

MAY 2018



**WIM #42  
US 61,  
MP 119.6  
COTTAGE  
GROVE,  
MINNESOTA**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #42 is located on US 61 near Cottage Grove in Washington county.

## System Operation

WIM #42 was operational for the entire month of May 2018. Volume was computed using all monthly data.

## System Calibration

WIM #42 was most recently calibrated on 2016-08-04. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Table 1 indicates that the class 9 front axle weights were all within +/- 9% of baseline calibration values for all lanes. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 1132671 | Passenger Vehicles: 1078136 | Heavy Commercial Vehicles: 54535

Monthly Average Daily Traffic (MADT): 36538 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1759

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Mondays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Mondays (see Figure 3 and 4).

## Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), NB PVs generally reached peak volume levels between 07 AM and 05 PM. Similarly, SB PVs peaked in volume between 03 PM and 05 PM

## Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 07 AM and 05 PM, while volume going SB peaked between 03 PM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

## Overweight HCVs

**Volume trends.** Of a total of 54535 HCVs, 3315 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.3% of total monthly volume, and 6.3% of total monthly HCV volume. NB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Wednesdays, with lowest volumes reported on Saturdays. See Figure 3 . The top two overweight violators by class were the class 9 and class 6 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 51% of all overweight vehicles traveling SB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in August.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report<sup>4</sup>.

Using normal load limits ,37 NB vehicles exceeded 88,000 pounds (20 vehicles were Class 10's; 12 vehicles were Class 13's). Of vehicles traveling SB,

84 NB vehicles exceeded 88,000 pounds (40 vehicles were Class 10's; 25 vehicles were Class 13's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from May 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in May 2018. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling NB, while there were more fully\_loaded Class 9's than empty traveling SB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the NB direction. In the SB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 359165 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (58.2%) than SB (41.8%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 5895 (Hastings Bridge) is approximately 1.9 miles south of WIM #42, and Bridge No. 82J16 is 1.0 miles north of WIM #42. WIM #42 recorded a total of 1132671 vehicles with a combined GVW of 6367245 kips (1 kip = 1,000 pounds = 0.5 tons) in May 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 29131 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 57% of all ESALs were recorded NB while 43% was observed SB. In particular, 60% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 17% of total GVW observed this month). See Table 6 and

Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

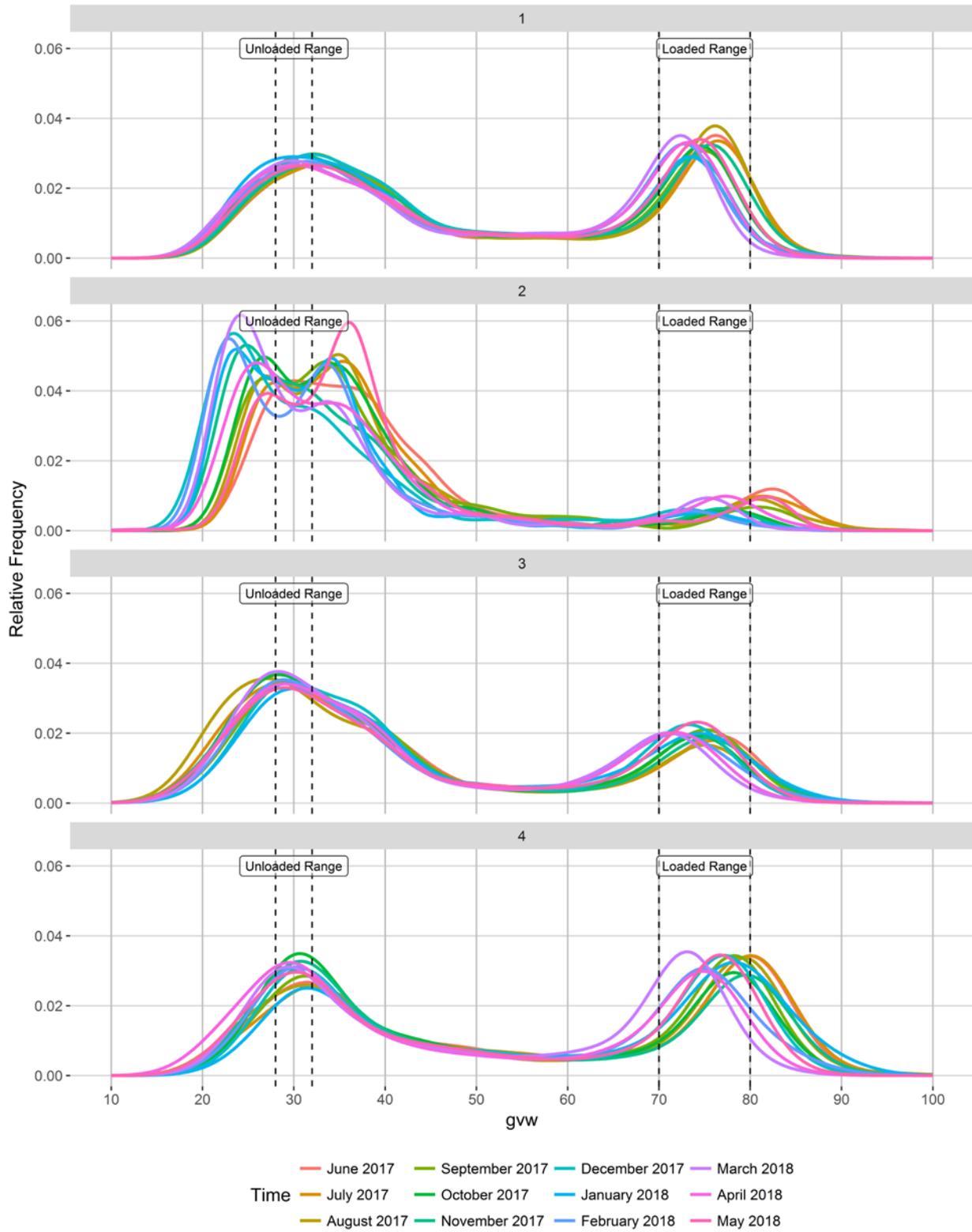
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at: <http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes: [http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

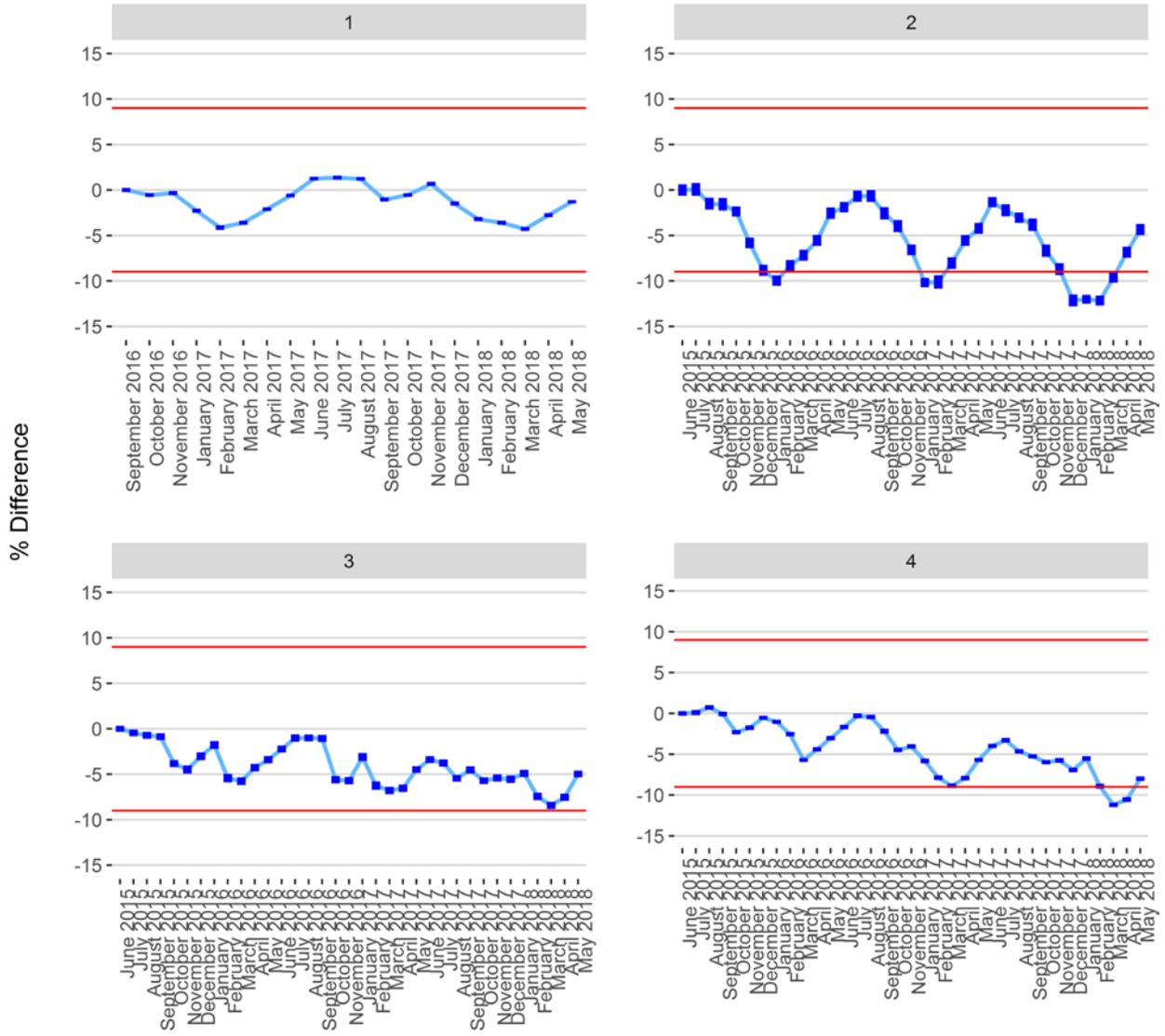
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Figure 1 - Monthly Class 9 GVW Histogram



Months that have not passed QC parameters are not displayed

Figure 2 - Percent Difference of Front Axle Weight from Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume vs. Day of the Week

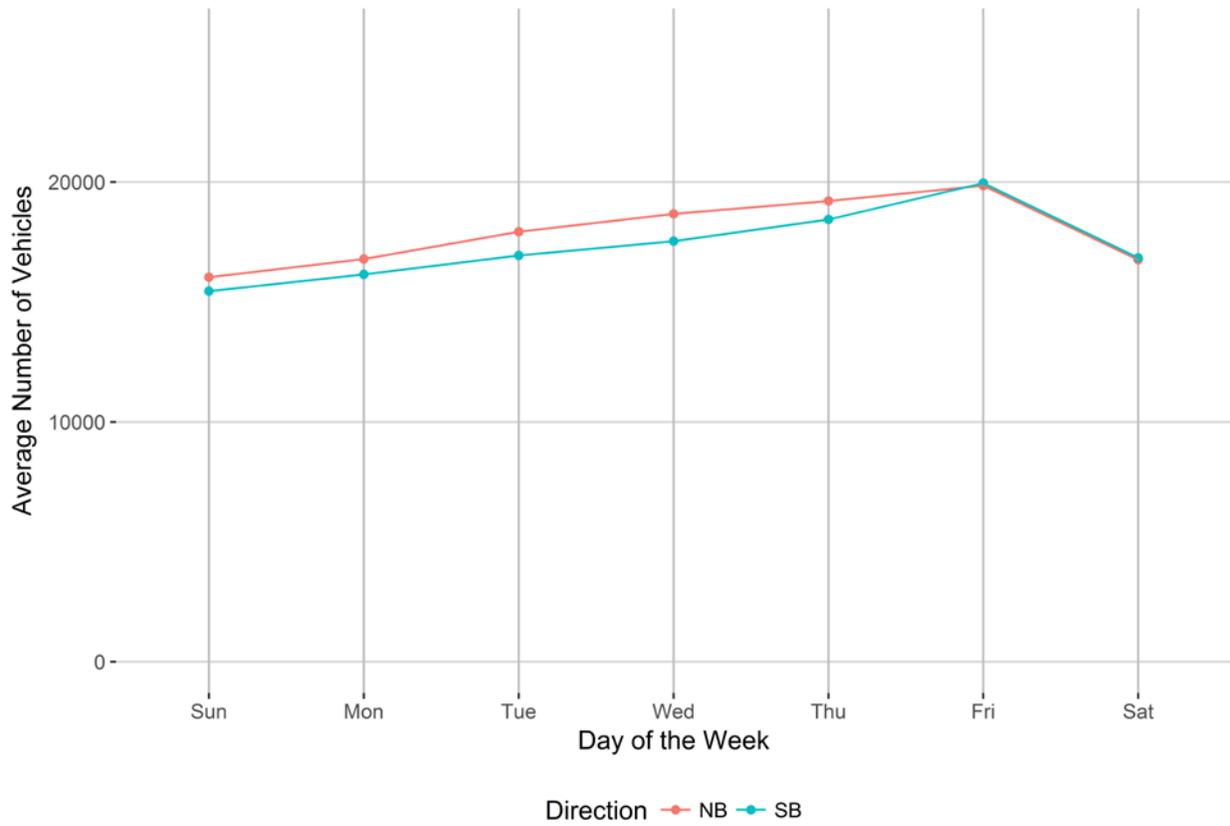


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

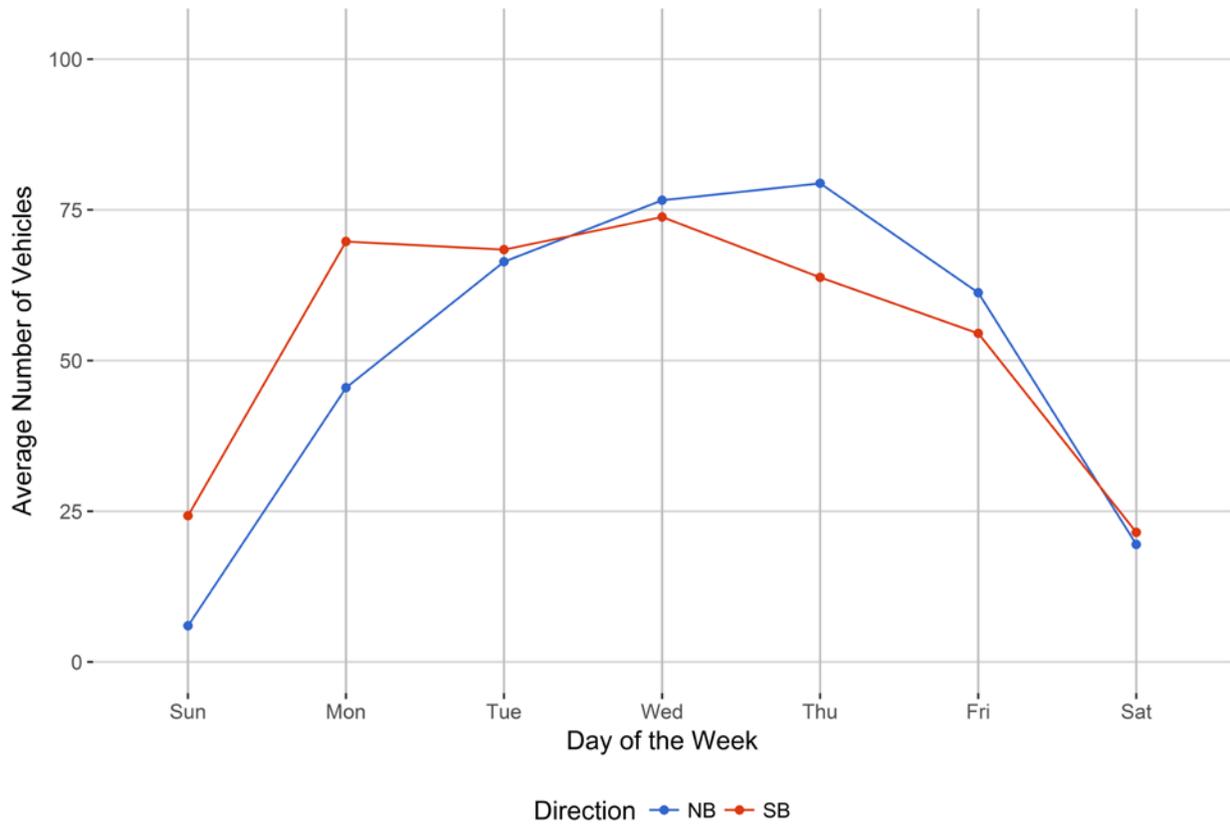


Figure 4 - Passenger Vehicles vs. Hour of the Day

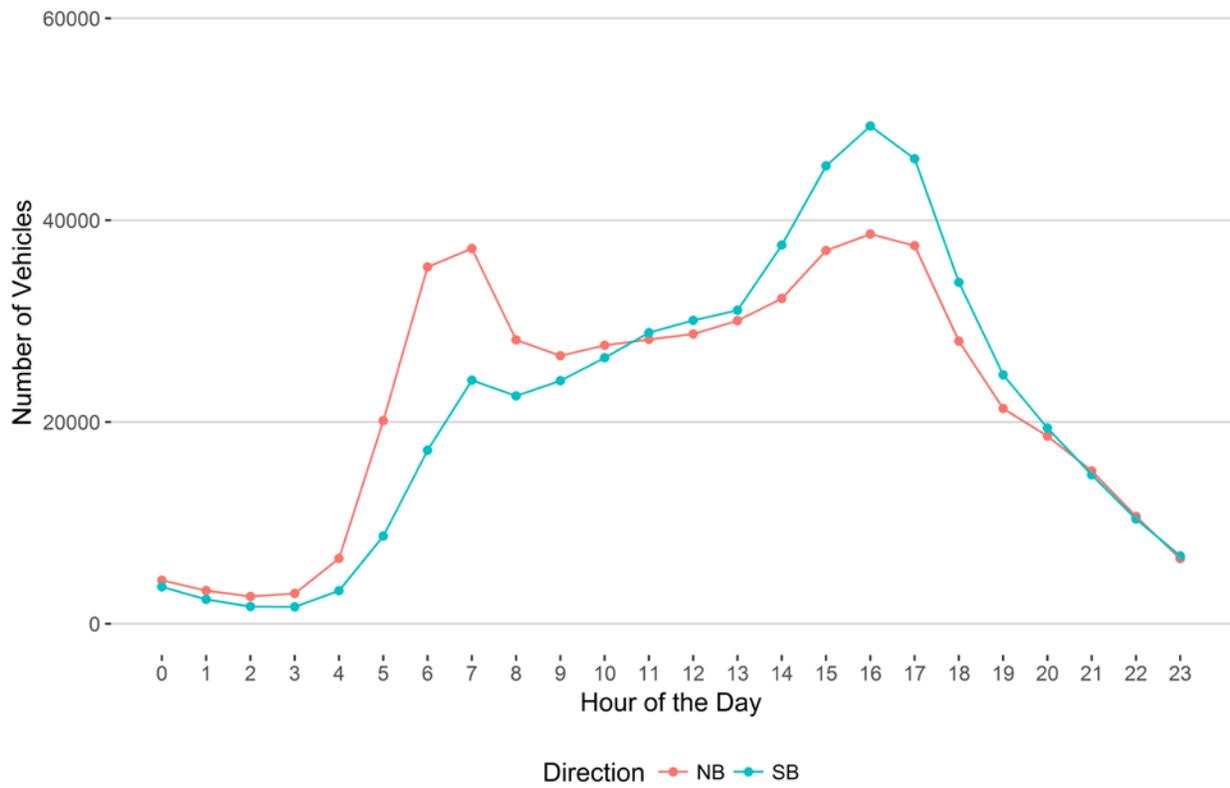


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

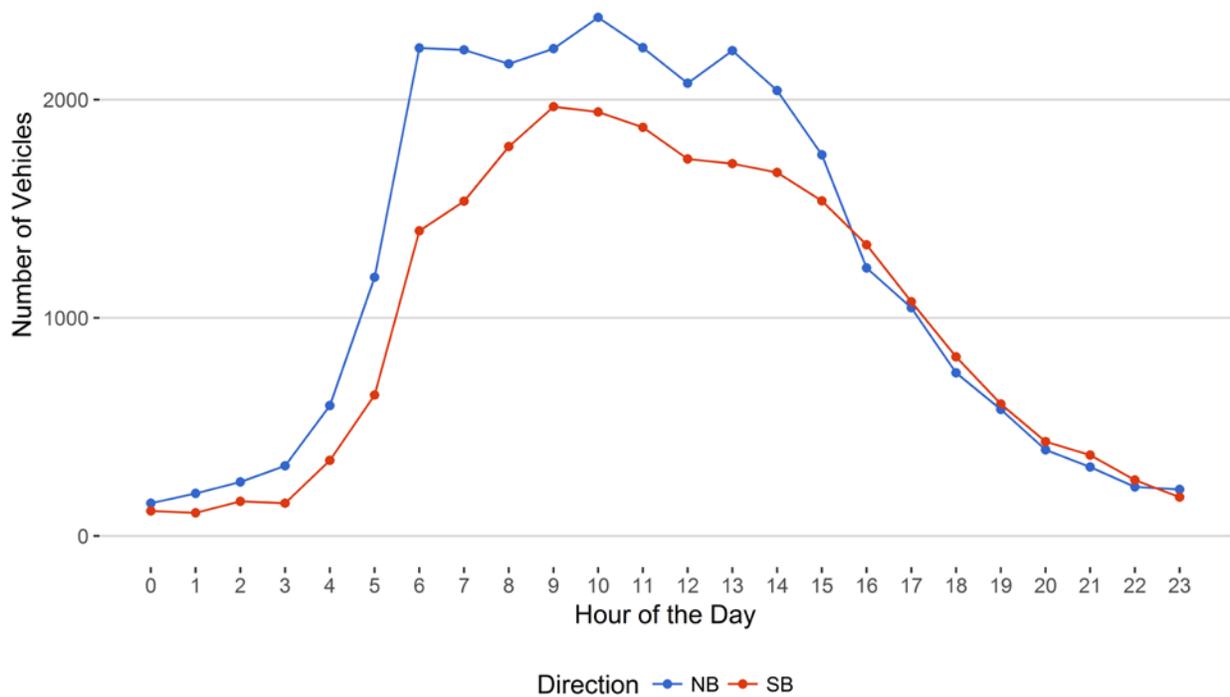


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

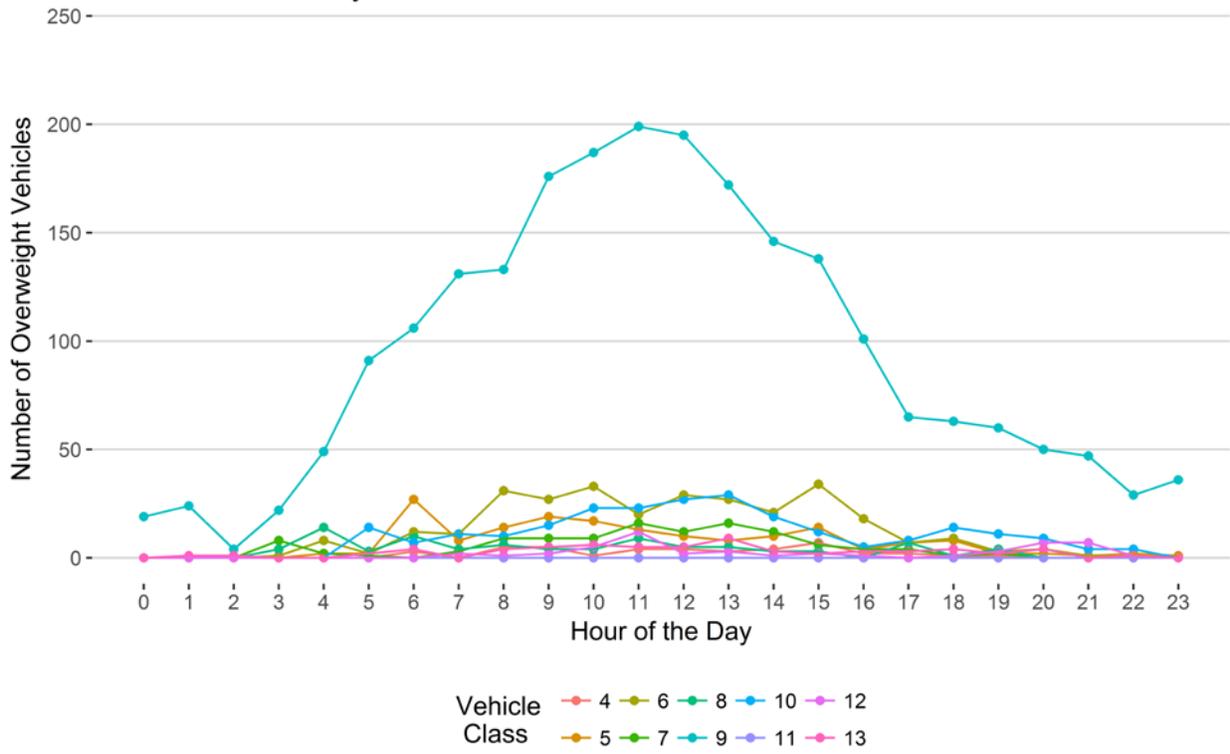


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

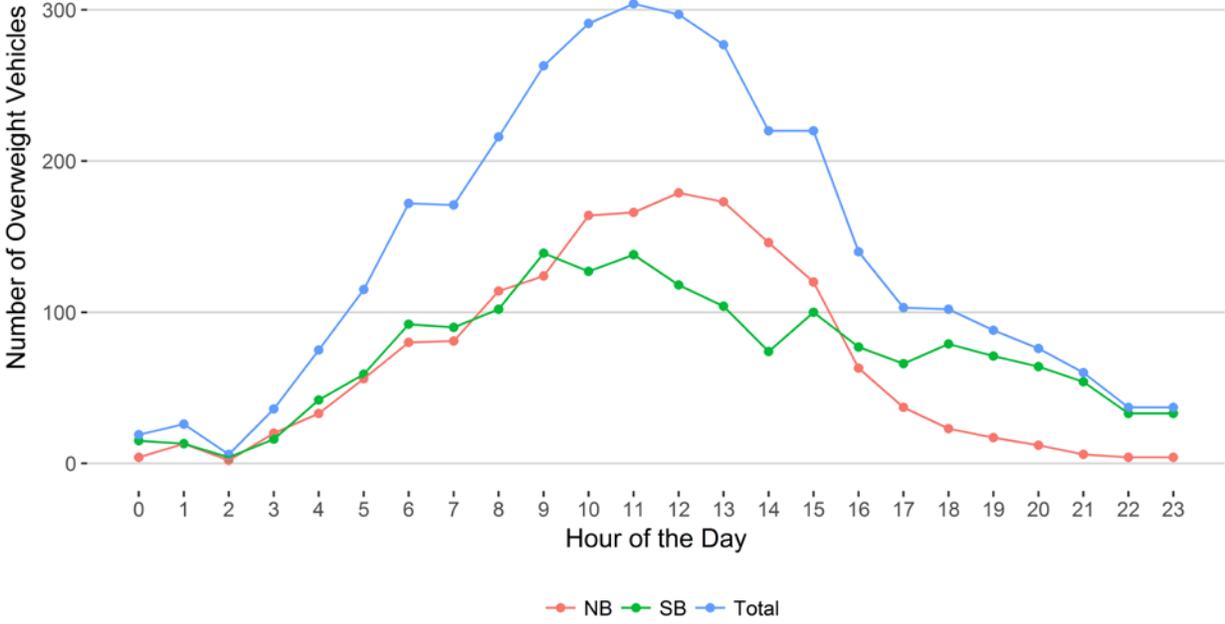
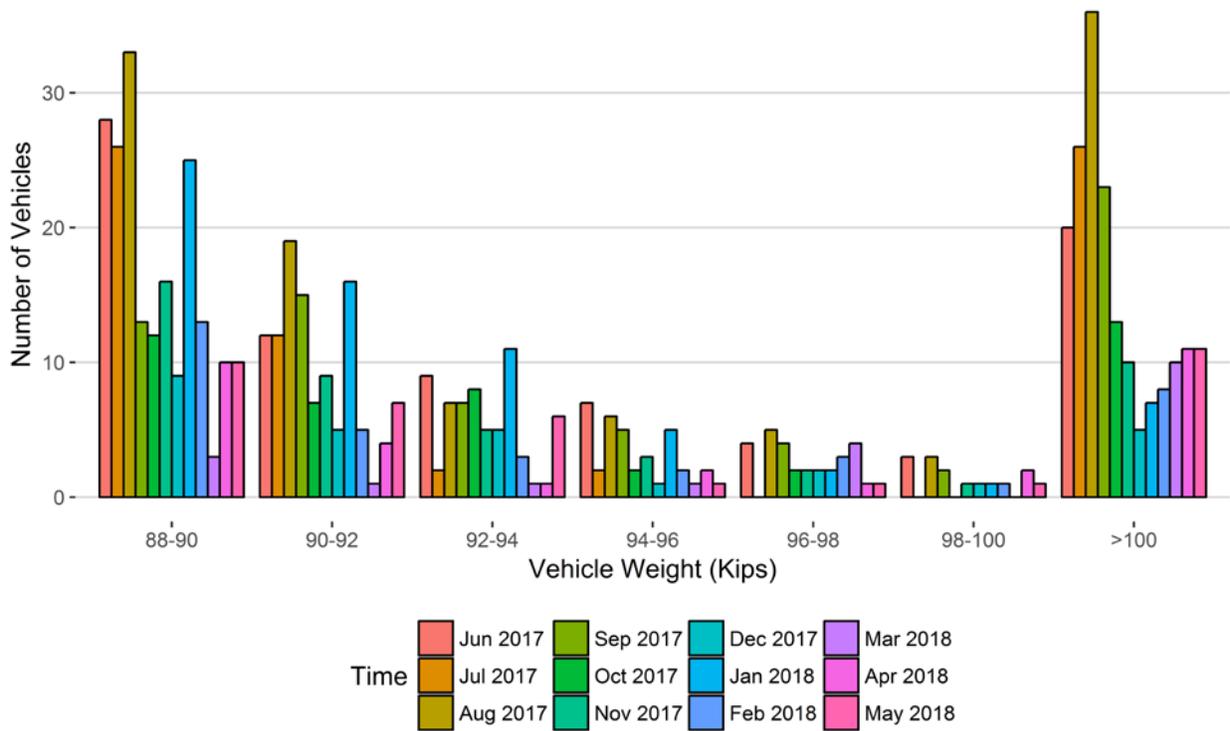
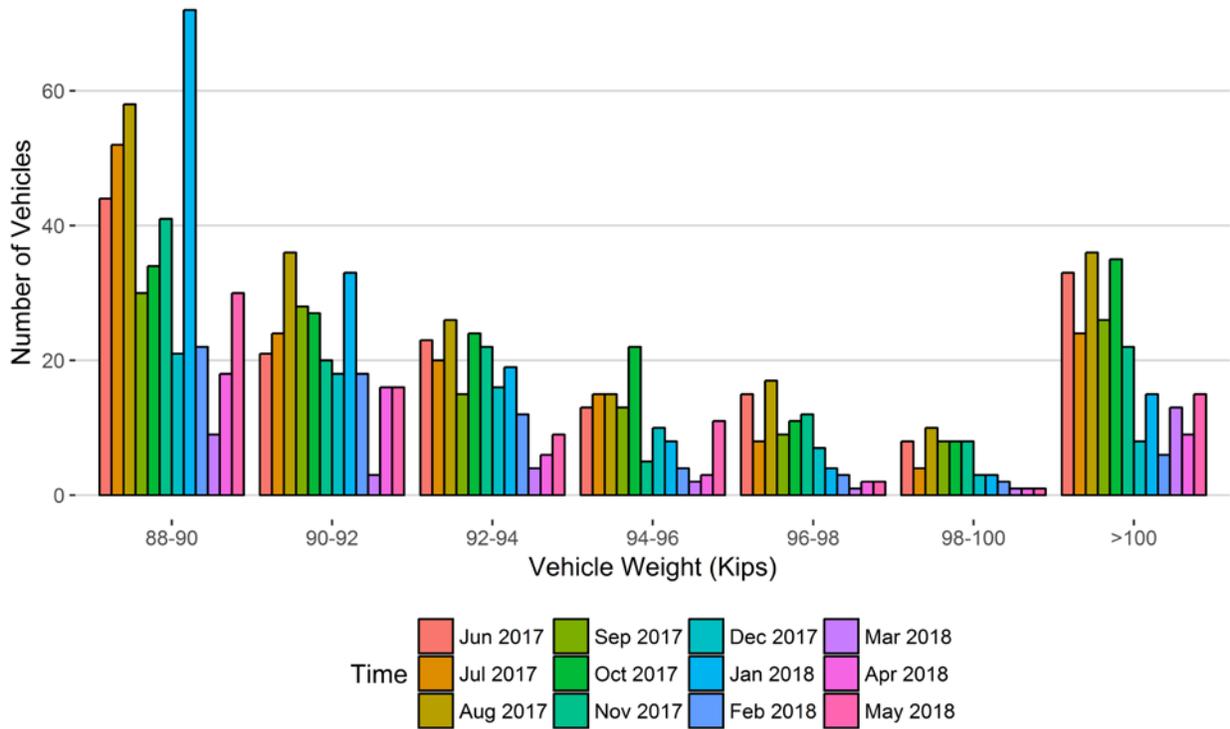


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018
88-90	28	26	33	13	12	16	9	25	13	3	10	10
90-92	12	12	19	15	7	9	5	16	5	1	4	7
92-94	9	2	7	7	8	5	5	11	3	1	1	6
94-96	7	2	6	5	2	3	1	5	2	1	2	1
96-98	4	0	5	4	2	2	2	2	3	4	1	1
98-100	3	0	3	2	0	1	1	1	1	0	2	1
>100	20	26	36	23	13	10	5	7	8	10	11	11
Total	83	68	109	69	44	46	28	67	35	20	31	37

Figure 8 - Histogram of SB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018
88-90	44	52	58	30	34	41	21	72	22	9	18	30
90-92	21	24	36	28	27	20	18	33	18	3	16	16
92-94	23	20	26	15	24	22	16	19	12	4	6	9
94-96	13	15	15	13	22	5	10	8	4	2	3	11
96-98	15	8	17	9	11	12	7	4	3	1	2	2
98-100	8	4	10	8	8	8	3	3	2	1	1	1
>100	33	24	36	26	35	22	8	15	6	13	9	15
Total	157	147	198	129	161	130	83	154	67	33	55	84

Figure 8 - Class 9's and 10's by Direction vs Gross Vehicle Weight

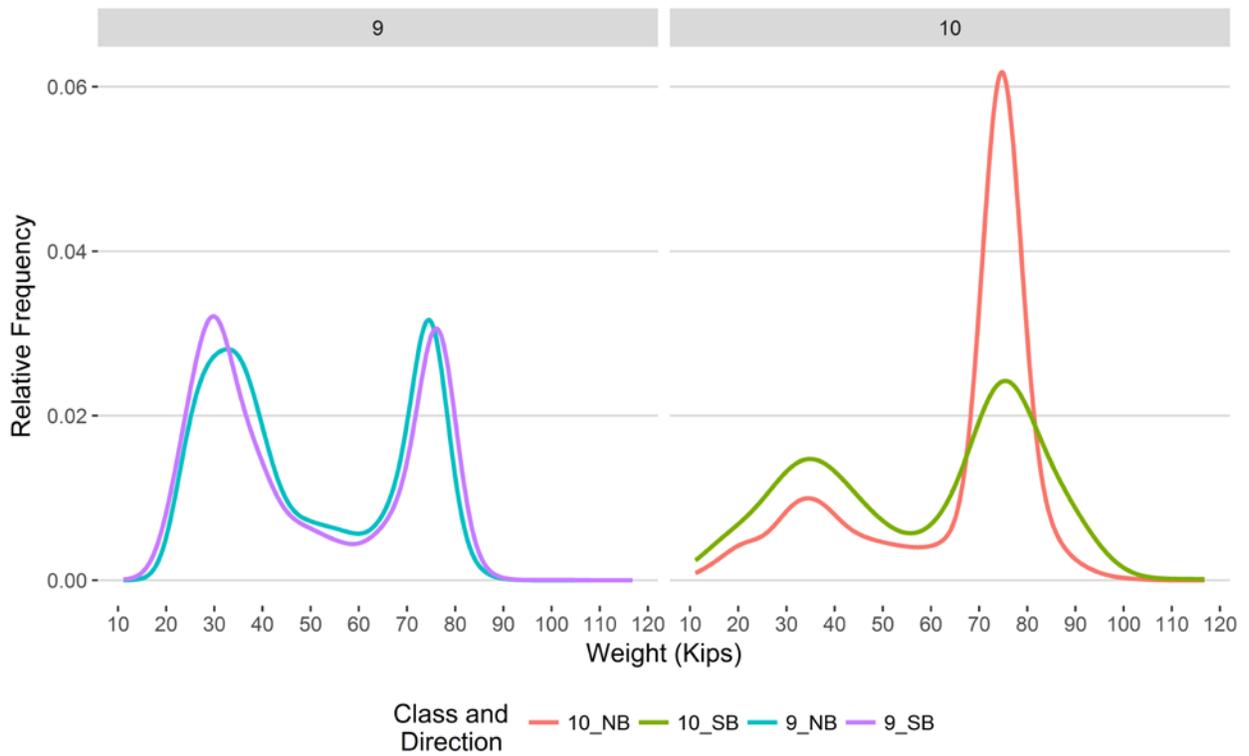


Figure 9 - Freight Percentage by Direction and Class

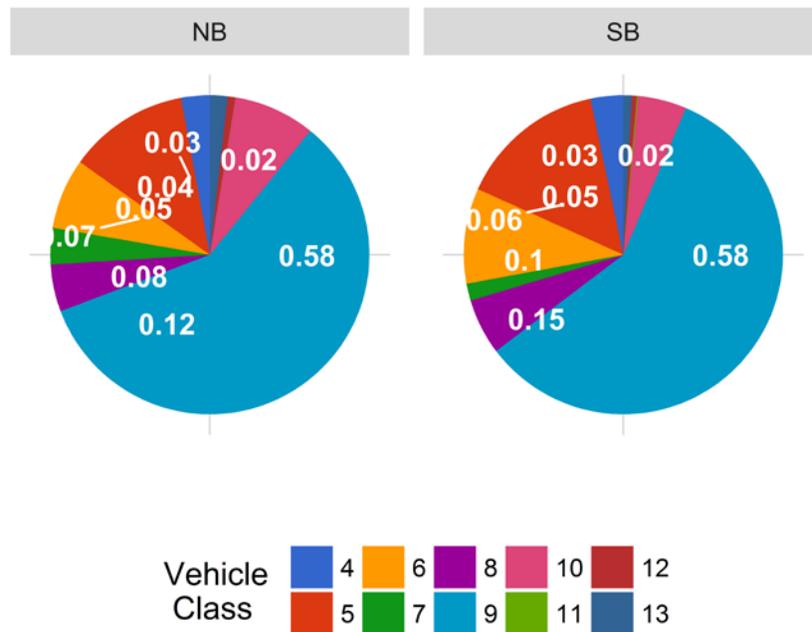


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

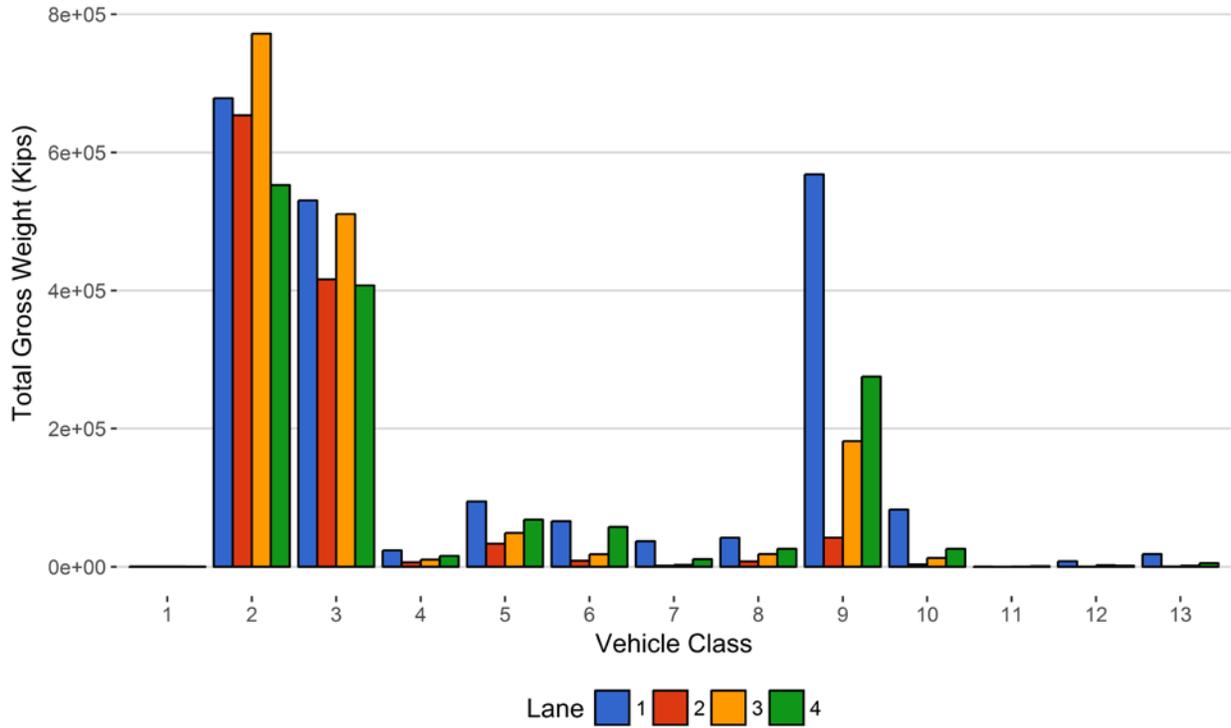


Figure 11 - Total Gross Vehicle Weight I

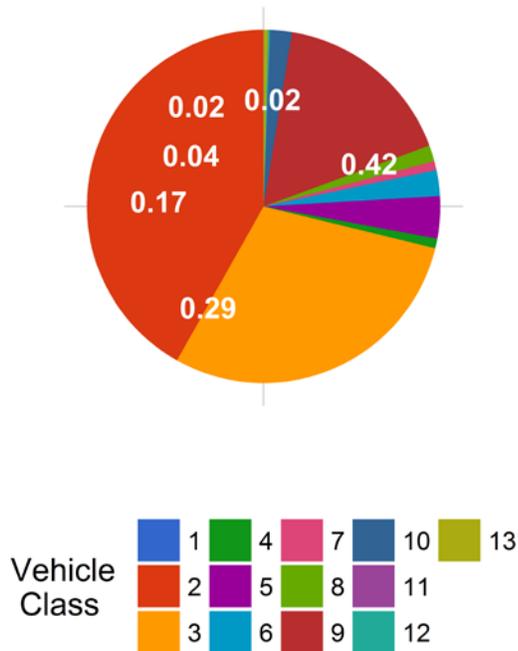


Figure 12 - Total ESALs by Class and Lane

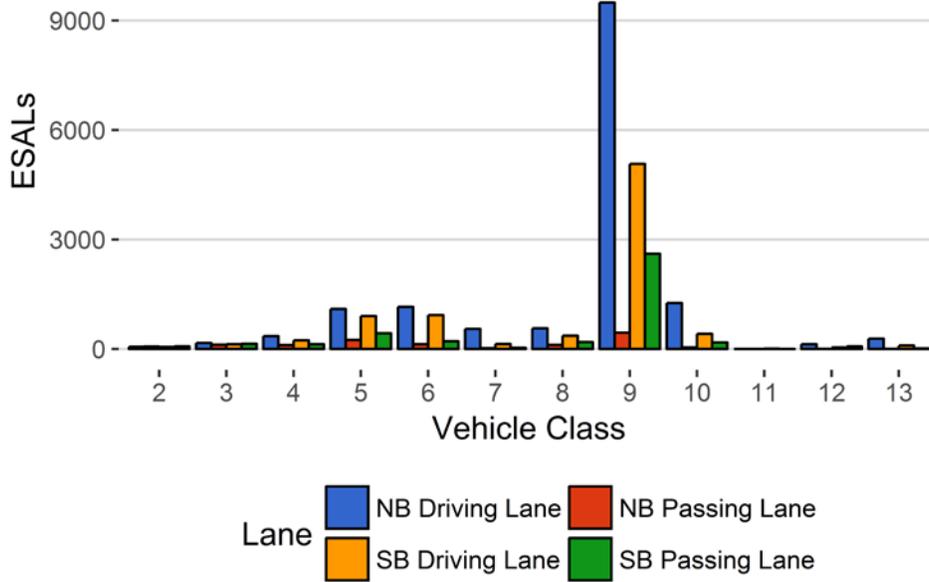
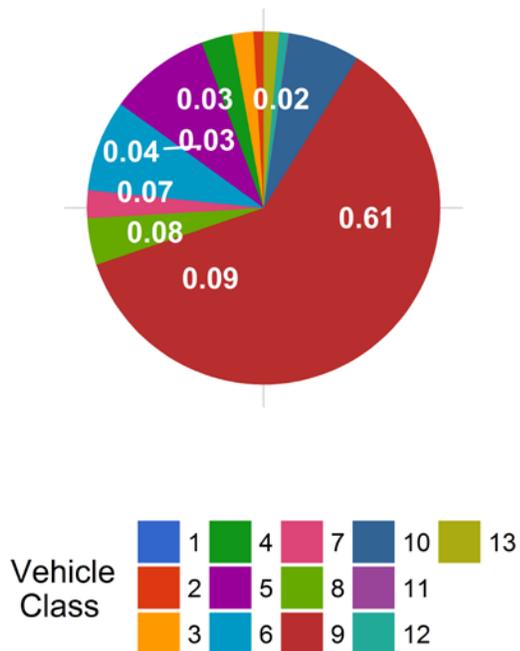


Figure 13 - ESALs by Class



**Table 1 Class 9 Front Axle Weight by Lane**

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
June 2015	NA	NA	10.99	0.00	10.36	0.00	11.58	0.00
July 2015	NA	NA	11.00	0.07	10.31	-0.46	11.59	0.10
August 2015	NA	NA	10.83	-1.50	10.29	-0.71	11.66	0.73
September 2015	NA	NA	10.82	-1.58	10.27	-0.86	11.57	-0.07
October 2015	NA	NA	10.73	-2.36	9.96	-3.82	11.31	-2.30
November 2015	NA	NA	10.35	-5.82	9.90	-4.48	11.38	-1.76
December 2015	NA	NA	10.02	-8.82	10.05	-3.02	11.52	-0.54
January 2016	NA	NA	9.90	-9.96	10.18	-1.79	11.46	-1.04
February 2016	NA	NA	10.08	-8.33	9.80	-5.44	11.28	-2.55
March 2016	NA	NA	10.20	-7.17	9.76	-5.76	10.92	-5.71
April 2016	NA	NA	10.38	-5.54	9.92	-4.27	11.07	-4.40
May 2016	NA	NA	10.71	-2.55	10.01	-3.40	11.23	-3.03
June 2016	NA	NA	10.79	-1.89	10.13	-2.23	11.38	-1.68
July 2016	NA	NA	10.92	-0.67	10.25	-1.02	11.54	-0.30
August 2016	NA	NA	10.92	-0.66	10.26	-1.01	11.53	-0.45
September 2016	10.31	0.00	10.71	-2.56	10.25	-1.07	11.33	-2.18
October 2016	10.25	-0.56	10.56	-3.97	9.78	-5.60	11.06	-4.48
November 2016	10.27	-0.33	10.27	-6.58	9.77	-5.71	11.11	-4.04
January 2017	10.07	-2.27	9.87	-10.18	10.04	-3.10	10.90	-5.84
February 2017	9.88	-4.13	9.88	-10.10	9.71	-6.24	10.67	-7.87
March 2017	9.94	-3.61	10.11	-8.04	9.66	-6.79	10.55	-8.88
April 2017	10.09	-2.11	10.38	-5.55	9.68	-6.54	10.66	-7.92
May 2017	10.25	-0.61	10.53	-4.22	9.90	-4.48	10.92	-5.70
June 2017	10.44	1.25	10.85	-1.33	10.01	-3.39	11.12	-3.99
July 2017	10.45	1.36	10.75	-2.23	9.97	-3.77	11.20	-3.28
August 2017	10.43	1.22	10.66	-3.04	9.79	-5.46	11.04	-4.65

September 2017	10.20	-1.06	10.57	-3.80	9.89	-4.52	10.97	-5.27
October 2017	10.25	-0.56	10.26	-6.68	9.77	-5.71	10.89	-5.98
November 2017	10.38	0.67	10.04	-8.70	9.80	-5.41	10.91	-5.75
December 2017	10.15	-1.49	9.66	-12.14	9.79	-5.54	10.78	-6.93
January 2018	9.98	-3.20	9.67	-12.02	9.85	-4.90	10.94	-5.52
February 2018	9.94	-3.60	9.66	-12.16	9.59	-7.44	10.55	-8.91
March 2018	9.87	-4.29	9.93	-9.63	9.49	-8.42	10.28	-11.21
April 2018	10.02	-2.76	10.24	-6.84	9.58	-7.54	10.36	-10.54
May 2018	10.17	-1.30	10.52	-4.34	9.85	-4.97	10.65	-7.99

**Table 2 Vehicle Classification Data**

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	40	1249	0.1	0	0
2	23899	740884	65.4	0	0
3	10839	336003	29.7	0	0
4	66	2057	0.2	42	1.3
5	588	18243	1.6	171	5.2
6	166	5153	0.5	298	9
7	29	900	0.1	114	3.4
8	107	3329	0.3	86	2.6
9	717	22222	2	2243	67.7
10	67	2070	0.2	247	7.5
11	1	27	0	0	0
12	6	182	0	50	1.5
13	11	352	0	64	1.9
<b>TOTAL</b>	<b>36538</b>	<b>1132671</b>	<b>100</b>	<b>3315</b>	<b>100</b>

**Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10**

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2018-05-31	Thursday	10:40:30	9	SB	4	127.12
2018-05-19	Saturday	13:54:57	10	SB	4	116.83
2018-05-16	Wednesday	13:01:49	10	SB	4	109.02
2018-05-19	Saturday	14:44:08	10	SB	4	106.32
2018-05-09	Wednesday	21:53:35	9	SB	4	102.78
2018-05-24	Thursday	14:17:39	9	SB	3	102.23
2018-05-29	Tuesday	13:24:40	10	SB	4	100.78
2018-05-01	Tuesday	12:56:46	10	NB	1	100.66
2018-05-17	Thursday	16:30:22	9	SB	4	99.94
2018-05-24	Thursday	15:08:51	9	SB	4	99.74

**Table 4 Freight Summary**

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	NB	15	1099	190	17.3	27879	2371	7122
5	NB	8	9221	1548	16.8	116851	11027	27733
6	NB	19	2409	325	13.5	69517	5345	14961
7	NB	11.5	631	0	0	38583	0	15663
8	NB	31	1695	1046	61.7	26068	23857	2975
9	NB	33	12237	3361	27.5	516967	93459	112029
10	NB	33.5	1338	150	11.2	82373	3856	21287
11	NB	36.5	5	5	100	0	139	0
12	NB	36.5	125	2	1.6	8118	47	1814
13	NB	31.5	259	0	0	18780	0	5311
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>29019</b>	<b>6627</b>	<b>****</b>	<b>905137</b>	<b>****</b>	<b>208896</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	SB	15	891	117	13.1	24489	1478	6440
5	SB	8	8427	1367	16.2	107540	9802	25530
6	SB	19	2576	287	11.1	71133	4704	13821
7	SB	11.5	240	0	0	13589	0	5414
8	SB	31	1525	839	55	26132	18400	2433
9	SB	33	9260	3253	35.1	367384	89967	84576
10	SB	33.5	664	134	20.2	35339	3452	8792
11	SB	36.5	21	3	14.3	948	72	145
12	SB	36.5	51	3	5.9	3774	61	1011
13	SB	31.5	82	0	0	6794	0	2106
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>23737</b>	<b>6003</b>	<b>****</b>	<b>657122</b>	<b>****</b>	<b>150269</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>52756</b>	<b>12630</b>	<b>420</b>	<b>1562259</b>	<b>268037</b>	<b>359165</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	306	378	460	244	1387	0
2	678662	653831	772096	552848	2657438	41.8
3	530648	416167	510731	407372	1864918	29.4
4	23791	6459	10260	15707	56217	0.9
5	94564	33314	48996	68346	245220	3.9
6	66040	8822	18217	57620	150699	2.4
7	37074	1509	2619	10970	52172	0.8
8	42086	7840	18445	26088	94458	1.5
9	568310	42115	181964	275387	1067776	16.8
10	82853	3375	12690	26102	125020	2
11	139	0	79	940	1158	0
12	7938	227	2296	1539	12000	0.2
13	18409	372	1431	5364	25574	0.4
<b>TOTAL</b>	<b>2150820</b>	<b>1174409</b>	<b>1580283</b>	<b>1448526</b>	<b>6354039</b>	<b>100</b>
<b>GVW/LANE</b>	<b>33.85</b>	<b>18.48</b>	<b>24.87</b>	<b>22.8</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	8e-04
2	66	70	75	58	269	0.93	8e-04
3	164	119	142	135	560	1.94	0.0035
4	350	106	133	237	826	2.85	0.83
5	1100	248	433	904	2685	9.28	0.3
6	1155	131	211	928	2426	8.39	0.98
7	553	21	32	135	741	2.56	1.7
8	568	113	192	362	1235	4.27	0.77
9	9492	445	2608	5070	17615	60.89	1.64
10	1258	44	180	418	1900	6.57	1.9
11	0	0	1	13	14	0.05	1.07
12	130	5	74	43	252	0.87	2.74
13	286	5	18	98	407	1.41	2.34
<b>TOTAL</b>	<b>15121</b>	<b>1307</b>	<b>4100</b>	<b>8402</b>	<b>28930</b>	<b>100</b>	<b>14</b>
<b>ESALS/LANE</b>	<b>52.3</b>	<b>4.5</b>	<b>14.2</b>	<b>29</b>	<b>100</b>	<b>--</b>	<b>--</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Jun 2017	1080417	36014	1846	1025050	94.9	55366.6	5.1	73.5	26.5
Jul 2017	1068790	34477	1568	1020187	95.5	48603	4.5	73.1	26.9
Aug 2017	1061457	34240	1731	1007809	94.9	53647.7	5.1	72.3	27.7
Sep 2017	1024417	34147	1676	974137	95.1	50280.4	4.9	73.5	26.5
Oct 2017	1066794	34413	1775	1011755	94.8	55038.8	5.2	73.9	26.1
Nov 2017	953086	31770	1573	905896	95	47190.4	5	74	26
Dec 2017	916857	29576	1233	878647	95.8	38210.2	4.2	71.1	28.9
Jan 2018	872295	28138	1250	833551	95.6	38744	4.4	68.9	31.1
Feb 2018	821000	29321	1278	785225	95.6	35774.6	4.4	71.6	28.4
Mar 2018	973481	31403	1334	932126	95.8	41355	4.2	73.2	26.8
Apr 2018	951927	31731	1397	910012	95.6	41915.4	4.4	72.3	27.7
May 2018	1132671	36538	1759	1078136	95.2	54534.7	4.8	72.4	27.6
<b>TOTAL</b>	<b>11923192</b>	<b>--</b>	<b>--</b>	<b>11362531</b>	<b>--</b>	<b>560661</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>AVERAGE</b>	<b>993599</b>	<b>32647</b>	<b>1535</b>	<b>946878</b>	<b>95</b>	<b>46722</b>	<b>5</b>	<b>72</b>	<b>28</b>

## ESALS

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Jun 2017	17094	1587	4226	12090	34997	83	17	1.6
Jul 2017	14862	1367	3640	10342	30211	83	17	0.9
Aug 2017	16521	1443	3865	10965	32795	84	16	1.7
Sep 2017	13486	1270	3745	10395	28896	83	17	1.2
Oct 2017	14796	1056	3830	10197	29879	84	16	0.7
Nov 2017	13898	810	3662	9572	27942	84	16	0.8
Dec 2017	9122	748	3027	7048	19946	81	19	1.6
Jan 2018	8928	843	3536	7448	20755	79	21	2.9
Feb 2018	9225	701	2769	5385	18081	81	19	1.9
Mar 2018	10255	816	2598	5993	19663	83	17	0.2
Apr 2018	10719	1003	2961	5887	20570	81	19	0.5
May 2018	15293	1316	4108	8413	29131	81	19	0.4
<b>TOTAL</b>	<b>154202</b>	<b>12960</b>	<b>41969</b>	<b>103735</b>	<b>312866</b>	--	--	--
<b>AVERAGE</b>	<b>12850</b>	<b>1080</b>	<b>3497</b>	<b>8645</b>	<b>26072</b>	<b>82</b>	<b>18</b>	<b>1</b>

## Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Jun 2017	1535621	819939	1217052	1168290	4740903
Jul 2017	1484466	720163	1090816	1068086	4363532
Aug 2017	1730276	868402	1235504	1263310	5097491
Sep 2017	1713918	884564	1241636	1225668	5065786
Oct 2017	2161183	1175039	1581054	1449968	6367245
Nov 2017	2228949	1119563	1574829	1626819	6550161
Dec 2017	2126470	1091575	1499708	1469135	6186888
Jan 2018	2166374	1116411	1494313	1517190	6294287
Feb 2018	1995793	1061893	1411603	1508519	5977808
Mar 2018	2111653	1089943	1502804	1588535	6292934
Apr 2018	1895059	933642	1366755	1465744	5661201
May 2018	1643079	793869	1249765	1255341	4942054
<b>TOTAL</b>	<b>22792842</b>	<b>11675003</b>	<b>16465838</b>	<b>16606606</b>	<b>67540290</b>
<b>AVERAGE</b>	<b>1899403</b>	<b>972917</b>	<b>1372153</b>	<b>1383884</b>	<b>5628358</b>

## Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Jun 2017	5870	0.6	10.7	241	64
Jul 2017	5270	0.5	11	215	54
Aug 2017	5377	0.5	10.1	308	85
Sep 2017	4168	0.4	8.3	199	60
Oct 2017	3836	0.4	7	206	56
Nov 2017	4271	0.5	9.1	177	42
Dec 2017	2385	0.3	6.3	111	17
Jan 2018	2776	0.3	7.1	224	28
Feb 2018	1765	0.2	4.9	102	17
Mar 2018	1311	0.1	3.2	53	24
Apr 2018	1746	0.2	4.1	86	23
May 2018	3351	0.3	6.3	121	28
<b>TOTAL</b>	<b>42126</b>	<b>--</b>	<b>--</b>	<b>2043</b>	<b>498</b>
<b>AVERAGE</b>	<b>3510.5</b>	<b>0.4</b>	<b>7.3</b>	<b>170.2</b>	<b>41.5</b>

## Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Jun 2017	233945	177367	411312	56.9	43.1
Jul 2017	194424	153209	347633	55.9	44.1
Aug 2017	217682	162484	380166	57.3	42.7
Sep 2017	189502	157281	346783	54.6	45.4
Oct 2017	213041	158477	371518	57.3	42.7
Nov 2017	183851	144619	328470	56	44
Dec 2017	126740	115689	242429	52.3	47.7
Jan 2018	122668	121856	244524	50.2	49.8
Feb 2018	125964	95803	221767	56.8	43.2
Mar 2018	143515	109156	252670	56.8	43.2
Apr 2018	150002	107961	257962	58.1	41.9
May 2018	208896	150269	359165	58.2	41.8
<b>TOTAL</b>	<b>2110230</b>	<b>1654170</b>	<b>3764400</b>	<b>--</b>	<b>--</b>
<b>AVERAGE</b>	<b>175852.5</b>	<b>137847.5</b>	<b>313700</b>	<b>55.9</b>	<b>44.1</b>