

SEPTEMBER 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 September 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: 285228 | Passenger Vehicles: 260744 | Heavy Commercial Vehicles: 24484

Monthly Average Daily Traffic (MADT): 9508 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 816

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 Sundays, with lowest volumes reported on Wednesdays (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 11 AM and 03 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 11 AM and 03 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 24484 HCVs, 3528 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 1.2% of total monthly volume, and 14.5% 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 Fridays, 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 57% 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 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 ,125 NB vehicles exceeded 88,000 pounds (58 vehicles were Class 13's; 53 vehicles were Class 10's). Of vehicles traveling SB,

463 NB vehicles exceeded 88,000 pounds (273 vehicles were Class 10's; 96 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from September 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in September 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 200270 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (52.5%) than SB (47.5%). 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 285228 vehicles with a combined GVW of 2307712 kips (1 kip = 1,000 pounds = 0.5 tons) in September 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 19030 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.7% of all ESALs were recorded SB while 49.3% was observed NB. In particular, 61% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 26% 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).

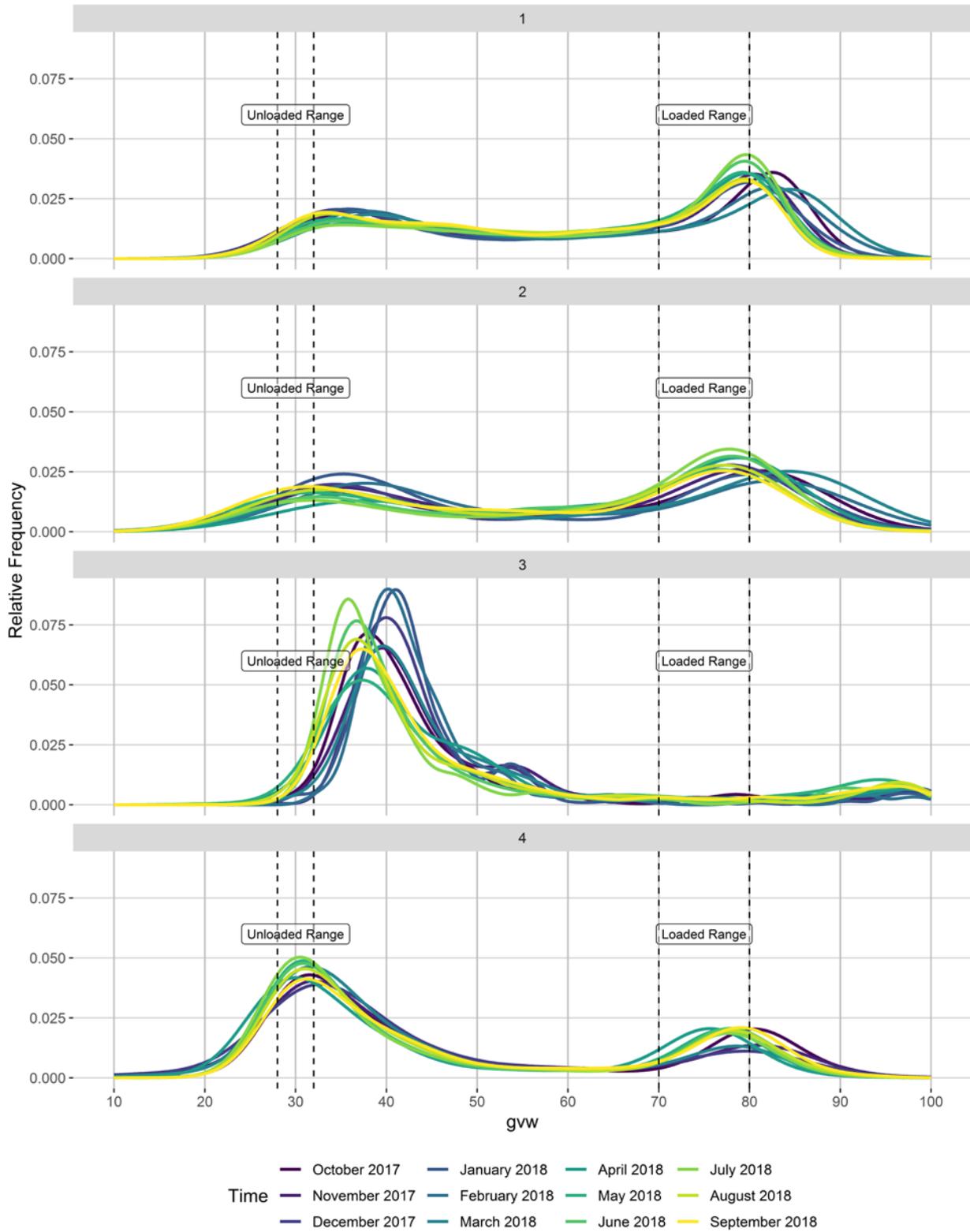
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

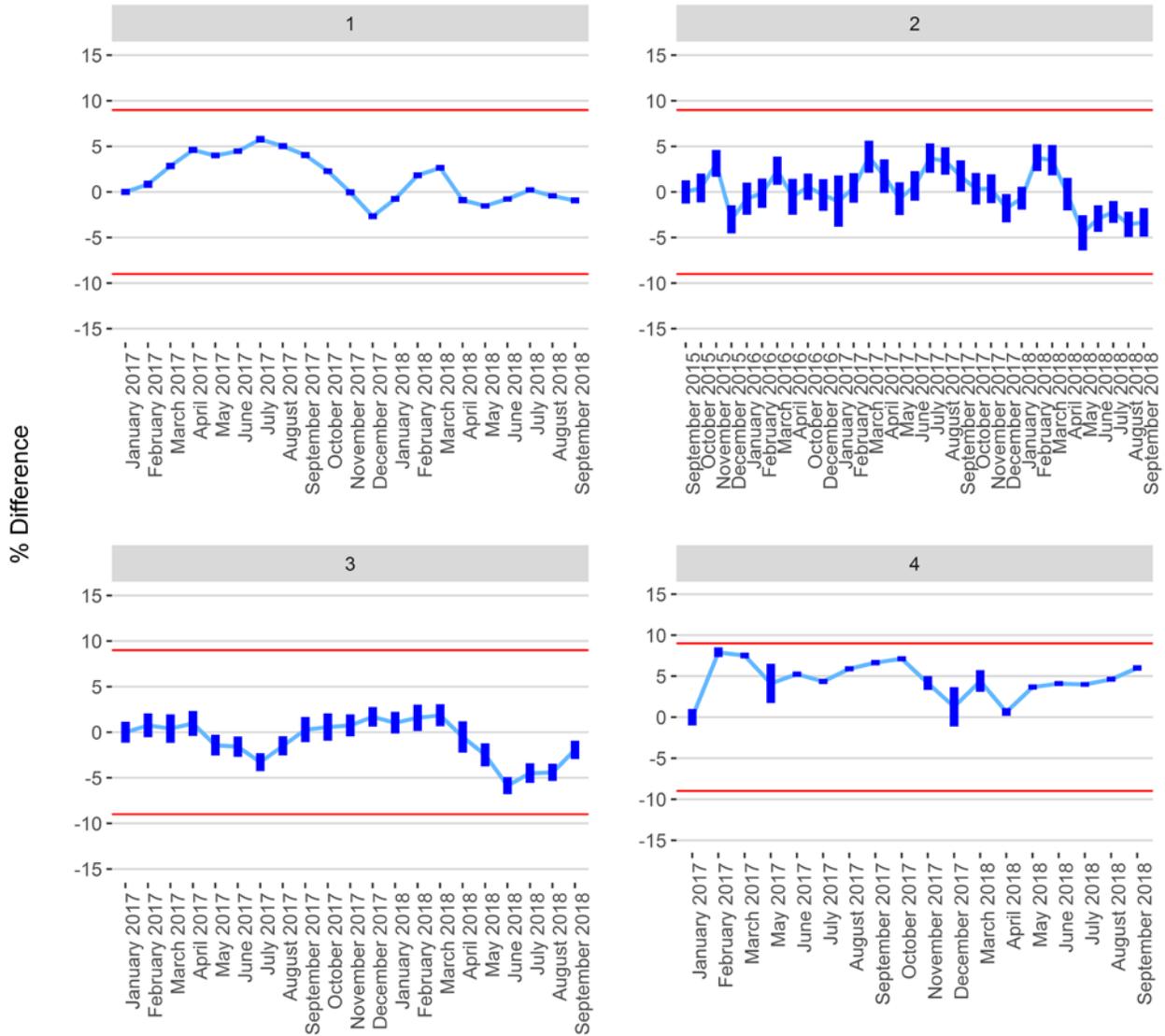
**To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to [ADArequest.dot@state.mn.us](mailto:ADArequest.dot@state.mn.us). Please request at least one week in advance.**

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

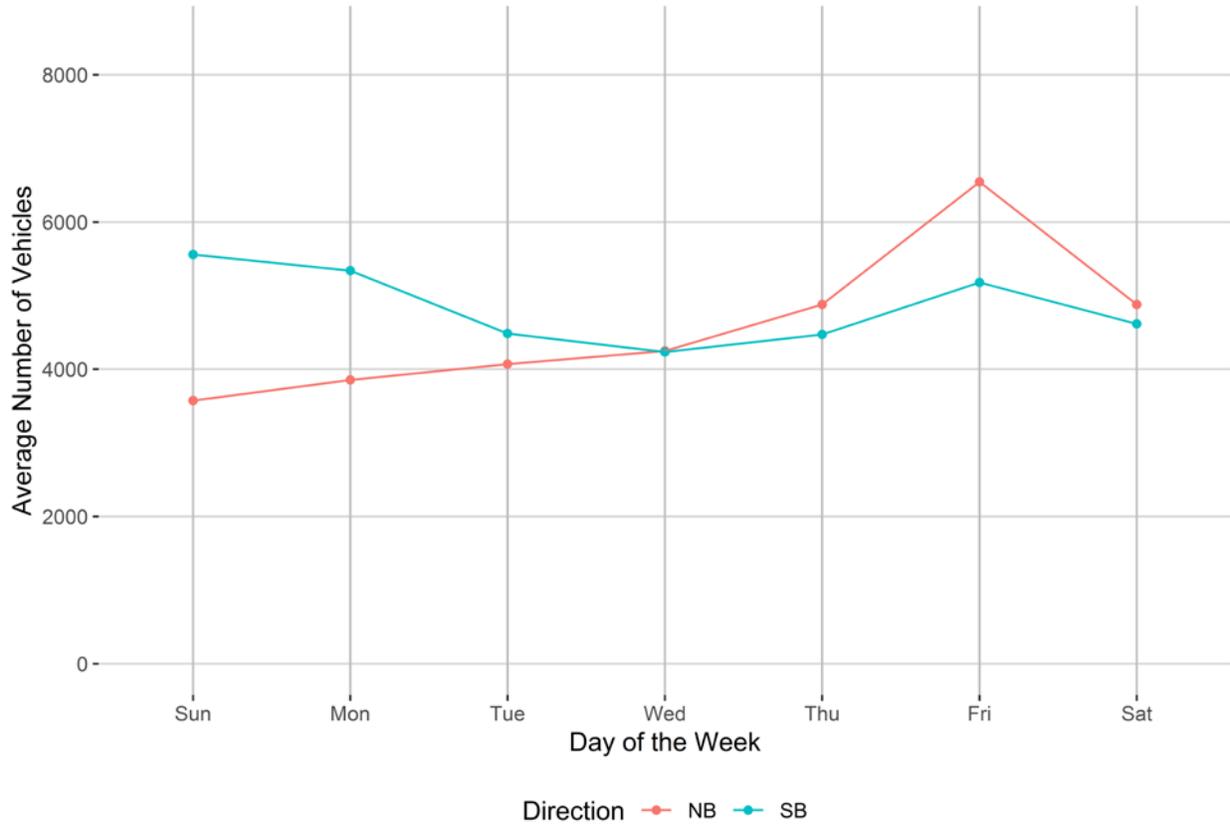


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

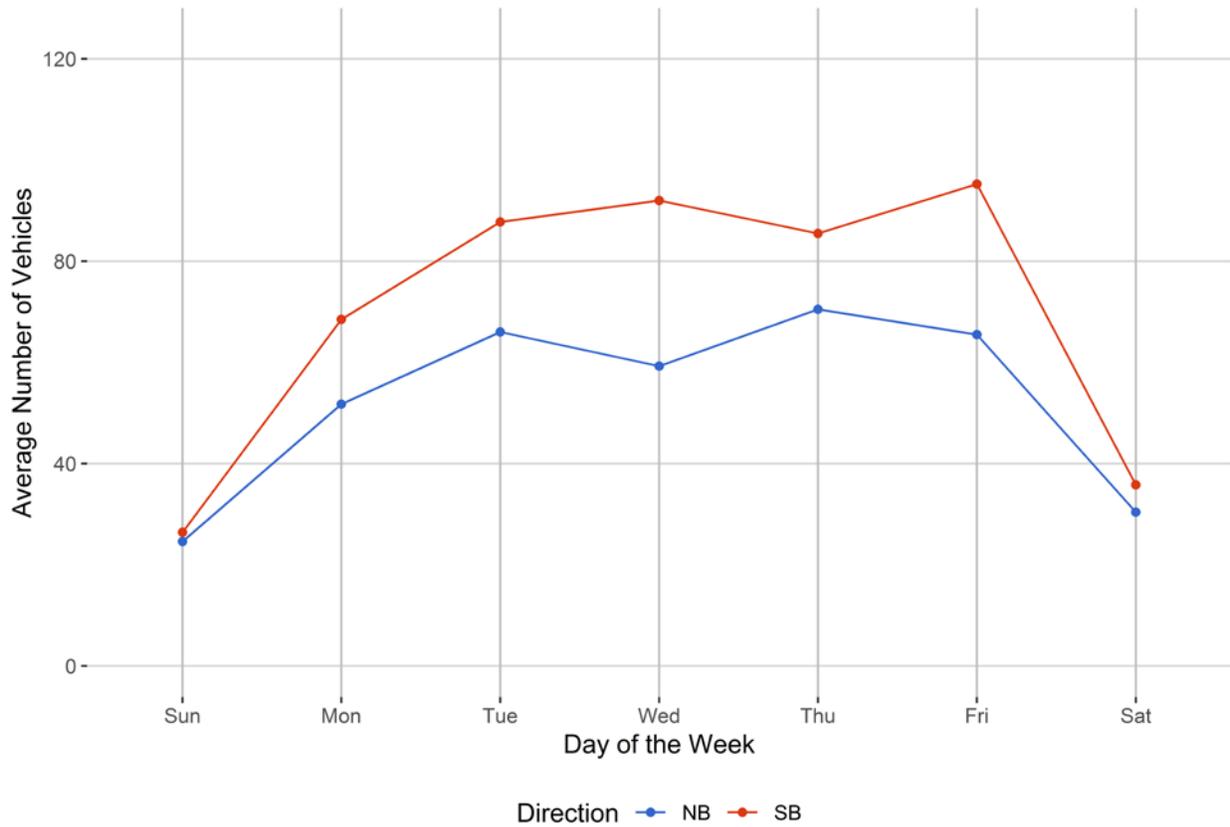


Figure 4 - Passenger Vehicles vs. Hour of the Day

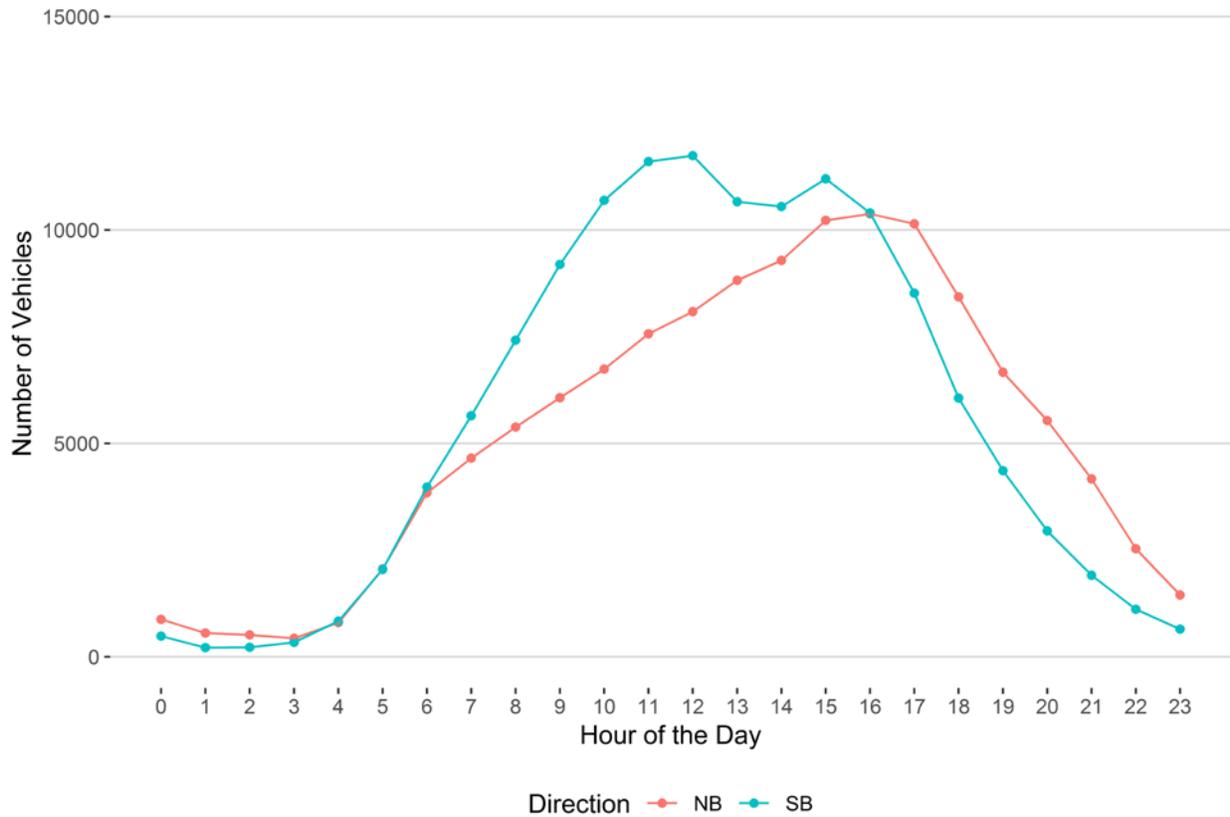


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

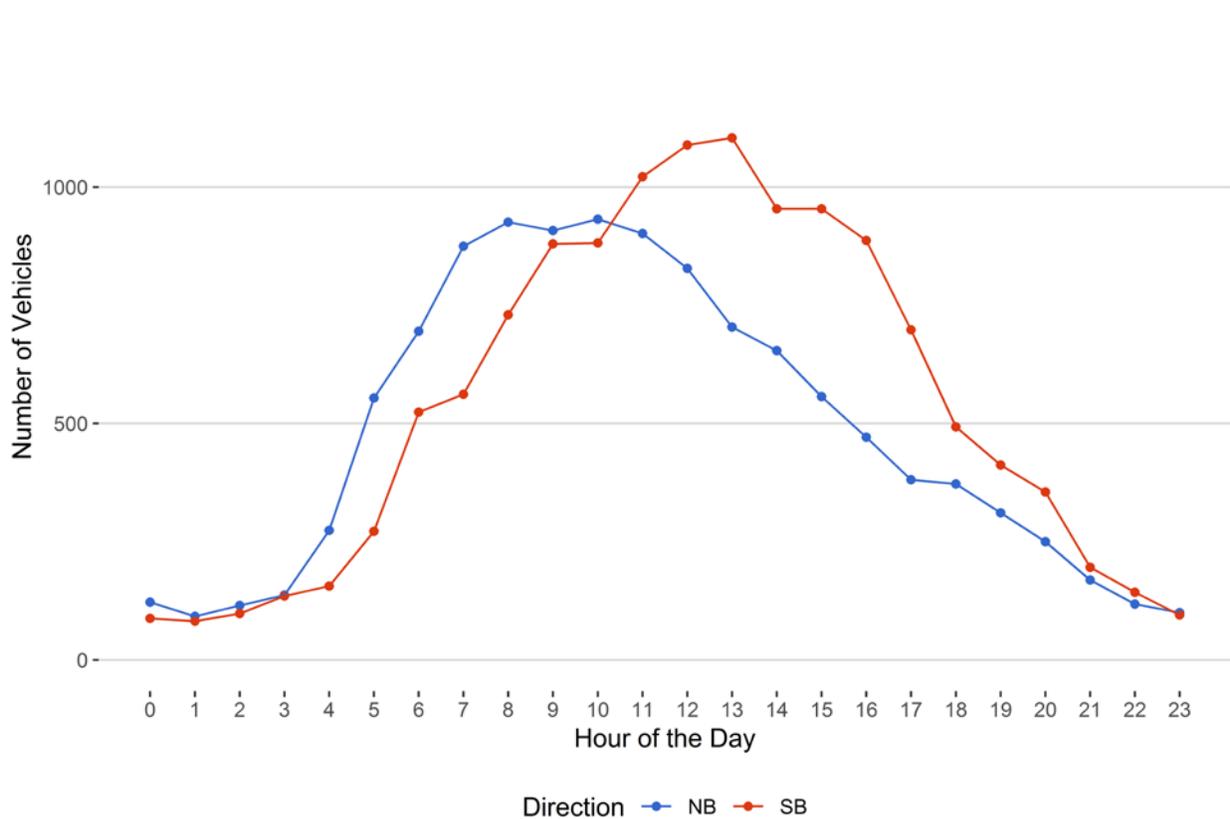


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

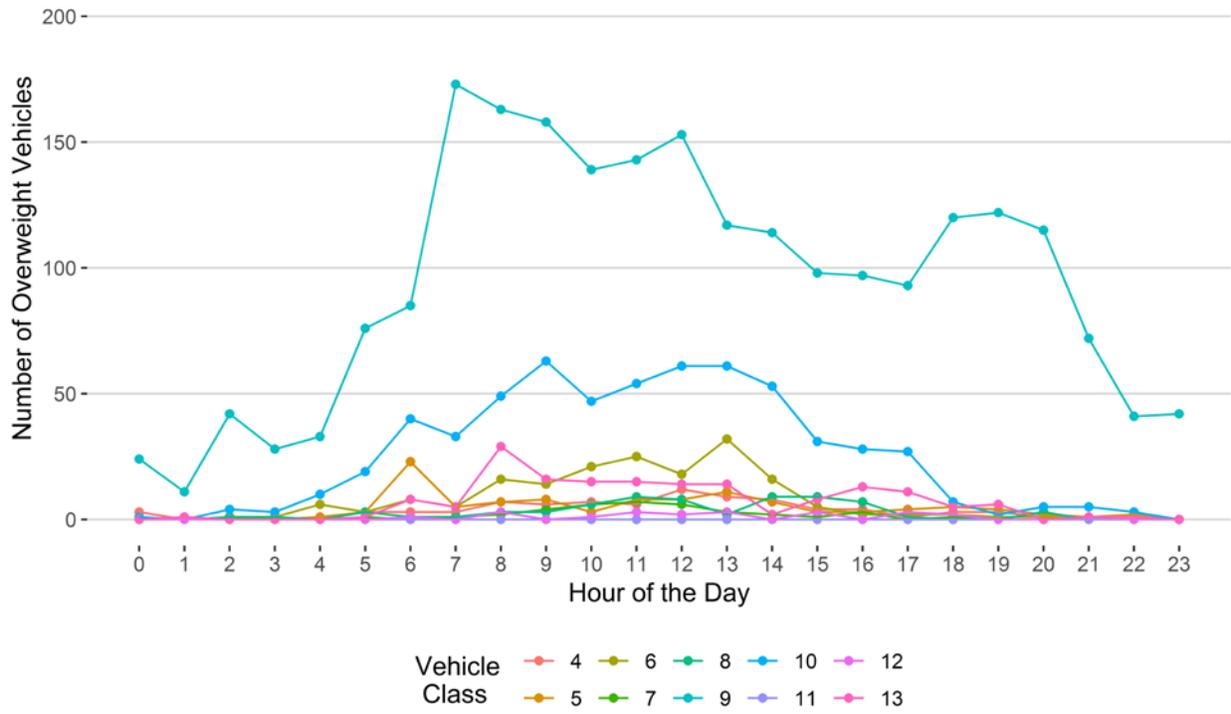


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

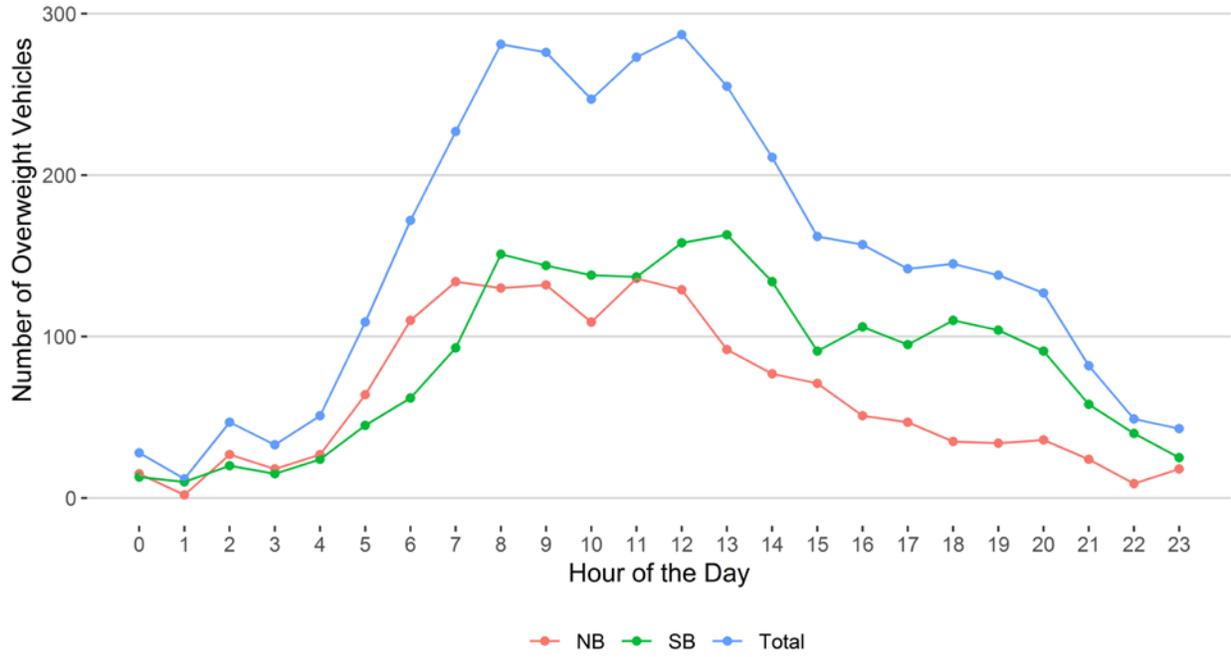
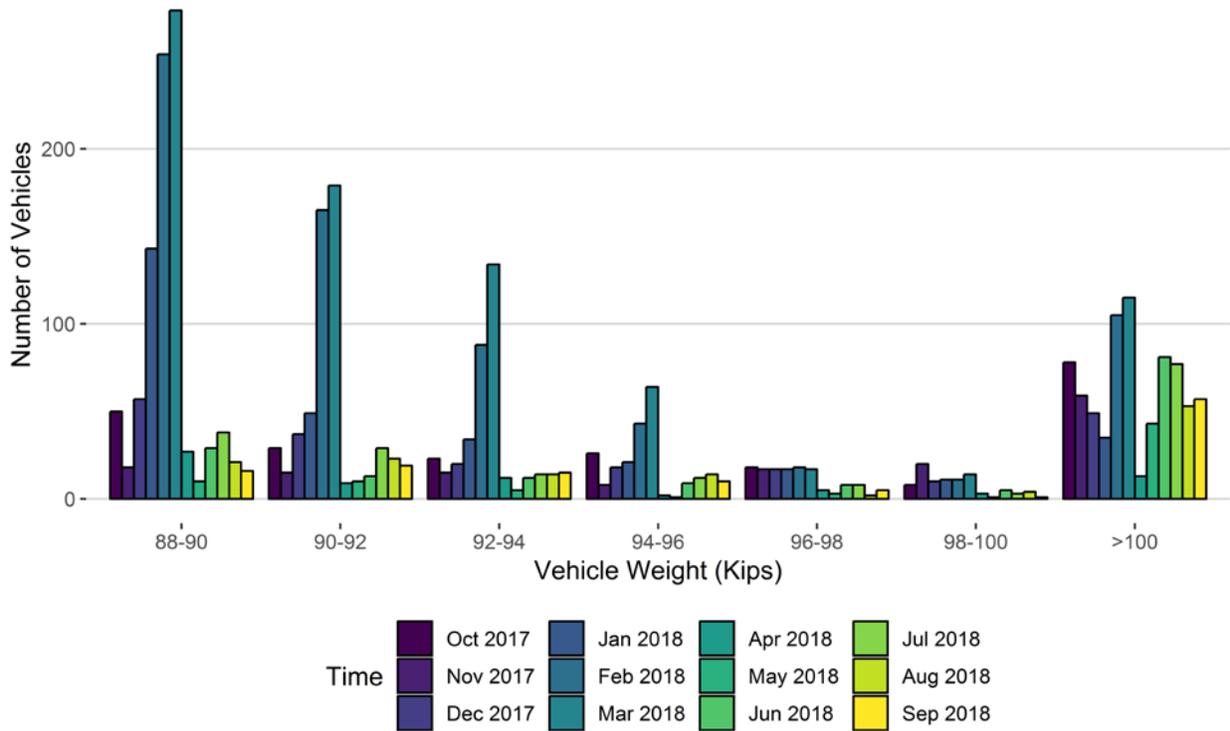
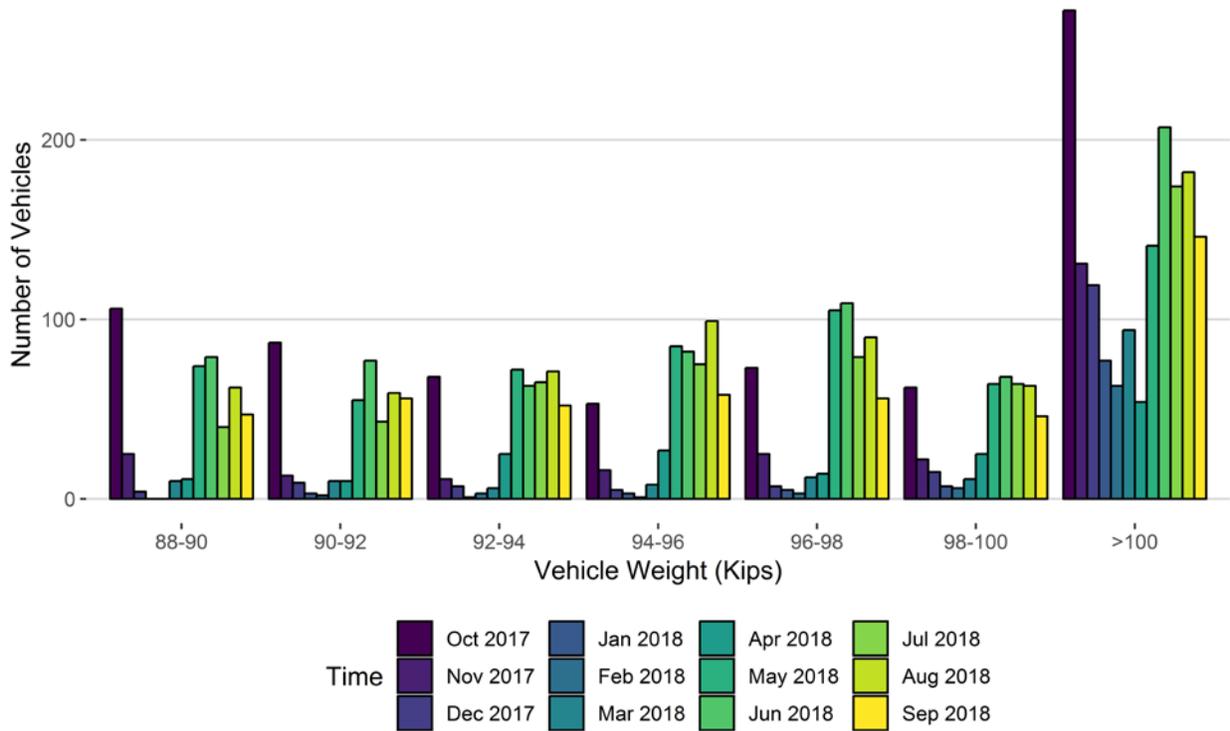


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
88-90	50	18	57	143	254	279	27	10	29	38	21	16
90-92	29	15	37	49	165	179	9	10	13	29	23	19
92-94	23	15	20	34	88	134	12	5	12	14	14	15
94-96	26	8	18	21	43	64	2	1	9	12	14	10
96-98	18	17	17	17	18	17	5	3	8	8	2	5
98-100	8	20	10	11	11	14	3	1	5	3	4	1
>100	78	59	49	35	105	115	13	43	81	77	53	57
Total	232	152	208	310	684	802	71	73	157	181	131	123

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



Vehicle Weights (Kips)	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
88-90	106	25	4	0	0	10	11	74	79	40	62	47
90-92	87	13	9	3	2	10	10	55	77	43	59	56
92-94	68	11	7	1	3	6	25	72	63	65	71	52
94-96	53	16	5	3	1	8	27	85	82	75	99	58
96-98	73	25	7	5	3	12	14	105	109	79	90	56
98-100	62	22	15	7	6	11	25	64	68	64	63	46
>100	272	131	119	77	63	94	54	141	207	174	182	146
Total	721	243	166	96	78	151	166	596	685	540	626	461

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

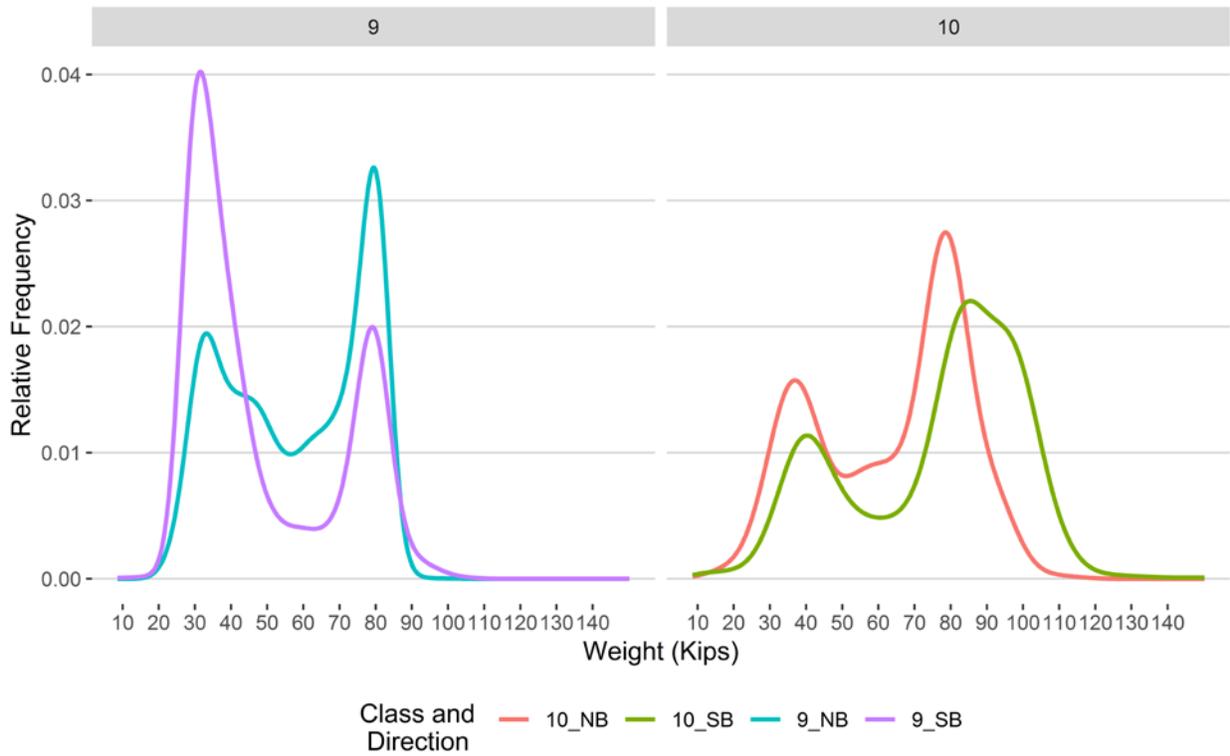


Figure 9 - Freight Percentage by Direction and Class

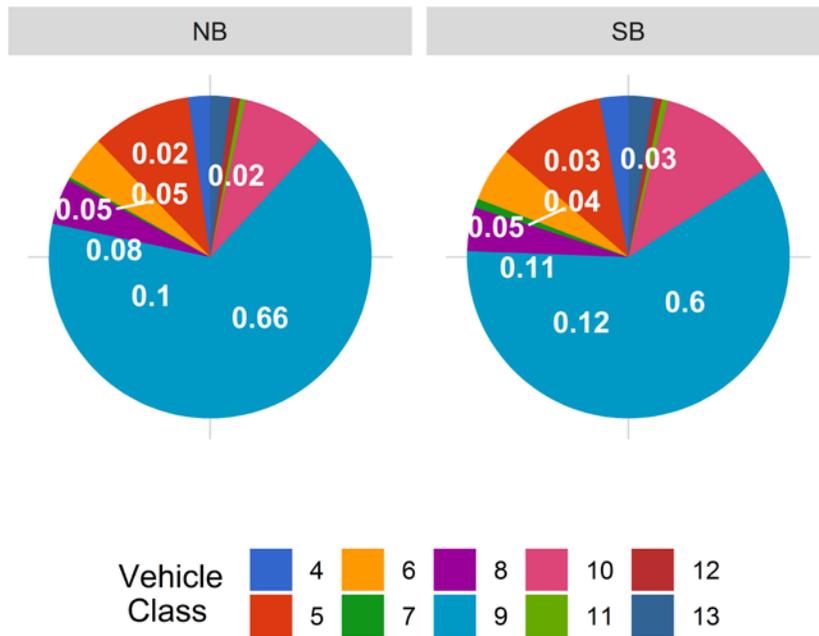


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

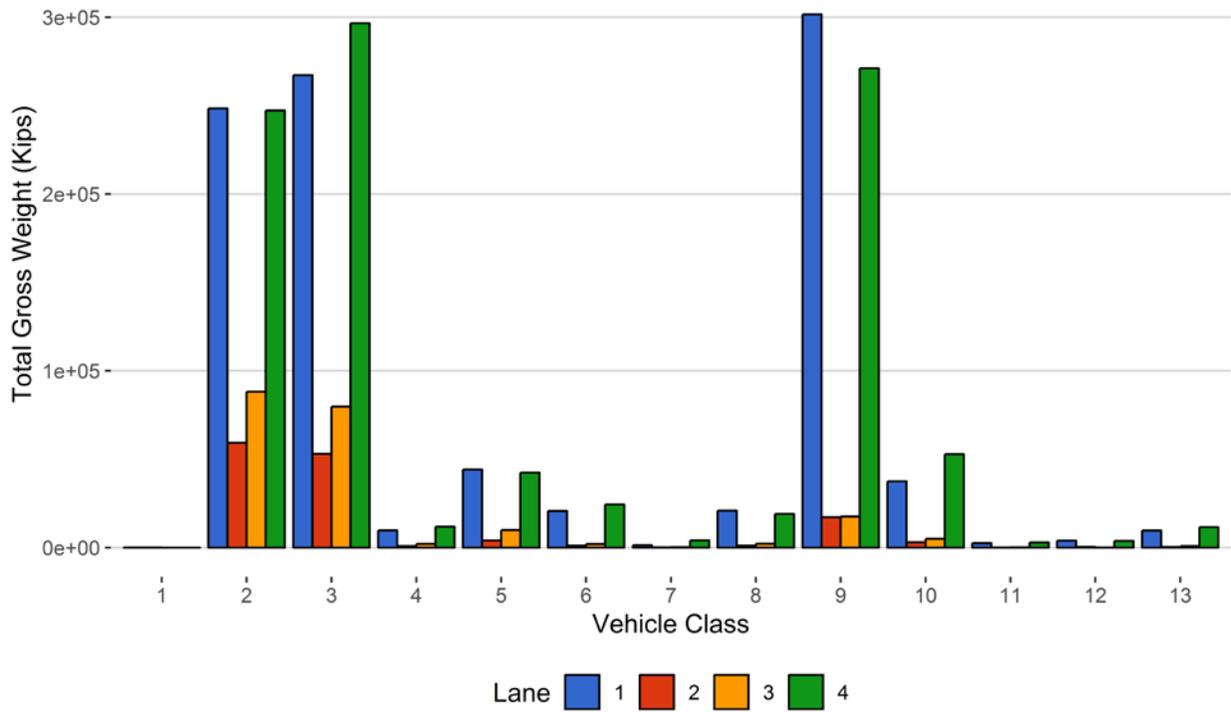


Figure 11 - Total Gross Vehicle Weight t

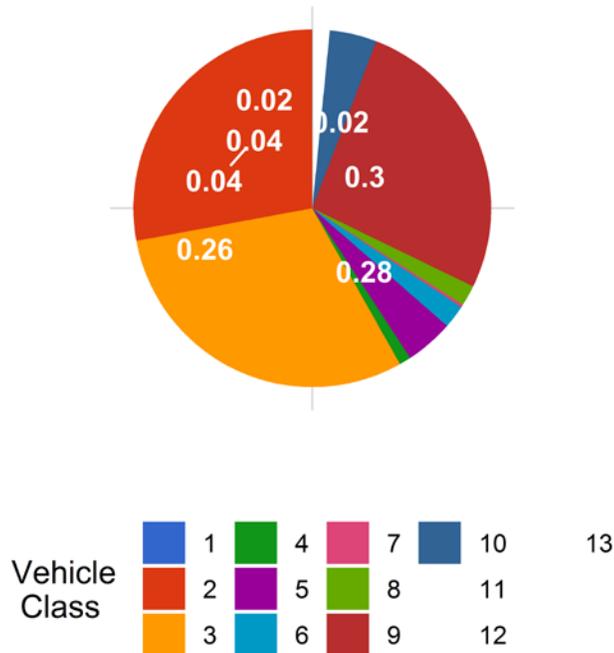


Figure 12 - Total ESALs by Class and Lane

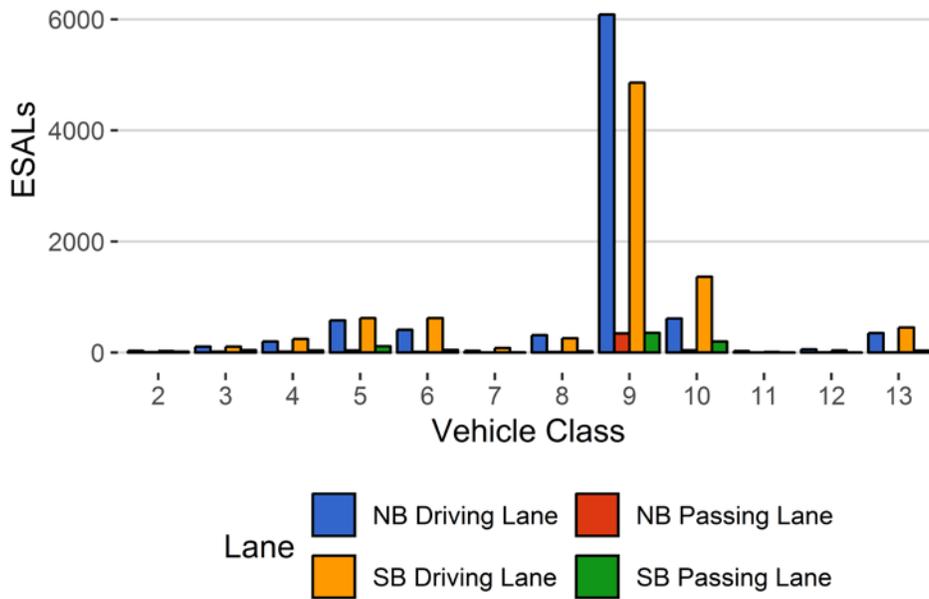
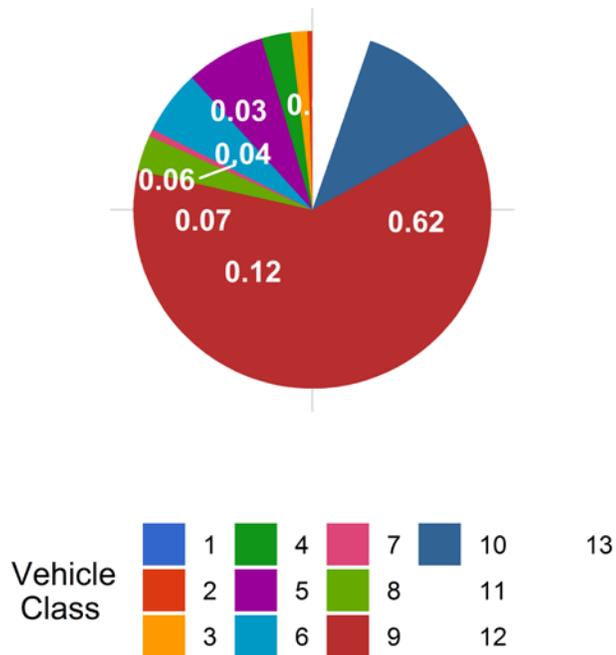


Figure 13 - ESALs by Class



**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

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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	1	34	0	0	0
2	5262	157869	55.3	0	0
3	3428	102841	36.1	0	0
4	30	899	0.3	86	2.4
5	230	6893	2.4	108	3.1
6	47	1418	0.5	178	5
7	4	113	0	37	1
8	56	1676	0.6	67	1.9
9	384	11506	4	2259	64
10	47	1409	0.5	606	17.2
11	7	205	0.1	0	0
12	5	147	0.1	22	0.6
13	7	217	0.1	165	4.7
<b>TOTAL</b>	<b>9508</b>	<b>285228</b>	<b>100</b>	<b>3528</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>
2018-09-11	Tuesday	05:33:47	10	SB	3	150.2
2018-09-26	Wednesday	05:39:51	9	NB	1	144.05
2018-09-22	Saturday	15:18:04	10	SB	4	136.69
2018-09-18	Tuesday	12:01:09	10	SB	4	128.95
2018-09-22	Saturday	11:21:39	10	SB	3	124.05
2018-09-24	Monday	16:10:57	10	SB	3	121.4
2018-09-26	Wednesday	17:05:13	10	SB	4	115.98
2018-09-04	Tuesday	20:16:00	10	SB	4	113.52
2018-09-04	Tuesday	10:49:45	10	SB	3	112.98
2018-09-09	Sunday	13:00:50	10	SB	3	112.82

**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	371	72	19.4	9671	933	2593
5	NB	8	3219	352	10.9	45596	2521	11330
6	NB	19	678	48	7.1	21040	801	4535
7	NB	11.5	28	0	0	1510	0	594
8	NB	31	789	414	52.5	14745	7234	1560
9	NB	33	5466	692	12.7	298318	20538	70388
10	NB	33.5	635	57	9	38737	1662	9687
11	NB	36.5	87	61	70.1	1513	1111	282
12	NB	36.5	75	8	10.7	4107	179	831
13	NB	31.5	99	0	0	9964	0	3423
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>11447</b>	<b>1704</b>	<b>****</b>	<b>445201</b>	<b>****</b>	<b>105223</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	520	83	16	12831	1093	3138
5	SB	8	3610	374	10.4	49624	2638	11868
6	SB	19	727	47	6.5	25488	838	6284
7	SB	11.5	84	0	0	4299	0	1667
8	SB	31	872	585	67.1	11121	10106	1112
9	SB	33	5934	1848	31.1	234086	54654	49624
10	SB	33.5	761	22	2.9	57206	574	16225
11	SB	36.5	116	92	79.3	1126	1839	125
12	SB	36.5	71	7	9.9	3620	168	642
13	SB	31.5	116	0	0	12380	0	4363
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>12811</b>	<b>3058</b>	<b>****</b>	<b>411781</b>	<b>****</b>	<b>95047</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>24258</b>	<b>4762</b>	<b>416</b>	<b>856982</b>	<b>106890</b>	<b>200270</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	28	9	6	3	45	0
2	248414	59265	88188	247271	643137	27.9
3	267210	53067	79748	296666	696691	30.2
4	9744	860	2094	11831	24528	1.1
5	44128	3989	9899	42364	100380	4.4
6	20722	1118	1979	24348	48167	2.1
7	1391	119	191	4108	5809	0.3
8	20865	1114	2197	19030	43205	1.9
9	301669	17187	17526	271214	607597	26.4
10	37487	2912	4953	52827	98179	4.3
11	2553	71	127	2838	5589	0.2
12	3892	394	61	3727	8074	0.4
13	9627	338	862	11518	22344	1
<b>TOTAL</b>	<b>967730</b>	<b>140443</b>	<b>207829</b>	<b>987745</b>	<b>2303746</b>	<b>100</b>
<b>GVW/LANE</b>	<b>42.01</b>	<b>6.1</b>	<b>9.02</b>	<b>42.88</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	0.0286
2	31	8	20	27	86	0.45	0.0011
3	107	17	46	109	280	1.48	0.0055
4	200	18	38	246	503	2.66	1.13
5	581	38	117	622	1358	7.17	0.4
6	411	17	50	623	1101	5.82	1.57
7	32	3	5	84	124	0.66	2.15
8	315	12	25	260	613	3.24	0.74
9	6084	345	357	4859	11645	61.54	2.05
10	614	42	200	1364	2219	11.73	3.17
11	30	0	0	14	44	0.23	0.46
12	60	7	0	40	108	0.57	1.45
13	352	5	35	452	844	4.46	7.48
<b>TOTAL</b>	<b>8817</b>	<b>511</b>	<b>894</b>	<b>8701</b>	<b>18923</b>	<b>100</b>	<b>21</b>
<b>ESALS/LANE</b>	<b>46.6</b>	<b>2.7</b>	<b>4.7</b>	<b>46</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>
Oct 2017	260529	8404	843	234384	90	26144.9	10	92.4	7.6
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
<b>TOTAL</b>	<b>3025360</b>	<b>-</b>	<b>-</b>	<b>2787276</b>	<b>-</b>	<b>238085</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>252113</b>	<b>8275</b>	<b>651</b>	<b>232273</b>	<b>92</b>	<b>19840</b>	<b>8</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>
Oct 2017	12228	695	965	10730	24619	93	7	6.3
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
<b>TOTAL</b>	<b>241730</b>	<b>7534</b>	<b>12593</b>	<b>107733</b>	<b>369591</b>	-	-	-
<b>AVERAGE</b>	<b>20144</b>	<b>628</b>	<b>1049</b>	<b>8978</b>	<b>30799</b>	<b>94</b>	<b>6</b>	<b>11</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>
Oct 2017	825230	86740	100718	162052	1174740
Nov 2017	818040	85005	93348	153344	1149736
Dec 2017	897695	103424	129546	244500	1375165
Jan 2018	749520	88531	110315	462367	1410733
Feb 2018	1019948	141819	177143	923114	2262024
Mar 2018	1194612	198846	235069	1090007	2718534
Apr 2018	1200888	197432	267870	1094248	2760438
May 2018	1173525	196694	261803	1096958	2728981
Jun 2018	969392	140464	208303	989554	2307712
Jul 2018	1034880	137948	160634	994865	2328327
Aug 2018	864848	109802	135880	388739	1499269
Sep 2018	847068	95361	130293	218569	1291292
<b>TOTAL</b>	<b>11595645</b>	<b>1582066</b>	<b>2010922</b>	<b>7818316</b>	<b>23006950</b>
<b>AVERAGE</b>	<b>966304</b>	<b>131839</b>	<b>167577</b>	<b>651526</b>	<b>1917246</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>
Oct 2017	5511	2.1	21.2	955	421
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
<b>TOTAL</b>	<b>40437</b>	<b>-</b>	<b>-</b>	<b>7845</b>	<b>3117</b>
<b>AVERAGE</b>	<b>3369.8</b>	<b>1.4</b>	<b>16.9</b>	<b>653.8</b>	<b>259.8</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>
Oct 2017	135565	112336	247902	54.7	45.3
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
<b>TOTAL</b>	<b>1440521</b>	<b>714084</b>	<b>2154605</b>	-	-
<b>AVERAGE</b>	<b>120043.4</b>	<b>59507</b>	<b>179550.4</b>	<b>71</b>	<b>29</b>