

AUGUST 2018



**WIM #38  
I-535, MP 1.1  
DULUTH, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #38 is located on I-535 near Duluth in St Louis county.

## System Operation

WIM #38 was operational for the entire month of August 2018. Volume was computed using all monthly data.

## System Calibration

WIM #38 was most recently calibrated on 2017-01-23. 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: 1185009 | Passenger Vehicles: 1112539 | Heavy Commercial Vehicles: 72470

Monthly Average Daily Traffic (MADT): 38226 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2338

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 Sundays. 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 72470 HCVs, 4562 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.4% of total monthly volume, and 6.7% 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 Tuesdays, with lowest volumes reported on Sundays. 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 55.9% 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 September.

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 ,57 NB vehicles exceeded 88,000 pounds (27 vehicles were Class 10's; 26 vehicles were Class 13's). Of vehicles traveling SB,

169 NB vehicles exceeded 88,000 pounds (111 vehicles were Class 10's; 51 vehicles were Class 13's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from August 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in August 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 521356 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (52.6%) than NB (47.4%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 9030 (Blatnik Bridge) is approximately 1.1 miles south of WIM #38, and Bridge No. 69808 is 0.45 miles south of WIM #38. A pair of bridges also exists 0.4 miles north of WIM #38 (Bridge No. 69801C on the NB side and Bridge No. 69801N on the SB side). WIM #38 recorded a total of 1185009 vehicles with a combined GVW of 7403395 kips (1 kip = 1,000 pounds = 0.5 tons) in August 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 45480 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.9% of all ESALs were recorded SB while 49.1% was observed NB. In particular, 56% of all ESALs were generated by the Class 9's (Class 9's

were also responsible for generating 19% 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).

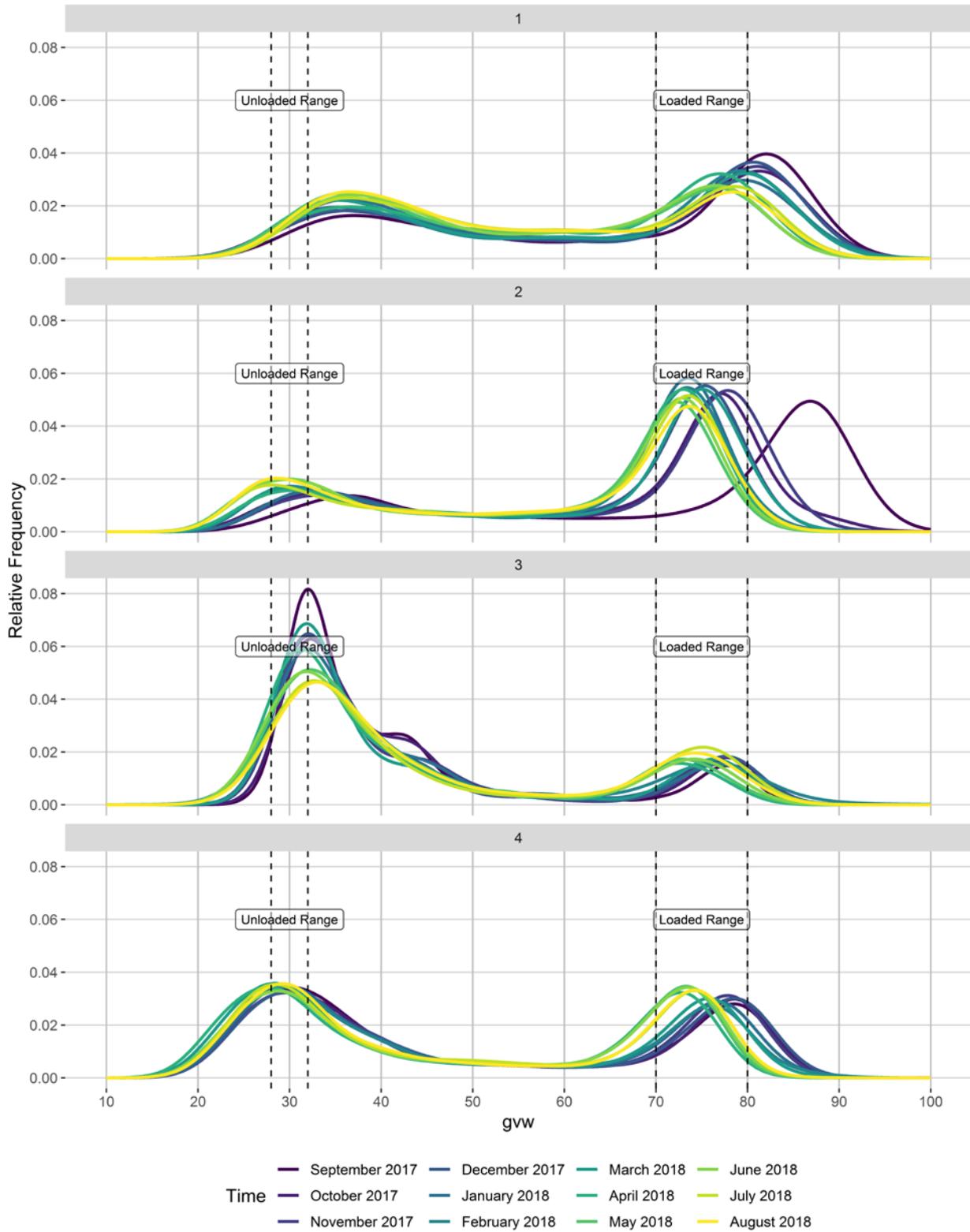
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

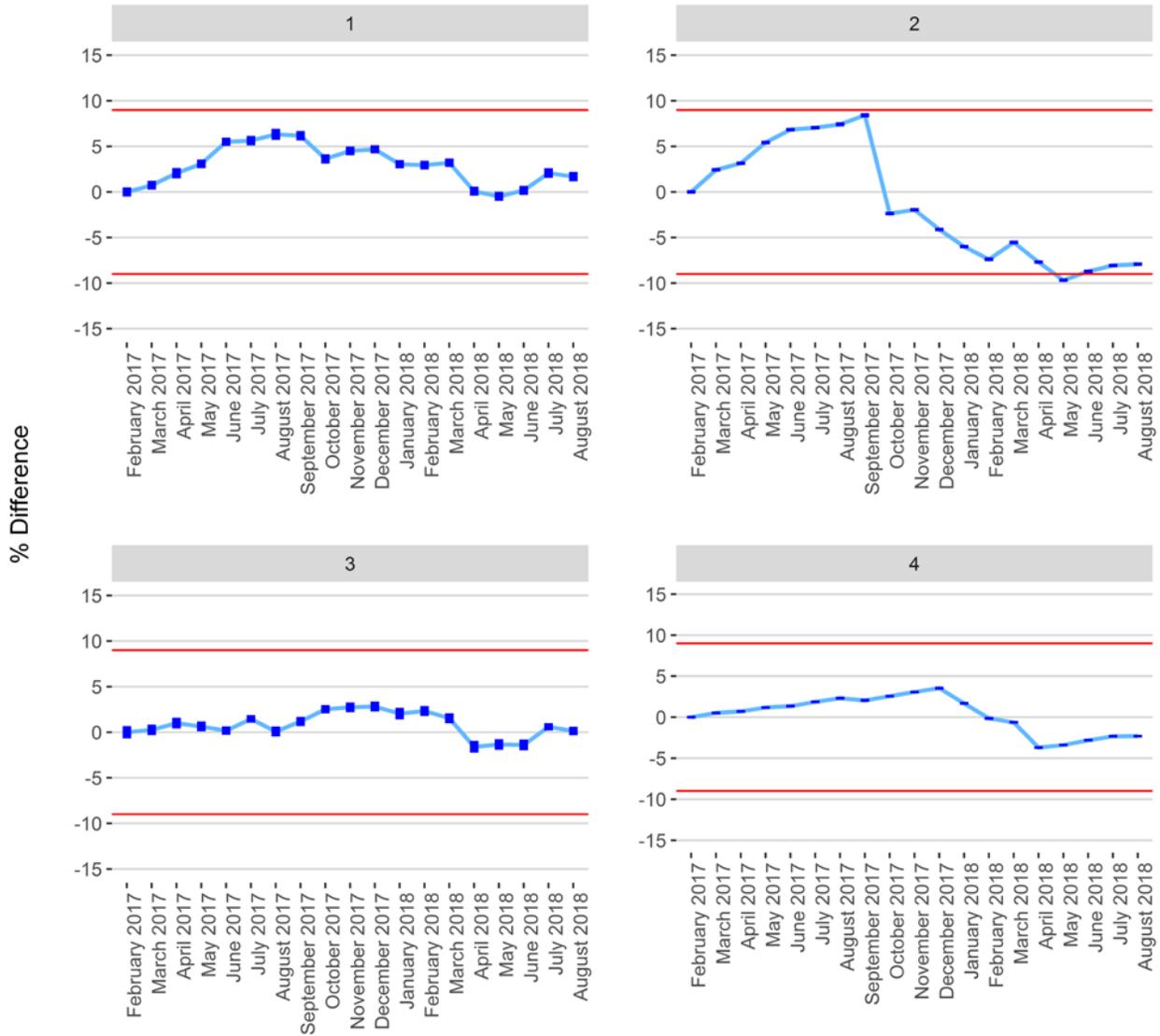
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Figure 1 - Monthly Class 9 GVW Histogram



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

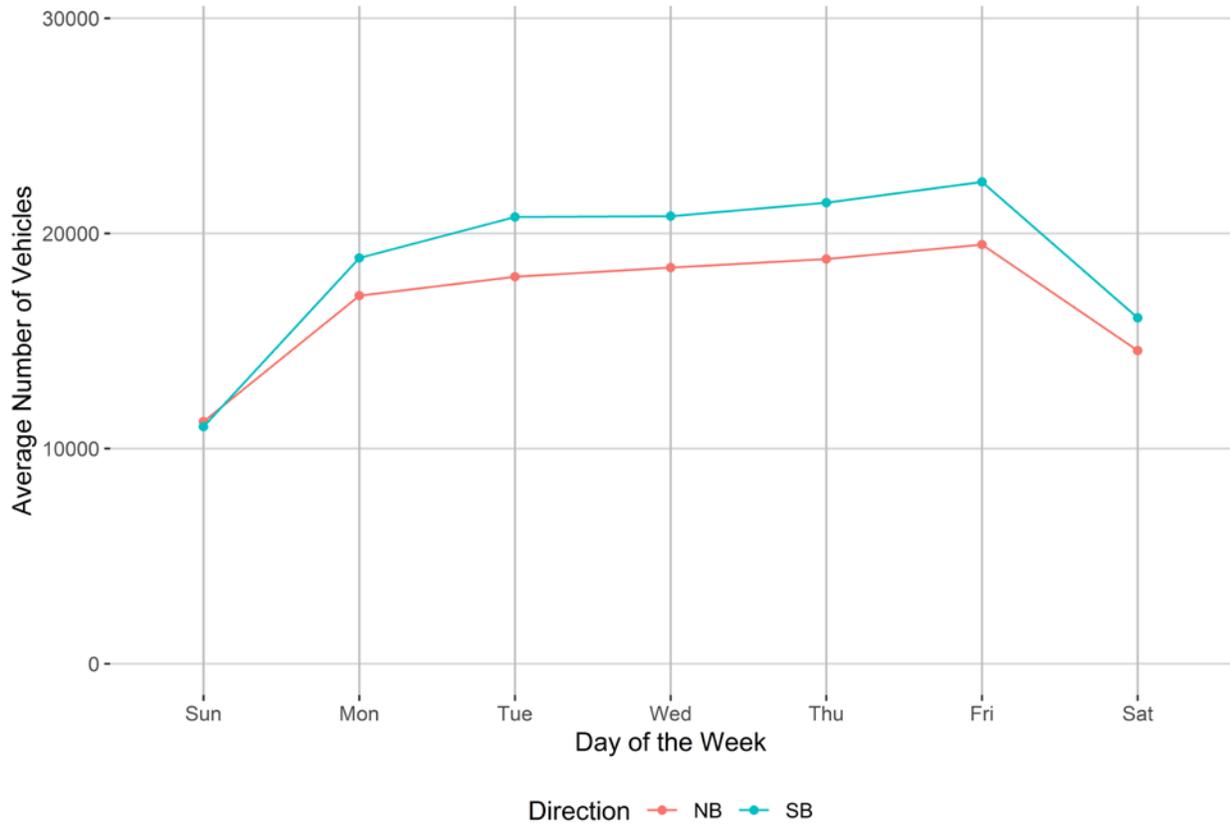


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

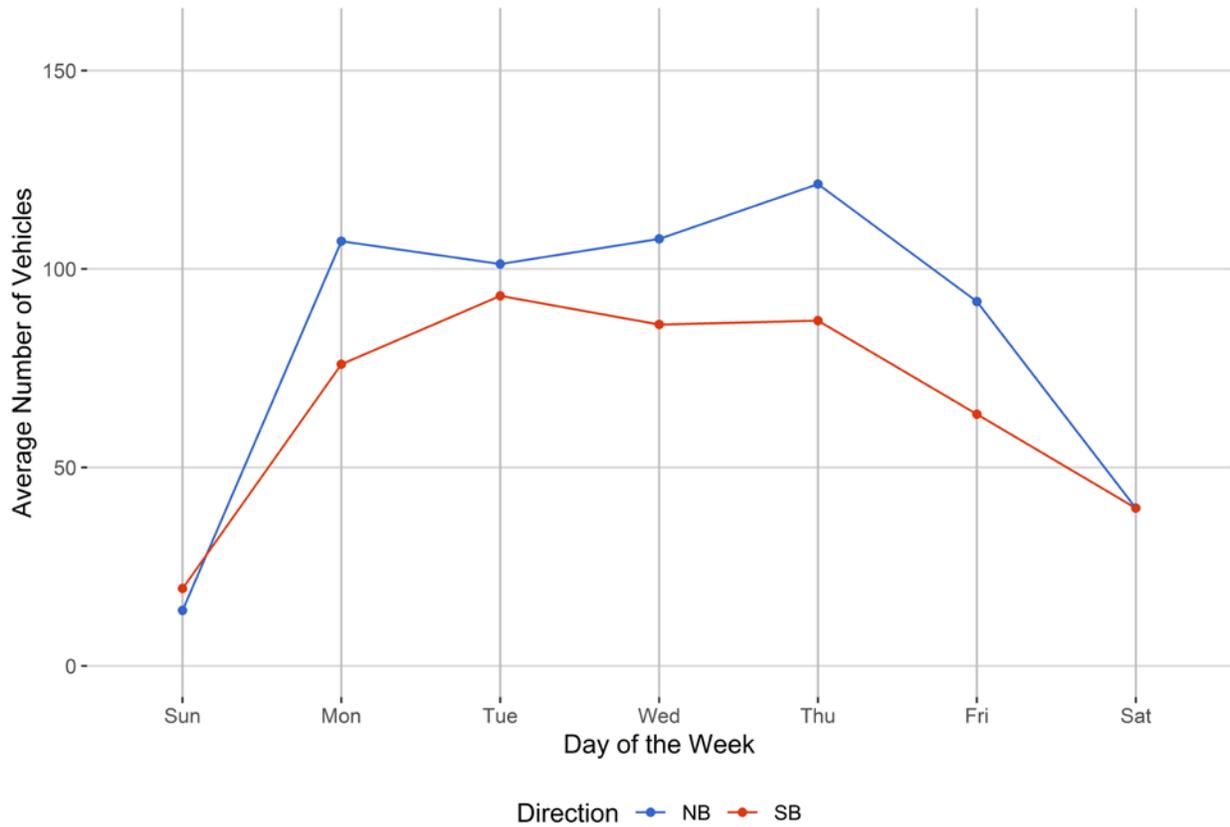


Figure 4 - Passenger Vehicles vs. Hour of the Day

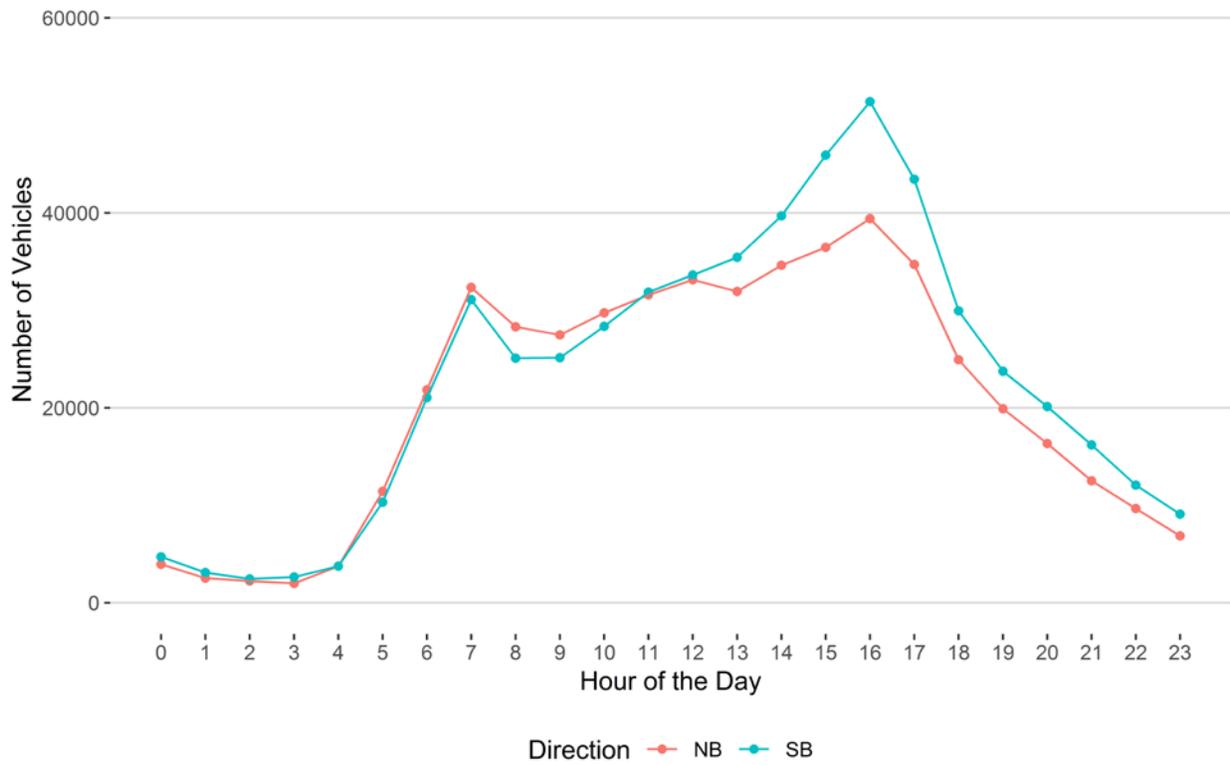


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

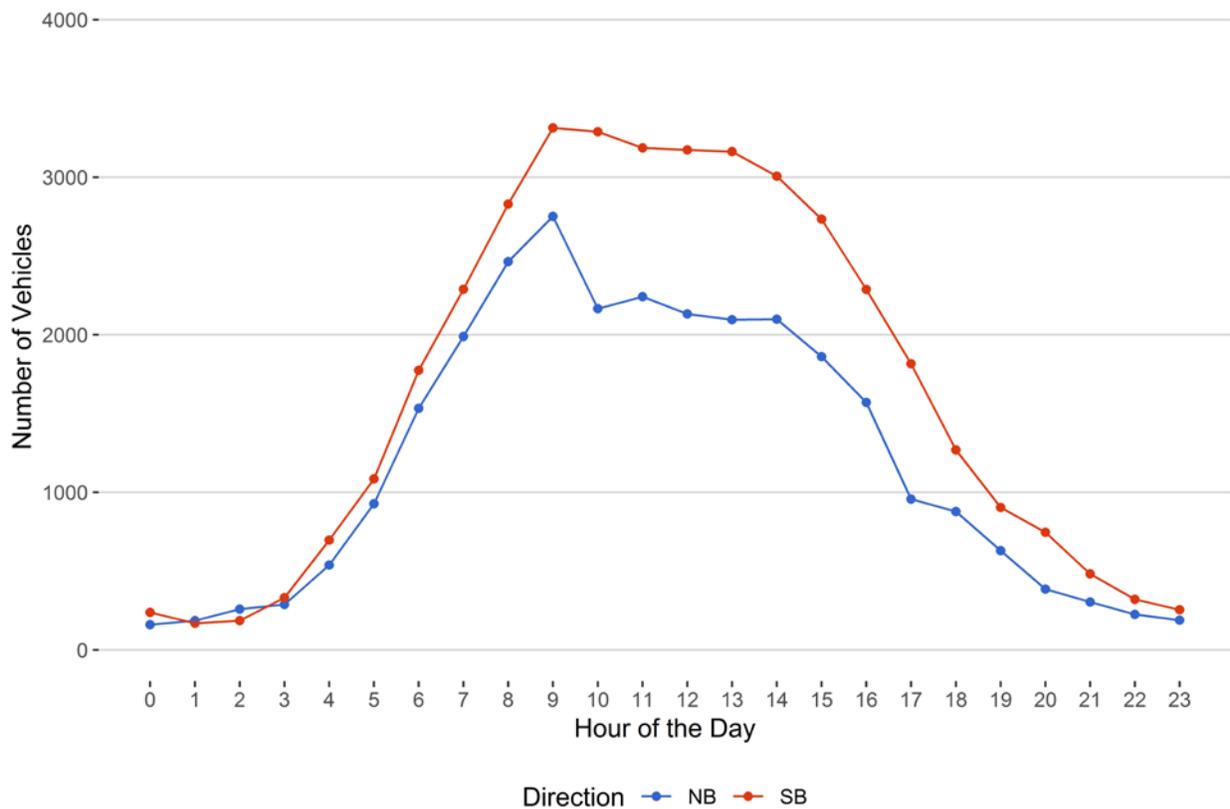


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

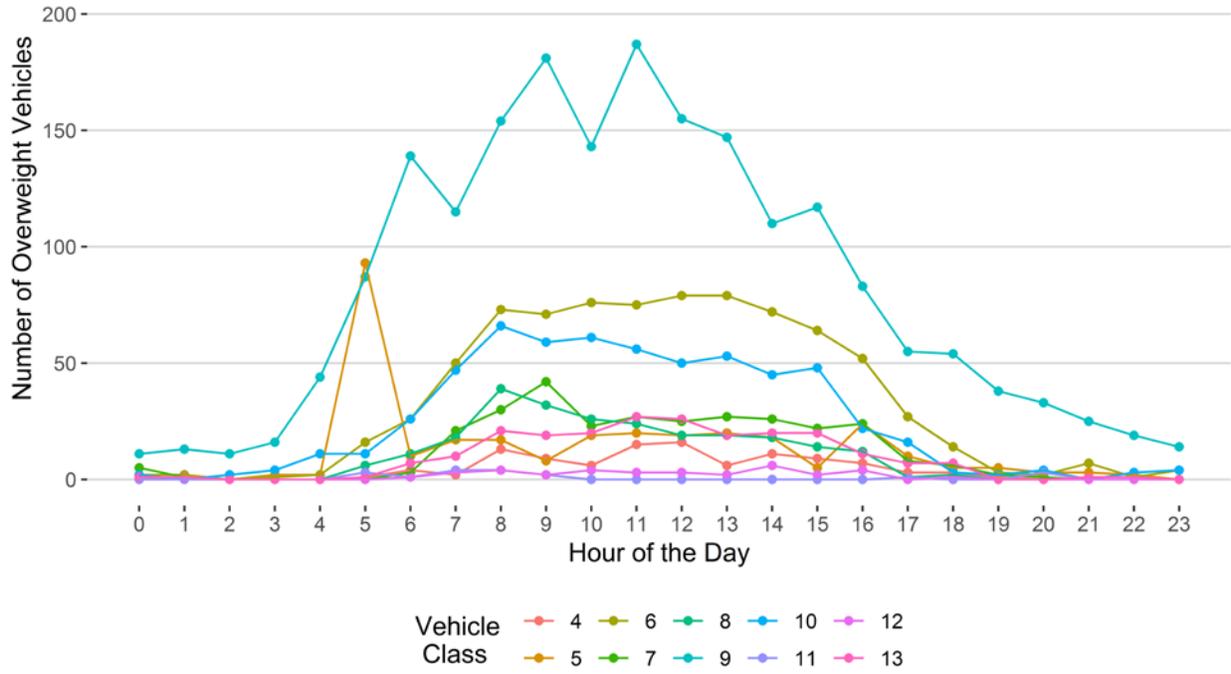


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

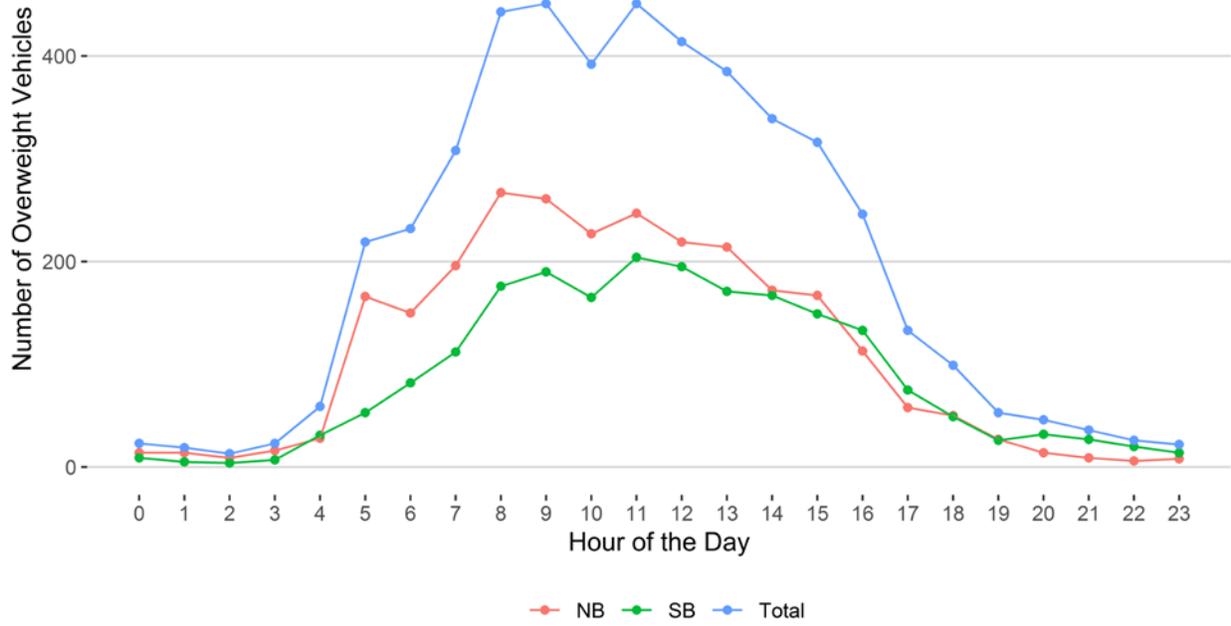
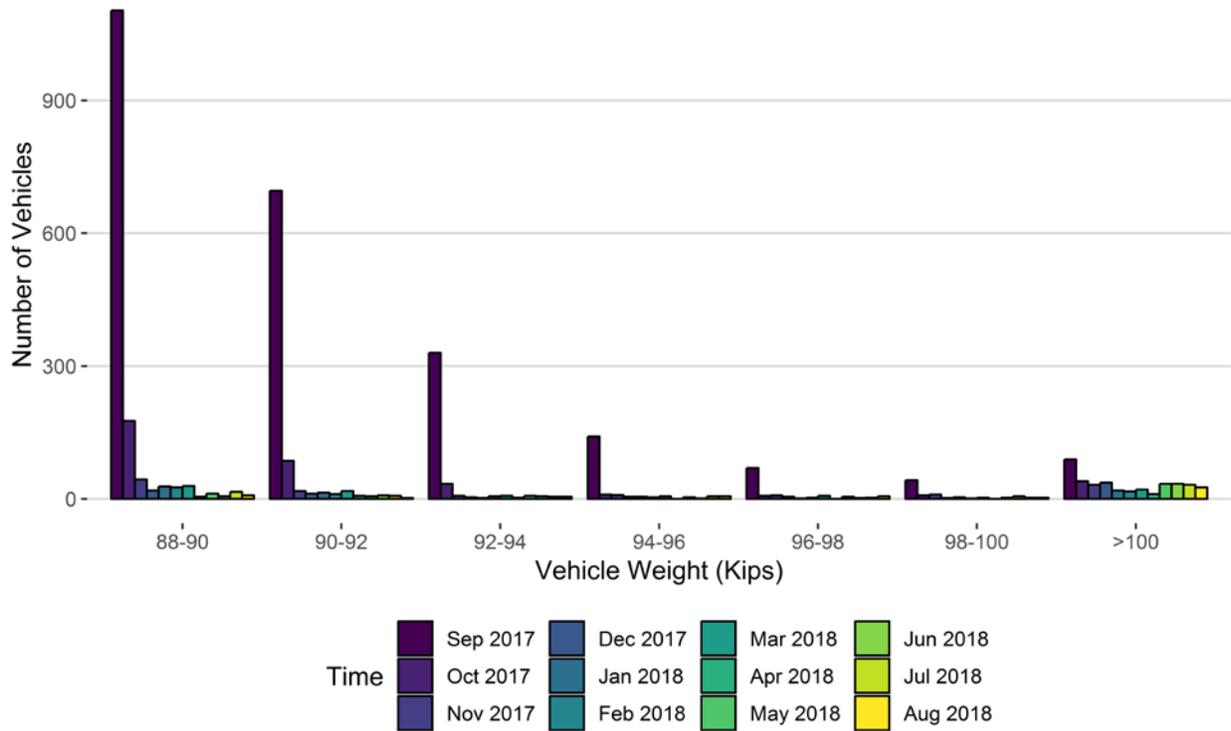
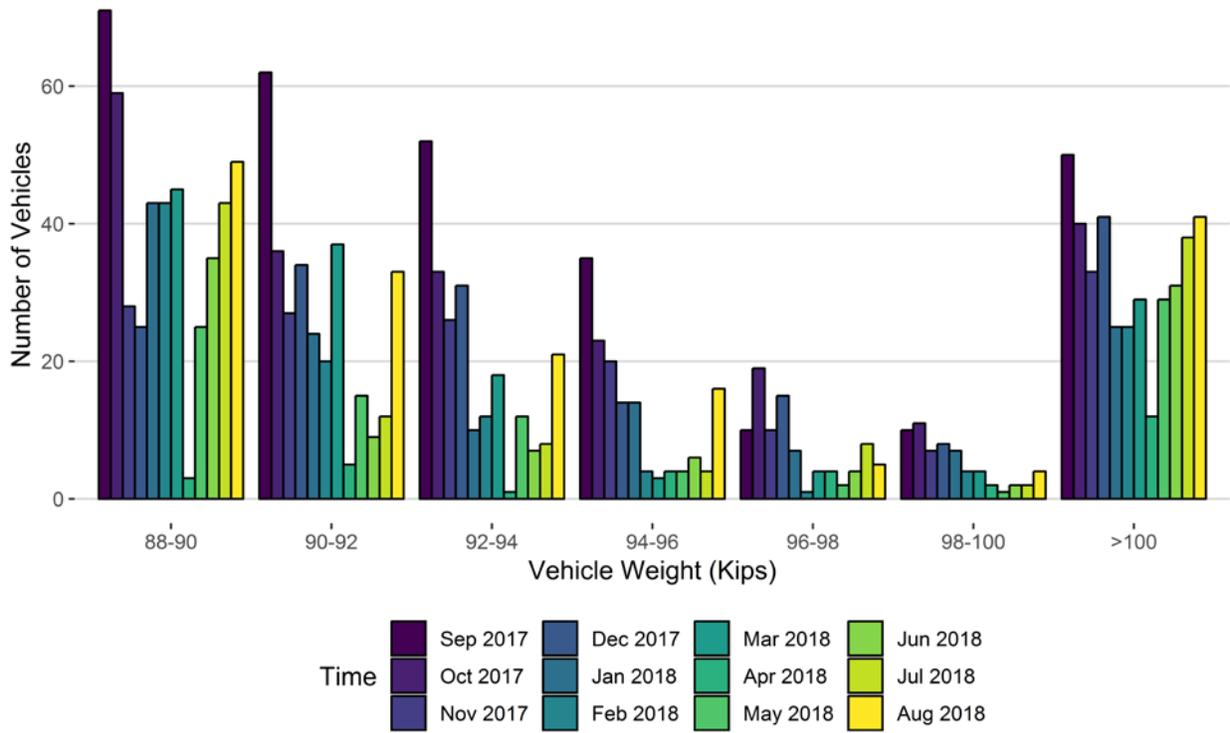


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018
88-90	1103	176	44	19	28	26	29	5	12	6	16	8
90-92	696	86	18	12	14	11	18	7	6	8	7	2
92-94	330	34	7	4	2	6	7	3	7	6	5	5
94-96	141	10	9	5	5	4	6	0	4	1	6	6
96-98	70	7	8	5	1	3	7	0	5	2	3	6
98-100	42	8	10	2	4	1	3	0	3	6	3	3
>100	89	40	32	37	19	17	21	11	34	34	32	26
Total	2471	361	128	84	73	68	91	26	71	63	72	56

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



Vehicle Weights (Kips)	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018
88-90	71	59	28	25	43	43	45	3	25	35	43	49
90-92	62	36	27	34	24	20	37	5	15	9	12	33
92-94	52	33	26	31	10	12	18	1	12	7	8	21
94-96	35	23	20	14	14	4	3	4	4	6	4	16
96-98	10	19	10	15	7	1	4	4	2	4	8	5
98-100	10	11	7	8	7	4	4	2	1	2	2	4
>100	50	40	33	41	25	25	29	12	29	31	38	41
Total	290	221	151	168	130	109	140	31	88	94	115	169

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

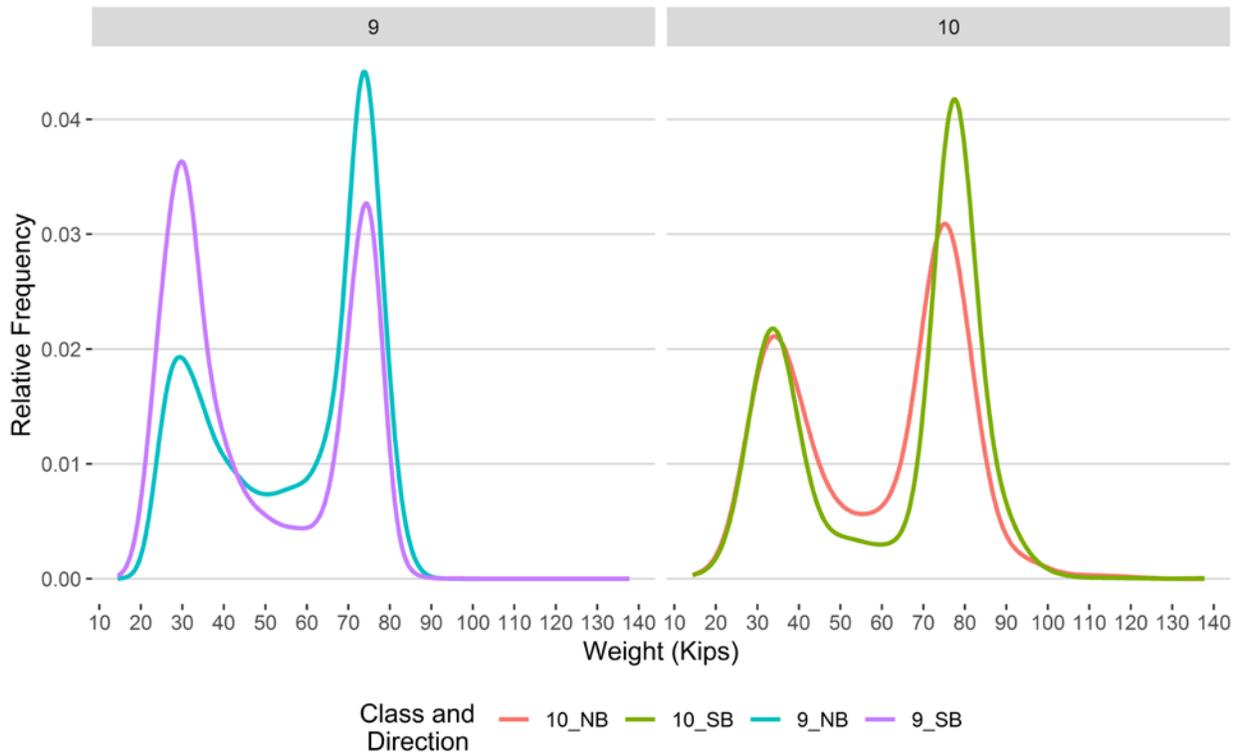


Figure 9 - Freight Percentage by Direction and Class

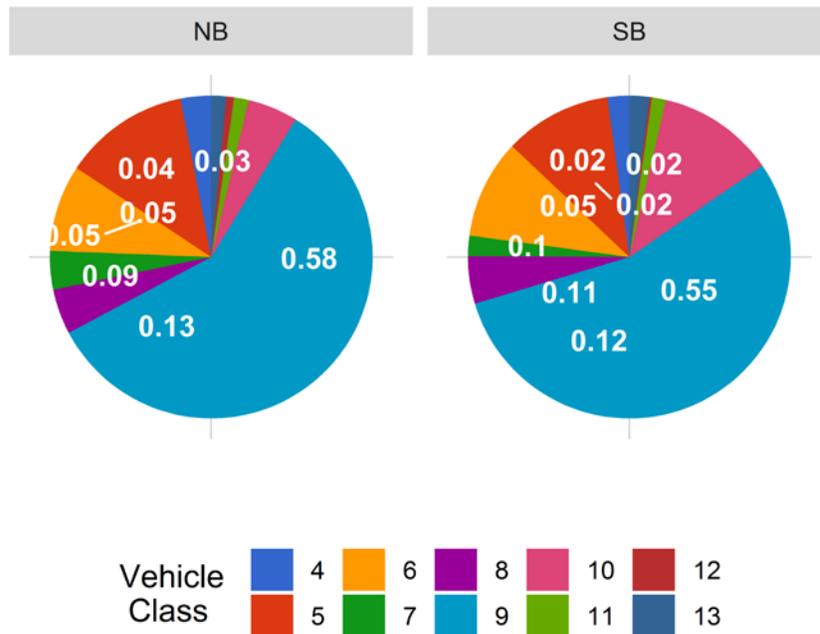


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

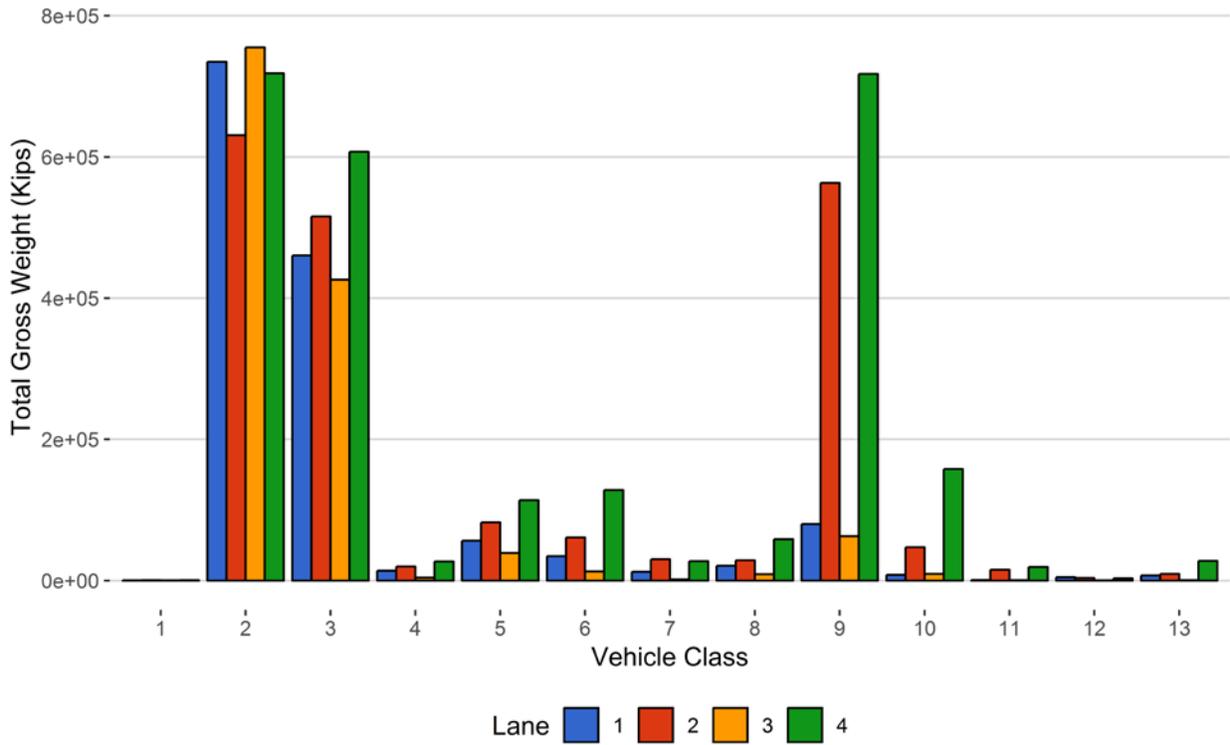


Figure 11 - Total Gross Vehicle Weight t

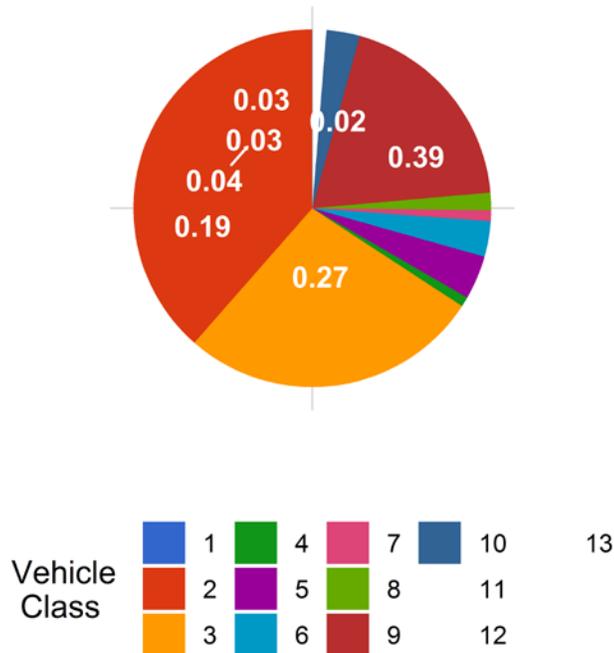


Figure 12 - Total ESALs by Class and Lane

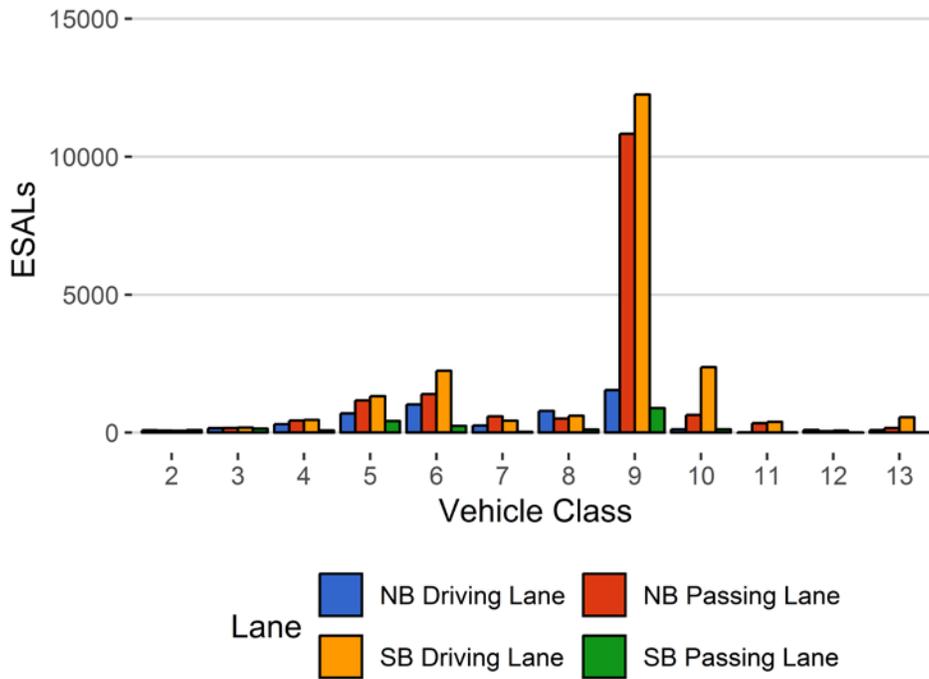
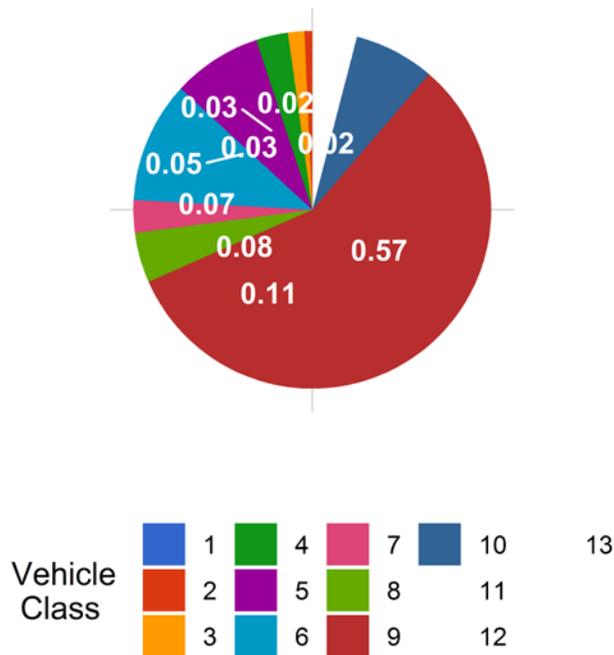


Figure 13 - ESALs by Class



**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>
February 2017	11.58	0.00	11.71	0.00	11.07	0.00	10.45	0.00
March 2017	11.67	0.74	12.00	2.43	11.10	0.26	10.50	0.53
April 2017	11.82	2.05	12.08	3.15	11.18	1.00	10.52	0.71
May 2017	11.94	3.09	12.35	5.42	11.14	0.64	10.57	1.18
June 2017	12.22	5.51	12.51	6.84	11.09	0.18	10.59	1.36
July 2017	12.23	5.63	12.54	7.05	11.23	1.46	10.64	1.87
August 2017	12.31	6.32	12.58	7.42	11.08	0.08	10.69	2.32
September 2017	12.29	6.17	12.70	8.41	11.20	1.18	10.66	2.06
October 2017	12.00	3.63	11.43	-2.37	11.35	2.52	10.72	2.56
November 2017	12.10	4.50	11.48	-1.96	11.37	2.73	10.77	3.08
December 2017	12.12	4.67	11.23	-4.12	11.38	2.82	10.82	3.54
January 2018	11.93	3.05	11.01	-6.00	11.30	2.06	10.63	1.69
February 2018	11.92	2.95	10.85	-7.39	11.33	2.33	10.43	-0.15
March 2018	11.95	3.20	11.06	-5.53	11.24	1.53	10.38	-0.63
April 2018	11.59	0.09	10.81	-7.70	10.89	-1.59	10.06	-3.69
May 2018	11.52	-0.49	10.58	-9.68	10.92	-1.34	10.09	-3.39
June 2018	11.60	0.17	10.69	-8.71	10.91	-1.39	10.16	-2.80
July 2018	11.82	2.08	10.77	-8.07	11.13	0.60	10.21	-2.33
August 2018	11.78	1.69	10.78	-7.92	11.08	0.13	10.21	-2.30

**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	49	1525	0.1	0	0
2	24637	763745	64.5	0	0
3	11202	347269	29.3	0	0
4	72	2236	0.2	107	2.3
5	736	22810	1.9	303	6.6
6	251	7779	0.7	798	17.5
7	42	1313	0.1	293	6.4
8	130	4015	0.3	241	5.3
9	933	28913	2.4	1951	42.8
10	124	3856	0.3	595	13
11	24	758	0.1	18	0.4
12	6	195	0	37	0.8
13	19	596	0.1	219	4.8
<b>TOTAL</b>	<b>38226</b>	<b>1185009</b>	<b>100</b>	<b>4562</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>
2018-08-08	Wednesday	16:53:14	10	SB	4	137.76
2018-08-08	Wednesday	10:30:51	10	SB	4	122.42
2018-08-01	Wednesday	15:33:12	10	NB	2	119.89
2018-08-20	Monday	07:19:06	10	NB	1	115.48
2018-08-01	Wednesday	07:00:50	10	SB	4	114.55
2018-08-15	Wednesday	10:57:38	10	SB	4	112.9
2018-08-27	Monday	09:43:12	10	NB	1	111.6
2018-08-30	Thursday	07:03:30	10	NB	2	107.59
2018-08-21	Tuesday	07:55:07	10	SB	3	107
2018-08-01	Wednesday	07:03:04	10	NB	2	106.66

**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	1044	127	12.2	32109	1623	9177
5	NB	8	10023	1403	14	128770	10226	29905
6	NB	19	2809	371	13.2	89286	6265	21482
7	NB	11.5	722	0	0	42631	0	17164
8	NB	31	1448	716	49.4	34637	15189	5973
9	NB	33	11200	2075	18.5	584570	58510	141722
10	NB	33.5	942	161	17.1	50500	4865	12168
11	NB	36.5	314	47	15	15157	969	2706
12	NB	36.5	131	7	5.3	8399	155	1936
13	NB	31.5	200	1	0.5	16422	20	5077
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>28833</b>	<b>4908</b>	<b>****</b>	<b>1002482</b>	<b>****</b>	<b>247311</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	1066	157	14.7	29122	1970	7744
5	SB	8	11500	2117	18.4	138166	14816	31551
6	SB	19	4531	479	10.6	133262	7836	28137
7	SB	11.5	517	0	0	28997	0	11526
8	SB	31	2340	1447	61.8	34048	33540	3183
9	SB	33	16081	6014	37.4	612436	168035	140113
10	SB	33.5	2696	441	16.4	154071	13168	39264
11	SB	36.5	401	97	24.2	17505	2486	3204
12	SB	36.5	53	6	11.3	3310	153	797
13	SB	31.5	362	0	0	28457	0	8527
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>39547</b>	<b>10758</b>	<b>****</b>	<b>1179375</b>	<b>****</b>	<b>274046</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>68380</b>	<b>15666</b>	<b>340</b>	<b>2181857</b>	<b>339825</b>	<b>521356</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	431	523	451	533	1938	0
2	734852	630764	755219	718378	2839212	38.5
3	460417	515623	426095	607309	2009444	27.3
4	13889	19843	4121	26972	64825	0.9
5	56538	82458	39089	113892	291977	4
6	34389	61162	12856	128242	236649	3.2
7	12433	30198	1644	27353	71628	1
8	21032	28794	8922	58667	117415	1.6
9	79900	563180	62866	717605	1423551	19.3
10	8122	47243	9266	157973	222604	3
11	713	15414	653	19337	36117	0.5
12	4849	3705	255	3208	12017	0.2
13	7150	9292	543	27914	44899	0.6
<b>TOTAL</b>	<b>1434714</b>	<b>2008199</b>	<b>1321980</b>	<b>2607382</b>	<b>7372275</b>	<b>100</b>
<b>GVW/LANE</b>	<b>19.46</b>	<b>27.24</b>	<b>17.93</b>	<b>35.37</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	7e-04
2	88	70	91	68	317	0.71	9e-04
3	164	171	140	183	658	1.47	0.004
4	312	440	78	464	1294	2.89	1.23
5	697	1170	422	1322	3610	8.08	0.34
6	1020	1396	247	2245	4908	10.98	1.34
7	260	596	28	432	1316	2.94	2.12
8	786	511	112	610	2019	4.52	1.07
9	1544	10833	894	12256	25528	57.1	1.87
10	122	643	120	2376	3261	7.29	1.79
11	7	341	10	389	748	1.67	2.08
12	100	54	2	70	227	0.51	2.38
13	92	166	7	556	821	1.84	2.88
<b>TOTAL</b>	<b>5192</b>	<b>16390</b>	<b>2153</b>	<b>20971</b>	<b>44706</b>	<b>100</b>	<b>17</b>
<b>ESALS/LANE</b>	<b>11.6</b>	<b>36.7</b>	<b>4.8</b>	<b>46.9</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>
Sep 2017	1051344	35045	2281	982913	93.5	68430.8	6.5	60.3	39.7
Oct 2017	1057921	34126	2165	990812	93.7	67109	6.3	60	40
Nov 2017	923269	30776	1811	868925	94.1	54344.1	5.9	60.9	39.1
Dec 2017	913329	29462	1624	862996	94.5	50333.1	5.5	60.5	39.5
Jan 2018	858959	27708	1616	808848	94.2	50110.6	5.8	60.1	39.9
Feb 2018	795786	28421	1662	749260	94.2	46525.6	5.8	59.1	40.9
Mar 2018	957360	30883	1728	903798	94.4	53562.5	5.6	60.8	39.2
Apr 2018	934763	31159	1628	885913	94.8	48850.1	5.2	60.9	39.1
May 2018	1053607	33987	1904	994590	94.4	59016.7	5.6	61.7	38.3
Jun 2018	1050563	35019	2037	989463	94.2	61099.9	5.8	60.7	39.3
Jul 2018	1102714	35571	2065	1038708	94.2	64005.8	5.8	59	41
Aug 2018	1185009	38226	2338	1112539	93.9	72469.6	6.1	61.4	38.6
<b>TOTAL</b>	<b>11884624</b>	<b>-</b>	<b>-</b>	<b>11188765</b>	<b>-</b>	<b>695858</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERA GE</b>	<b>990385</b>	<b>32532</b>	<b>1905</b>	<b>932397</b>	<b>94</b>	<b>57988</b>	<b>6</b>	<b>60</b>	<b>40</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>
Sep 2017	5516	27204	1410	19085	53216	46	54	32.1
Oct 2017	5387	21860	1938	23245	52430	55	45	3.5
Nov 2017	4502	18335	1386	19614	43837	55	45	2.6
Dec 2017	5033	14652	1411	18341	39436	59	41	3.4
Jan 2018	3867	13495	1148	15629	34139	57	43	3.7
Feb 2018	4269	13000	1411	14675	33354	57	43	2.6
Mar 2018	4256	15982	1290	16709	38236	55	45	3.5
Apr 2018	2887	12198	902	12945	28932	55	45	0.4
May 2018	4057	12762	1206	16207	34231	59	41	1.4
Jun 2018	4502	14753	1337	17081	37672	57	43	1.4
Jul 2018	5462	15767	2447	17423	41100	56	44	1.5
Aug 2018	5680	16641	2158	21001	45480	59	41	2.5
<b>TOTAL</b>	<b>55417</b>	<b>196650</b>	<b>18043</b>	<b>211954</b>	<b>482063</b>	-	-	-
<b>AVERAGE</b>	<b>4618</b>	<b>16388</b>	<b>1504</b>	<b>17663</b>	<b>40172</b>	<b>56</b>	<b>44</b>	<b>5</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>
Sep 2017	1100540	1437948	924675	1711001	5174164
Oct 2017	1096990	1404045	940384	1574511	5015929
Nov 2017	1259004	1655262	1055154	1973361	5942780
Dec 2017	1149562	1493254	972731	1803124	5418670
Jan 2018	1319432	1720244	1091705	2152815	6284196
Feb 2018	1325028	1870703	1115831	2261593	6573155
Mar 2018	1448213	1938169	1296696	2275279	6958356
Apr 2018	1453125	2018291	1322478	2609501	7403395
May 2018	1153419	1839408	961714	1968958	5923499
Jun 2018	1397531	2035396	1222254	2396951	7052132
Jul 2018	1205042	1716301	1046717	2030046	5998106
Aug 2018	1216056	1589362	1057242	1926795	5789455
<b>TOTAL</b>	<b>15123942</b>	<b>20718380</b>	<b>13007581</b>	<b>24683933</b>	<b>73533837</b>
<b>AVERAGE</b>	<b>1260329</b>	<b>1726532</b>	<b>1083965</b>	<b>2056994</b>	<b>6127820</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>
Sep 2017	12595	1.5	23.5	2766	192
Oct 2017	9515	0.9	14.5	584	99
Nov 2017	7927	0.9	14.9	279	82
Dec 2017	6568	0.7	13.3	253	88
Jan 2018	4336	0.5	9.3	204	55
Feb 2018	4386	0.6	9.6	178	48
Mar 2018	4983	0.5	9.5	232	58
Apr 2018	2100	0.2	4.5	57	25
May 2018	2603	0.3	4.6	159	67
Jun 2018	3262	0.3	5.4	158	73
Jul 2018	4147	0.4	6.6	187	75
Aug 2018	4748	0.4	6.8	226	74
<b>TOTAL</b>	<b>67170</b>	<b>-</b>	<b>-</b>	<b>5283</b>	<b>936</b>
<b>AVERAGE</b>	<b>5597.5</b>	<b>0.6</b>	<b>10.2</b>	<b>440.2</b>	<b>78</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>
Sep 2017	297263	219100	516363	57.6	42.4
Oct 2017	293703	260883	554586	53	47
Nov 2017	235864	214931	450795	52.3	47.7
Dec 2017	206917	196474	403391	51.3	48.7
Jan 2018	193276	170391	363667	53.1	46.9
Feb 2018	190177	163838	354015	53.7	46.3
Mar 2018	219841	189443	409283	53.7	46.3
Apr 2018	176275	162266	338541	52.1	47.9
May 2018	195567	213437	409004	47.8	52.2
Jun 2018	219771	218945	438715	50.1	49.9
Jul 2018	234161	233004	467165	50.1	49.9
Aug 2018	247311	274046	521356	47.4	52.6
<b>TOTAL</b>	<b>2710125</b>	<b>2516757</b>	<b>5226882</b>	-	-
<b>AVERAGE</b>	<b>225843.8</b>	<b>209729.7</b>	<b>435573.5</b>	<b>51.9</b>	<b>48.1</b>