

APRIL 2019



**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 April 2019. 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>. 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: 1019560 | Passenger Vehicles: 973238 | Heavy Commercial Vehicles: 46322

Monthly Average Daily Traffic (MADT): 33985 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1544

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 Thursdays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays (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 03 PM 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 03 PM 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 46322 HCVs, 1061 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.1% of total monthly volume, and 2.4% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Tuesdays, 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 5 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 58.9% 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 July.

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 ,20 NB vehicles exceeded 88,000 pounds (18 vehicles were Class 13's; 2 vehicles were Class 10's). Of vehicles traveling SB,

20 NB vehicles exceeded 88,000 pounds (12 vehicles were Class 13's; 5 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from April 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in April 2019. 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 257419 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (50.4%) than SB (49.6%). 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 1019560 vehicles with a combined GVW of 5313211 kips (1 kip = 1,000 pounds = 0.5 tons) in April 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 19322 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.6% of all ESALs were recorded SB while 49.4% was observed NB. In particular, 61% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 16% 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).

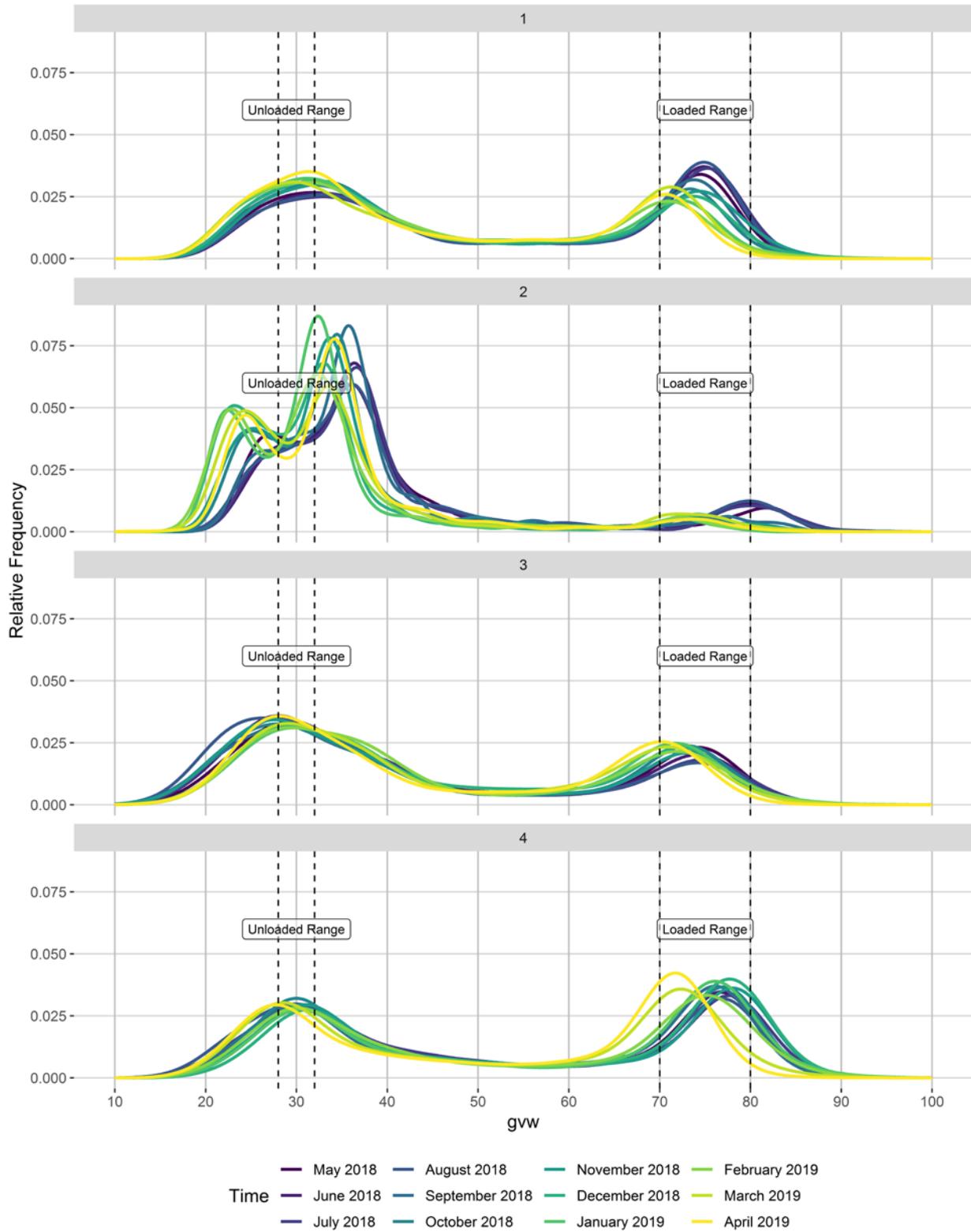
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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.

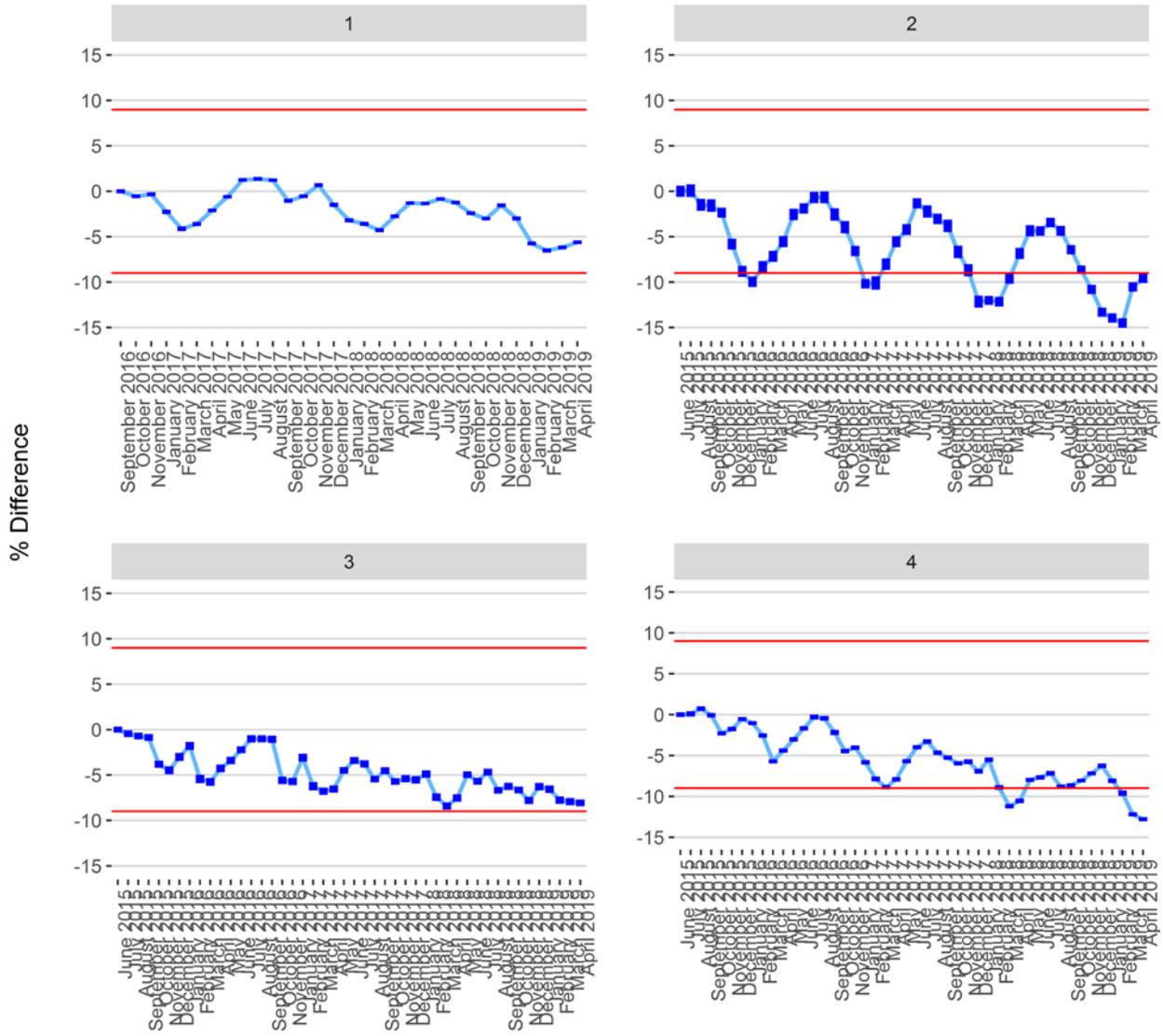
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Figure 1 - Monthly Class 9 GVW Histogram



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

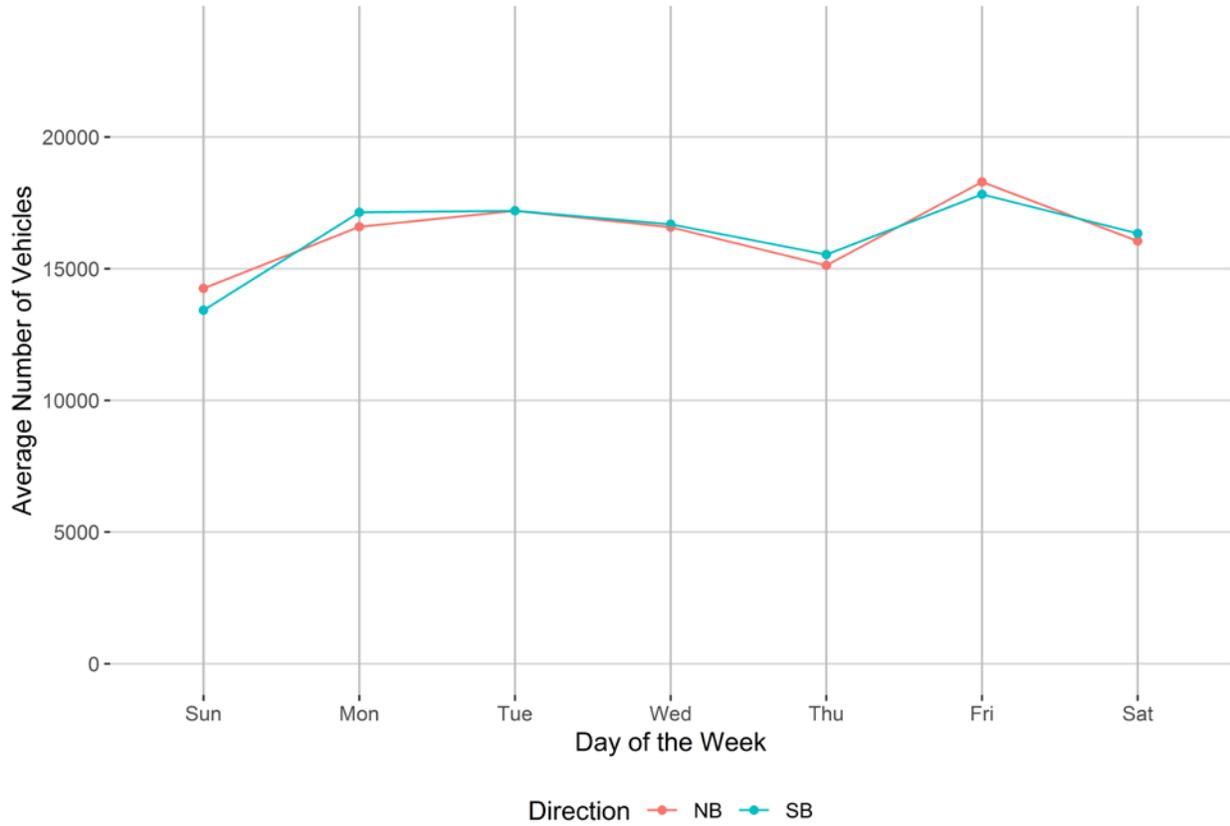


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

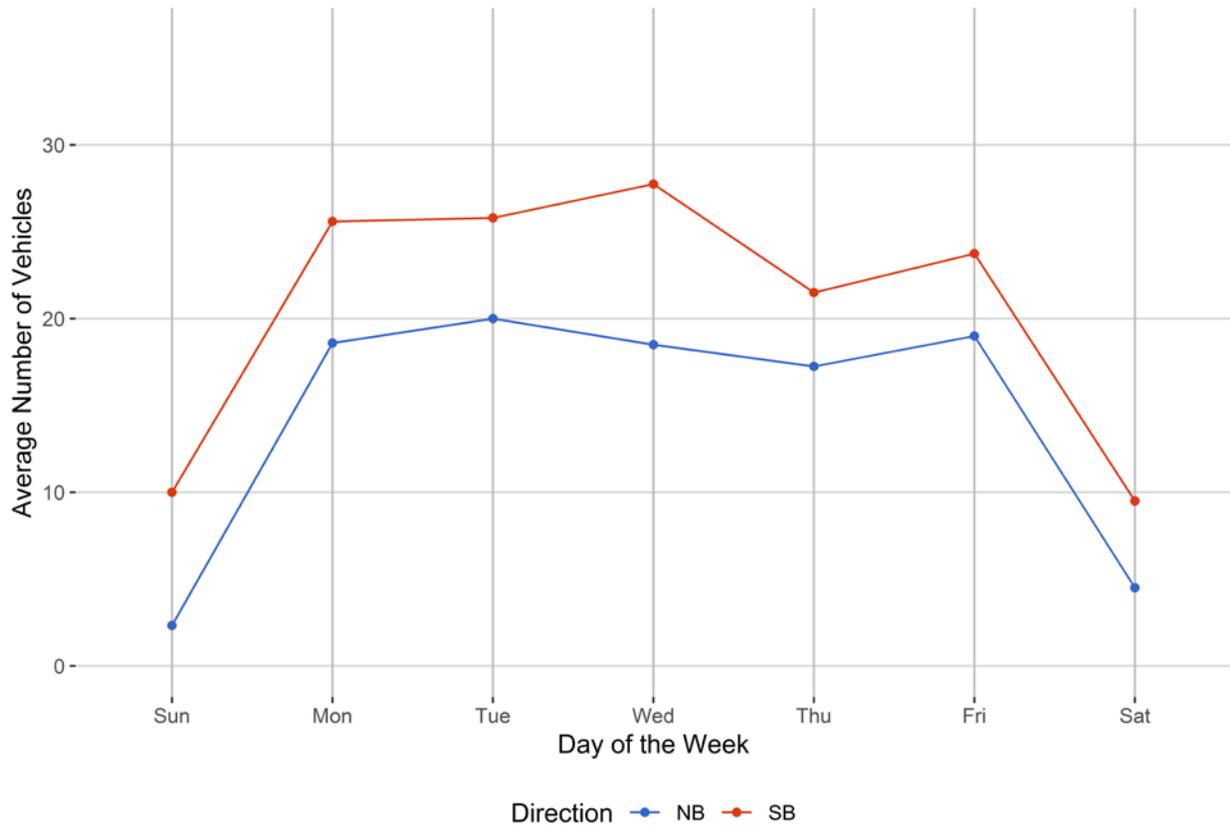


Figure 4 - Passenger Vehicles vs. Hour of the Day

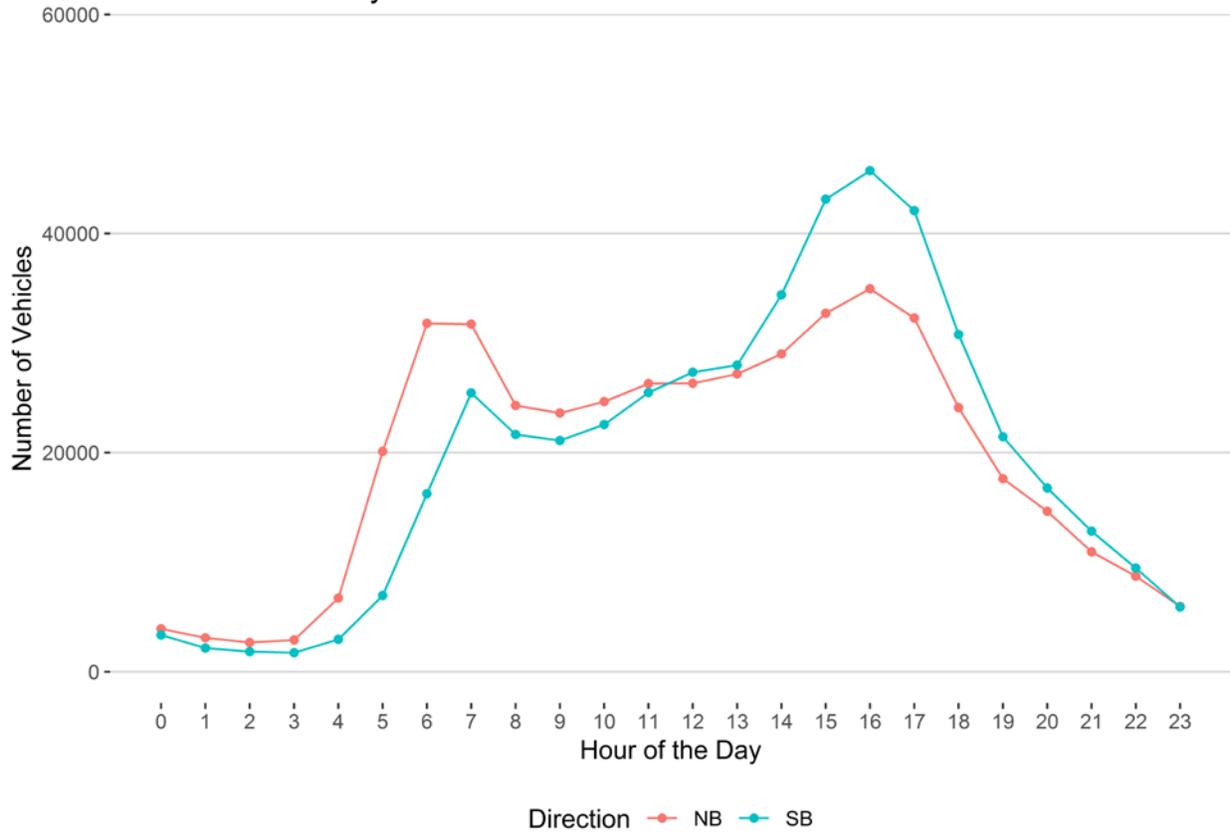


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

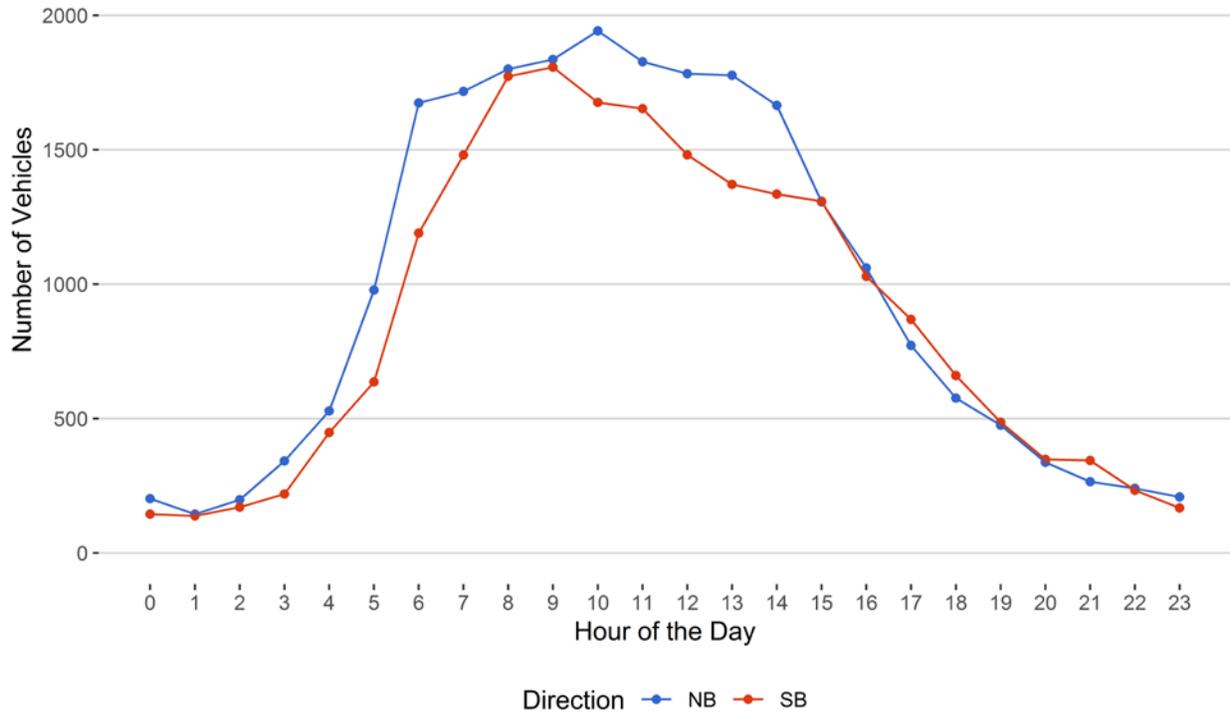


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

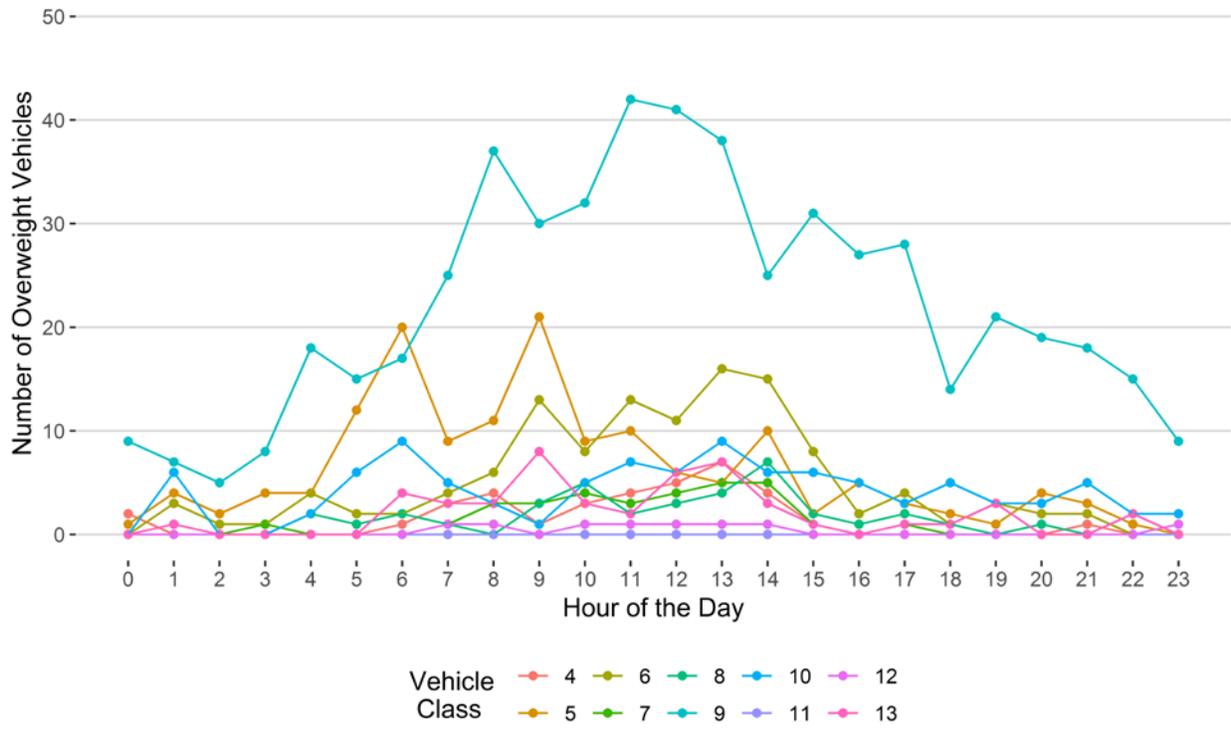


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

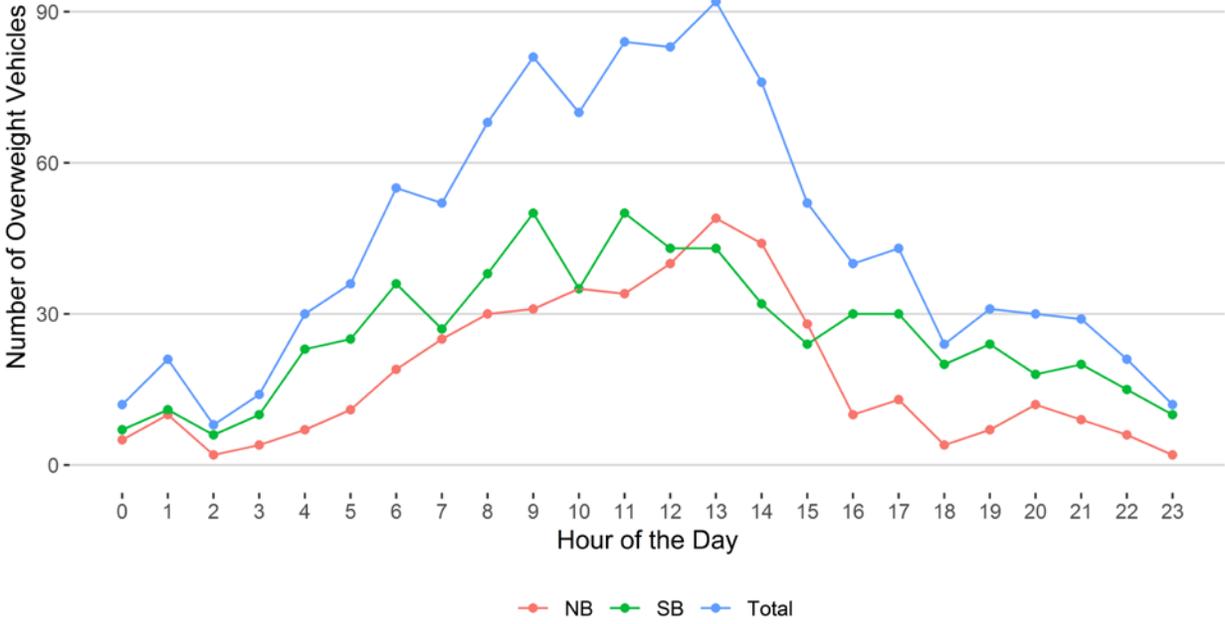
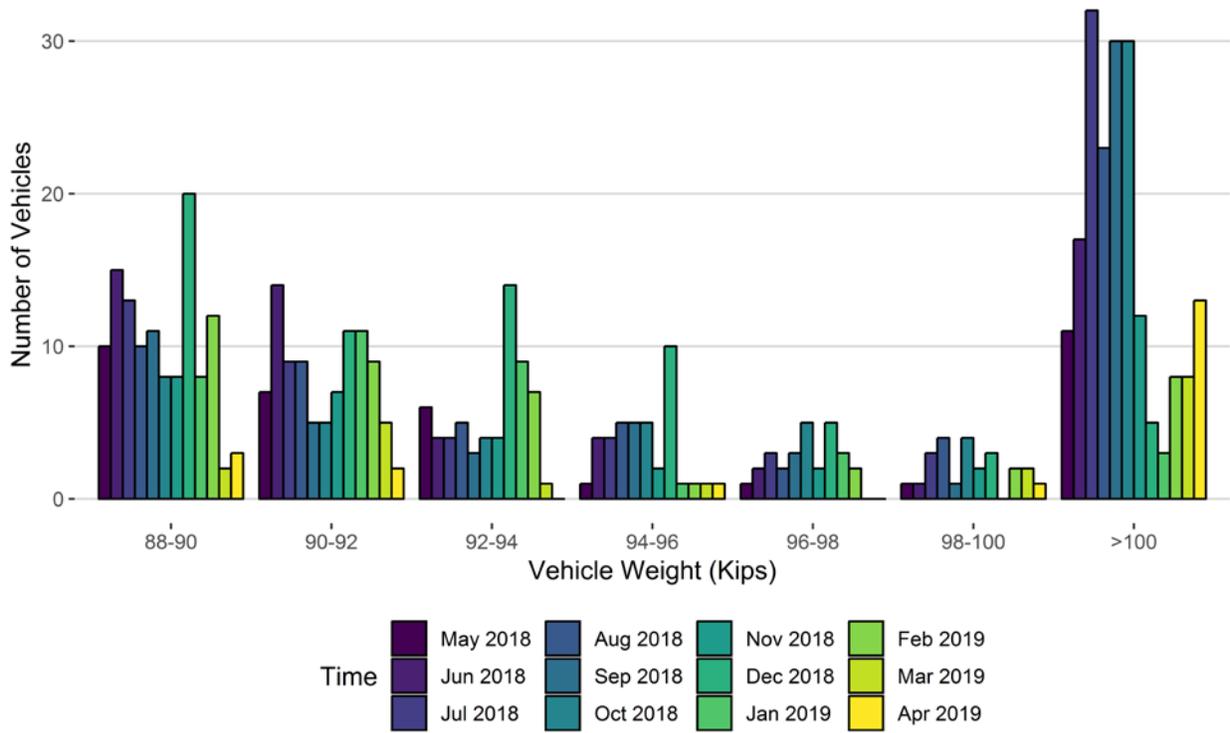
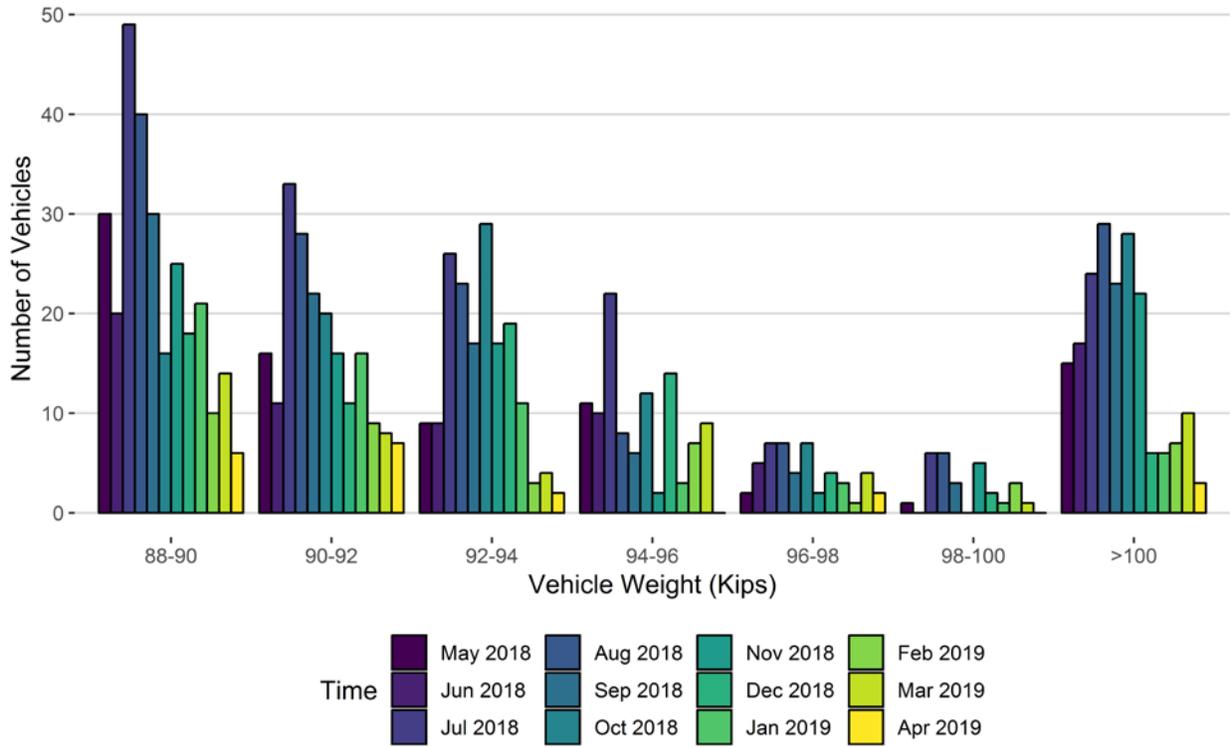


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
88-90	10	15	13	10	11	8	8	20	8	12	2	3
90-92	7	14	9	9	5	5	7	11	11	9	5	2
92-94	6	4	4	5	3	4	4	14	9	7	1	0
94-96	1	4	4	5	5	5	2	10	1	1	1	1
96-98	1	2	3	2	3	5	2	5	3	2	0	0
98-100	1	1	3	4	1	4	2	3	0	2	2	1
>100	11	17	32	23	30	30	12	5	3	8	8	13
<b>Total</b>	<b>37</b>	<b>57</b>	<b>68</b>	<b>58</b>	<b>58</b>	<b>61</b>	<b>37</b>	<b>68</b>	<b>35</b>	<b>41</b>	<b>19</b>	<b>20</b>

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



Vehicle Weights (Kips)	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
88-90	30	20	49	40	30	16	25	18	21	10	14	6
90-92	16	11	33	28	22	20	16	11	16	9	8	7
92-94	9	9	26	23	17	29	17	19	11	3	4	2
94-96	11	10	22	8	6	12	2	14	3	7	9	0
96-98	2	5	7	7	4	7	2	4	3	1	4	2
98-100	1	0	6	6	3	0	5	2	1	3	1	0
>100	15	17	24	29	23	28	22	6	6	7	10	3
Total	84	72	167	141	105	112	89	74	61	40	50	20

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

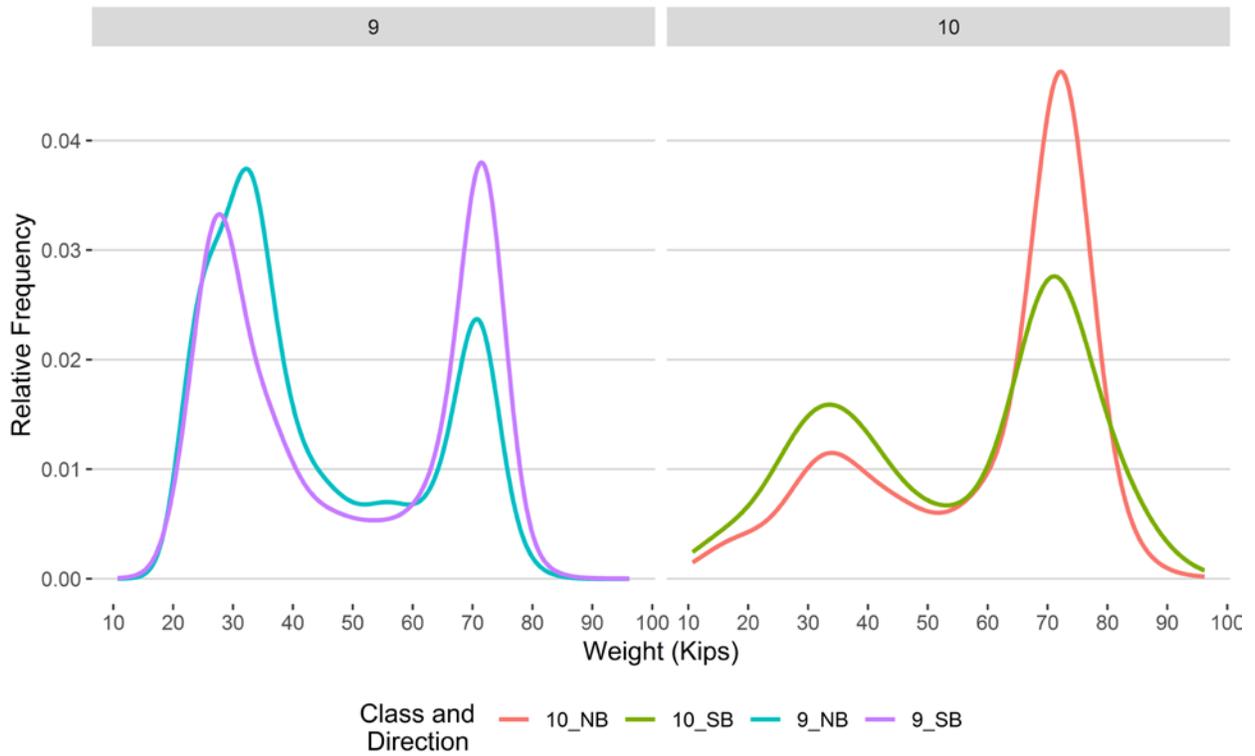


Figure 9 - Freight Percentage by Direction and Class

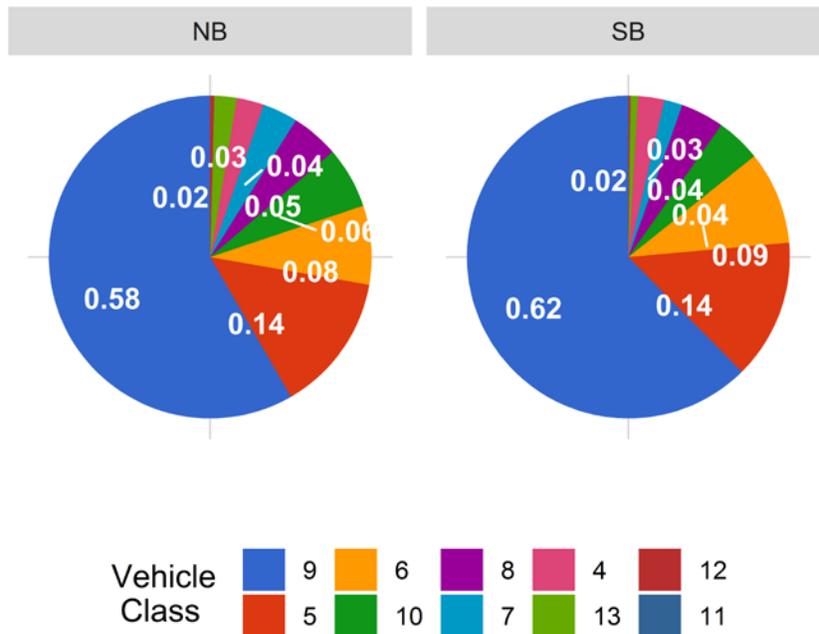


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

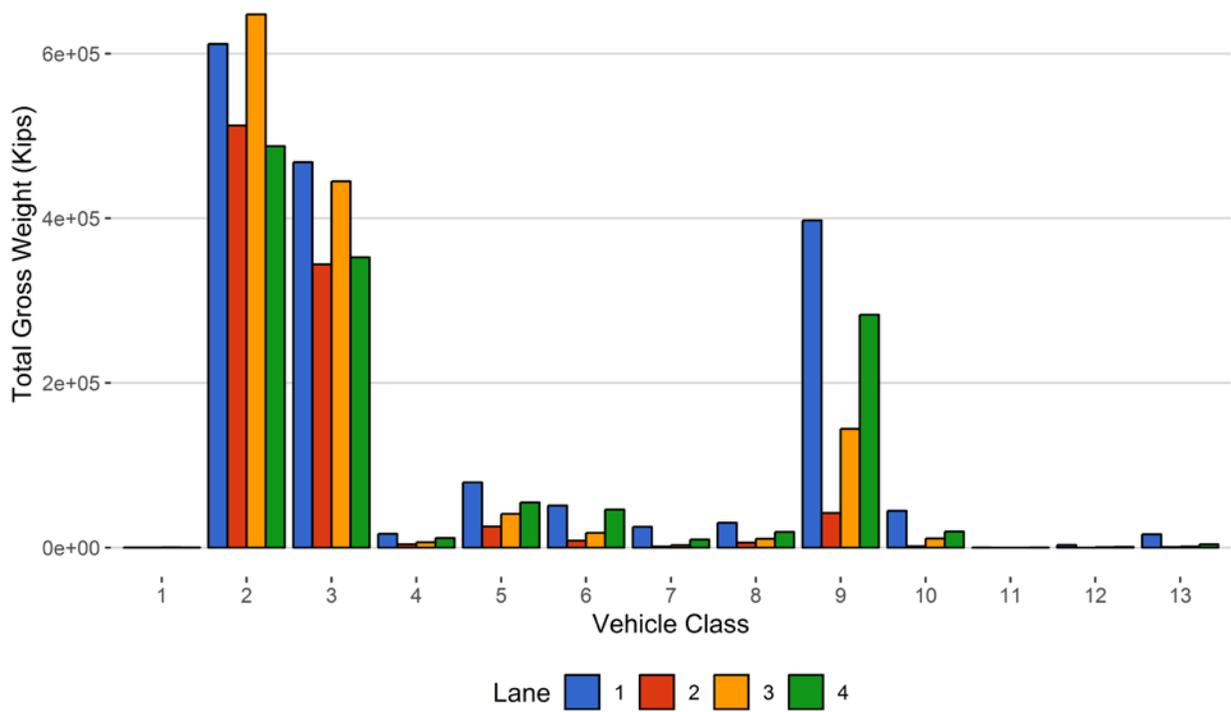


Figure 11 - Total Gross Vehicle Weight t

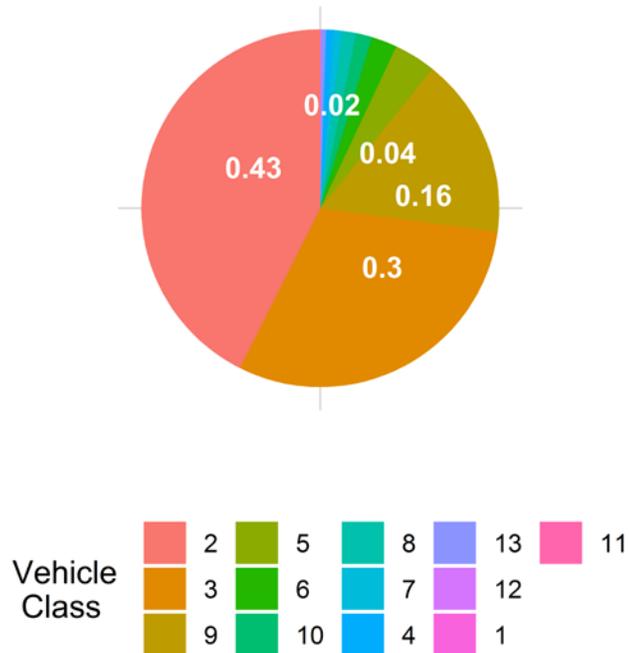


Figure 12 - Total ESALs by Class and Lane

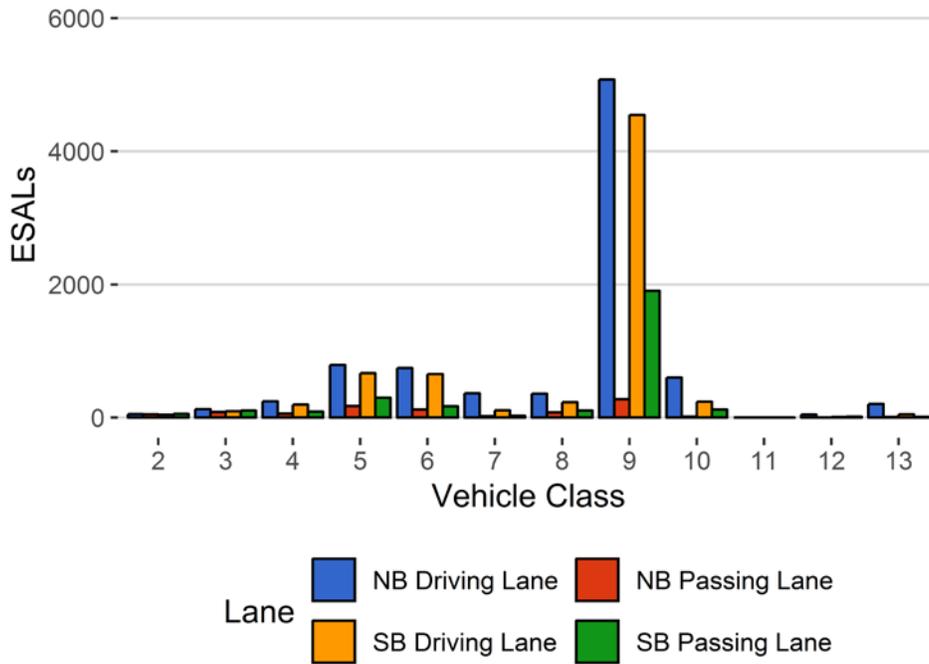
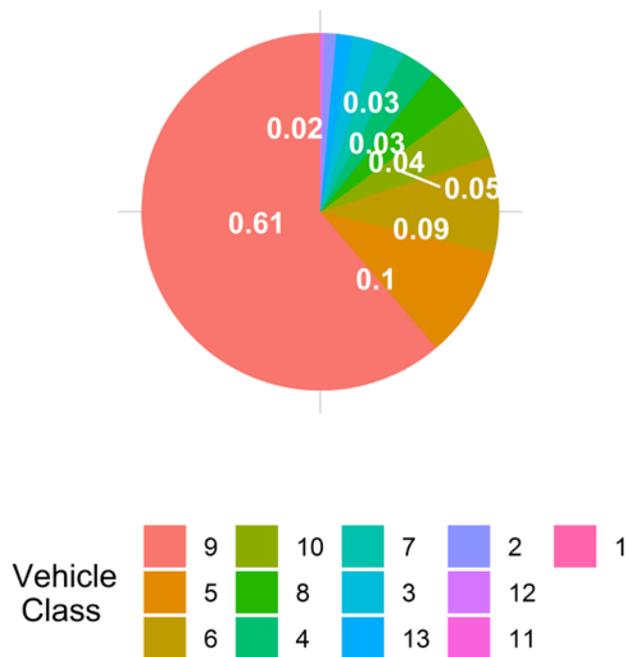


Figure 13 - ESALs by Class



**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
June 2018	10.17	-1.35	10.51	-4.37	9.77	-5.69	10.69	-7.67
July 2018	10.22	-0.84	10.61	-3.45	9.88	-4.68	10.75	-7.17
August 2018	10.18	-1.25	10.51	-4.36	9.67	-6.69	10.56	-8.80
September 2018	10.06	-2.42	10.29	-6.44	9.71	-6.26	10.58	-8.65
October 2018	10.00	-3.01	10.04	-8.65	9.67	-6.65	10.64	-8.07
November 2018	10.15	-1.55	9.80	-10.82	9.55	-7.80	10.75	-7.18
December 2018	10.00	-3.01	9.53	-13.32	9.71	-6.29	10.85	-6.26
January 2019	9.72	-5.74	9.46	-13.96	9.68	-6.56	10.64	-8.10
February 2019	9.64	-6.52	9.40	-14.50	9.56	-7.77	10.47	-9.61
March 2019	9.67	-6.19	9.84	-10.53	9.54	-7.94	10.17	-12.20
April 2019	9.73	-5.61	9.94	-9.59	9.52	-8.08	10.10	-12.79

**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	21	640	0.1	0	0
2	22025	660761	64.8	0	0
3	10395	311837	30.6	0	0
4	48	1427	0.1	37	3.5
5	534	16007	1.6	149	14
6	150	4497	0.4	121	11.4
7	24	731	0.1	31	2.9
8	81	2439	0.2	37	3.5
9	648	19440	1.9	531	50
10	46	1379	0.1	99	9.3
11	0	4	0	0	0
12	3	82	0	8	0.8
13	11	318	0	48	4.5
<b>TOTAL</b>	<b>33985</b>	<b>1019560</b>	<b>100</b>	<b>1061</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>
2019-04-11	Thursday	18:21:11	10	SB	4	98.96
2019-04-18	Thursday	16:18:19	9	SB	4	96.21
2019-04-02	Tuesday	20:41:42	10	NB	1	95.98
2019-04-08	Monday	17:30:28	9	SB	4	93.74
2019-04-25	Thursday	01:11:41	10	SB	4	93.33
2019-04-04	Thursday	22:06:27	10	SB	4	91.26
2019-04-11	Thursday	20:18:50	9	SB	4	91.22
2019-04-11	Thursday	14:08:15	10	SB	4	91.02
2019-04-16	Tuesday	15:38:37	10	SB	3	90.6
2019-04-16	Tuesday	12:17:02	10	SB	4	90.07

**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	743	129	17.4	19023	1586	4907
5	NB	8	8039	1936	24.1	91017	13690	21096
6	NB	19	2032	345	17	53948	5497	10948
7	NB	11.5	469	0	0	26501	0	10554
8	NB	31	1272	874	68.7	15716	20364	1689
9	NB	33	10034	3842	38.3	333535	105828	64599
10	NB	33.5	772	107	13.9	43530	2757	10626
11	NB	36.5	1	1	100	0	19	0
12	NB	36.5	52	2	3.8	3038	54	606
13	NB	31.5	238	0	0	16901	0	4702
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>23652</b>	<b>7236</b>	<b>****</b>	<b>603210</b>	<b>****</b>	<b>129728</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	631	95	15.1	16820	1154	4390
5	SB	8	7379	1818	24.6	82961	12756	19237
6	SB	19	2299	373	16.2	57854	5973	10630
7	SB	11.5	235	0	0	12569	0	4933
8	SB	31	1077	698	64.8	14039	15651	1145
9	SB	33	8690	3038	35	344728	82391	79106
10	SB	33.5	556	119	21.4	27617	3054	6489
11	SB	36.5	3	1	33.3	114	32	21
12	SB	36.5	27	8	29.6	1231	140	269
13	SB	31.5	68	0	0	5086	0	1472
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>20965</b>	<b>6150</b>	<b>****</b>	<b>563020</b>	<b>****</b>	<b>127691</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>44617</b>	<b>13386</b>	<b>523</b>	<b>1166230</b>	<b>270944</b>	<b>257419</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	149	177	240	113	679	0
2	611634	512617	647757	487656	2259664	42.6
3	468117	343934	445039	352553	1609643	30.3
4	16733	3877	6365	11608	38583	0.7
5	79078	25629	40814	54903	200424	3.8
6	51122	8323	17750	46077	123272	2.3
7	25187	1313	2848	9721	39070	0.7
8	30037	6044	10758	18932	65770	1.2
9	397414	41949	144171	282947	866481	16.3
10	44601	1686	11037	19635	76958	1.5
11	19	0	0	146	165	0
12	3092	0	578	794	4463	0.1
13	16172	730	1269	3817	21987	0.4
<b>TOTAL</b>	<b>1743354</b>	<b>946278</b>	<b>1328626</b>	<b>1288902</b>	<b>5307161</b>	<b>100</b>
<b>GVW/LANE</b>	<b>32.85</b>	<b>17.83</b>	<b>25.03</b>	<b>24.29</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	0.0016
2	54	50	57	45	206	1.07	7e-04
3	129	84	107	95	415	2.16	0.0028
4	246	59	89	198	591	3.07	0.86
5	790	174	300	667	1931	10.02	0.25
6	746	122	170	653	1692	8.78	0.78
7	366	20	28	110	524	2.72	1.49
8	360	80	108	231	779	4.04	0.67
9	5078	277	1903	4547	11805	61.25	1.26
10	601	17	122	240	979	5.08	1.48
11	0	0	0	2	2	0.01	1
12	47	0	14	8	70	0.36	1.67
13	206	10	14	50	280	1.45	1.8
<b>TOTAL</b>	<b>8622</b>	<b>893</b>	<b>2913</b>	<b>6845</b>	<b>19274</b>	<b>100</b>	<b>11</b>
<b>ESALS/LANE</b>	<b>44.7</b>	<b>4.6</b>	<b>15.1</b>	<b>35.5</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>
May 2018	1132671	36538	1759	1078136	95.2	54534.7	4.8	72.4	27.6
Jun 2018	1115053	37168	1796	1061160	95.2	53892.6	4.8	72	28
Jul 2018	1124798	36284	1799	1069022	95	55776	5	73.1	26.9
Aug 2018	1137438	36692	1873	1079387	94.9	58051	5.1	72.5	27.5
Sep 2018	1068437	35615	1806	1014244	94.9	54192.6	5.1	73.1	26.9
Oct 2018	1143679	36893	1913	1084361	94.8	59317.7	5.2	73.6	26.4
Nov 2018	980508	32684	1594	932691	95.1	47816.9	4.9	71.4	28.6
Dec 2018	921951	30732	1217	884226	95.9	37725.4	4.1	70.5	29.5
Jan 2019	912085	29422	1247	873418	95.8	38667.4	4.2	72	28
Feb 2019	795365	28406	1230	760938	95.7	34426.8	4.3	67	33
Mar 2019	973223	31394	1336	931796	95.7	41427.3	4.3	71.7	28.3
Apr 2019	1019560	33985	1544	973238	95.5	46322.3	4.5	72.1	27.9
<b>TOTAL</b>	<b>12324768</b>	<b>-</b>	<b>-</b>	<b>11742617</b>	<b>-</b>	<b>582151</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERA GE</b>	<b>1027064</b>	<b>33818</b>	<b>1593</b>	<b>978551</b>	<b>95</b>	<b>48513</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>
May 2018	15293	1316	4108	8413	29131	81	19	0.4
Jun 2018	16225	1468	3956	8512	30161	82	18	1
Jul 2018	16409	1565	3643	9784	31401	83	17	1.3
Aug 2018	16699	1569	3852	9882	32003	83	17	0.8
Sep 2018	13504	1314	3680	9789	28287	82	18	0.9
Oct 2018	14258	1193	3930	11360	30741	83	17	1
Nov 2018	11820	925	3283	9678	25705	84	16	0.7
Dec 2018	9672	743	2777	6999	20190	83	17	2.8
Jan 2019	8504	642	2895	6695	18736	81	19	1.3
Feb 2019	7396	843	2850	4522	15611	76	24	1.9
Mar 2019	8913	920	2731	6292	18856	81	19	0.5
Apr 2019	8652	896	2921	6854	19322	80	20	0.1
<b>TOTAL</b>	<b>147346</b>	<b>13394</b>	<b>40625</b>	<b>98780</b>	<b>300145</b>	-	-	-
<b>AVERAGE</b>	<b>12279</b>	<b>1116</b>	<b>3385</b>	<b>8232</b>	<b>25012</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>
May 18	2161183	1175039	1581054	1449968	6367245
Jun 18	2164093	1193202	1560431	1483902	6401628
Jul 18	2204255	1198396	1514059	1576436	6493146
Aug 18	2205186	1193867	1552543	1615359	6566955
Sep 18	1969077	1086805	1443718	1567916	6067516
Oct 18	2199555	1175217	1576712	1711159	6662643
Nov 18	1807476	940472	1377348	1453973	5579269
Dec 18	1696068	847600	1282320	1192264	5018252
Jan 19	1596048	784003	1204798	1160173	4745021
Feb 19	1387374	715290	1084749	864793	4052206
Mar 19	1654804	918271	1249463	1251819	5074356
Apr 19	1746072	946867	1329617	1290655	5313211
<b>TOTAL</b>	<b>22791190</b>	<b>12175030</b>	<b>16756812</b>	<b>16618417</b>	<b>68341448</b>
<b>AVERAGE</b>	<b>1899266</b>	<b>1014586</b>	<b>1396401</b>	<b>1384868</b>	<b>5695121</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>
May 2018	3351	0.3	6.3	121	28
Jun 2018	4036	0.4	7.6	129	35
Jul 2018	4531	0.4	8.3	235	65
Aug 2018	4223	0.4	7.4	199	62
Sep 2018	3238	0.3	6	163	57
Oct 2018	3746	0.3	6.4	173	62
Nov 2018	3672	0.4	7.8	127	42
Dec 2018	2606	0.3	6.9	144	17
Jan 2019	1949	0.2	5.1	96	10
Feb 2019	1628	0.2	4.7	81	20
Mar 2019	1385	0.1	3.4	70	22
Apr 2019	1064	0.1	2.3	40	17
<b>TOTAL</b>	<b>35429</b>	<b>-</b>	<b>-</b>	<b>1578</b>	<b>437</b>
<b>AVERAGE</b>	<b>2952.4</b>	<b>0.3</b>	<b>6</b>	<b>131.5</b>	<b>36.4</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>
May 2018	208896	150269	359165	58.2	41.8
Jun 2018	215733	147528	363262	59.4	40.6
Jul 2018	223930	159341	383271	58.4	41.6
Aug 2018	227868	162122	389990	58.4	41.6
Sep 2018	203714	164103	367817	55.4	44.6
Oct 2018	204388	178193	382582	53.4	46.6
Nov 2018	157880	147600	305480	51.7	48.3
Dec 2018	125562	112167	237729	52.8	47.2
Jan 2019	114896	109750	224646	51.1	48.9
Feb 2019	102376	83792	186168	55	45
Mar 2019	125458	111529	236987	52.9	47.1
Apr 2019	129728	127691	257419	50.4	49.6
<b>TOTAL</b>	<b>2040430</b>	<b>1654084</b>	<b>3694515</b>	-	-
<b>AVERAGE</b>	<b>170035.9</b>	<b>137840.4</b>	<b>307876.2</b>	<b>54.8</b>	<b>45.2</b>