

OCTOBER 2018



**WIM #29  
US 53,  
MP 42.1  
Cotton, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #29 is located on US 53 near Cotton in St Louis county.

## System Operation

WIM #29 was operational for the entire month of October 2018. Volume was computed using all monthly data.

## System Calibration

WIM #29 was most recently calibrated on 2016-12-28. 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: 249622 | Passenger Vehicles: 231097 | Heavy Commercial Vehicles: 18525

Monthly Average Daily Traffic (MADT): 8052 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 598

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 Tuesdays. SB vehicles typically reached highest volume levels on Sundays, with lowest volumes reported on Tuesdays (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 12 PM and 04 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 12 PM and 04 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 18525 HCVs, 2266 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.9% of total monthly volume, and 12.2% 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 Mondays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 56.7% of all overweight vehicles traveling NB 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 March.

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 ,88 NB vehicles exceeded 88,000 pounds (38 vehicles were Class 13's; 34 vehicles were Class 10's). Of vehicles traveling SB,

320 NB vehicles exceeded 88,000 pounds (169 vehicles were Class 10's; 72 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from October 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in October 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 empty Class 9's than fully\_loaded 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 159047 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (72.9%) than SB (27.1%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 69021 is approximately 5.8 miles north of WIM #29. Bridges No. 69019 and No. 6603, which are respectively on the NB and SB side of MN 53, are 0.2 miles south of WIM #29. WIM #29 recorded a total of 249622 vehicles with a combined GVW of 1756665 kips (1 kip = 1,000 pounds = 0.5 tons) in October 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 66222 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 73.6% of all ESALs were recorded SB while 26.4% was observed NB. In particular, 78% of all ESALs were generated by the Class 14's (Class 14's were also responsible for generating % 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).

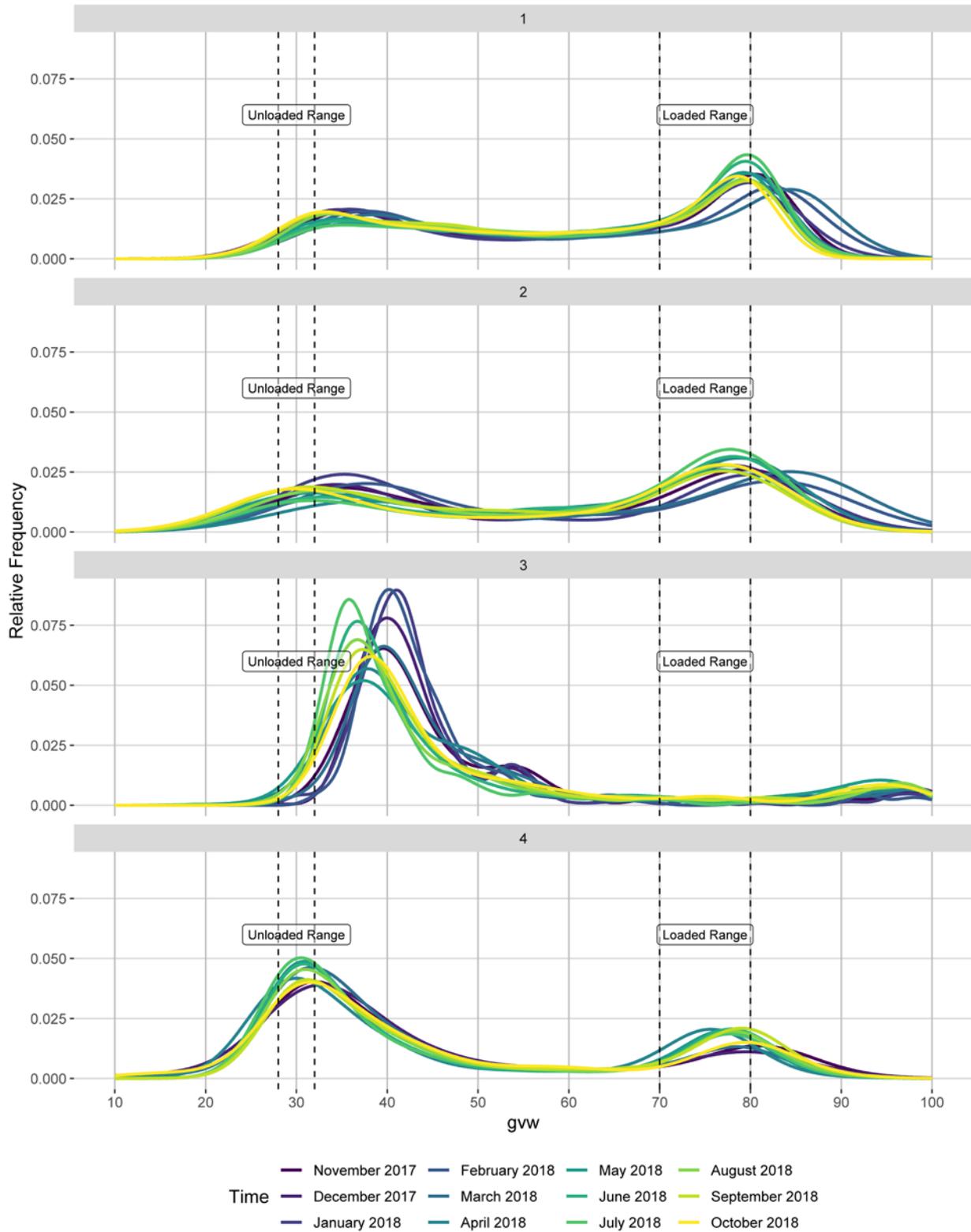
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

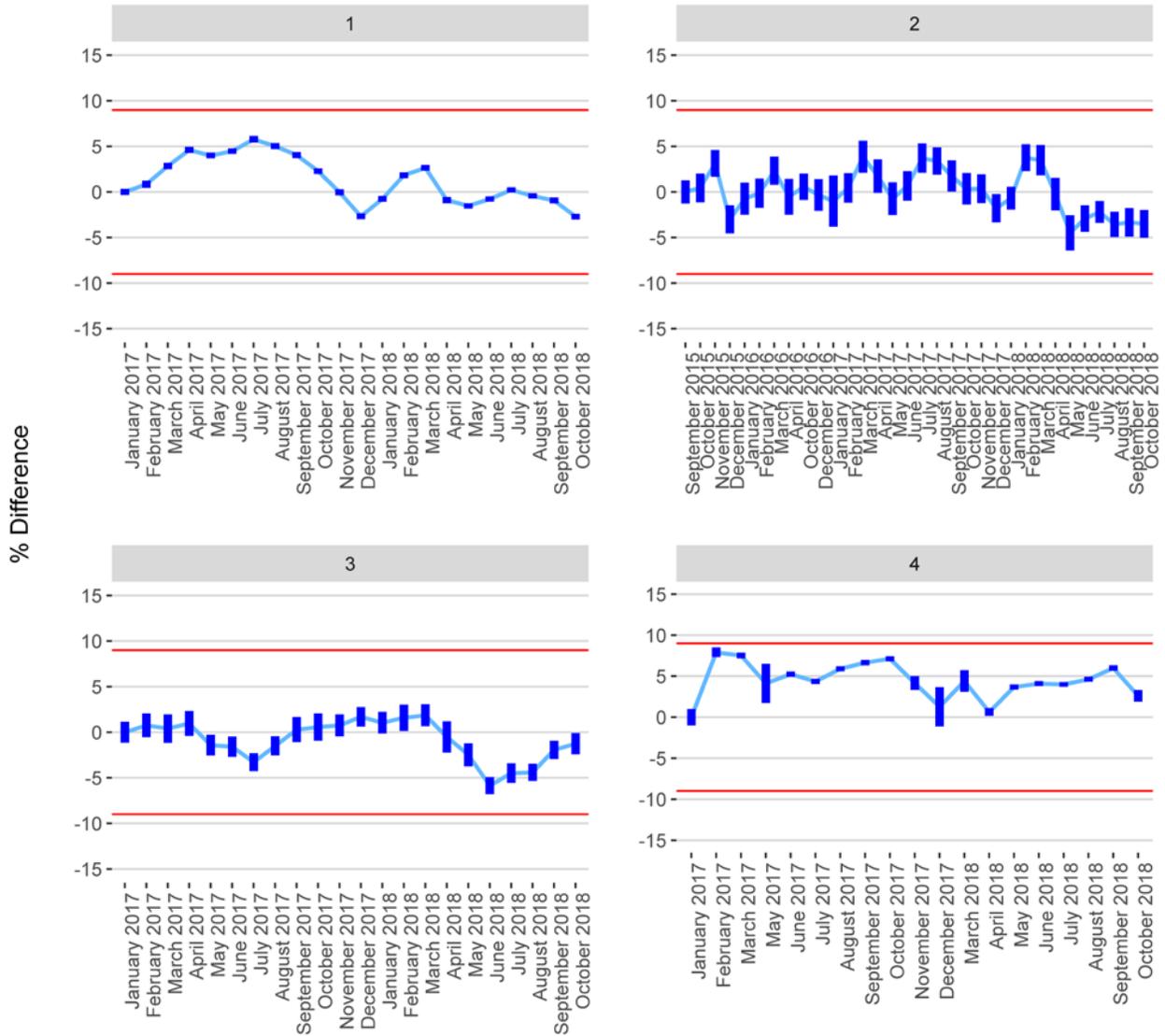
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Figure 1 - Monthly Class 9 GWW Histogram



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

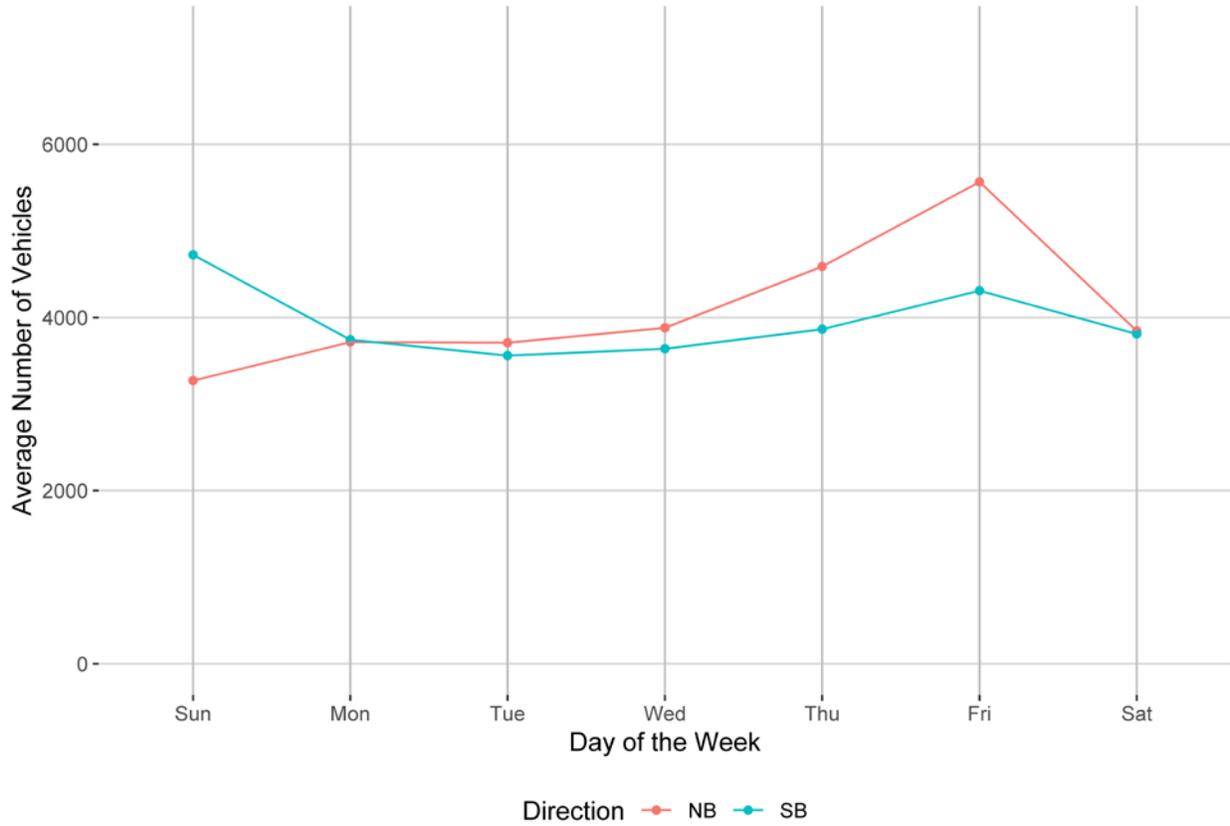


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

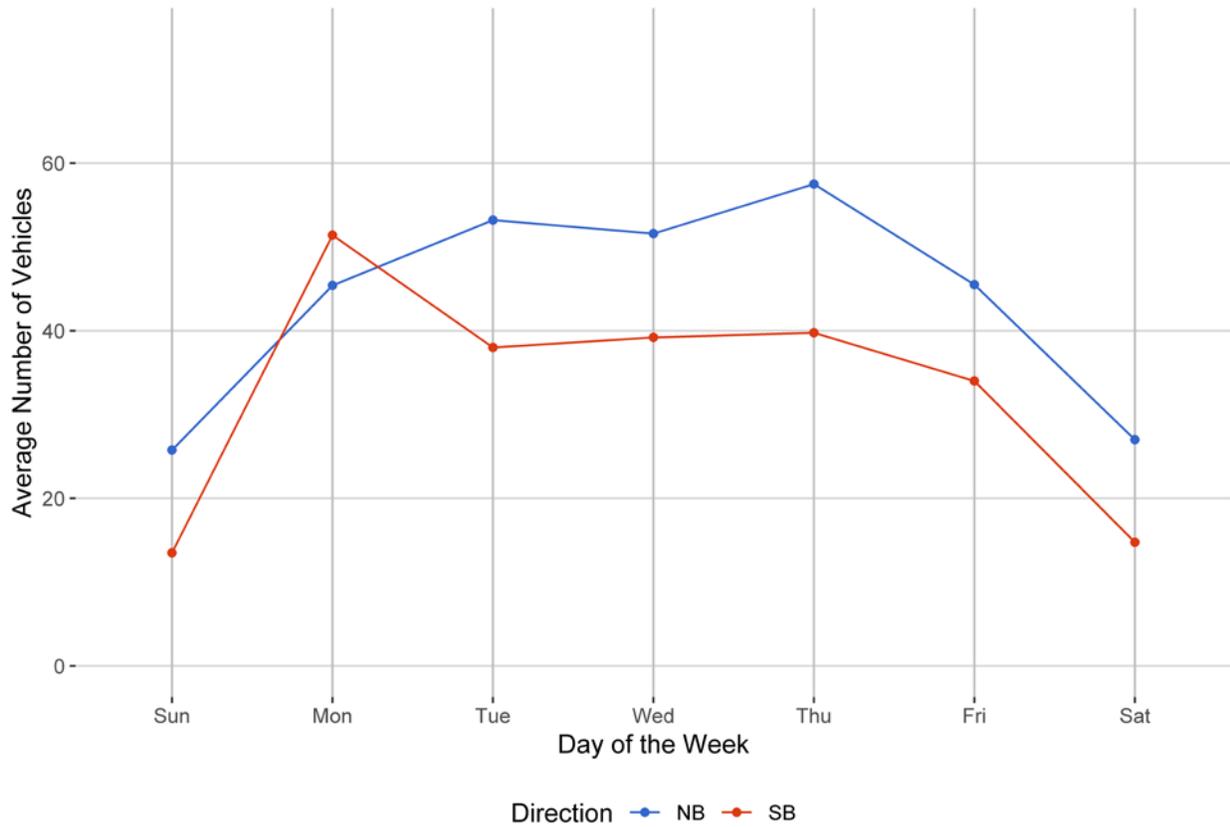


Figure 4 - Passenger Vehicles vs. Hour of the Day

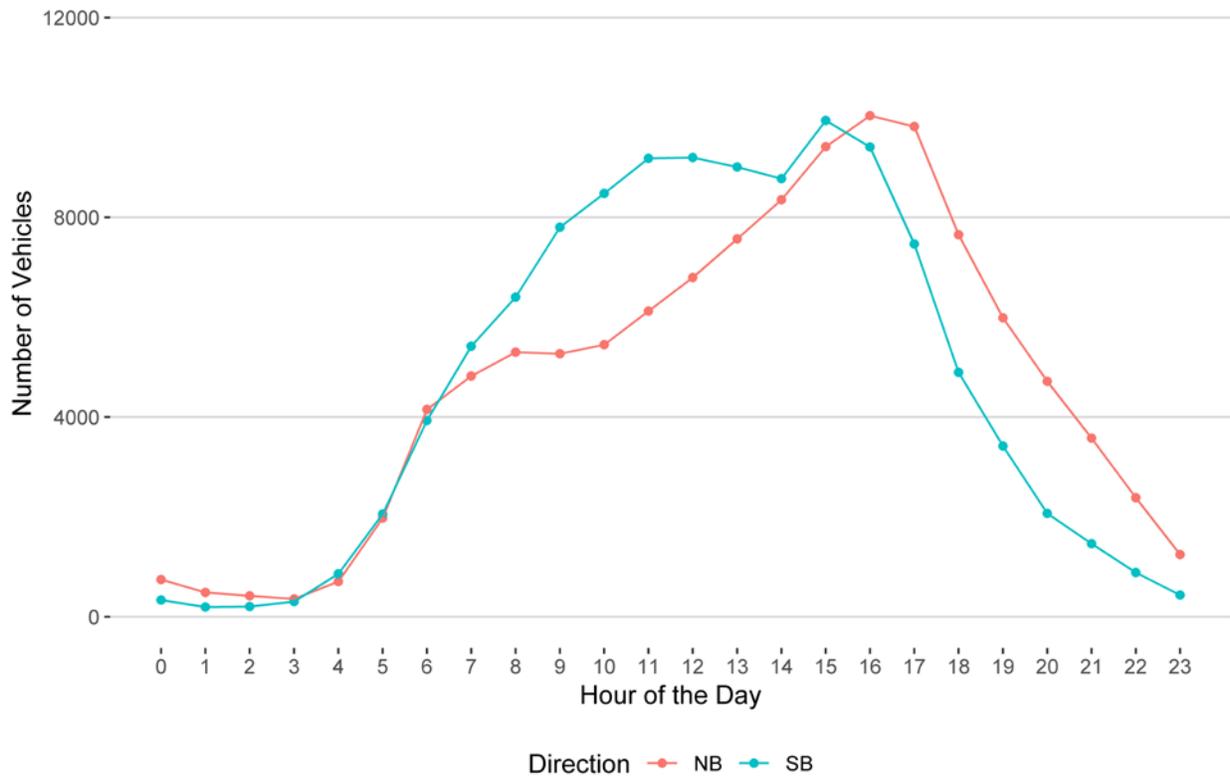


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

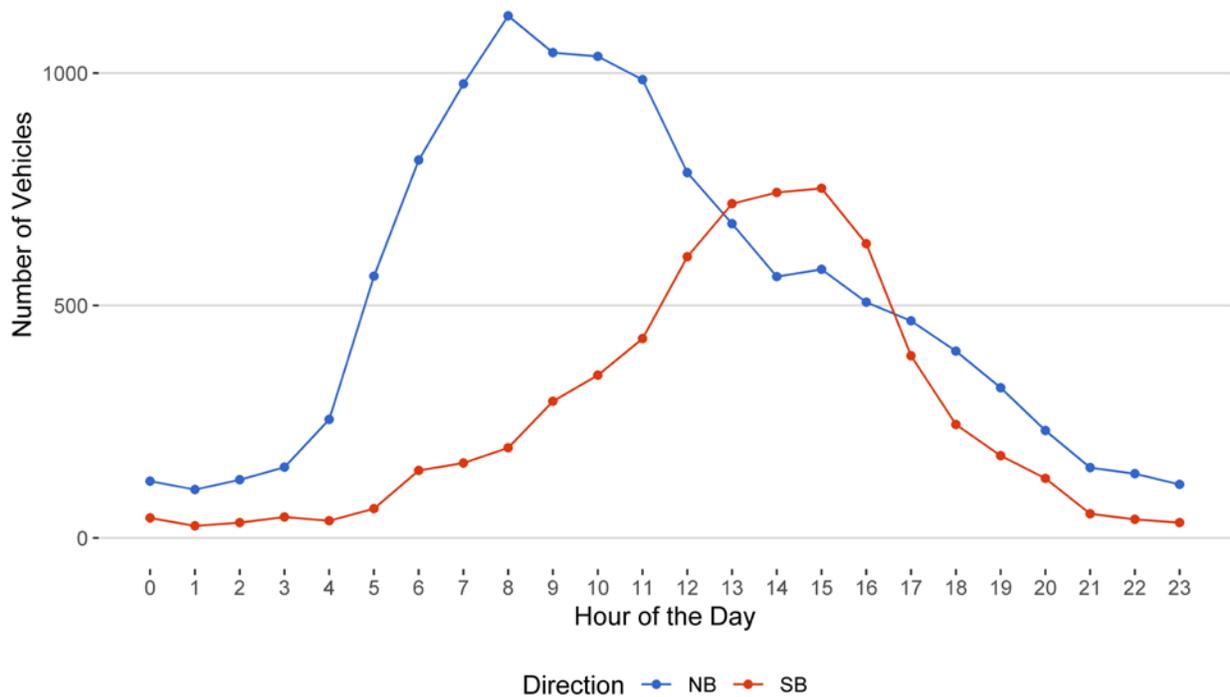


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

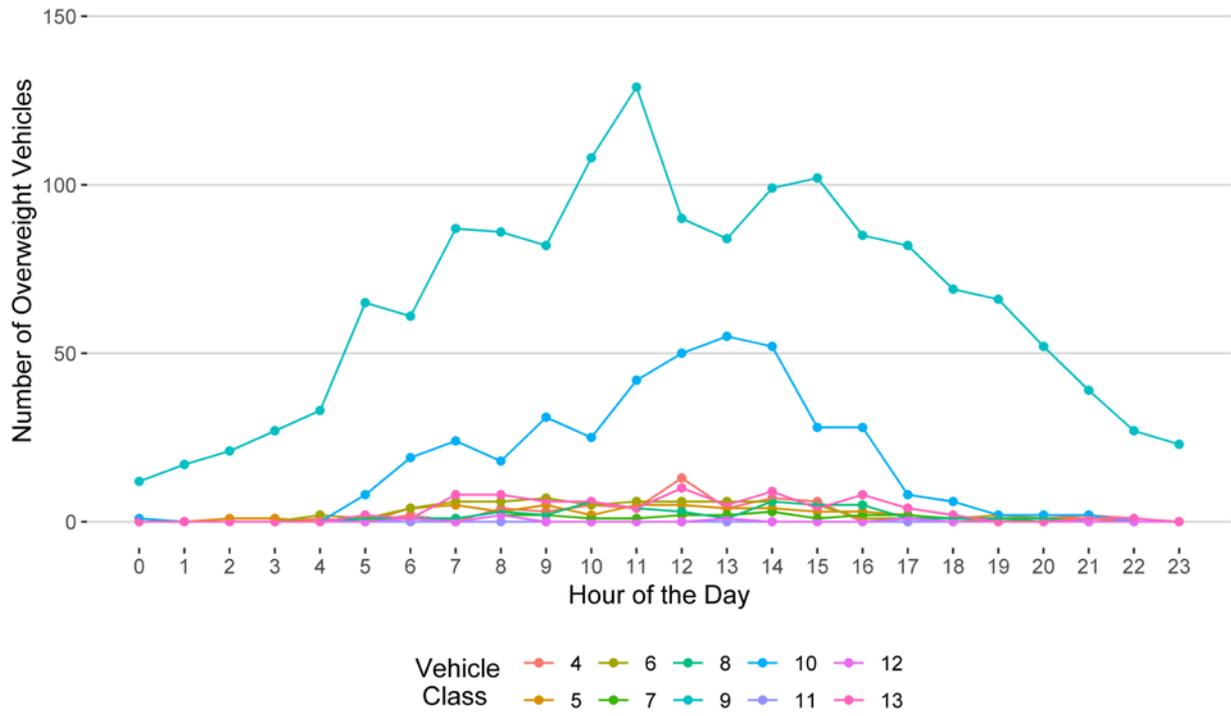


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

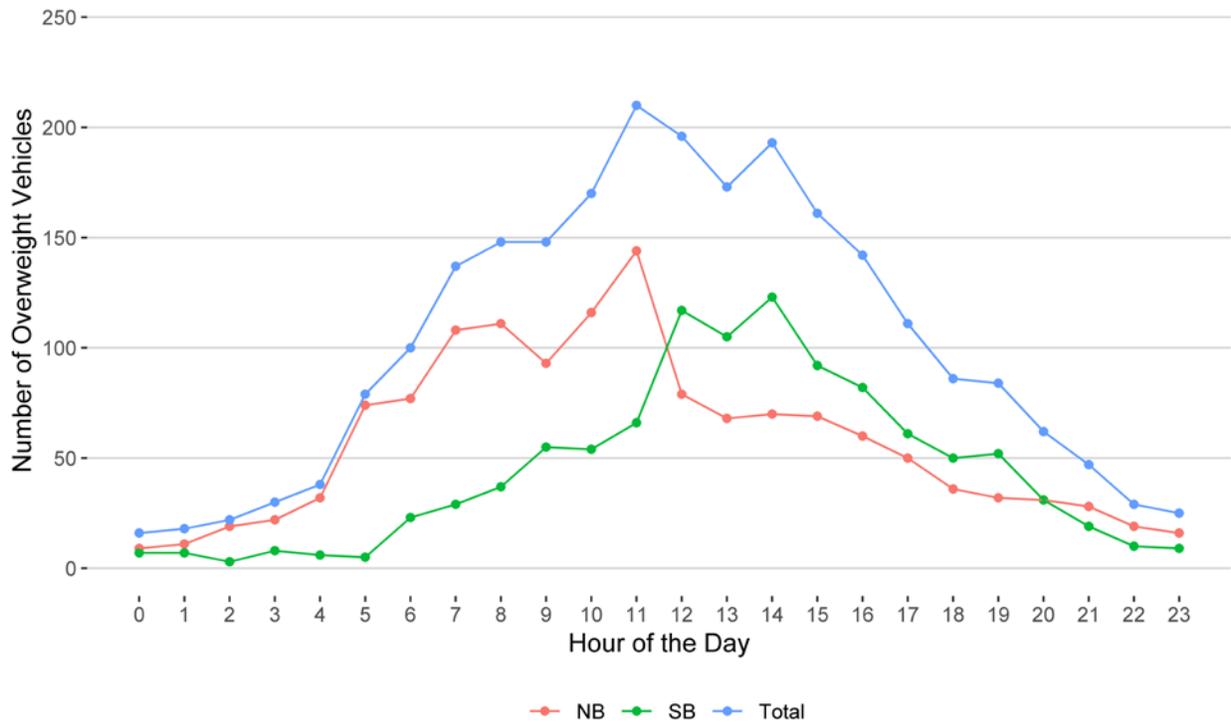
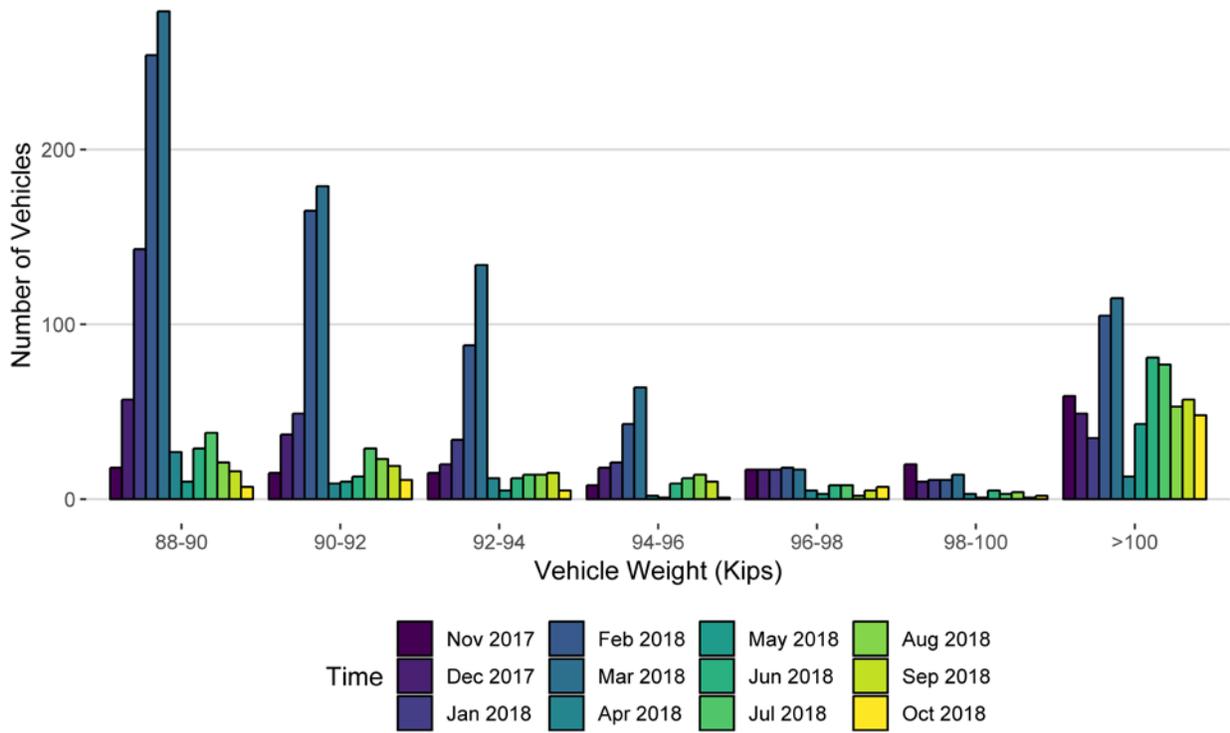
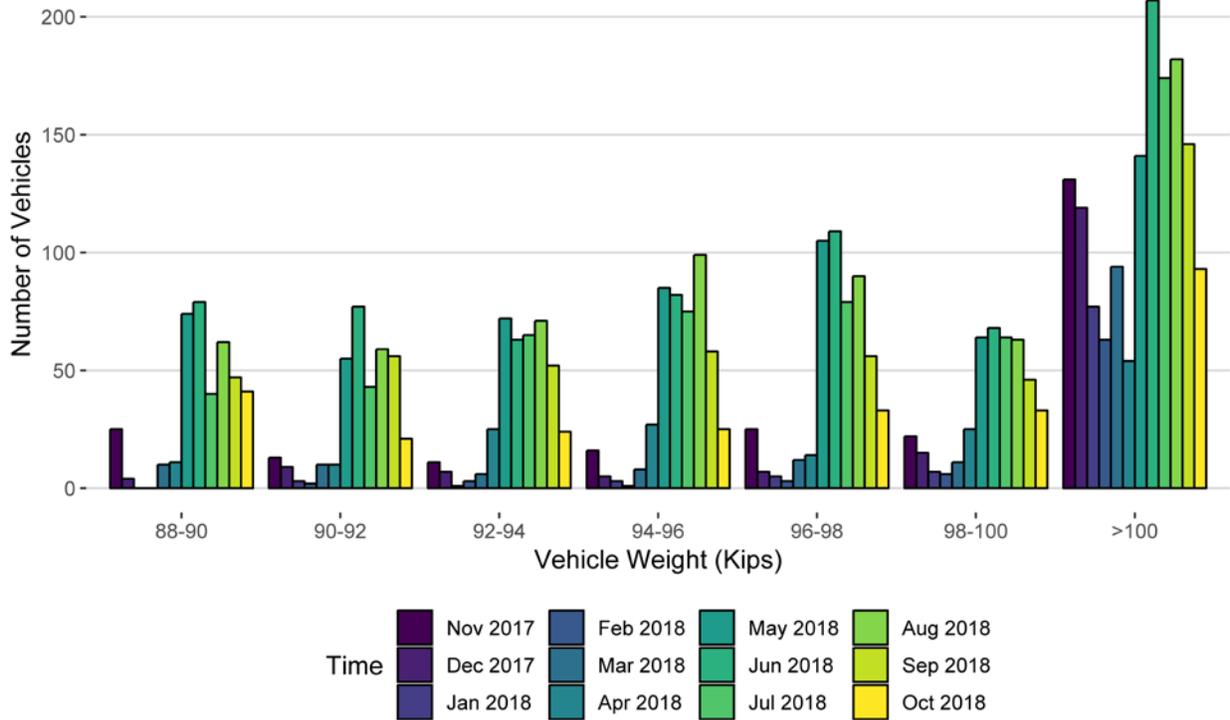


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018
88-90	18	57	143	254	279	27	10	29	38	21	16	7
90-92	15	37	49	165	179	9	10	13	29	23	19	11
92-94	15	20	34	88	134	12	5	12	14	14	15	5
94-96	8	18	21	43	64	2	1	9	12	14	10	1
96-98	17	17	17	18	17	5	3	8	8	2	5	7
98-100	20	10	11	11	14	3	1	5	3	4	1	2
>100	59	49	35	105	115	13	43	81	77	53	57	48
Total	152	208	310	684	802	71	73	157	181	131	123	81

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



Vehicle Weights (Kips)	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018
88-90	25	4	0	0	10	11	74	79	40	62	47	41
90-92	13	9	3	2	10	10	55	77	43	59	56	21
92-94	11	7	1	3	6	25	72	63	65	71	52	24
94-96	16	5	3	1	8	27	85	82	75	99	58	25
96-98	25	7	5	3	12	14	105	109	79	90	56	33
98-100	22	15	7	6	11	25	64	68	64	63	46	33
>100	131	119	77	63	94	54	141	207	174	182	146	93
Total	243	166	96	78	151	166	596	685	540	626	461	270

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

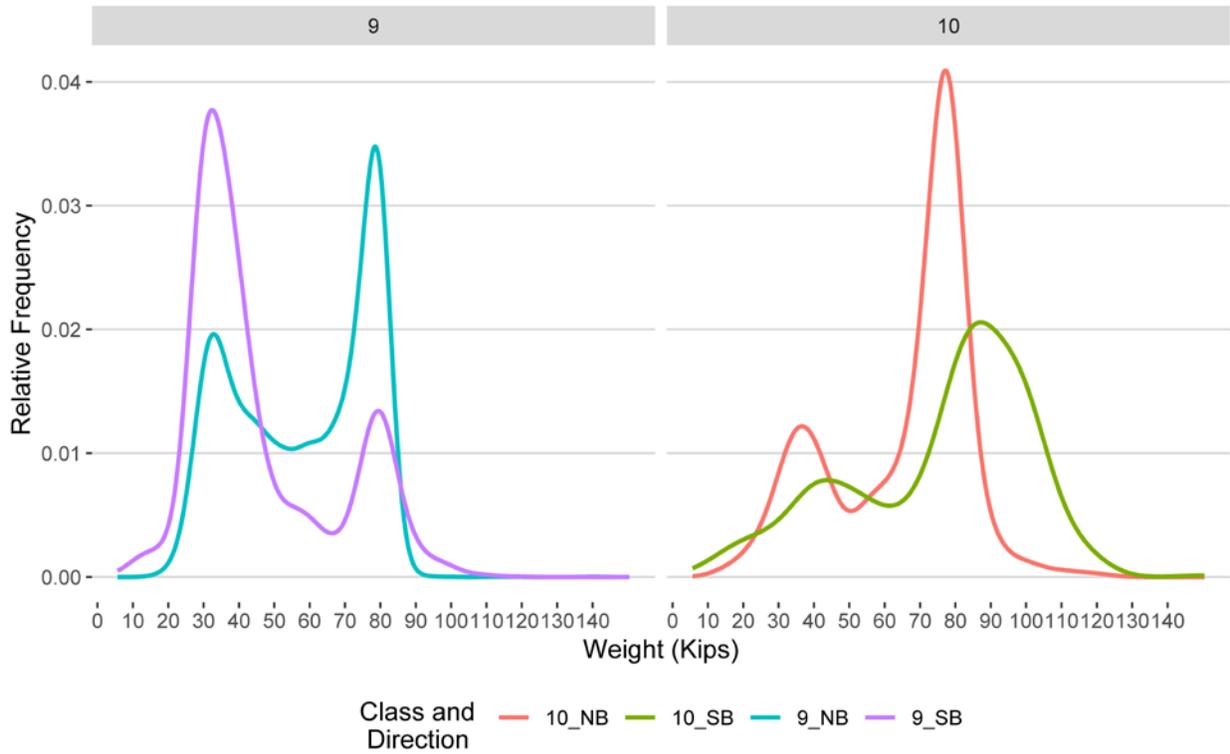


Figure 9 - Freight Percentage by Direction and Class

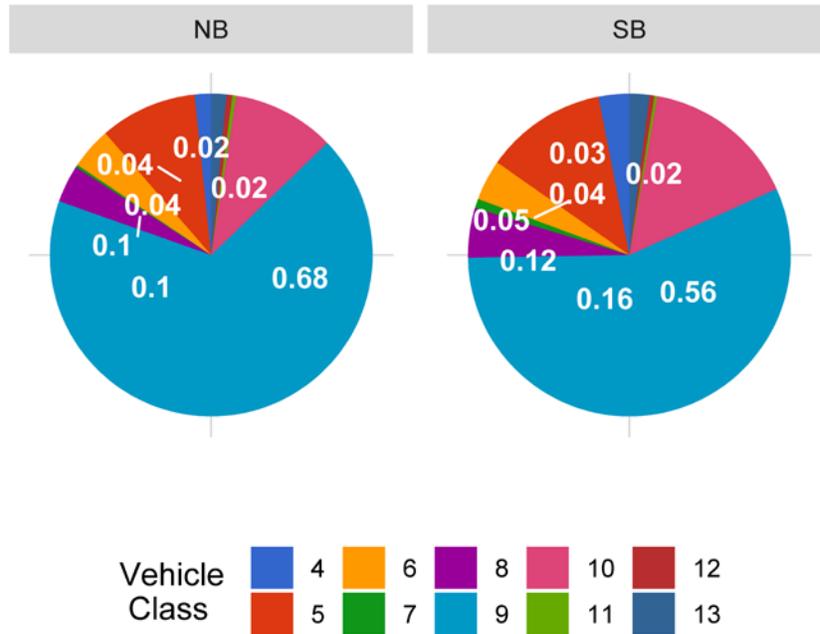


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

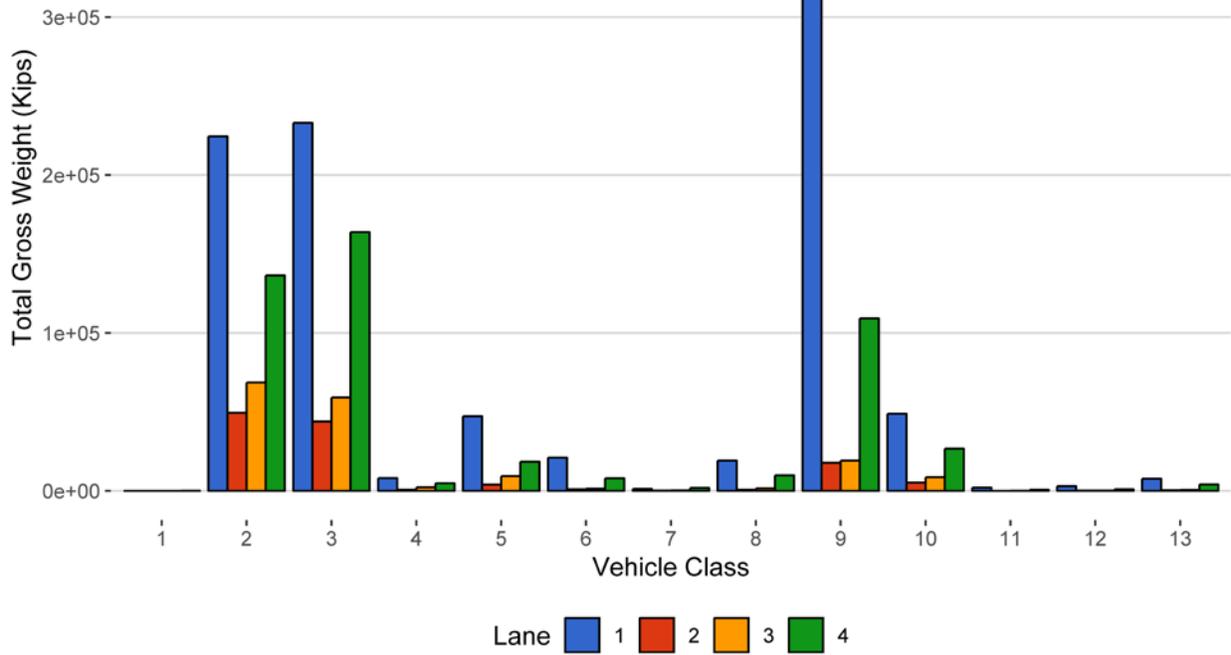


Figure 11 - Total Gross Vehicle Weight t

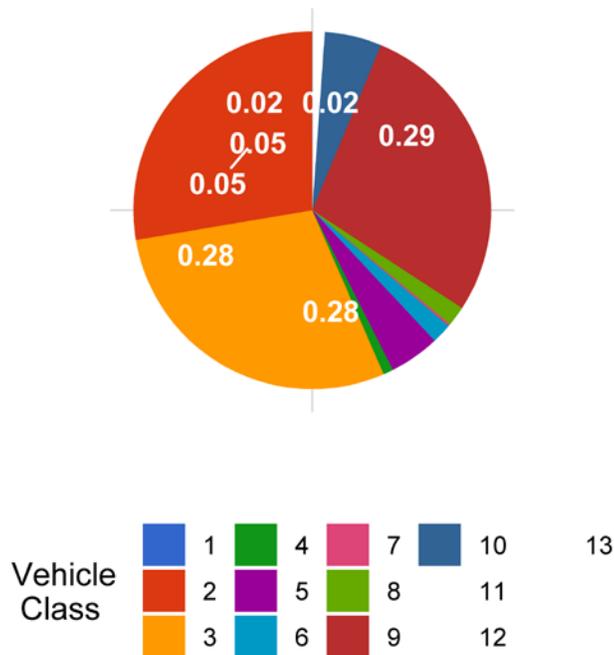


Figure 12 - Total ESALs by Class and Lane

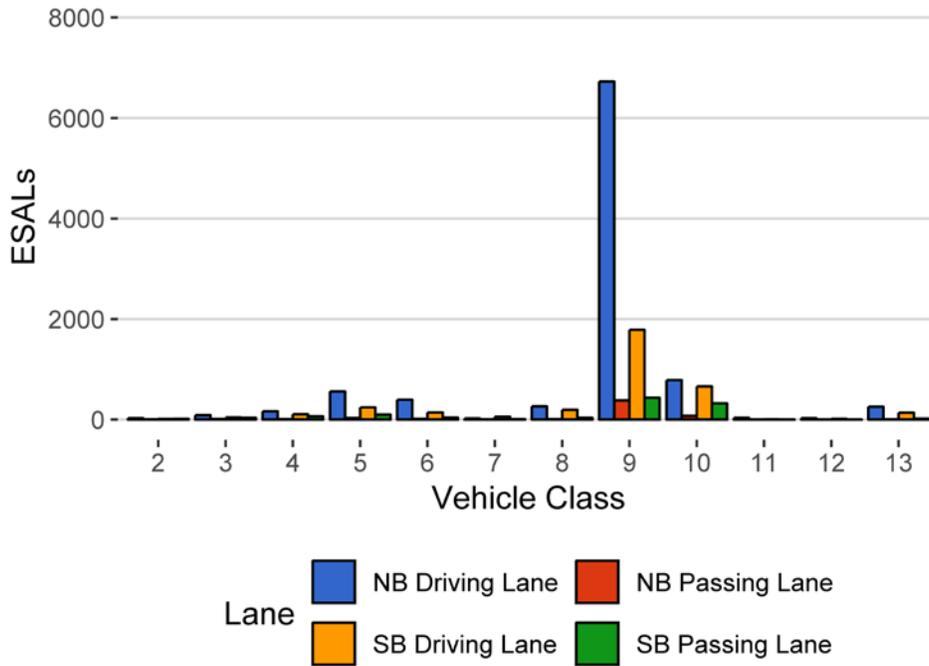
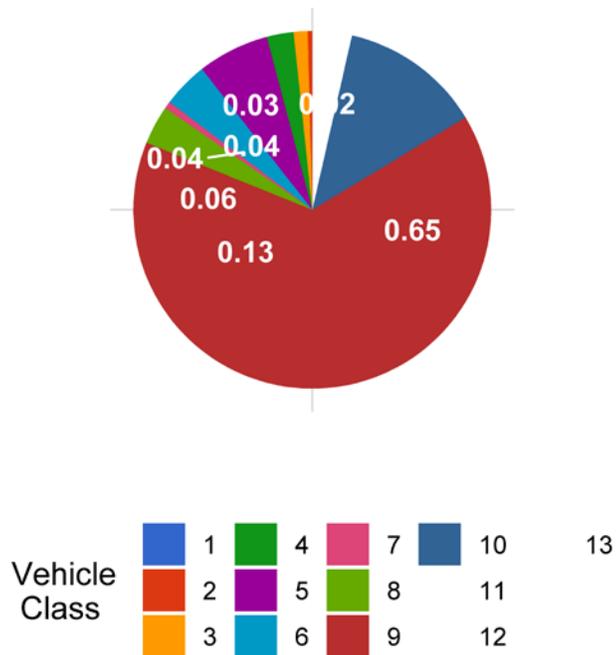


Figure 13 - ESALs by Class



**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>
September 2015	NA	NA	11.27	0.00	NA	NA	NA	NA
October 2015	NA	NA	11.32	0.45	NA	NA	NA	NA
November 2015	NA	NA	11.62	3.14	NA	NA	NA	NA
December 2015	NA	NA	10.93	-3.01	NA	NA	NA	NA
January 2016	NA	NA	11.19	-0.73	NA	NA	NA	NA
February 2016	NA	NA	11.25	-0.14	NA	NA	NA	NA
March 2016	NA	NA	11.53	2.33	NA	NA	NA	NA
April 2016	NA	NA	11.21	-0.53	NA	NA	NA	NA
October 2016	NA	NA	11.33	0.56	NA	NA	NA	NA
December 2016	NA	NA	11.23	-0.34	NA	NA	NA	NA
January 2017	12.25	0.00	11.15	-1.01	13.55	0.00	9.66	0.00
February 2017	12.36	0.85	11.32	0.45	13.65	0.76	10.42	7.91
March 2017	12.60	2.86	11.70	3.86	13.60	0.40	10.38	7.51
April 2017	12.82	4.61	11.46	1.73	13.68	0.97	NA	NA
May 2017	12.74	3.99	11.19	-0.74	13.36	-1.41	10.05	4.12
June 2017	12.80	4.47	11.34	0.66	13.33	-1.59	10.16	5.25
July 2017	12.96	5.78	11.69	3.71	13.10	-3.28	10.08	4.36
August 2017	12.87	5.03	11.65	3.40	13.35	-1.49	10.23	5.90
September 2017	12.75	4.04	11.47	1.75	13.59	0.29	10.30	6.65
October 2017	12.53	2.29	11.31	0.34	13.63	0.57	10.34	7.12
November 2017	12.25	-0.04	11.31	0.36	13.65	0.76	10.06	4.16
December 2017	11.93	-2.67	11.07	-1.79	13.78	1.69	9.78	1.27
January 2018	12.16	-0.76	11.19	-0.68	13.69	1.05	NA	NA
February	12.48	1.83	11.69	3.76	13.76	1.58	NA	NA

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2018								
March 2018	12.58	2.64	11.66	3.49	13.80	1.86	10.08	4.41
April 2018	12.14	-0.90	11.24	-0.24	13.48	-0.52	9.72	0.64
May 2018	12.07	-1.53	10.76	-4.48	13.21	-2.48	10.01	3.68
June 2018	12.16	-0.78	10.94	-2.92	12.75	-5.86	10.05	4.09
July 2018	12.28	0.23	11.02	-2.20	12.94	-4.49	10.04	3.99
August 2018	12.20	-0.43	10.87	-3.56	12.95	-4.40	10.10	4.62
September 2018	12.14	-0.93	10.89	-3.33	13.29	-1.93	10.24	6.00
October 2018	11.92	-2.70	10.88	-3.49	13.38	-1.26	9.91	2.61

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**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	2	71	0	0	0
2	4402	136467	54.7	0	0
3	3050	94559	37.9	0	0
4	18	562	0.2	57	2.5
5	174	5401	2.2	53	2.3
6	32	988	0.4	63	2.8
7	2	64	0	20	0.9
8	35	1095	0.4	42	1.9
9	286	8854	3.5	1546	68.2
10	42	1287	0.5	401	17.7
11	2	59	0	0	0
12	3	81	0	5	0.2
13	4	136	0.1	79	3.5
<b>TOTAL</b>	<b>8052</b>	<b>249622</b>	<b>100</b>	<b>2266</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>
2018-10-08	Monday	06:18:14	10	SB	4	150.45
2018-10-03	Wednesday	11:59:41	9	NB	1	140.46
2018-10-05	Friday	09:49:28	10	SB	3	132.08
2018-10-26	Friday	16:55:26	10	NB	1	121.94
2018-10-08	Monday	12:17:10	10	SB	3	120.86
2018-10-01	Monday	01:10:20	10	NB	1	119.82
2018-10-10	Wednesday	12:27:41	10	SB	3	119.39
2018-10-12	Friday	09:27:35	9	SB	3	118.76
2018-10-15	Monday	07:53:40	10	SB	3	118.54
2018-10-03	Wednesday	10:39:59	9	NB	1	118.19

**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	300	65	21.7	7891	812	2183
5	NB	8	3453	400	11.6	48207	2860	11892
6	NB	19	705	87	12.3	20488	1453	4373
7	NB	11.5	27	0	0	1334	0	512
8	NB	31	663	320	48.3	13371	6380	1369
9	NB	33	6088	834	13.7	330476	24539	78547
10	NB	33.5	824	69	8.4	52110	1933	13409
11	NB	36.5	39	8	20.5	1827	150	348
12	NB	36.5	57	5	8.8	2931	135	516
13	NB	31.5	80	0	0	7977	0	2729
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>12236</b>	<b>1788</b>	<b>****</b>	<b>486611</b>	<b>****</b>	<b>115876</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	263	61	23.2	6314	686	1642
5	SB	8	1962	170	8.7	26532	1184	6098
6	SB	19	286	42	14.7	8699	597	2031
7	SB	11.5	37	0	0	2086	0	830
8	SB	31	435	278	63.9	5918	5426	526
9	SB	33	2789	911	32.7	102605	25713	20315
10	SB	33.5	466	34	7.3	34502	756	10015
11	SB	36.5	20	11	55	426	228	49
12	SB	36.5	24	8	33.3	922	185	169
13	SB	31.5	56	11	19.6	4409	149	1496
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>6338</b>	<b>1526</b>	<b>****</b>	<b>192413</b>	<b>****</b>	<b>43171</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>18574</b>	<b>3314</b>	<b>404</b>	<b>679024</b>	<b>73185</b>	<b>159047</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	0	1	0	41	43	0
2	224419	49387	68517	136384	478706	27.7
3	232968	43830	59069	163774	499642	28.9
4	8031	672	2246	4754	15703	0.9
5	47184	3883	9259	18457	78783	4.6
6	20971	970	1384	7912	31236	1.8
7	1223	111	248	1838	3420	0.2
8	19125	626	1524	9821	31095	1.8
9	337312	17703	19158	109161	483333	27.9
10	48832	5211	8624	26634	89302	5.2
11	1976	0	23	631	2631	0.2
12	2896	170	139	968	4172	0.2
13	7624	353	526	4031	12535	0.7
<b>TOTAL</b>	<b>952561</b>	<b>122917</b>	<b>170717</b>	<b>484405</b>	<b>1730600</b>	<b>100</b>
<b>GVW/LANE</b>	<b>55.04</b>	<b>7.1</b>	<b>9.86</b>	<b>27.99</b>	<b>100</b>	<b>0.01</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	0.0139
2	27	6	15	11	60	0.41	9e-04
3	90	14	35	43	182	1.27	0.0039
4	165	7	65	110	347	2.41	1.24
5	561	32	99	244	936	6.49	0.35
6	398	16	41	142	596	4.13	1.2
7	23	4	8	58	94	0.65	2.74
8	266	9	34	196	506	3.51	0.93
9	6726	382	435	1789	9331	64.75	2.11
10	785	74	326	661	1845	12.81	2.86
11	38	0	0	5	43	0.3	1.38
12	28	2	1	17	48	0.33	1.17
13	258	6	21	137	422	2.93	5.78
<b>TOTAL</b>	<b>9364</b>	<b>552</b>	<b>1080</b>	<b>3413</b>	<b>14410</b>	<b>100</b>	<b>20</b>
<b>ESALS/LANE</b>	<b>65</b>	<b>3.8</b>	<b>7.5</b>	<b>23.7</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>
Nov 2017	215323	7177	500	200318	93	15005	7	88.1	11.9
Dec 2017	205518	6630	393	193348	94.1	12170.2	5.9	85.6	14.4
Jan 2018	181841	5866	375	170202	93.6	11639.2	6.4	85.6	14.4
Feb 2018	175341	6262	392	164375	93.7	10966.1	6.3	87	13
Mar 2018	211100	6810	405	198536	94	12563.9	6	87.5	12.5
Apr 2018	204305	6810	502	189259	92.6	15045.9	7.4	91.2	8.8
May 2018	275884	8900	800	251075	91	24809.3	9	91.9	8.1
Jun 2018	322699	10757	940	294501	91.3	28198.1	8.7	90.5	9.5
Jul 2018	344993	11129	938	315918	91.6	29075.1	8.4	90.7	9.3
Aug 2018	342599	11052	903	314616	91.8	27983.2	8.2	90.5	9.5
Sep 2018	285228	9508	816	260744	91.4	24483.8	8.6	90.9	9.1
Oct 2018	249622	8052	598	231097	92.6	18525.4	7.4	88.5	11.5
<b>TOTAL</b>	<b>3014453</b>	<b>-</b>	<b>-</b>	<b>2783989</b>	<b>-</b>	<b>230465</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>251204</b>	<b>8246</b>	<b>630</b>	<b>231999</b>	<b>93</b>	<b>19205</b>	<b>7</b>	<b>89</b>	<b>11</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>
Nov 2017	16855	610	1089	22664	41217	96	4	34.2
Dec 2017	22666	582	1523	13599	38370	95	5	7.9
Jan 2018	20391	683	1163	7	22244	92	8	10.7
Feb 2018	26091	646	943	7	27687	94	6	27.8
Mar 2018	48174	658	1125	4031	53988	97	3	29.2
Apr 2018	25401	477	631	12895	39405	97	3	2.4
May 2018	26838	463	1016	8043	36361	96	4	2.2
Jun 2018	11493	815	1013	9537	22857	92	8	3.5
Jul 2018	12319	772	968	8324	22382	92	8	6.5
Aug 2018	10410	622	1244	9155	21431	91	9	3.8
Sep 2018	8865	511	913	8741	19030	93	7	2.7
Oct 2018	16925	553	1095	47650	66222	98	2	24.1
<b>TOTAL</b>	<b>246428</b>	<b>7392</b>	<b>12722</b>	<b>144653</b>	<b>411194</b>	-	-	-
<b>AVERAGE</b>	<b>20536</b>	<b>616</b>	<b>1060</b>	<b>12054</b>	<b>34266</b>	<b>94</b>	<b>6</b>	<b>13</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>
Nov 2017	825230	86740	100718	162052	1174740
Dec 2017	818040	85005	93348	153344	1149736
Jan 2018	897695	103424	129546	244500	1375165
Feb 2018	749520	88531	110315	462367	1410733
Mar 2018	1019948	141819	177143	923114	2262024
Apr 2018	1194612	198846	235069	1090007	2718534
May 2018	1200888	197432	267870	1094248	2760438
Jun 2018	1173525	196694	261803	1096958	2728981
Jul 2018	969392	140464	208303	989554	2307712
Aug 2018	954312	123010	171147	508197	1756665
Sep 2018	864848	109802	135880	388739	1499269
Oct 2018	847068	95361	130293	218569	1291292
<b>TOTAL</b>	<b>11515078</b>	<b>1567128</b>	<b>2021434</b>	<b>7331649</b>	<b>22435288</b>
<b>AVERAGE</b>	<b>959590</b>	<b>130594</b>	<b>168453</b>	<b>610971</b>	<b>1869607</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>
Nov 2017	2799	1.3	16.4	429	260
Dec 2017	2265	1.1	16	412	224
Jan 2018	2500	1.4	19.5	415	137
Feb 2018	2757	1.6	22.7	778	197
Mar 2018	3069	1.5	21.2	988	264
Apr 2018	2151	1.1	13.2	267	119
May 2018	3435	1.3	13.9	687	261
Jun 2018	4353	1.4	15.5	843	362
Jul 2018	4156	1.2	14.4	724	320
Aug 2018	3887	1.1	13.9	759	302
Sep 2018	3554	1.3	14.5	588	250
Oct 2018	2425	1	11.2	408	227
<b>TOTAL</b>	<b>37351</b>	<b>-</b>	<b>-</b>	<b>7298</b>	<b>2923</b>
<b>AVERAGE</b>	<b>3112.6</b>	<b>1.3</b>	<b>16</b>	<b>608.2</b>	<b>243.6</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>
Nov 2017	115079	32265	147344	78.1	21.9
Dec 2017	111685	13609	125293	89.1	10.9
Jan 2018	116628	7851	124479	93.7	6.3
Feb 2018	116036	6240	122276	94.9	5.1
Mar 2018	122115	14504	136619	89.4	10.6
Apr 2018	96227	38405	134632	71.5	28.5
May 2018	116982	93214	210196	55.7	44.3
Jun 2018	140596	106134	246729	57	43
Jul 2018	141151	92036	233187	60.5	39.5
Aug 2018	123235	102443	225678	54.6	45.4
Sep 2018	105223	95047	200270	52.5	47.5
Oct 2018	115876	43171	159047	72.9	27.1
<b>TOTAL</b>	<b>1420832</b>	<b>644919</b>	<b>2065751</b>	-	-
<b>AVERAGE</b>	<b>118402.6</b>	<b>53743.2</b>	<b>172145.9</b>	<b>72.5</b>	<b>27.5</b>