak-hour trips per attending family with an average of 14.67 attending families during the PM peak-hour. This equated to approximately 27.73 PM peak-hour trips for an average weekday at their existing facility.

The pool size will be increasing from 30-feet by 50-feet to 50-feet by 70-feet. This increase is to account for the number of instructors doubling and for an increase in the warm-up/cool-down area which is currently undersized. Due to the swimming lessons being held in a one-on-one format, the number of trips is expected to double with the increase in instructors. This would result in a PM peak-hour trip generation of approximately 55.45 trips.

The number of Average Daily Trips (ADT) for the 7C's Swimming School was estimated conservatively high by assuming that the number of PM peak-hour trips (typically the highest in the day) occurred during every hour of operation. The 7C's Swim School will be retaining its hours of operation (9:30 AM till 7:00 PM), resulting in 9.5 hours of operation. Taking off a half hour to account for instructor breaks, the 7C's Swim School is anticipated to generate approximately 499.07 ADT.

Due to the Swim School not being open during the AM peak-hour (7-9 AM) the development will not generate any trips during the AM peak-hour. The trip generation for the 7C's Swim School is summarized in Table 1 below.

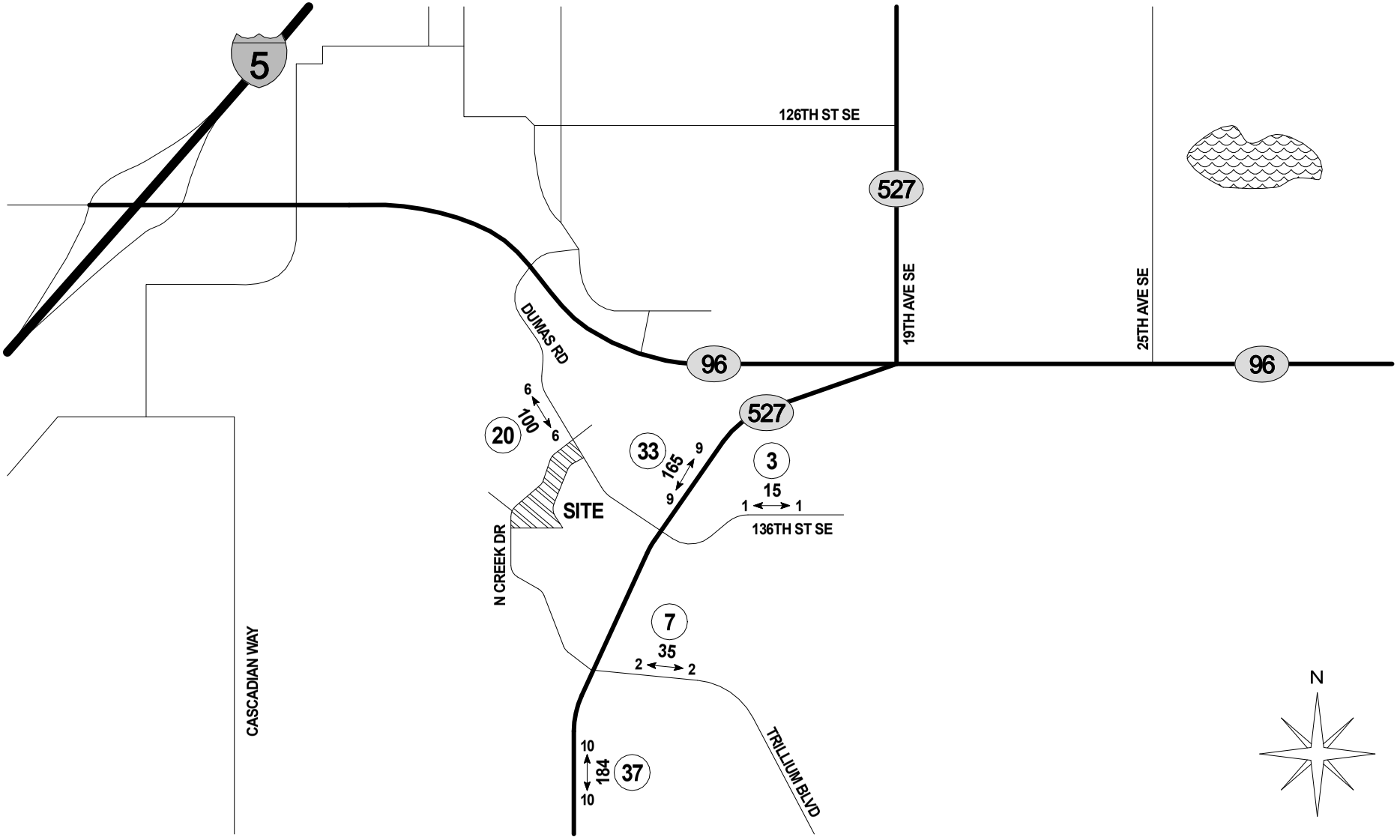
Table 1: 7C's Swim School Trip Generation

7C's Swim School (29.34 Attending Families)	Average Daily Trips			PM Peak-Hour Trips		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Generation Rate	17.01 trips per Attending Family			1.89 trips per Attending Family		
Splits	50%	50%	100%	50%	50%	100%
Trips	249.54	249.53	499.07	27.73	27.72	55.45

The 7C's Swim School is anticipated to generate 499.07 new average daily trips with 55.45 new PM peak-hour trips. The trip generation calculations are included in the attachments.

4. TRIP DISTRIBUTION

The distribution of trips generated by the 7C's Swim School development is based on local counts performed in the site vicinity. It is estimated that 53% of the development's trips will travel to and from the north, twenty percent along Dumas Road and thirty-three percent along SR-527. An expected 10% will travel to and from the east, three percent along 136th Street SE and seven percent along Trillium Boulevard. The final 37% is expected to travel to and from the south along SR-527. Detailed distributions for the PM peak-hour trips generated by the development are shown in Figure 2.



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AWDT
PM ◄► PEAK — NEW SITE TRAFFIC (DAILY/PEAK-HOUR)

(XX) — TRIP DISTRIBUTION %

FIGURE 2
DEVELOPMENT TRIP DISTRIBUTION PM PEAK-HOUR

5. INTERSECTION ANALYSIS

Intersection level of service analysis has been performed for the following intersections:

1. N Creek Road at Dumas Road – Signalized
2. SR-527 at Dumas Road – Signalized
3. SR-527 at N Creek Road – Signalized
4. N Creek Road at Site Access - Unsignalized

Congestion at intersections is generally measured in terms of level of service (LOS). In accordance with the Highway Capacity Manual (HCM) 6th Edition, 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 [1] Service	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

The City of Mill Creek has a level of service standard of C for local intersections, level of service D for collector arterials, level of service E for arterial to local intersections and level of service F for arterial to arterial intersections.

[1] **Source:** *Highway Capacity Manual* 6th Edition.

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.

5.1 2018 Existing Conditions

The existing intersection level of service analysis is based on the existing channelization and PM peak-hour turning movement volumes. Turning movement counts were conducted at the study intersections in November 2018 by Traffic Data Gathering (TDG). The existing turning movement volumes are shown in Figure 3.

The existing level of service analysis shows that the study intersections will operate at LOS C or better. The level of service calculations are included in the attachments. The level of service is summarized in Table 3.

5.2 2023 Baseline Conditions

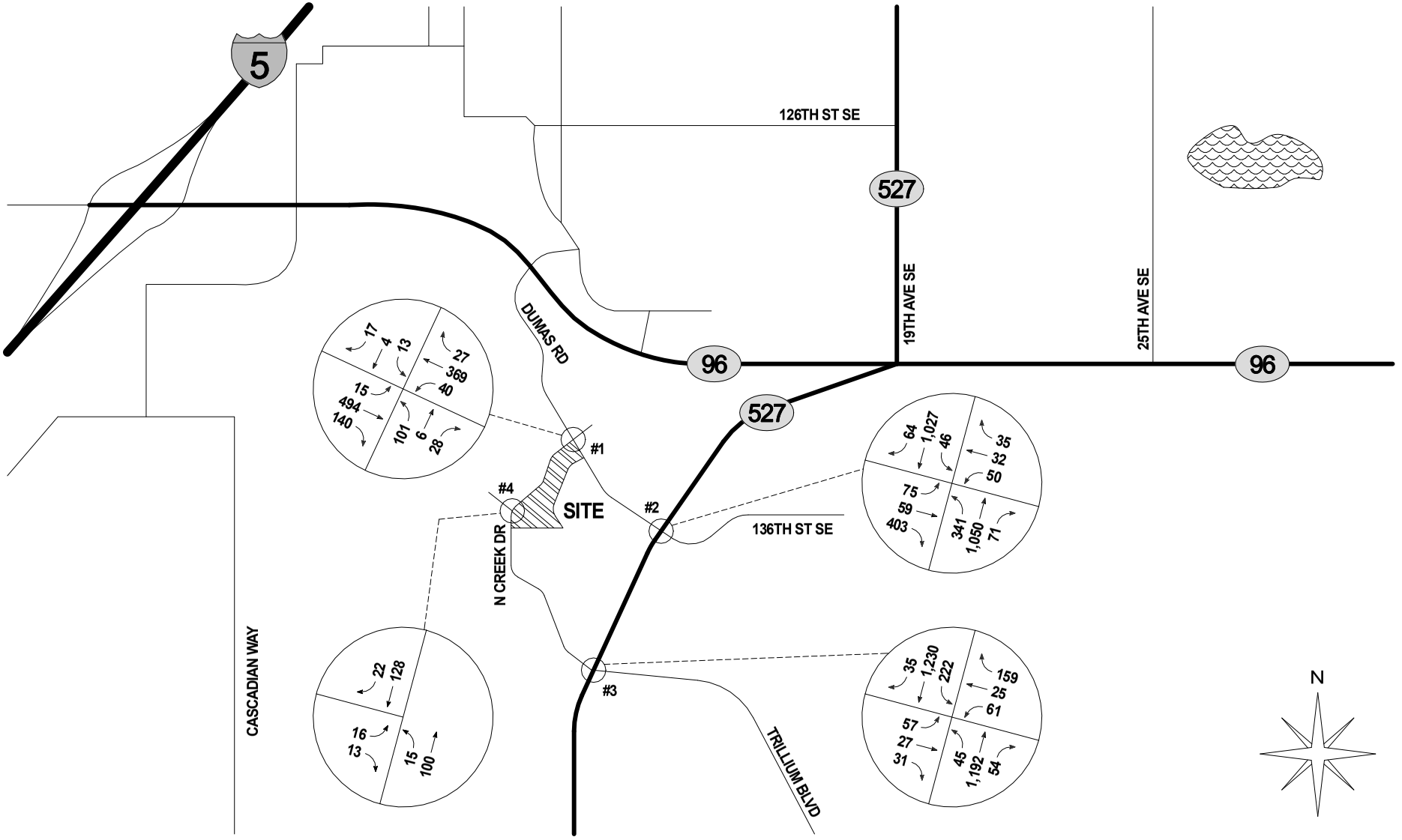
The 2023 baseline intersection level of service analysis has been performed to satisfy a 5-year concurrency period. The 2023 baseline turning movements have been calculated by adding a 1.0% annually compounding growth rate to the existing turning movement counts. The 2023 baseline turning movements are shown in Figure 4.

The analysis shows that the study intersections are expected to operate at LOS C or better. The level of service calculations are included in the attachments. The level of service is summarized in Table 3.

5.3 2023 Future with Development Conditions

The 2023 future with development turning movements have been calculated by adding the trips from the 7C's Swim School development to the 2023 baseline turning movements. The 2023 future with development turning movements at the study intersections are shown in Figure 5.

The study intersections are expected to operate at LOS C or better with the development. The level of service is summarized in Table 3. The level of service calculations are included in the attachments.



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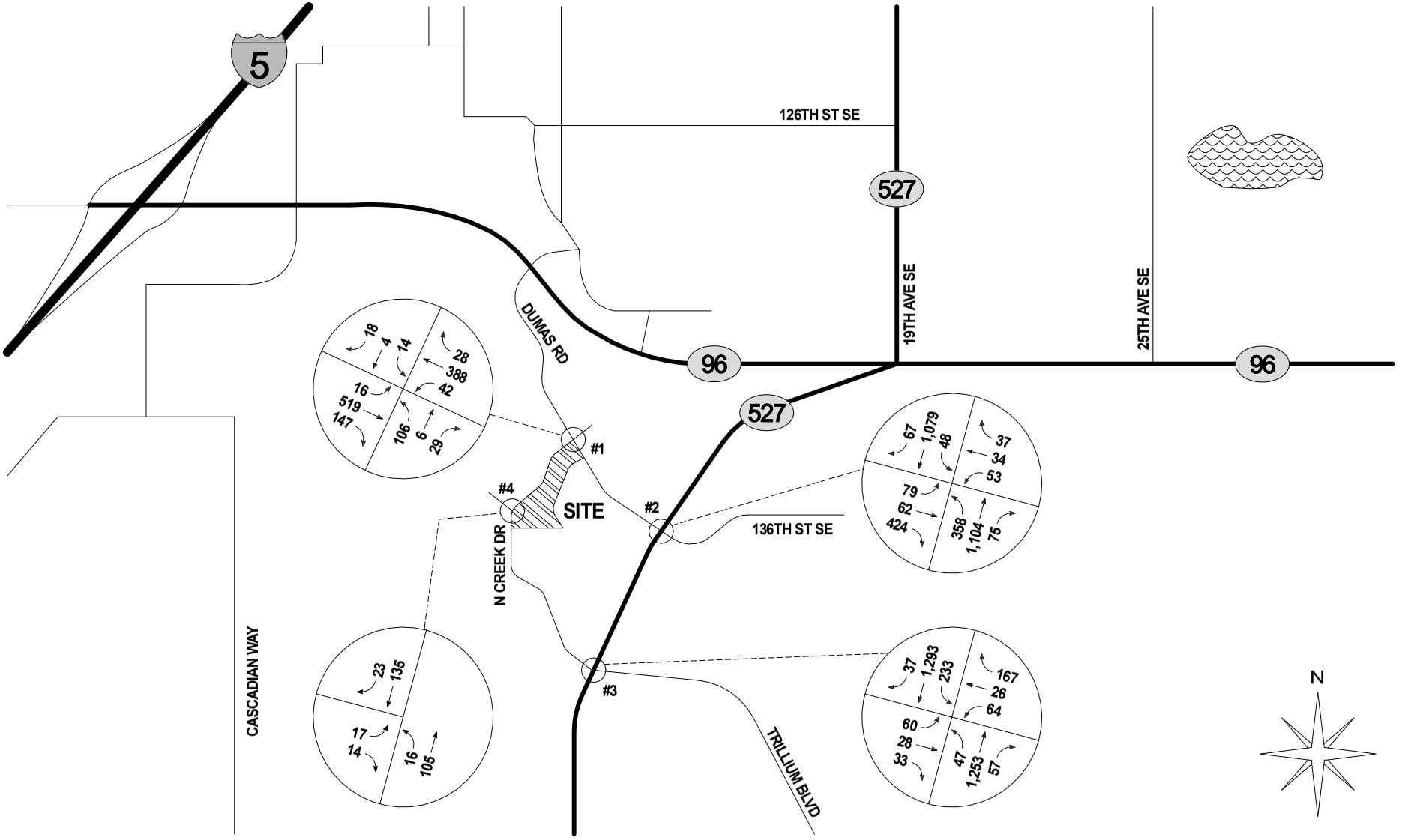
XXX → EXISTING TURNING MOVEMENT VOLUMES

FIGURE 3

EXISTING TURNING MOVEMENT VOLUMES



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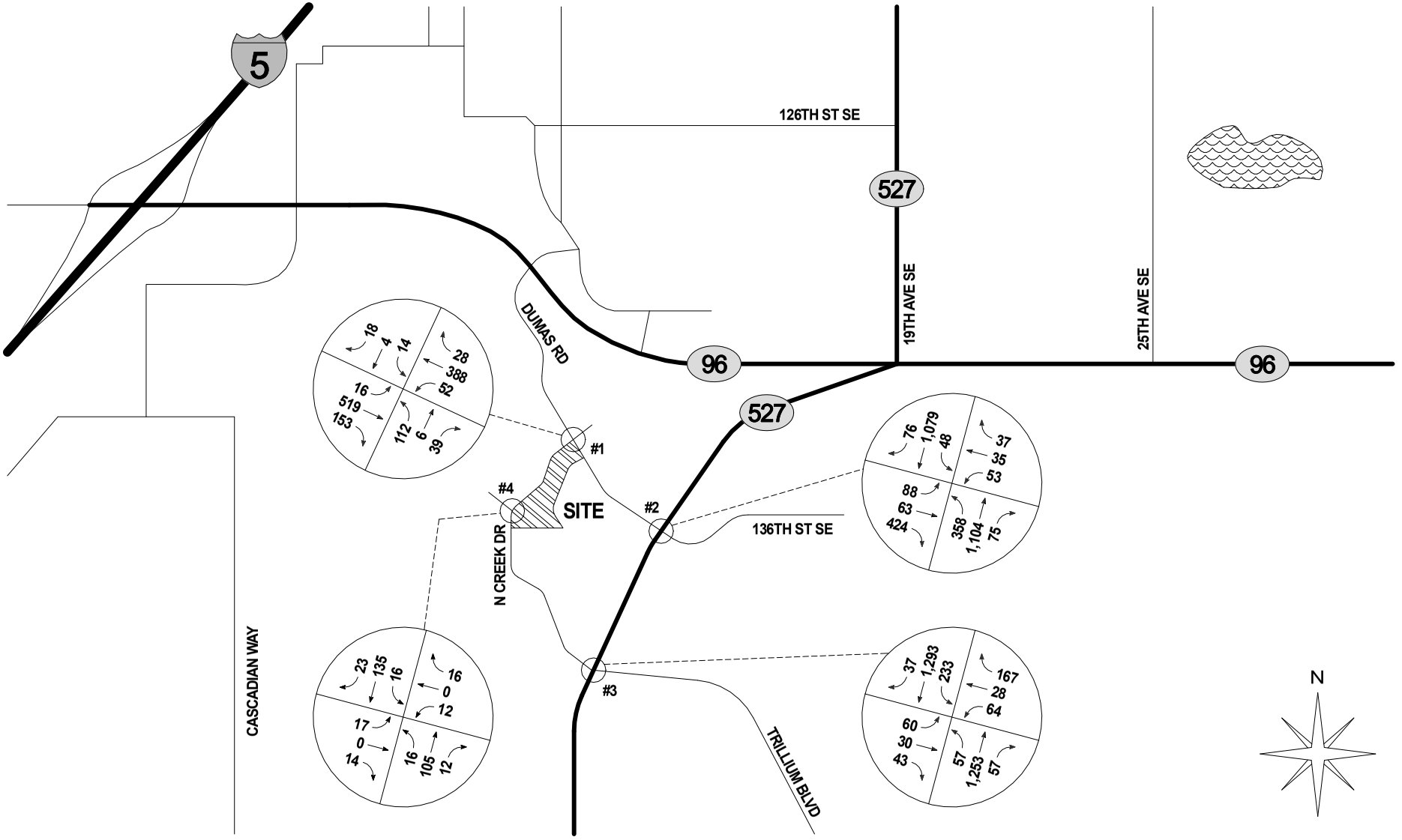
XXX → 2023 BASELINE TURNING MOVEMENT VOLUMES

FIGURE 4

2023 BASELINE TURNING MOVEMENT VOLUMES



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XXX → 2023 FUTURE TURNING MOVEMENT VOLUMES

FIGURE 5

2023 FUTURE TURNING MOVEMENT VOLUMES

Table 3: Intersection Level of Service Summary

Intersection	Existing Conditions		2023 Baseline Conditions		2023 Future with Development Conditions	
	LOS	Delay	LOS	Delay	LOS	Delay
1. N Creek Road at Dumas Road	B	11.3 sec	B	11.8 sec	B	12.4 sec
2. SR-527 at Dumas Road	C	25.9 sec	C	28.2 sec	C	28.4 sec
3. SR-527 at N Creek Road	B	13.3 sec	B	14.2 sec	B	14.4 sec
4. N Creek Road at Site Access	A	9.9 sec	B	10.0 sec	B	10.3 sec

The study intersection will continue to operate at an acceptable level of service under the 2023 future with development conditions. The level of service calculations at the study intersections for the PM peak-hour are included in the attachments.

6. COLLISION ANALYSIS

Collision data near the study intersections and along the site frontage was requested from WSDOT from January 2013 through January 2018. Table 4 summarizes the data received by WSDOT.

Table 4: Collision Data Summary

Intersection	Collision Type							Total Collisions	Collisions Per Year
	Rear-End	Entering at Angle	Opp. Dir.	Sideswipe	Same Dir.	Ped. / Cyclist	Fixed Object/ Other		
N Creek Road at Dumas Road	1	1	2	0	1	2	1	8	1.6
SR-527 at Dumas Road	13	7	32	3	0	4	1	60	12.0
SR-527 at N Creek Road	11	5	2	1	1	1	2	23	4.6
N Creek Road at Site Access	0	1	0	0	1	0	0	2	0.4

The 5-year collision rate has been calculated using PM peak-hour volumes and a K-factor of 10 for conversion to average daily traffic. The 5-year collision rates are summarized in Table 5.

Table 5: 5-Year Collision Rate Calculation

Intersection	PM Peak-Hour Intersection Vol.	K-Factor	Total Collisions	Collision Rate[3]
N Creek Road at Dumas Road	1,254	10	8	0.35
SR-527 at Dumas Road	3,253	10	60	1.01
SR-527 at N Creek Road	3,138	10	23	0.40
N Creek Road at Site Access	294	10	2	0.37

The intersection of SR-527 at Dumas Road had the highest collision rate of the study area with opposite direction and rear-end collisions as the most common. WSDOT has published collision data for the Northwest Region in the *2011 Annual Collision Summary* (the latest report that provides data for different road types). The average collision rate for State Routes in the Northwest Region is 1.49 collisions per Million Vehicle Miles (equivalent to Million Entering Vehicles at an intersection) for urban principal arterials. All the intersections have collision rates per million entering vehicles below 1.0, which is below the average rate for the area.

7. SIGHT DISTANCE ANALYSIS

The City of Mill Creek assesses sight distance based on the standards described in the AASHTO Geometric Design Manual. The speed limit along N Creek Road near the site access is 25-mph. Based on a design speed of 25-mph, 155 feet of stopping sight distance and 280 feet of intersection sight distance is required. As the site frontage will be updated with the development, it will have to meet sight distance standards. For stopping sight distance, this is measured from an eye height of 3.5 feet to an object 2 feet tall. For intersection sight distance, at an eye height of 3.5 feet, an object 3.5 feet tall must be seen. The proposed access is located directly opposite an existing multifamily residential access and the curb cut is existing today. The sight distance to the south is obstructed by an off-site fence and to the north the sight distance can be achieved by clearing the foliage along the frontage.

[3] The collision rate is based on Million Entering Vehicles.

8. TRAFFIC MITIGATION FEES

Developments in the City of Mill Creek are required to pay traffic mitigation fees to the City of Mill Creek. The City of Mill Creek does not currently have an interlocal agreement with other surrounding jurisdictions, including WSDOT, for the payment of traffic mitigation fees.

8.1 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 $3,900.00 per PM peak-hour trip generated. The 7C's Swim School development will generate 55.45 new PM peak-hour trips and will have an associated traffic mitigation fee of $216,255.00.

8.2 Snohomish County

The City of Mill Creek currently doesn't an interlocal agreement with Snohomish county, therefore there are no interlocal fees.

8.3 Traffic Impact Fee Summary

The 7C's Swim School development will generate 499.07 new average daily trips and 55.45 new PM peak-hour trips. The 7C's Swim School development will have a total traffic mitigation fee of $216,255.00.

9. CONCLUSIONS

The 7C's Swim School development is proposed to consist of a facility to house their new 50-foot by 70-foot pool. It's anticipated that an average of 29.34 family attendances will occur over the course of a weekday. The site is located on the east side of N Creek Road, south of Dumas Road. The site is proposed to take access directly across from the southern Heatherwood Apartments driveway. The development is anticipated to generate 499.07 new average daily trips with 55.45 new PM peak-hour. The total traffic mitigation fees for the development will be $216,255.00.

Trip Generation Calculations

2017 Family Visits between 5-6pm Mondays-Fridays

Total Daily Average
14.67

January		February		March	
Date	Families	Date	Families	Date	Families
2	0	1	18	1	18
3	16	2	17	2	13
4	18	3	14	3	17
5	14	6	16	6	17
6	18	7	16	7	16
9	15	8	14	8	17
10	17	9	16	9	17
11	18	10	16	10	17
12	13	13	18	13	16
13	18	14	15	14	16
16	0	15	18	15	17
17	16	16	13	16	15
18	17	17	18	17	17
19	16	20	0	20	17
20	18	21	11	21	15
23	17	22	17	22	17
24	17	23	14	23	15
25	17	24	17	24	16
26	15	27	16	27	18
27	17	28	14	28	14
30	12			29	18
31	14			30	15
				31	17
Average	14.68	Average	14.90	Average	16.30

April		May		June	
Date	Families	Date	Families	Date	Families
3	18	1	16	1	13
4	15	2	17	2	18
5	16	3	17	5	16
6	13	4	16	6	16
7	13	5	16	7	16
10	0	8	17	8	16
11	13	9	15	9	17
12	14	10	17	12	17
13	12	11	16	13	16
14	15	12	18	14	17
17	18	15	18	15	16
18	14	16	15	16	15
19	18	17	15	19	17
20	14	18	16	20	15
21	18	19	18	21	14
24	18	22	18	22	14
25	16	23	17	23	15
26	17	24	14	26	16
27	15	25	13	27	17
28	16	26	17	28	17
		29	0	29	10
		30	15	30	16
		31	16		
Average	14.65	Average	15.52	Average	15.64

July	
Date	Families
3	0
4	0
5	17
6	16
7	17
10	12
11	17
12	18
13	18
14	16
17	17
18	16
19	16
20	16
21	18
24	15
25	16
26	17
27	16
28	17
31	16
Average	14.81

August	
Date	Families
1	17
2	16
3	15
4	16
7	17
8	17
9	17
10	13
11	17
14	17
15	16
16	18
17	17
18	15
21	18
22	15
23	17
24	18
25	16
28	17
29	17
30	16
31	13
Average	16.30

September	
Date	Families
1	15
4	0
5	15
6	18
7	16
8	18
11	17
12	17
13	17
14	15
15	18
18	14
19	15
20	17
21	17
22	17
25	17
26	15
27	18
28	0
29	18
Average	14.95

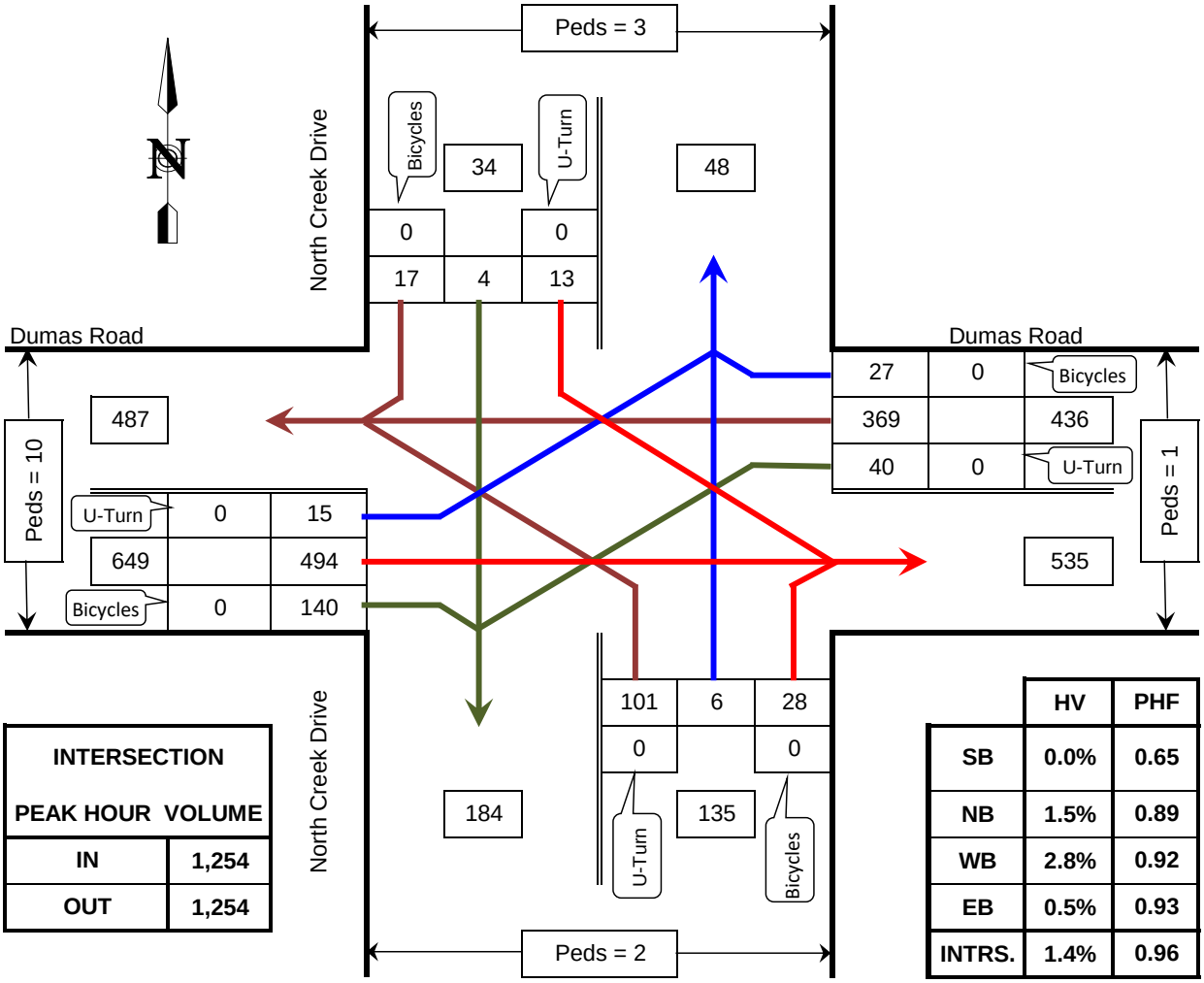
October		November		December	
Date	Families	Date	Families	Date	Families
2	17	1	17	1	14
3	17	2	16	4	16
4	18	3	16	5	15
5	17	6	17	6	17
6	17	7	15	7	18
9	14	8	18	8	14
10	17	9	16	11	16
11	17	10	0	12	12
12	16	13	17	13	16
13	14	14	14	14	17
16	17	15	17	15	17
17	16	16	17	18	0
18	16	17	18	19	0
19	16	20	17	20	0
20	17	21	12	21	0
23	18	22	18	22	0
24	16	23	0	25	0
25	17	24	0	26	0
26	16	27	18	27	0
27	17	28	18	28	0
30	16	29	17	29	0
31	0	30	17		
Average	15.73	Average	14.32	Average	8.19

Counts and Turning Movement Calculations

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM



INTERSECTION PEAK HOUR VOLUME	
IN	1,254
OUT	1,254

	HV	PHF
SB	0.0%	0.65
NB	1.5%	0.89
WB	2.8%	0.92
EB	0.5%	0.93
INTRS.	1.4%	0.96

PHF = Peak Hour Factor
HV = Heavy Vehicle

Dumas Road @ North Creek Drive

Mill Creek, WA

COUNTED BY: TDG

DATE OF COUNT: Thu. 11/15/18

REDUCTION DATE: Sat. 11/17/18

TIME OF COUNT: 4:00 PM - 6:00 PM

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: Dumas Road @ North Creek Drive
Mill Creek, WA

DATE OF COUNT: Thu. 11/15/18
TIME OF COUNT: 4:00 PM - 6:00 PM

COUNTED BY: TDG
DATE OF REDUCTION: 11/17/2018

TIME INTERVAL ENDING AT	FROM NORTH ON North Creek Drive							FROM SOUTH ON North Creek Drive							FROM EAST ON Dumas Road							FROM WEST ON Dumas Road							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	0	0	3	0	4	1	0	4	0	22	2	5	0	0	3	0	5	80	10	3	1	2	0	1	163	29	324
04:30 PM	3	0	0	0	4	1	3	0	0	1	0	22	2	3	0	0	4	0	9	88	6	4	0	1	0	5	111	37	291
04:45 PM	0	0	0	0	3	1	5	1	0	1	0	29	1	8	1	0	6	0	11	88	10	5	0	0	0	4	127	29	316
05:00 PM	0	0	0	0	2	0	2	0	0	0	0	23	1	11	0	0	2	0	8	92	5	0	0	2	0	1	136	38	319
05:15 PM	0	0	0	0	4	2	7	1	0	0	0	27	2	6	0	0	0	0	12	101	6	1	0	0	0	5	120	36	328
05:30 PM	0	0	0	0	5	1	6	0	0	0	0	23	2	5	0	0	3	0	7	78	14	0	0	0	0	1	107	38	287
05:45 PM	0	0	0	0	4	2	2	0	0	0	0	20	2	4	0	0	0	0	5	81	9	1	1	1	0	4	117	36	286
06:00 PM	0	0	0	0	0	2	1	0	0	0	0	17	0	13	0	0	1	0	12	95	4	0	0	0	0	5	99	26	274
PEAK HOUR TOTALS	3	0	0	0	13	4	17	2	0	2	0	101	6	28	1	0	12	0	40	369	27	10	0	3	0	15	494	140	INTERSECTION
ALL MOVEMENTS				34							135							436							649			1254
% HV			0.0%							1.5%							2.8%							0.5%				1.4%
PEAK HOUR FACTOR				0.65							0.89							0.92							0.93			0.96

HV = Heavy Vehicle
PHF = Peak Hour Factor

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM

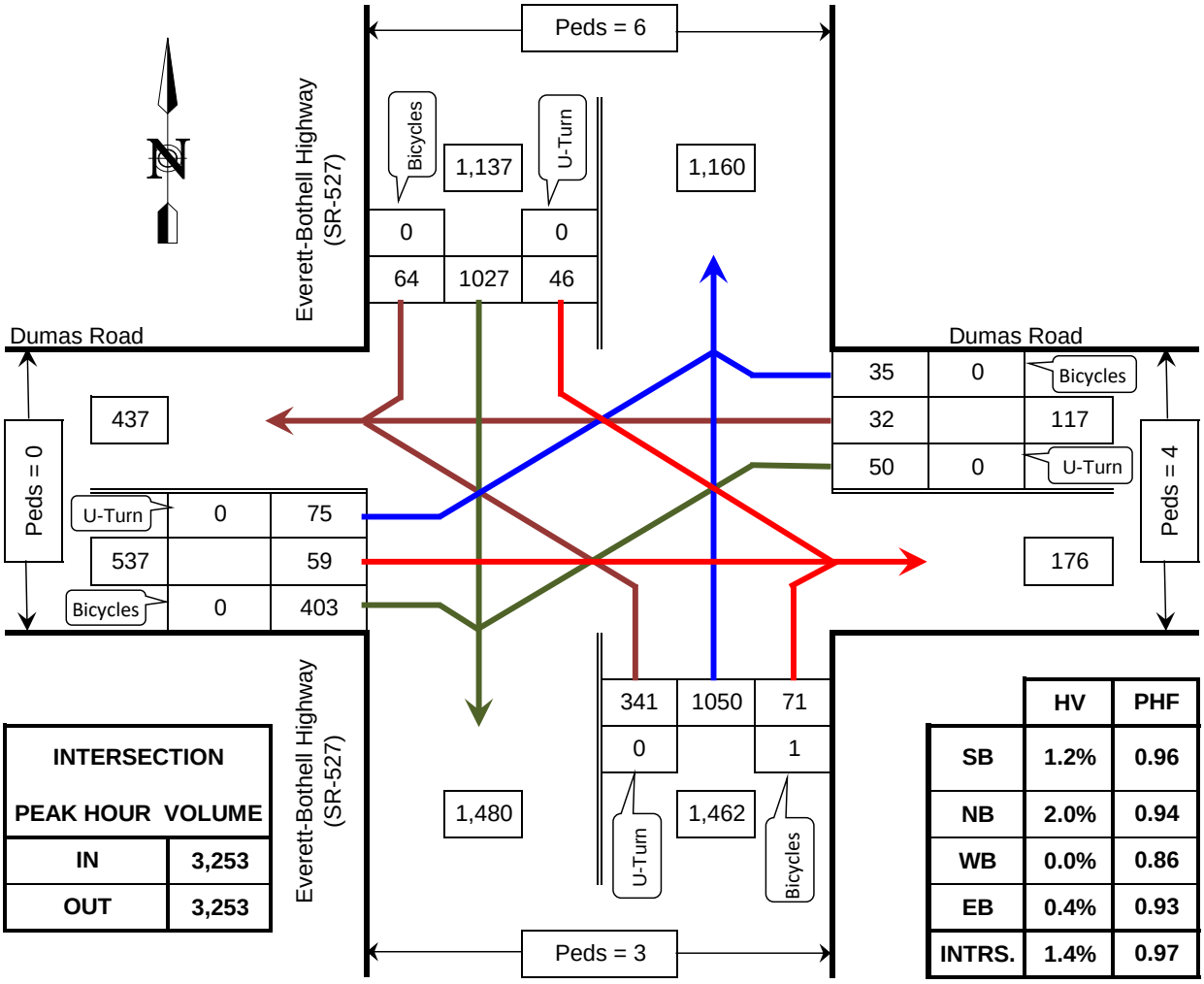
ROLLING HOUR COUNT

TIME INTERVAL	FROM NORTH ON North Creek Drive							FROM SOUTH ON North Creek Drive							FROM EAST ON Dumas Road							FROM WEST ON Dumas Road							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	4	0	0	0	12	2	14	2	0	6	0	96	6	27	1	0	15	0	33	348	31	12	1	5	0	11	537	133	1250
4:15 PM - 5:15 PM	3	0	0	0	13	4	17	2	0	2	0	101	6	28	1	0	12	0	40	369	27	10	0	3	0	15	494	140	1254
4:30 PM - 5:30 PM	0	0	0	0	14	4	20	2	0	1	0	102	6	30	1	0	11	0	38	359	35	6	0	2	0	11	490	141	1250
4:45 PM - 5:45 PM	0	0	0	0	15	5	17	1	0	0	0	93	7	26	0	0	5	0	32	352	34	2	1	3	0	11	480	148	1220
5:00 PM - 6:00 PM	0	0	0	0	13	7	16	1	0	0	0	87	6	28	0	0	4	0	36	355	33	2	1	1	0	15	443	136	1175
4:00 PM - 6:00 PM Total:	4	0	0	0	25	9	30	3	0	6	0	183	12	55	1	0	19	0	69	703	64	14	2	6	0	26	980	269	2425

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM



INTERSECTION PEAK HOUR VOLUME	
IN	3,253
OUT	3,253

	HV	PHF
SB	1.2%	0.96
NB	2.0%	0.94
WB	0.0%	0.86
EB	0.4%	0.93
INTRS.	1.4%	0.97

PHF = Peak Hour Factor
HV = Heavy Vehicle

Dumas Road @ Everett-Bothell Highway (SR-527)

Mill Creek, WA

COUNTED BY: TDG

DATE OF COUNT: Thu. 11/15/18

REDUCTION DATE: Sat. 11/17/18

TIME OF COUNT: 4:00 PM - 6:00 PM

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: Dumas Road @ Everett-Bothell Highway (SR-527)
Mill Creek, WA

DATE OF COUNT: Thu. 11/15/18
TIME OF COUNT: 4:00 PM - 6:00 PM

COUNTED BY: TDG
DATE OF REDUCTION: 11/17/2018

TIME INTERVAL ENDING AT	FROM NORTH ON Everett-Bothell Highway (SR-527)							FROM SOUTH ON Everett-Bothell Highway (SR-527)							FROM EAST ON Dumas Road							FROM WEST ON Dumas Road							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:15 PM	6	0	2	0	10	239	6	1	0	5	0	77	242	8	1	0	4	0	13	15	9	2	0	1	0	22	18	140	**799**
04:30 PM	4	0	3	0	14	232	16	1	0	8	0	85	279	23	2	0	0	0	12	7	8	0	0	0	0	9	11	104	**800**
04:45 PM	1	0	4	0	9	269	19	1	0	13	0	87	261	18	0	0	0	0	14	10	10	0	0	1	0	18	12	109	**836**
05:00 PM	0	0	4	0	10	268	14	0	1	5	0	85	236	14	1	0	0	0	14	3	8	0	0	0	0	28	15	101	**796**
05:15 PM	1	0	3	0	13	258	15	1	0	3	0	84	274	16	1	0	0	0	10	12	9	0	0	1	0	20	21	89	**821**
05:30 PM	0	0	1	0	8	261	18	0	0	6	0	75	258	18	0	0	0	0	16	6	11	0	0	0	0	20	6	98	**795**
05:45 PM	0	0	2	0	5	270	16	0	0	1	0	73	266	13	0	0	0	0	9	7	1	0	0	0	0	17	17	95	**789**
06:00 PM	1	1	1	0	14	220	18	0	0	6	0	79	248	17	0	0	0	0	10	10	3	0	0	0	0	19	13	77	**728**
PEAK HOUR TOTALS	**6**	**0**	**14**	**0**	**46**	**1027**	**64**	**3**	**1**	**29**	**0**	**341**	**1050**	**71**	**4**	**0**	**0**	**0**	**50**	**32**	**35**	**0**	**0**	**2**	**0**	**75**	**59**	**403**	**INTERSECTION**
ALL MOVEMENTS				**1137**						**1462**							**117**							**537**				**3253**
% HV			**1.2%**							**2.0%**							**0.0%**							**0.4%**				**1.4%**
PEAK HOUR FACTOR				**0.96**						**0.94**							**0.86**							**0.93**				**0.97**

HV = Heavy Vehicle
PHF = Peak Hour Factor

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM

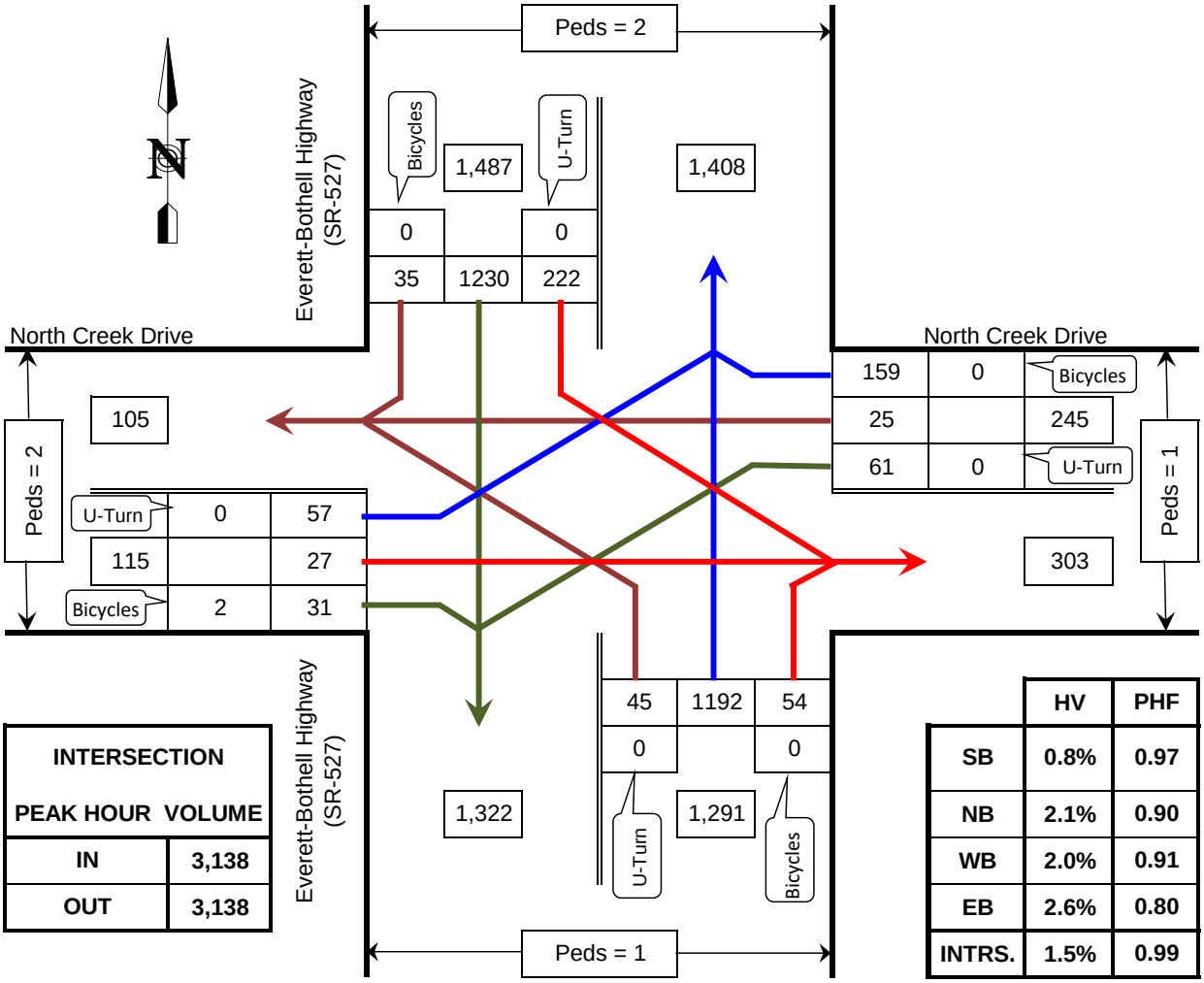
ROLLING HOUR COUNT

TIME INTERVAL	FROM NORTH ON Everett-Bothell Highway (SR-527)							FROM SOUTH ON Everett-Bothell Highway (SR-527)							FROM EAST ON Dumas Road							FROM WEST ON Dumas Road							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	11	0	13	0	43	1008	55	3	1	31	0	334	1018	63	4	0	4	0	53	35	35	2	0	2	0	77	56	454	3231
4:15 PM - 5:15 PM	6	0	14	0	46	1027	64	3	1	29	0	341	1050	71	4	0	0	0	50	32	35	0	0	2	0	75	59	403	3253
4:30 PM - 5:30 PM	2	0	12	0	40	1056	66	2	1	27	0	331	1029	66	2	0	0	0	54	31	38	0	0	2	0	86	54	397	3248
4:45 PM - 5:45 PM	1	0	10	0	36	1057	63	1	1	15	0	317	1034	61	2	0	0	0	49	28	29	0	0	1	0	85	59	383	3201
5:00 PM - 6:00 PM	2	1	7	0	40	1009	67	1	0	16	0	311	1046	64	1	0	0	0	45	35	24	0	0	1	0	76	57	359	3133
4:00 PM - 6:00 PM Total:	13	1	20	0	83	2017	122	4	1	47	0	645	2064	127	5	0	4	0	98	70	59	2	0	3	0	153	113	813	6364

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:00 PM TO 5:00 PM



INTERSECTION PEAK HOUR VOLUME	
IN	3,138
OUT	3,138

	HV	PHF
SB	0.8%	0.97
NB	2.1%	0.90
WB	2.0%	0.91
EB	2.6%	0.80
INTRS.	1.5%	0.99

PHF = Peak Hour Factor
HV = Heavy Vehicle

North Creek Drive @ Everett-Bothell Highway (SR-527)

Mill Creek, WA

COUNTED BY: TDG

DATE OF COUNT: Thu. 11/15/18

REDUCTION DATE: Sat. 11/17/18

TIME OF COUNT: 4:00 PM - 6:00 PM

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: North Creek Drive @ Everett-Bothell Highway (SR-527)
Mill Creek, WA

DATE OF COUNT: Thu. 11/15/18
TIME OF COUNT: 4:00 PM - 6:00 PM

COUNTED BY: TDG
DATE OF REDUCTION: 11/17/2018

TIME INTERVAL ENDING AT	FROM NORTH ON Everett-Bothell Highway (SR-527)							FROM SOUTH ON Everett-Bothell Highway (SR-527)							FROM EAST ON North Creek Drive							FROM WEST ON North Creek Drive							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	3	0	57	319	8	1	0	5	0	10	290	13	0	0	2	0	20	5	42	1	2	1	0	13	5	7	789
04:30 PM	1	0	3	0	41	294	9	0	0	7	0	9	331	20	0	0	2	0	14	4	35	1	0	1	0	18	10	8	793
04:45 PM	0	0	2	0	69	308	7	0	0	11	0	11	291	10	0	0	1	0	15	6	43	0	0	1	0	14	1	11	786
05:00 PM	0	0	4	0	55	309	11	0	0	4	0	15	280	11	1	0	0	0	12	10	39	0	0	0	0	12	11	5	770
05:15 PM	0	0	3	0	68	266	10	0	0	3	0	12	330	7	0	0	1	0	17	8	27	0	0	0	0	13	8	9	775
05:30 PM	2	0	2	0	67	323	5	0	0	3	0	5	281	9	0	0	1	0	18	5	29	0	0	0	0	18	11	11	782
05:45 PM	0	0	2	0	52	297	12	0	0	1	0	14	294	3	0	0	1	0	11	6	34	0	0	0	0	22	6	7	758
06:00 PM	0	0	1	0	56	256	10	0	0	4	0	12	260	3	0	0	0	0	6	6	26	0	1	1	0	21	6	3	665
PEAK HOUR TOTALS	2	0	12	0	222	1230	35	1	0	27	0	45	1192	54	1	0	5	0	61	25	159	2	2	3	0	57	27	31	INTERSECTION
ALL MOVEMENTS					1487							1291							245							115			3138
% HV			0.8%							2.1%							2.0%							2.6%					1.5%
PEAK HOUR FACTOR					0.97							0.90							0.91							0.80			0.99

HV = Heavy Vehicle
PHF = Peak Hour Factor

4:00 PM - 6:00 PM PEAK HOUR: 4:00 PM TO 5:00 PM

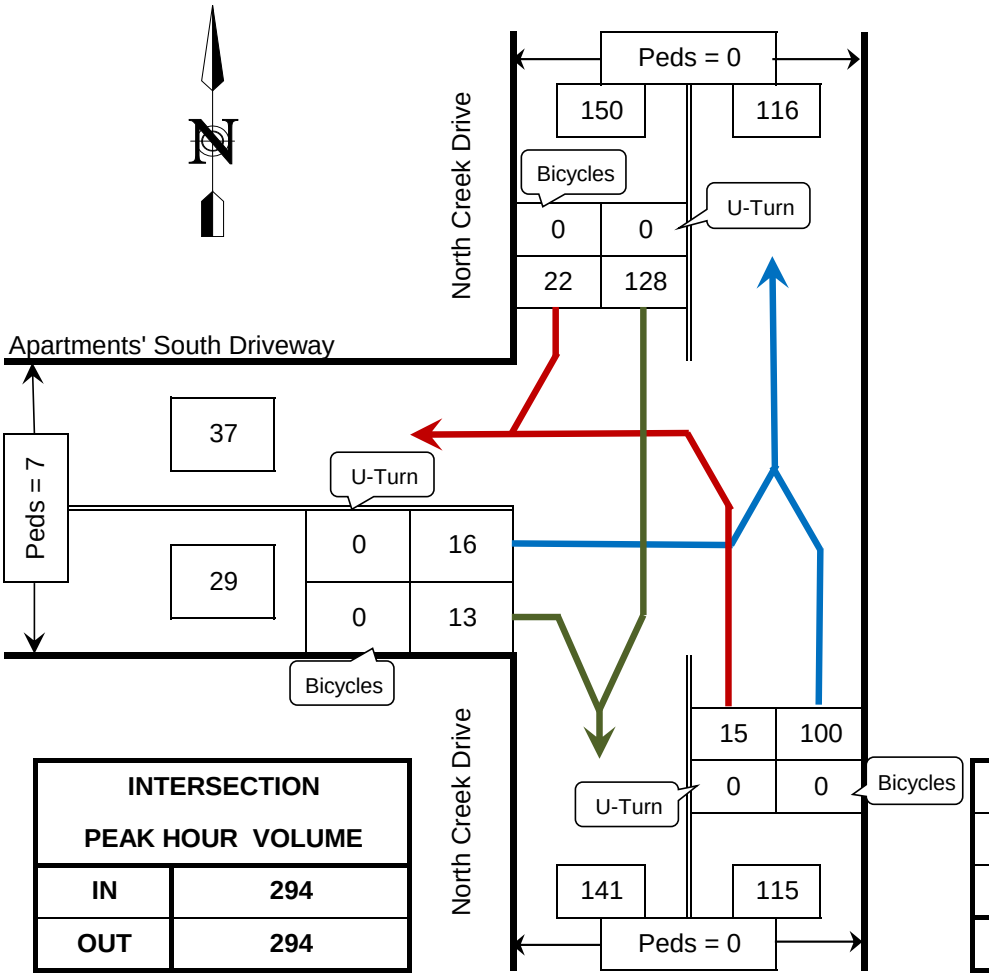
ROLLING HOUR COUNT

TIME INTERVAL	FROM NORTH ON Everett-Bothell Highway (SR-527)							FROM SOUTH ON Everett-Bothell Highway (SR-527)							FROM EAST ON North Creek Drive							FROM WEST ON North Creek Drive							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	2	0	12	0	222	1230	35	1	0	27	0	45	1192	54	1	0	5	0	61	25	159	2	2	3	0	57	27	31	3138
4:15 PM - 5:15 PM	1	0	12	0	233	1177	37	0	0	25	0	47	1232	48	1	0	4	0	58	28	144	1	0	2	0	57	30	33	3124
4:30 PM - 5:30 PM	2	0	11	0	259	1206	33	0	0	21	0	43	1182	37	1	0	3	0	62	29	138	0	0	1	0	57	31	36	3113
4:45 PM - 5:45 PM	2	0	11	0	242	1195	38	0	0	11	0	46	1185	30	1	0	3	0	58	29	129	0	0	0	0	65	36	32	3085
5:00 PM - 6:00 PM	2	0	8	0	243	1142	37	0	0	11	0	43	1165	22	0	0	3	0	52	25	116	0	1	1	0	74	31	30	2980
4:00 PM - 6:00 PM Total:	4	0	20	0	465	2372	72	1	0	38	0	88	2357	76	1	0	8	0	113	50	275	2	3	4	0	131	58	61	6118

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM



INTERSECTION PEAK HOUR VOLUME	
IN	294
OUT	294

	HV	PHF
SB	2.7%	0.94
NB	1.7%	0.78
EB	3.4%	0.66
INTRS.	2.4%	0.92

HV = Heavy Vehicles
PHF = Peak Hour Factor

North Creek Drive @ Apartments' South Driveway

Mill Creek, WA

COUNTED BY: TDG

DATE OF COUNT: Thu. 11/15/18

REDUCTION DATE: Sat. 11/17/18

TIME OF COUNT: 4:00 PM - 6:00 PM

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: North Creek Drive @ Apartments' South Driveway
Mill Creek, WA

DATE OF COUNT: Thu. 11/15/18
TIME OF COUNT: 4:00 PM - 6:00 PM

COUNTED BY: TDG
DATE OF REDUCTION: 11/17/2018

TIME INTERVAL ENDING AT	FROM NORTH ON North Creek Drive							FROM SOUTH ON North Creek Drive							FROM EAST ON							FROM WEST ON Apartments' South Driveway							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:15 PM	0	1	1	0	0	26	2	0	0	1	0	3	21	0	0	0	0	0	0	0	0	2	0	1	0	3	0	2	**57**
04:30 PM	0	0	2	0	0	34	4	0	0	2	0	2	19	0	0	0	0	0	0	0	0	2	0	1	0	4	0	1	**64**
04:45 PM	0	0	1	0	0	27	9	0	0	0	0	5	32	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	**75**
05:00 PM	0	0	1	0	0	30	6	0	0	0	0	4	24	0	0	0	0	0	0	0	0	2	0	0	0	5	0	6	**75**
05:15 PM	0	0	0	0	0	37	3	0	0	0	0	4	25	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	**80**
05:30 PM	0	0	1	0	0	37	2	0	0	0	0	0	14	0	0	0	0	0	0	0	0	1	0	0	0	5	0	4	**62**
05:45 PM	0	0	1	0	0	32	2	0	0	0	0	3	24	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	**63**
06:00 PM	0	1	0	0	0	23	3	0	0	1	0	4	15	0	0	0	0	0	0	0	0	4	1	0	0	12	0	3	**60**
PEAK HOUR TOTALS	**0**	**0**	**4**	**0**	**0**	**128**	**22**	**0**	**0**	**2**	**0**	**15**	**100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**1**	**0**	**16**	**0**	**13**	INTERSECTION
ALL MOVEMENTS				**150**							**115**							**0**							**29**			**294**
% HV			**2.7%**							**1.7%**							**#N/A**							**3.4%**				**2.4%**
PEAK HOUR FACTOR				**0.94**							**0.78**							**#N/A**							**0.66**			**0.92**

HV = Heavy Vehicle
PHF = Peak Hour Factor

4:00 PM - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM

ROLLING HOUR COUNT

TIME INTERVAL	FROM NORTH ON North Creek Drive							FROM SOUTH ON North Creek Drive							FROM EAST ON							FROM WEST ON Apartments' South Driveway							INTERVAL TOTALS
	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	Peds	Bicycle	HV	U-Turn	Left	Thru	Right	
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	1	5	0	0	117	21	0	0	3	0	14	96	0	0	0	0	0	0	0	0	8	0	2	0	14	0	9	271
4:15 PM - 5:15 PM	0	0	4	0	0	128	22	0	0	2	0	15	100	0	0	0	0	0	0	0	0	7	0	1	0	16	0	13	294
4:30 PM - 5:30 PM	0	0	3	0	0	131	20	0	0	0	0	13	95	0	0	0	0	0	0	0	0	6	0	0	0	17	0	16	292
4:45 PM - 5:45 PM	0	0	3	0	0	136	13	0	0	0	0	11	87	0	0	0	0	0	0	0	0	6	0	0	0	16	0	17	280
5:00 PM - 6:00 PM	0	1	2	0	0	129	10	0	0	1	0	11	78	0	0	0	0	0	0	0	0	8	1	0	0	23	0	14	265
4:00 PM - 6:00 PM Total:	0	2	7	0	0	246	31	0	0	4	0	25	174	0	0	0	0	0	0	0	0	16	1	2	0	37	0	23	536

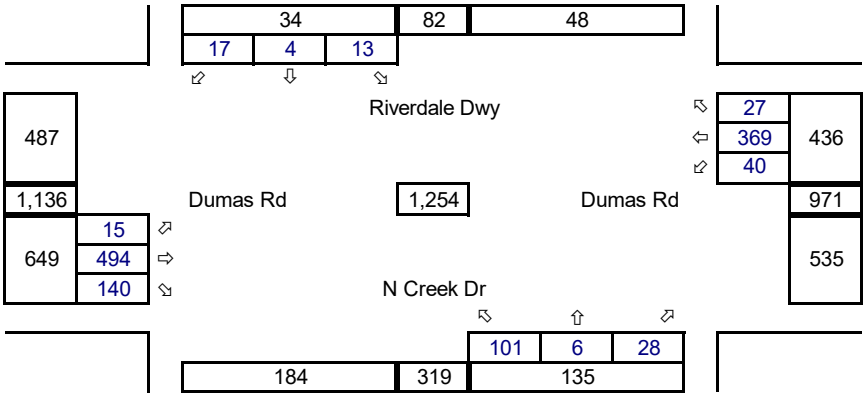
1 N Creek Dr @ Dumas Rd

Synchro ID: 1

Existing
Average Weekday
PM Peak Hour

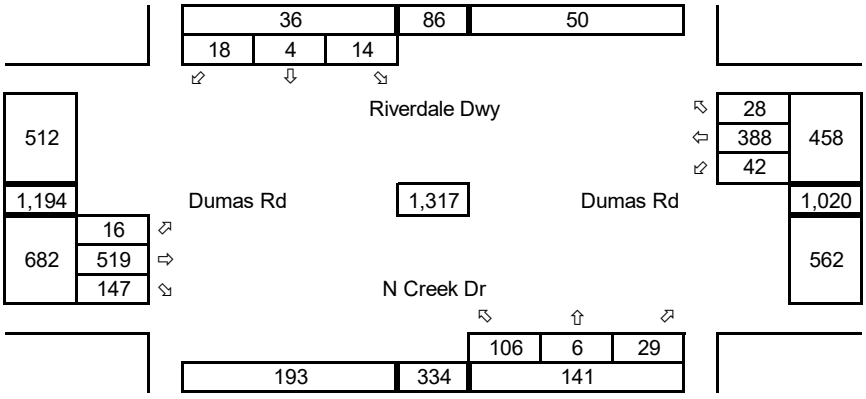
Year: **11/15/18**

Data Source: TDG

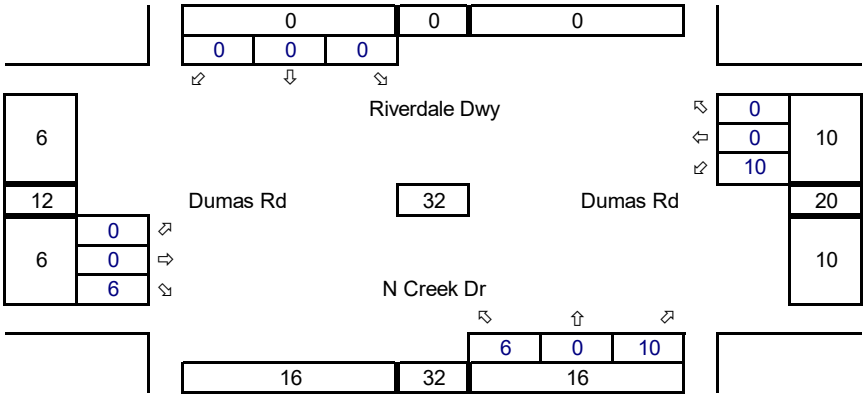


Future without Project
Average Weekday
PM Peak Hour

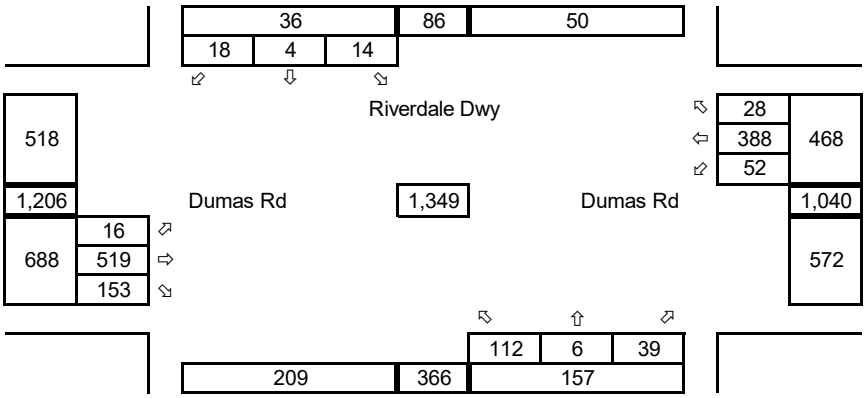
Year: 2023
Growth Rate = 1.0%
Years of Growth = 5
Total Growth = 1.0510



Total Project Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



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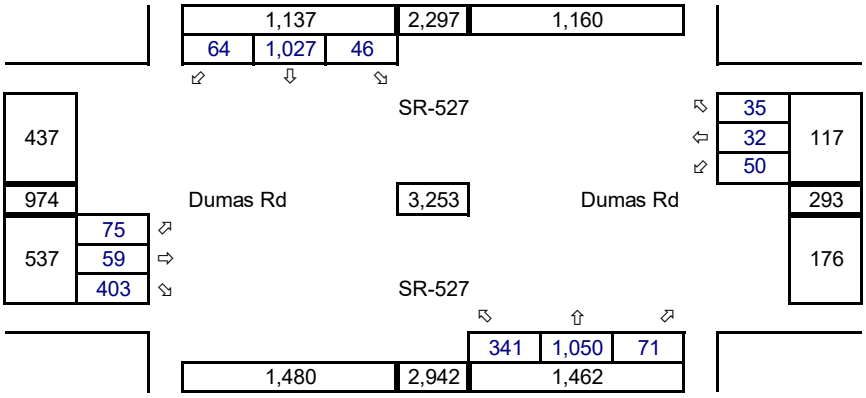
2 SR-527 @ Dumas Rd

Synchro ID: 2

Existing
Average Weekday
PM Peak Hour

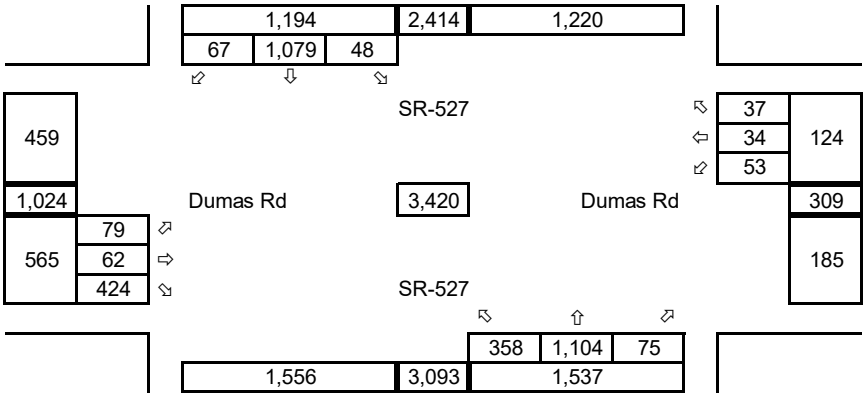
Year: **11/15/18**

Data Source: TDG

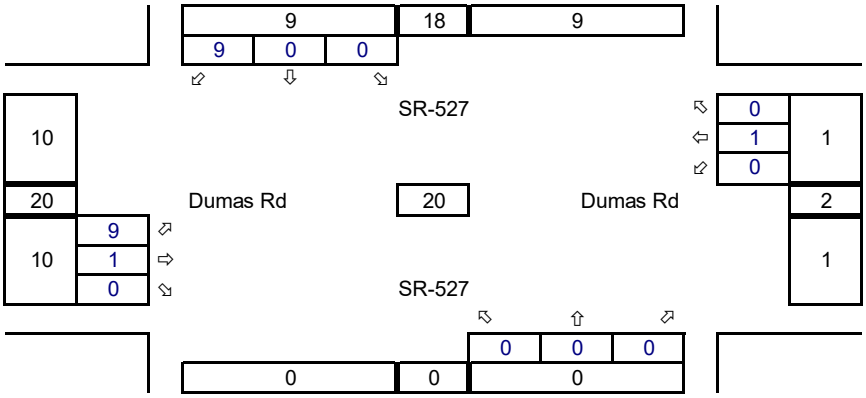


Future without Project
Average Weekday
PM Peak Hour

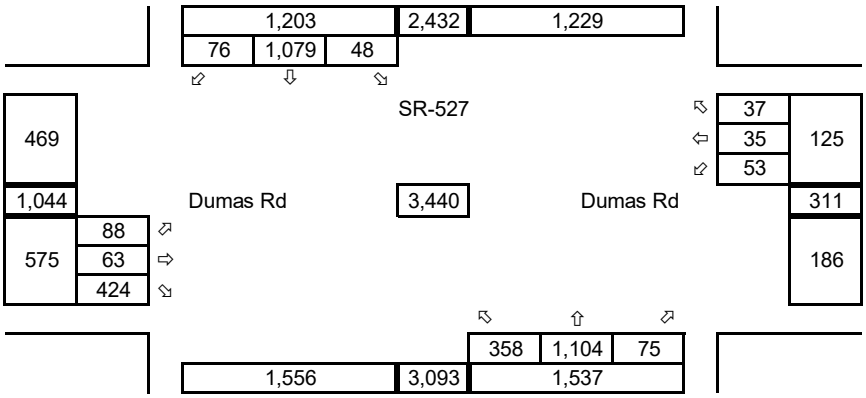
Year: 2023
Growth Rate = 1.0%
Years of Growth = 5
Total Growth = 1.0510



Total Project Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



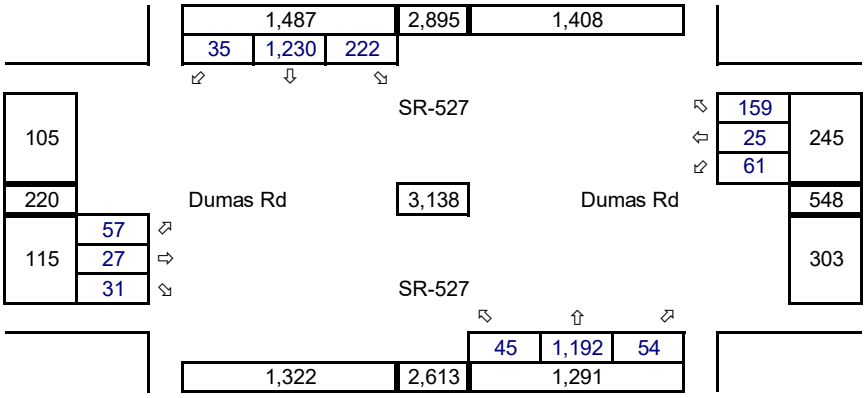
3 SR-527 @ N Creek Dr

Synchro ID: 3

Existing
Average Weekday
PM Peak Hour

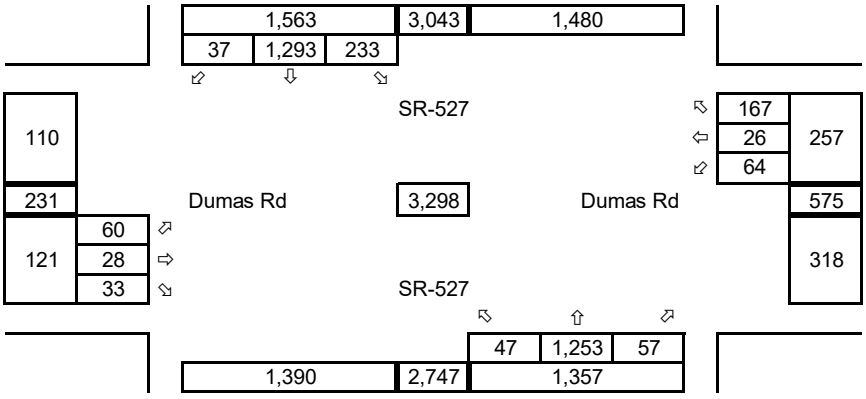
Year: **11/15/18**

Data Source: TDG

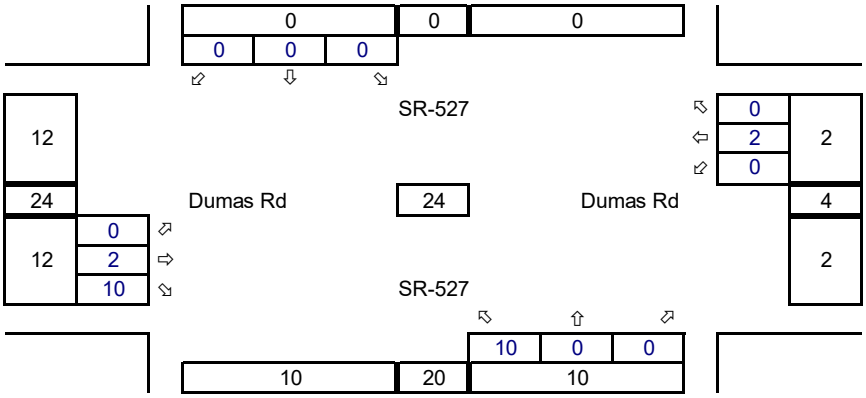


Future without Project
Average Weekday
PM Peak Hour

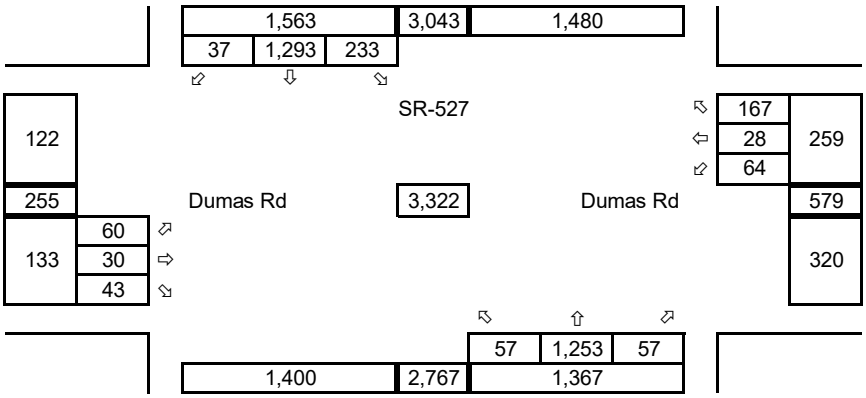
Year: 2023
Growth Rate = 1.0%
Years of Growth = 5
Total Growth = 1.0510



Total Project Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



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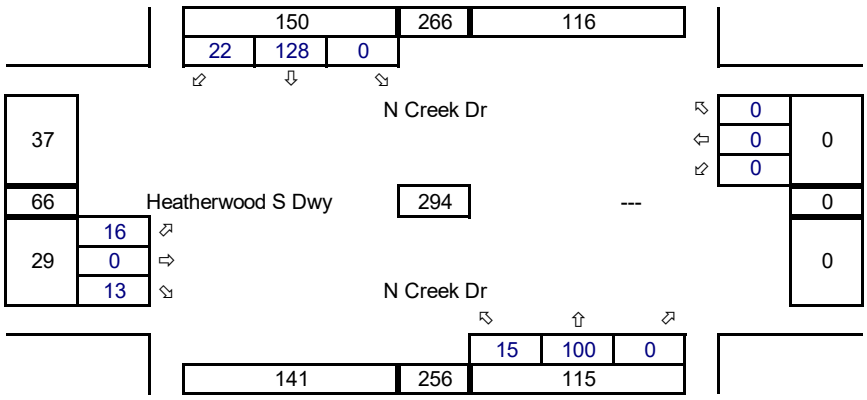
4 N Creek Dr @ Apts Dwy

Synchro ID: 4

Existing
Average Weekday
PM Peak Hour

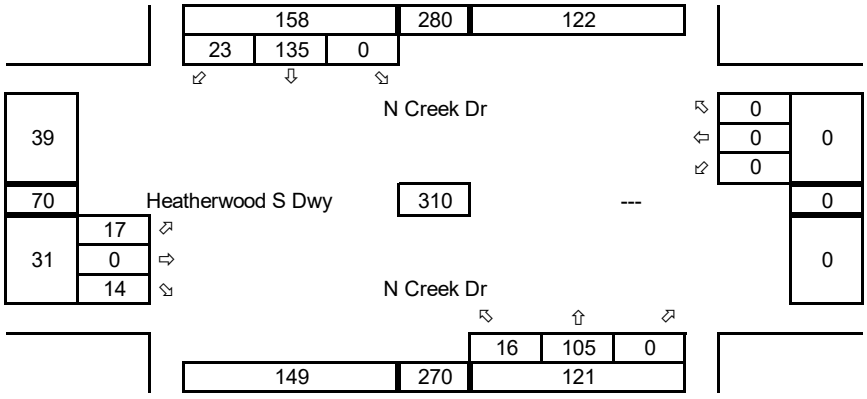
Year: **11/15/18**

Data Source: TDG

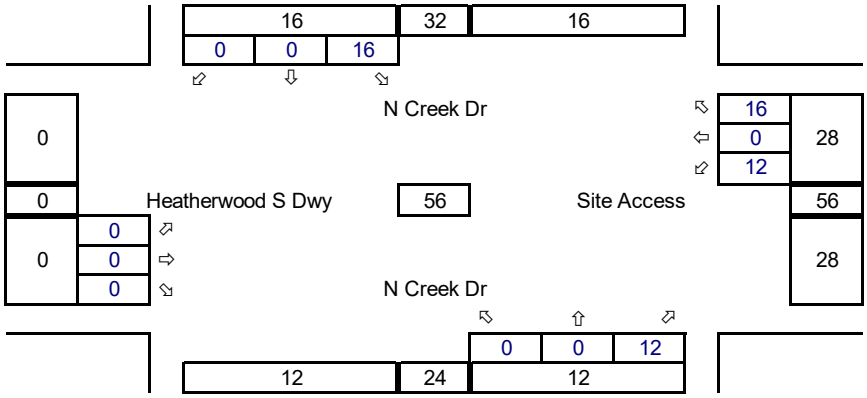


Future without Project
Average Weekday
PM Peak Hour

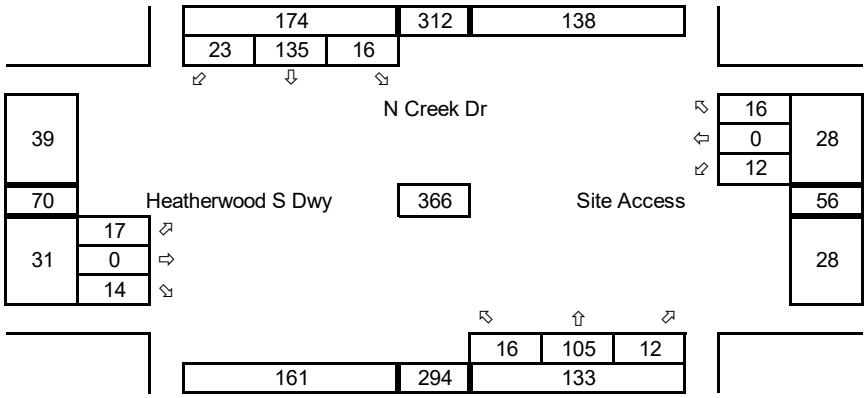
Year: 2023
Growth Rate = 1.0%
Years of Growth = 5
Total Growth = 1.0510



Total Project Trips
Average Weekday
PM Peak Hour



Future with Project
Average Weekday
PM Peak Hour



Level of Service Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	494	140	40	369	27	101	6	28	13	4	17
Future Volume (veh/h)	15	494	140	40	369	27	101	6	28	13	4	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	16	515	146	42	384	28	105	6	29	14	4	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	719	953	270	530	1307	1105	246	36	174	234	38	173
Arrive On Green	0.02	0.67	0.67	0.04	0.69	0.69	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1795	1412	400	1795	1885	1594	1352	272	1315	1338	289	1302
Grp Volume(v), veh/h	16	0	661	42	384	28	105	0	35	14	0	22
Grp Sat Flow(s),veh/h/ln	1795	0	1812	1795	1885	1594	1352	0	1588	1338	0	1591
Q Serve(g_s), s	0.2	0.0	16.2	0.6	6.8	0.5	6.4	0.0	1.7	0.8	0.0	1.1
Cycle Q Clear(g_c), s	0.2	0.0	16.2	0.6	6.8	0.5	7.5	0.0	1.7	2.5	0.0	1.1
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.83	1.00		0.82
Lane Grp Cap(c), veh/h	719	0	1223	530	1307	1105	246	0	210	234	0	211
V/C Ratio(X)	0.02	0.00	0.54	0.08	0.29	0.03	0.43	0.00	0.17	0.06	0.00	0.10
Avail Cap(c_a), veh/h	790	0	1223	567	1307	1105	418	0	412	404	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	7.2	5.3	5.1	4.2	36.4	0.0	33.3	34.5	0.0	33.1
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.1	0.6	0.0	1.2	0.0	0.4	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	5.7	0.2	2.4	0.1	2.2	0.0	0.7	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	0.0	8.9	5.3	5.7	4.2	37.5	0.0	33.7	34.6	0.0	33.3
LnGrp LOS	A	A	A	A	A	A	D	A	C	C	A	C
Approach Vol, veh/h		677			454			140			36	
Approach Delay, s/veh		8.8			5.6			36.6			33.8	
Approach LOS		A			A			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	64.6		16.0	7.7	63.0		16.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	58.5		22.5	5.0	58.5		22.5				
Max Q Clear Time (g_c+I1), s	2.2	8.8		9.5	2.6	18.2		4.5				
Green Ext Time (p_c), s	0.0	2.7		0.3	0.0	5.5		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			11.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	59	403	50	32	35	341	1050	71	46	1027	64
Future Volume (veh/h)	75	59	403	50	32	35	341	1050	71	46	1027	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	77	61	415	52	33	36	352	1082	73	47	1059	66
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	224	298	390	180	129	141	460	2362	159	391	2191	137
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.09	0.69	0.69	0.03	0.64	0.64
Sat Flow, veh/h	1330	1885	1579	921	819	893	1795	3399	229	1795	3424	213
Grp Volume(v), veh/h	77	61	415	52	0	69	352	570	585	47	554	571
Grp Sat Flow(s),veh/h/ln	1330	1885	1579	921	0	1712	1795	1791	1837	1795	1791	1846
Q Serve(g_s), s	6.4	3.3	18.7	6.2	0.0	4.2	7.4	16.9	16.9	1.0	19.1	19.1
Cycle Q Clear(g_c), s	10.6	3.3	18.7	9.5	0.0	4.2	7.4	16.9	16.9	1.0	19.1	19.1
Prop In Lane	1.00		1.00	1.00		0.52	1.00		0.12	1.00		0.12
Lane Grp Cap(c), veh/h	224	298	390	180	0	270	460	1245	1277	391	1146	1182
V/C Ratio(X)	0.34	0.20	1.06	0.29	0.00	0.26	0.76	0.46	0.46	0.12	0.48	0.48
Avail Cap(c_a), veh/h	224	298	390	180	0	270	810	1245	1277	415	1146	1182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	43.4	44.7	47.5	0.0	43.8	11.0	8.1	8.1	7.0	11.1	11.1
Incr Delay (d2), s/veh	0.9	0.3	63.5	0.9	0.0	0.5	2.7	1.2	1.2	0.1	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.6	18.2	1.5	0.0	1.8	3.8	6.4	6.6	0.4	7.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	43.7	108.2	48.4	0.0	44.2	13.7	9.3	9.3	7.1	12.6	12.5
LnGrp LOS	D	D	F	D	A	D	B	A	A	A	B	B
Approach Vol, veh/h		553			121			1507			1172	
Approach Delay, s/veh		92.9			46.0			10.3			12.3	
Approach LOS		F			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	86.8		23.2	14.9	80.3		23.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	82.3		18.7	33.5	54.3		18.7				
Max Q Clear Time (g_c+I1), s	3.0	18.9		20.7	9.4	21.1		11.5				
Green Ext Time (p_c), s	0.0	10.7		0.0	1.1	9.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			25.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	27	31	61	25	159	45	1192	54	222	1230	35
Future Volume (veh/h)	57	27	31	61	25	159	45	1192	54	222	1230	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	27	31	62	25	161	45	1204	55	224	1242	35
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	152	174	337	42	269	323	1703	78	386	1925	54
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.49	0.49	0.10	0.55	0.55
Sat Flow, veh/h	1195	786	903	1342	217	1397	1781	3460	158	1781	3530	99
Grp Volume(v), veh/h	58	0	58	62	0	186	45	618	641	224	625	652
Grp Sat Flow(s),veh/h/ln	1195	0	1689	1342	0	1614	1781	1777	1842	1781	1777	1852
Q Serve(g_s), s	2.9	0.0	1.8	2.5	0.0	6.5	0.7	16.7	16.8	3.5	15.2	15.3
Cycle Q Clear(g_c), s	9.4	0.0	1.8	4.3	0.0	6.5	0.7	16.7	16.8	3.5	15.2	15.3
Prop In Lane	1.00		0.53	1.00		0.87	1.00		0.09	1.00		0.05
Lane Grp Cap(c), veh/h	221	0	326	337	0	311	323	875	907	386	969	1010
V/C Ratio(X)	0.26	0.00	0.18	0.18	0.00	0.60	0.14	0.71	0.71	0.58	0.64	0.65
Avail Cap(c_a), veh/h	465	0	670	610	0	640	404	1737	1800	837	2200	2293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	20.9	22.6	0.0	22.8	8.1	12.2	12.2	10.5	9.9	9.9
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.3	0.0	1.8	0.2	1.1	1.0	1.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.7	0.8	0.0	2.5	0.2	5.8	6.0	1.2	5.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	21.1	22.9	0.0	24.6	8.3	13.3	13.2	11.9	10.6	10.6
LnGrp LOS	C	A	C	C	A	C	A	B	B	B	B	B
Approach Vol, veh/h		116			248			1304			1501	
Approach Delay, s/veh		24.4			24.2			13.1			10.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	34.9		16.4	7.2	38.2		16.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.6	60.4		24.5	5.5	76.5		24.5				
Max Q Clear Time (g_c+I1), s	5.5	18.8		11.4	2.7	17.3		8.5				
Green Ext Time (p_c), s	0.6	11.7		0.3	0.0	12.6		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	13	15	100	128	22
Future Vol, veh/h	16	13	15	100	128	22
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	14	16	109	139	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	299	158	170	0	-	0
Stage 1	158	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	692	887	1407	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	675	881	1398	-	-	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1398	-	771	-	-
HCM Lane V/C Ratio	0.012	-	0.041	-	-
HCM Control Delay (s)	7.6	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	519	147	42	388	28	106	6	29	14	4	18
Future Volume (veh/h)	16	519	147	42	388	28	106	6	29	14	4	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	17	541	153	44	404	29	110	6	30	15	4	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	700	949	268	504	1300	1100	249	36	180	238	38	178
Arrive On Green	0.02	0.67	0.67	0.04	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1795	1413	400	1795	1885	1594	1352	265	1323	1338	276	1313
Grp Volume(v), veh/h	17	0	694	44	404	29	110	0	36	15	0	23
Grp Sat Flow(s),veh/h/ln	1795	0	1812	1795	1885	1594	1352	0	1587	1338	0	1590
Q Serve(g_s), s	0.3	0.0	17.8	0.6	7.4	0.5	6.8	0.0	1.7	0.9	0.0	1.1
Cycle Q Clear(g_c), s	0.3	0.0	17.8	0.6	7.4	0.5	7.9	0.0	1.7	2.6	0.0	1.1
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.83	1.00		0.83
Lane Grp Cap(c), veh/h	700	0	1217	504	1300	1100	249	0	216	238	0	216
V/C Ratio(X)	0.02	0.00	0.57	0.09	0.31	0.03	0.44	0.00	0.17	0.06	0.00	0.11
Avail Cap(c_a), veh/h	768	0	1217	539	1300	1100	415	0	410	401	0	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.4	0.0	7.6	5.7	5.3	4.3	36.5	0.0	33.3	34.4	0.0	33.0
Incr Delay (d2), s/veh	0.0	0.0	1.9	0.1	0.6	0.0	1.2	0.0	0.4	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.4	0.2	2.6	0.2	2.3	0.0	0.7	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	0.0	9.6	5.8	6.0	4.3	37.7	0.0	33.6	34.5	0.0	33.2
LnGrp LOS	A	A	A	A	A	A	D	A	C	C	A	C
Approach Vol, veh/h		711			477			146			38	
Approach Delay, s/veh		9.4			5.8			36.7			33.7	
Approach LOS		A			A			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	64.6		16.3	7.8	63.0		16.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	58.5		22.5	5.0	58.5		22.5				
Max Q Clear Time (g_c+I1), s	2.3	9.4		9.9	2.6	19.8		4.6				
Green Ext Time (p_c), s	0.0	2.9		0.4	0.0	5.9		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	62	424	53	34	37	358	1104	75	48	1079	67
Future Volume (veh/h)	79	62	424	53	34	37	358	1104	75	48	1079	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	81	64	437	55	35	38	369	1138	77	49	1112	69
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	220	297	397	176	130	141	447	2360	160	372	2178	135
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.09	0.69	0.69	0.03	0.64	0.64
Sat Flow, veh/h	1326	1885	1579	900	821	891	1795	3399	230	1795	3425	212
Grp Volume(v), veh/h	81	64	437	55	0	73	369	599	616	49	581	600
Grp Sat Flow(s),veh/h/ln	1326	1885	1579	900	0	1713	1795	1791	1837	1795	1791	1846
Q Serve(g_s), s	6.8	3.5	18.7	6.7	0.0	4.4	7.8	18.2	18.2	1.1	20.7	20.8
Cycle Q Clear(g_c), s	11.2	3.5	18.7	10.2	0.0	4.4	7.8	18.2	18.2	1.1	20.7	20.8
Prop In Lane	1.00		1.00	1.00		0.52	1.00		0.13	1.00		0.12
Lane Grp Cap(c), veh/h	220	297	397	176	0	270	447	1244	1276	372	1139	1174
V/C Ratio(X)	0.37	0.22	1.10	0.31	0.00	0.27	0.83	0.48	0.48	0.13	0.51	0.51
Avail Cap(c_a), veh/h	220	297	397	176	0	270	789	1244	1276	394	1139	1174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	43.5	44.5	48.0	0.0	43.9	13.8	8.3	8.3	7.2	11.6	11.6
Incr Delay (d2), s/veh	1.0	0.4	75.5	1.0	0.0	0.5	3.9	1.3	1.3	0.2	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.7	19.9	1.6	0.0	1.9	6.0	6.9	7.1	0.4	8.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.9	43.9	120.0	49.0	0.0	44.4	17.7	9.6	9.6	7.4	13.3	13.2
LnGrp LOS	D	D	F	D	A	D	B	A	A	A	B	B
Approach Vol, veh/h		582			128			1584			1230	
Approach Delay, s/veh		101.9			46.4			11.5			13.0	
Approach LOS		F			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	86.8		23.2	15.4	79.9		23.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	82.3		18.7	33.5	54.3		18.7				
Max Q Clear Time (g_c+I1), s	3.1	20.2		20.7	9.8	22.8		12.2				
Green Ext Time (p_c), s	0.0	11.6		0.0	1.1	9.8		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			28.2									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	28	33	64	26	167	47	1253	57	233	1293	37
Future Volume (veh/h)	60	28	33	64	26	167	47	1253	57	233	1293	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	28	33	65	26	169	47	1266	58	235	1306	37
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	153	180	332	43	276	306	1744	80	369	1964	56
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.04	0.50	0.50	0.10	0.56	0.56
Sat Flow, veh/h	1186	774	913	1338	215	1398	1781	3460	158	1781	3529	100
Grp Volume(v), veh/h	61	0	61	65	0	195	47	650	674	235	657	686
Grp Sat Flow(s),veh/h/ln	1186	0	1687	1338	0	1614	1781	1777	1841	1781	1777	1852
Q Serve(g_s), s	3.3	0.0	2.0	2.8	0.0	7.4	0.8	19.1	19.1	3.9	17.4	17.4
Cycle Q Clear(g_c), s	10.7	0.0	2.0	4.8	0.0	7.4	0.8	19.1	19.1	3.9	17.4	17.4
Prop In Lane	1.00		0.54	1.00		0.87	1.00		0.09	1.00		0.05
Lane Grp Cap(c), veh/h	211	0	333	332	0	319	306	896	928	369	989	1031
V/C Ratio(X)	0.29	0.00	0.18	0.20	0.00	0.61	0.15	0.73	0.73	0.64	0.66	0.67
Avail Cap(c_a), veh/h	413	0	620	559	0	593	375	1609	1668	775	2038	2124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	0.0	22.3	24.3	0.0	24.4	8.6	12.9	12.9	11.9	10.4	10.4
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.3	0.0	1.9	0.2	1.1	1.1	1.8	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.8	0.9	0.0	2.8	0.3	6.7	7.0	1.7	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	0.0	22.5	24.6	0.0	26.3	8.9	14.1	14.0	13.7	11.2	11.2
LnGrp LOS	C	A	C	C	A	C	A	B	B	B	B	B
Approach Vol, veh/h		122			260			1371			1578	
Approach Delay, s/veh		26.3			25.9			13.9			11.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	38.1		17.7	7.4	41.6		17.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.6	60.4		24.5	5.5	76.5		24.5				
Max Q Clear Time (g_c+I1), s	5.9	21.1		12.7	2.8	19.4		9.4				
Green Ext Time (p_c), s	0.6	12.5		0.3	0.0	13.8		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	14	16	105	135	23
Future Vol, veh/h	17	14	16	105	135	23
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	15	17	114	147	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	315	167	179	0	-	0
Stage 1	167	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	678	877	1397	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	660	871	1388	-	-	-
Mov Cap-2 Maneuver	690	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	874	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1388	-	761	-	-
HCM Lane V/C Ratio	0.013	-	0.044	-	-
HCM Control Delay (s)	7.6	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	519	153	52	388	28	112	6	39	14	4	18
Future Volume (veh/h)	16	519	153	52	388	28	112	6	39	14	4	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	17	541	159	54	404	29	117	6	41	15	4	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	696	930	273	498	1295	1095	254	28	193	233	39	184
Arrive On Green	0.02	0.66	0.66	0.04	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1795	1399	411	1795	1885	1594	1353	201	1376	1328	277	1314
Grp Volume(v), veh/h	17	0	700	54	404	29	117	0	47	15	0	23
Grp Sat Flow(s),veh/h/ln	1795	0	1810	1795	1885	1594	1353	0	1577	1328	0	1591
Q Serve(g_s), s	0.3	0.0	18.6	0.8	7.5	0.5	7.3	0.0	2.3	0.9	0.0	1.1
Cycle Q Clear(g_c), s	0.3	0.0	18.6	0.8	7.5	0.5	8.4	0.0	2.3	3.2	0.0	1.1
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.87	1.00		0.83
Lane Grp Cap(c), veh/h	696	0	1203	498	1295	1095	254	0	221	233	0	223
V/C Ratio(X)	0.02	0.00	0.58	0.11	0.31	0.03	0.46	0.00	0.21	0.06	0.00	0.10
Avail Cap(c_a), veh/h	763	0	1203	525	1295	1095	411	0	403	386	0	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.6	0.0	8.1	6.0	5.5	4.4	36.7	0.0	33.5	35.0	0.0	33.0
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.1	0.6	0.0	1.3	0.0	0.5	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	6.7	0.2	2.7	0.2	2.5	0.0	0.9	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	0.0	10.1	6.1	6.1	4.4	38.0	0.0	34.0	35.1	0.0	33.2
LnGrp LOS	A	A	B	A	A	A	D	A	C	D	A	C
Approach Vol, veh/h		717			487			164			38	
Approach Delay, s/veh		10.0			6.0			36.8			33.9	
Approach LOS		A			A			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	65.0		16.8	8.2	63.0		16.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	58.5		22.5	5.0	58.5		22.5				
Max Q Clear Time (g_c+I1), s	2.3	9.5		10.4	2.8	20.6		5.2				
Green Ext Time (p_c), s	0.0	2.9		0.4	0.0	6.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	63	424	53	35	37	358	1104	75	48	1079	76
Future Volume (veh/h)	88	63	424	53	35	37	358	1104	75	48	1079	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	91	65	437	55	36	38	369	1138	77	49	1112	78
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	219	297	397	176	132	139	444	2360	160	372	2159	151
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.09	0.69	0.69	0.03	0.64	0.64
Sat Flow, veh/h	1324	1885	1579	899	834	881	1795	3399	230	1795	3394	238
Grp Volume(v), veh/h	91	65	437	55	0	74	369	599	616	49	586	604
Grp Sat Flow(s),veh/h/ln	1324	1885	1579	899	0	1715	1795	1791	1837	1795	1791	1841
Q Serve(g_s), s	7.7	3.6	18.7	6.7	0.0	4.5	7.8	18.2	18.2	1.1	21.0	21.0
Cycle Q Clear(g_c), s	12.2	3.6	18.7	10.3	0.0	4.5	7.8	18.2	18.2	1.1	21.0	21.0
Prop In Lane	1.00		1.00	1.00		0.51	1.00		0.13	1.00		0.13
Lane Grp Cap(c), veh/h	219	297	397	176	0	271	444	1244	1276	372	1139	1171
V/C Ratio(X)	0.41	0.22	1.10	0.31	0.00	0.27	0.83	0.48	0.48	0.13	0.51	0.52
Avail Cap(c_a), veh/h	219	297	397	176	0	271	786	1244	1276	394	1139	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	43.5	44.5	48.0	0.0	43.9	14.1	8.3	8.3	7.2	11.7	11.7
Incr Delay (d2), s/veh	1.2	0.4	75.5	1.0	0.0	0.5	4.1	1.3	1.3	0.2	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.7	19.9	1.6	0.0	2.0	6.4	6.9	7.1	0.4	8.5	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	43.9	120.0	49.0	0.0	44.5	18.2	9.6	9.6	7.4	13.3	13.3
LnGrp LOS	D	D	F	D	A	D	B	A	A	A	B	B
Approach Vol, veh/h		593			129			1584			1239	
Approach Delay, s/veh		101.0			46.4			11.6			13.1	
Approach LOS		F			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	86.8		23.2	15.4	79.9		23.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	82.3		18.7	33.5	54.3		18.7				
Max Q Clear Time (g_c+I1), s	3.1	20.2		20.7	9.8	23.0		12.3				
Green Ext Time (p_c), s	0.0	11.6		0.0	1.1	9.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			28.4									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	30	43	64	28	167	57	1253	57	233	1293	37
Future Volume (veh/h)	60	30	43	64	28	167	57	1253	57	233	1293	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	30	43	65	28	169	58	1266	58	235	1306	37
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	137	196	322	46	276	311	1741	80	369	1943	55
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.05	0.50	0.50	0.10	0.55	0.55
Sat Flow, veh/h	1184	687	985	1324	230	1386	1781	3460	158	1781	3529	100
Grp Volume(v), veh/h	61	0	73	65	0	197	58	650	674	235	657	686
Grp Sat Flow(s),veh/h/ln	1184	0	1673	1324	0	1616	1781	1777	1841	1781	1777	1852
Q Serve(g_s), s	3.3	0.0	2.5	2.9	0.0	7.5	1.0	19.2	19.3	4.0	17.7	17.7
Cycle Q Clear(g_c), s	10.8	0.0	2.5	5.4	0.0	7.5	1.0	19.2	19.3	4.0	17.7	17.7
Prop In Lane	1.00		0.59	1.00		0.86	1.00		0.09	1.00		0.05
Lane Grp Cap(c), veh/h	211	0	333	322	0	322	311	894	926	369	978	1020
V/C Ratio(X)	0.29	0.00	0.22	0.20	0.00	0.61	0.19	0.73	0.73	0.64	0.67	0.67
Avail Cap(c_a), veh/h	408	0	611	542	0	590	370	1600	1658	770	2026	2112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	22.5	24.7	0.0	24.5	8.8	13.1	13.1	12.0	10.8	10.8
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.3	0.0	1.9	0.3	1.1	1.1	1.8	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.9	0.9	0.0	2.9	0.3	6.8	7.1	1.6	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	0.0	22.8	25.0	0.0	26.4	9.1	14.2	14.2	13.8	11.6	11.5
LnGrp LOS	C	A	C	C	A	C	A	B	B	B	B	B
Approach Vol, veh/h		134			262			1382			1578	
Approach Delay, s/veh		26.2			26.1			14.0			11.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	38.3		17.9	7.8	41.4		17.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.6	60.4		24.5	5.5	76.5		24.5				
Max Q Clear Time (g_c+I1), s	6.0	21.3		12.8	3.0	19.7		9.5				
Green Ext Time (p_c), s	0.6	12.5		0.4	0.0	13.8		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	14	12	0	16	16	105	12	16	135	23
Future Vol, veh/h	17	0	14	12	0	16	16	105	12	16	135	23
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	0	0	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	15	13	0	17	17	114	13	17	147	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	364	362	167	356	368	121	179	0	0	127	0	0
Stage 1	201	201	-	155	155	-	-	-	-	-	-	-
Stage 2	163	161	-	201	213	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	592	565	877	599	561	930	1397	-	-	1459	-	-
Stage 1	801	735	-	847	769	-	-	-	-	-	-	-
Stage 2	839	765	-	801	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	567	547	871	578	544	930	1388	-	-	1459	-	-
Mov Cap-2 Maneuver	620	583	-	626	578	-	-	-	-	-	-	-
Stage 1	786	721	-	837	760	-	-	-	-	-	-	-
Stage 2	813	756	-	778	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	9.9	0.9	0.7
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1388	-	-	713	770	1459	-	-
HCM Lane V/C Ratio	0.013	-	-	0.047	0.04	0.012	-	-
HCM Control Delay (s)	7.6	-	-	10.3	9.9	7.5	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Collision Data

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN THE CITY OF MILL CREEK

01/01/2013 - *available 2018*

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

PRIMARY TRAFFICWAY	INTERSECTING/ REFERENCE TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	MILEPOST	A / B	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	FIRST COLLISION TYPE / OBJECT STRUCK
DUMAS RD	N CREEK DR	50	F	SE			E719969	10/02/2017	16:06	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
DUMAS RD	N CREEK DR						E438633	06/30/2015	22:05	Suspected Minor Injury	1	0	1	0	1	Vehicle - Pedalcyclist
DUMAS RD	N CREEK DR						E477798	10/28/2015	06:15	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one right turn
DUMAS RD	N CREEK DR						E645040	02/22/2017	22:23	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
N CREEK DR	DUMAS RD						E230466	03/06/2013	20:50	No Apparent Injury	0	0	2	0	0	Entering at angle
N CREEK DR	DUMAS RD						E315700	03/21/2014	07:44	Possible Injury	1	0	1	0	0	Over Embankment - No Guardrail Present
N CREEK DR	DUMAS RD						E357788	09/16/2014	14:16	Possible Injury	1	0	1	1	0	Vehicle turning left hits pedestrian
N CREEK DR	DUMAS RD						E408989	03/18/2015	18:15	No Apparent Injury	0	0	2	0	0	From same direction - all others
N CREEK DR	HEATHERWOOD DR						E337618	06/27/2014	19:11	No Apparent Injury	0	0	2	0	0	Entering at angle
N CREEK DR	HEATHERWOOD DR						E396752	01/31/2015	10:04	No Apparent Injury	0	0	2	0	0	From same direction - all others
SR-527	N CREEK DR				8.13		E221666	01/19/2013	12:04	Possible Injury	1	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E249705	06/11/2013	09:27	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - both moving - rear-end
SR-527	N CREEK DR				8.13		E253244	06/18/2013	15:55	Suspected Minor Injury	1	0	2	0	0	From same direction - both going straight - both moving - rear-end
SR-527	N CREEK DR				8.13		E258736	07/24/2013	16:10	Possible Injury	1	0	2	0	0	From same direction - both going straight - both moving - rear-end
SR-527	N CREEK DR				8.13		E277273	10/14/2013	11:59	No Apparent Injury	0	0	2	0	0	From same direction - one right turn - one straight
SR-527	N CREEK DR				8.13		E287383	11/23/2013	13:24	No Apparent Injury	0	0	3	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E290158	12/04/2013	14:21	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E311048	03/01/2014	07:07	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	N CREEK DR				8.13		E343794	07/23/2014	15:44	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - both moving - sideswipe
SR-527	N CREEK DR				8.13		E350410	08/20/2014	19:52	Suspected Minor Injury	1	0	1	0	1	Vehicle - Pedalcyclist
SR-527	N CREEK DR				8.13		E406651	03/09/2015	14:56	Possible Injury	3	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E429329	06/01/2015	11:37	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E460250	09/10/2015	05:45	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	N CREEK DR				8.13		E529210	03/25/2016	09:40	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E580466	09/02/2016	06:50	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	N CREEK DR				8.13		E597355	10/13/2016	16:36	Possible Injury	2	0	4	0	0	From opposite direction - one left turn - one straight
SR-527	N CREEK DR				8.13		E636295	01/28/2017	13:05	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	N CREEK DR				8.13		E673426	05/18/2017	11:20	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	N CREEK DR				8.13		E690753	07/10/2017	17:33	No Apparent Injury	0	0	1	0	0	Earth Bank or Ledge
SR-527	N CREEK DR				8.13		E717738	09/29/2017	09:45	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	N CREEK DR				8.13		E740095	11/22/2017	22:58	No Apparent Injury	0	0	2	0	0	All other non-collision
SR-527	N CREEK DR				8.13		E749381	12/18/2017	14:53	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one right turn
SR-527	N CREEK DR				8.14		E760665	01/16/2018	09:40	Possible Injury	1	0	2	0	0	From same direction - both going straight - both moving - rear-end
SR-527	DUMAS RD				8.36		E477651	11/02/2015	11:55	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E224978	02/05/2013	11:45	Possible Injury	2	0	3	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E233589	03/19/2013	16:45	Possible Injury	1	0	2	0	0	Entering at angle

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN THE CITY OF MILL CREEK

01/01/2013 - *available 2018*

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PRIMARY TRAFFICWAY	INTERSECTING/ REFERENCE TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	MILEPOST	A / B	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	FIRST COLLISION TYPE / OBJECT STRUCK
SR-527	DUMAS RD				8.37		E265401	08/25/2013	12:00	No Apparent Injury	0	0	2	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E270356	09/16/2013	18:15	Possible Injury	1	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E271742	09/21/2013	16:18	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E275652	10/07/2013	10:40	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E292612	12/13/2013	19:22	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E294662	12/20/2013	19:30	No Apparent Injury	0	0	1	0	0	Retaining Wall (concrete, rock, brick, etc.)
SR-527	DUMAS RD				8.37		E311860	03/04/2014	16:49	Possible Injury	1	0	2	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E312795	03/08/2014	18:45	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E314553	03/16/2014	15:59	Possible Injury	1	0	2	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E329310	05/22/2014	06:30	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - both moving - sideswipe
SR-527	DUMAS RD				8.37		E338601	07/01/2014	18:35	Suspected Minor Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E341920	07/15/2014	17:16	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E354285	09/04/2014	13:01	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E366792	10/21/2014	14:14	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E373294	11/10/2014	05:20	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E376739	11/22/2014	17:06	No Apparent Injury	0	0	3	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E376862	11/21/2014	22:03	Suspected Minor Injury	1	0	1	0	1	Vehicle - Pedalcyclist
SR-527	DUMAS RD				8.37		E382482	12/10/2014	19:15	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - both moving - rear-end
SR-527	DUMAS RD				8.37		E389577	01/05/2015	07:59	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E398675	02/06/2015	10:30	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - both moving - sideswipe
SR-527	DUMAS RD				8.37		E398748	02/06/2015	15:00	Possible Injury	2	0	2	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E406353	03/09/2015	07:56	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E407997	03/16/2015	17:53	Suspected Minor Injury	1	0	1	0	1	Vehicle - Pedalcyclist
SR-527	DUMAS RD				8.37		E413095	04/02/2015	06:45	Possible Injury	2	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E427985	05/26/2015	18:47	No Apparent Injury	0	0	3	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E437787	06/28/2015	14:10	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E442013	07/12/2015	12:20	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E473043	10/20/2015	06:10	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E478838	11/04/2015	06:35	Possible Injury	1	0	1	1	0	Vehicle turning left hits pedestrian
SR-527	DUMAS RD				8.37		E478884	11/05/2015	19:05	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E481704	11/10/2015	16:20	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E497558	12/23/2015	15:35	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E505043	01/13/2016	06:55	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E508951	01/23/2016	09:20	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E514670	02/10/2016	06:31	Possible Injury	1	0	3	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E517040	02/17/2016	20:28	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN THE CITY OF MILL CREEK

01/01/2013 - *available 2018*

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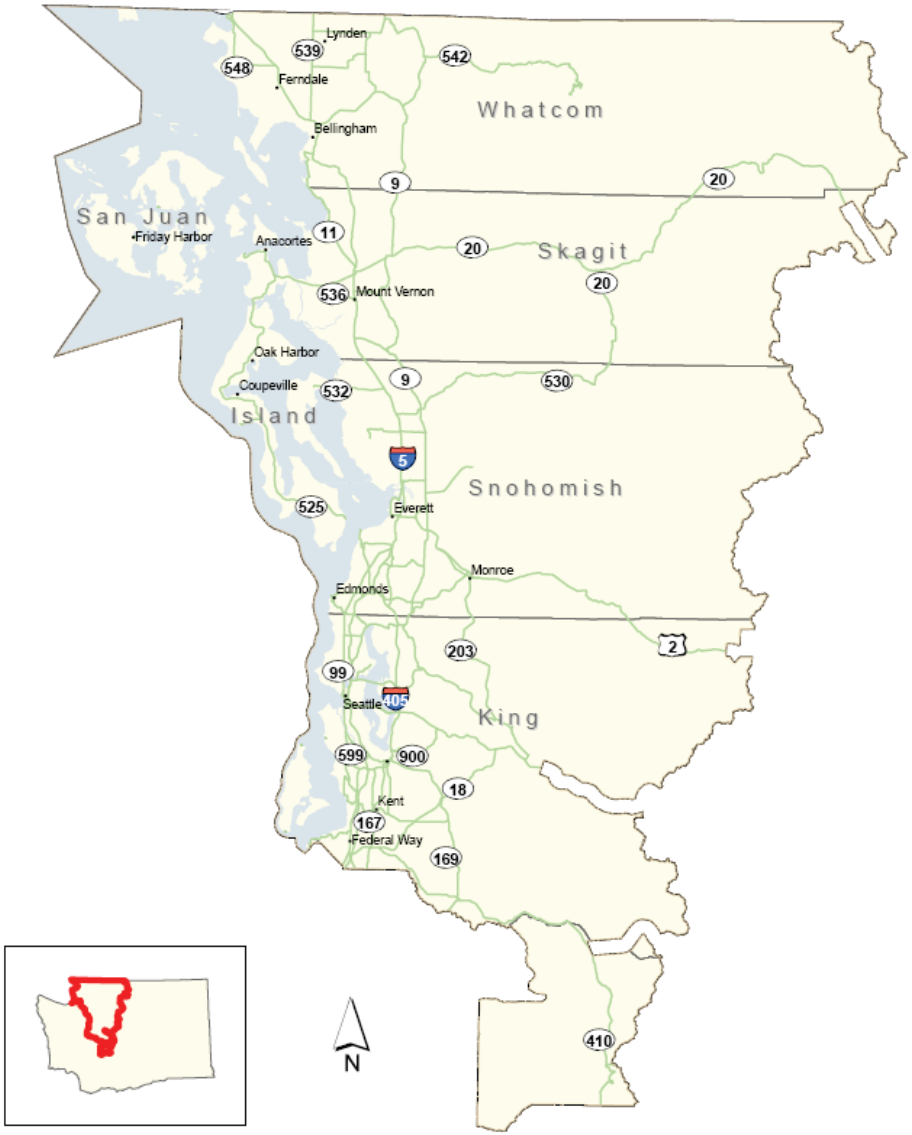
PRIMARY TRAFFICWAY	INTERSECTING/ REFERENCE TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	MILEPOST	A / B	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	FIRST COLLISION TYPE / OBJECT STRUCK
SR-527	DUMAS RD				8.37		E530092	03/31/2016	17:35	No Apparent Injury	0	0	3	0	0	From same direction - both going straight - both moving - rear-end
SR-527	DUMAS RD				8.37		E531515	04/05/2016	13:42	Possible Injury	2	0	4	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E555131	06/18/2016	12:30	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E580465	08/31/2016	15:54	Possible Injury	1	0	2	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E591418	09/28/2016	07:28	No Apparent Injury	0	0	2	0	0	From opposite direction - all others
SR-527	DUMAS RD				8.37		E613396	11/28/2016	16:25	Possible Injury	1	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E618128	12/10/2016	10:45	Possible Injury	1	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E665615	04/26/2017	14:10	No Apparent Injury	0	0	2	0	0	From opposite direction - all others
SR-527	DUMAS RD				8.37		E675053	05/24/2017	19:06	No Apparent Injury	0	0	3	0	0	Entering at angle
SR-527	DUMAS RD				8.37		E675055	05/23/2017	13:55	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E680546	06/06/2017	12:27	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E687267	07/02/2017	14:04	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end
SR-527	DUMAS RD				8.37		E689481	07/03/2017	14:13	Suspected Serious Injury	3	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E690754	07/12/2017	11:23	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E694050	07/22/2017	19:40	Suspected Serious Injury	1	0	1	0	2	Vehicle - Pedalcyclist
SR-527	DUMAS RD				8.37		E709348	09/07/2017	06:05	No Apparent Injury	0	0	2	0	0	Same direction -- both turning right -- one stopped -- sideswipe
SR-527	DUMAS RD				8.37		E711130	09/12/2017	09:30	No Apparent Injury	0	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E728106	10/27/2017	09:35	No Apparent Injury	0	0	2	0	0	Same direction -- both turning right -- one stopped -- rear end
SR-527	DUMAS RD				8.37		E740099	11/27/2017	07:27	Suspected Minor Injury	2	0	2	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E750213	12/21/2017	17:52	Possible Injury	1	0	3	0	0	From opposite direction - one left turn - one straight
SR-527	DUMAS RD				8.37		E760667	01/19/2018	12:35	No Apparent Injury	0	0	2	0	0	From same direction - both going straight - one stopped - rear-end

Washington State Department of Transportation

2011 Washington State Collision Data Summary

Average Collision Rates by Functional Class by Region

Northwest Region



2011 AVERAGE COLLISION RATES BY FUNCTIONAL CLASS
Northwest Region (State Routes only)

RURAL AREAS	PRINCIPAL ARTERIAL	MINOR ARTERIAL	COLLECTOR	INTERSTATE	ALL HIGHWAYS
Vehicle Miles of Travel (Millions)	554.01	448.32	215.05	970.35	2,187.73
Miles of Highway	133.41	255.91	158.99	57.61	605.92
Total Collisions	564	520	363	510	1,957
Collision Rate (1)	**1.02**	**1.16**	**1.69**	**0.53**	**0.89**
Property Damage Only Collisions	389	305	210	360	1,264
Property Damage Only Collision Rate (1)	**0.70**	**0.68**	**0.98**	**0.37**	**0.58**
Injury Collisions	169	209	152	149	679
Injury Collision Rate (1)	**0.31**	**0.47**	**0.71**	**0.15**	**0.31**
Fatal Collisions	6	6	1	1	14
Fatal Collision Rate (2)	**1.08**	**1.34**	**0.47**	**0.10**	**0.64**

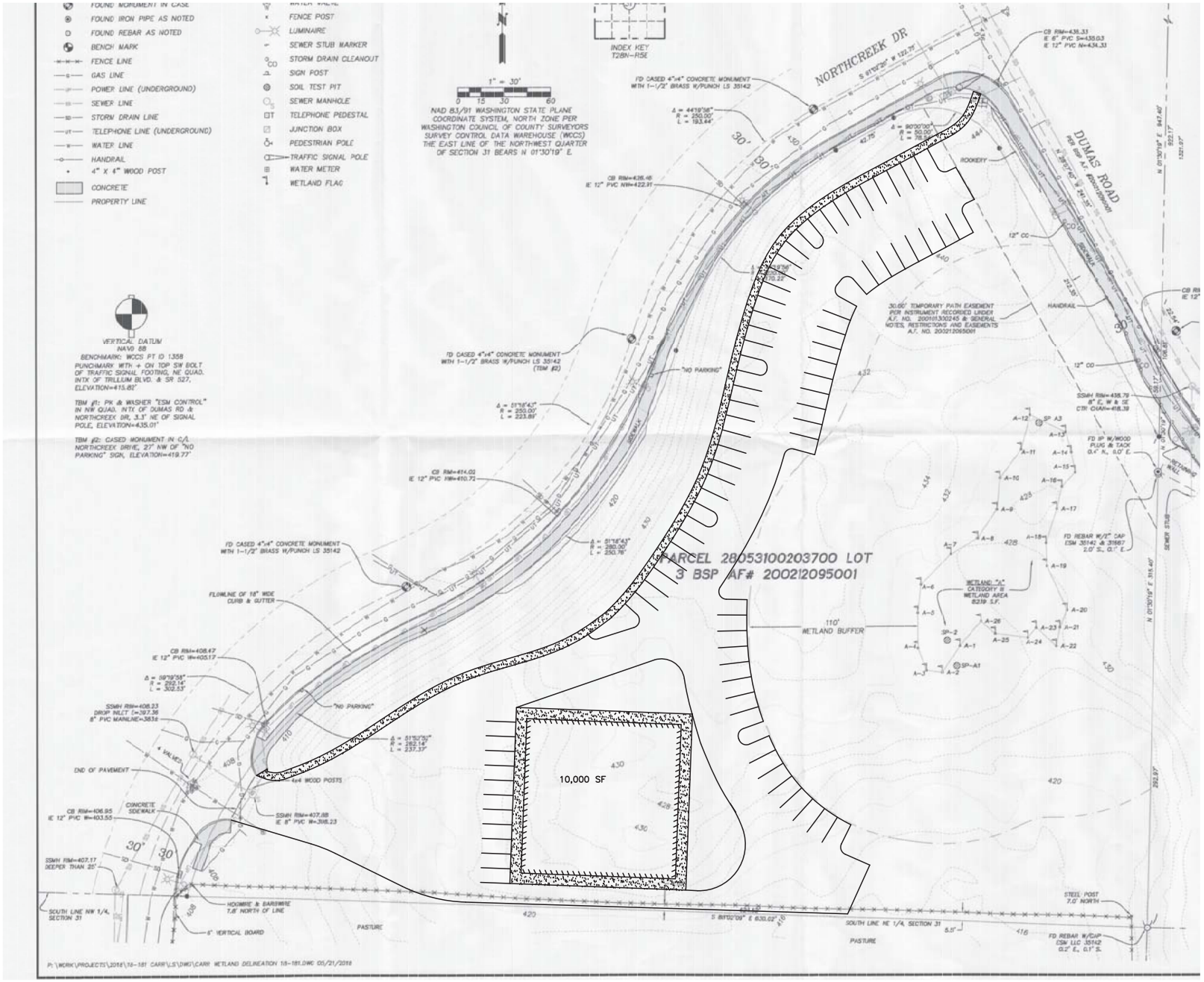
URBAN AREAS	PRINCIPAL ARTERIAL	MINOR ARTERIAL	COLLECTOR	INTERSTATE	ALL HIGHWAYS
Vehicle Miles of Travel (Millions)	4,033.90	506.92	0.00	6,899.35	11,440.17
Miles of Highway	326.43	98.04	0.00	141.43	565.90
Total Collisions	9,169	1,483	0	8,881	19,533
Collision Rate (1)	**2.27**	**2.93**	**0.00**	**1.29**	**1.71**
Property Damage Only Collisions	5,992	980	0	6,042	13,014
Property Damage Only Collision Rate (1)	**1.49**	**1.93**	**0.00**	**0.88**	**1.14**
Injury Collisions	3,158	493	0	2,820	6,471
Injury Collision Rate (1)	**0.78**	**0.97**	**0.00**	**0.41**	**0.57**
Fatal Collisions	19	10	0	19	48
Fatal Collision Rate (2)	**0.47**	**1.97**	**0.00**	**0.28**	**0.42**

ALL AREAS	PRINCIPAL ARTERIAL	MINOR ARTERIAL	COLLECTOR	INTERSTATE	ALL HIGHWAYS
Vehicle Miles of Travel (Millions)	4,587.91	955.24	215.05	7,869.70	13,627.90
Miles of Highway	459.84	353.95	158.99	199.04	1,171.82
Total Collisions	9,733	2,003	363	9,391	21,490
Collision Rate (1)	**2.12**	**2.10**	**1.69**	**1.19**	**1.58**
Property Damage Only Collisions	6,381	1,285	210	6,402	14,278
Property Damage Only Collision Rate (1)	**1.39**	**1.35**	**0.98**	**0.81**	**1.05**
Injury Collisions	3,327	702	152	2,969	7,150
Injury Collision Rate (1)	**0.73**	**0.73**	**0.71**	**0.38**	**0.52**
Fatal Collisions	25	16	1	20	62
Fatal Collision Rate (2)	**0.54**	**1.67**	**0.47**	**0.25**	**0.45**

(1) Per Million Vehicle Miles of Travel

(2) Per 100 Million Vehicle Miles of Travel

Site Plan



PARCEL AREA =196,020 SF

USEABLE AREA OUTSIDE CRITICAL AREA BUFFER = 82,900 SF

PARKING STALLS = 79

BACKGROUND SURVEY INFORMATION OBTAINED FROM RECORD INFORMATION, PREPARED BY HARMSEN AND ASSOCIATES, 5/17/18. TERRAVISTA NW, LLC DOES NOT WARRANT INFORMATION CONTAINED WITHIN BACKGROUND INFORMATION.

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