

AUGUST 2018



**WIM #32  
US 52, MP 66.0  
ORONOCO, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #32 is located on US 52 near Oronoco in Olmsted county.

## System Operation

WIM #32 was operational for the entire month of August 2018. Volume was computed using all monthly data.

## System Calibration

WIM #32 was most recently calibrated on 2017-05-05. 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: 1096236 | Passenger Vehicles: 1010488 | Heavy Commercial Vehicles: 85748

Monthly Average Daily Traffic (MADT): 35362 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2766

See Table 2 for vehicle class breakdown

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

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Mondays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on 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 07 AM 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 07 AM 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 85748 HCVs, 2373 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.2% of total monthly volume, and 2.8% 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 Saturdays. 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 69.9% 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 June.

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 ,114 NB vehicles exceeded 88,000 pounds (55 vehicles were Class 13's; 38 vehicles were Class 10's). Of vehicles traveling SB,

102 NB vehicles exceeded 88,000 pounds (77 vehicles were Class 13's; 20 vehicles were Class 10'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 629200 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (53.8%) than SB (46.2%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 55X13 (a box culvert) is approximately 1/3 of a mile north of WIM #32, and Bridge No. 8960 (a box culvert) is approximately 1 ¾ miles south of WIM #32. WIM #32 recorded a total of 1096236 vehicles with a combined GVW of 7621510 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 47995 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 55.1% of all ESALs were recorded NB while 44.9% was observed SB. In particular, 76% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 34% 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).

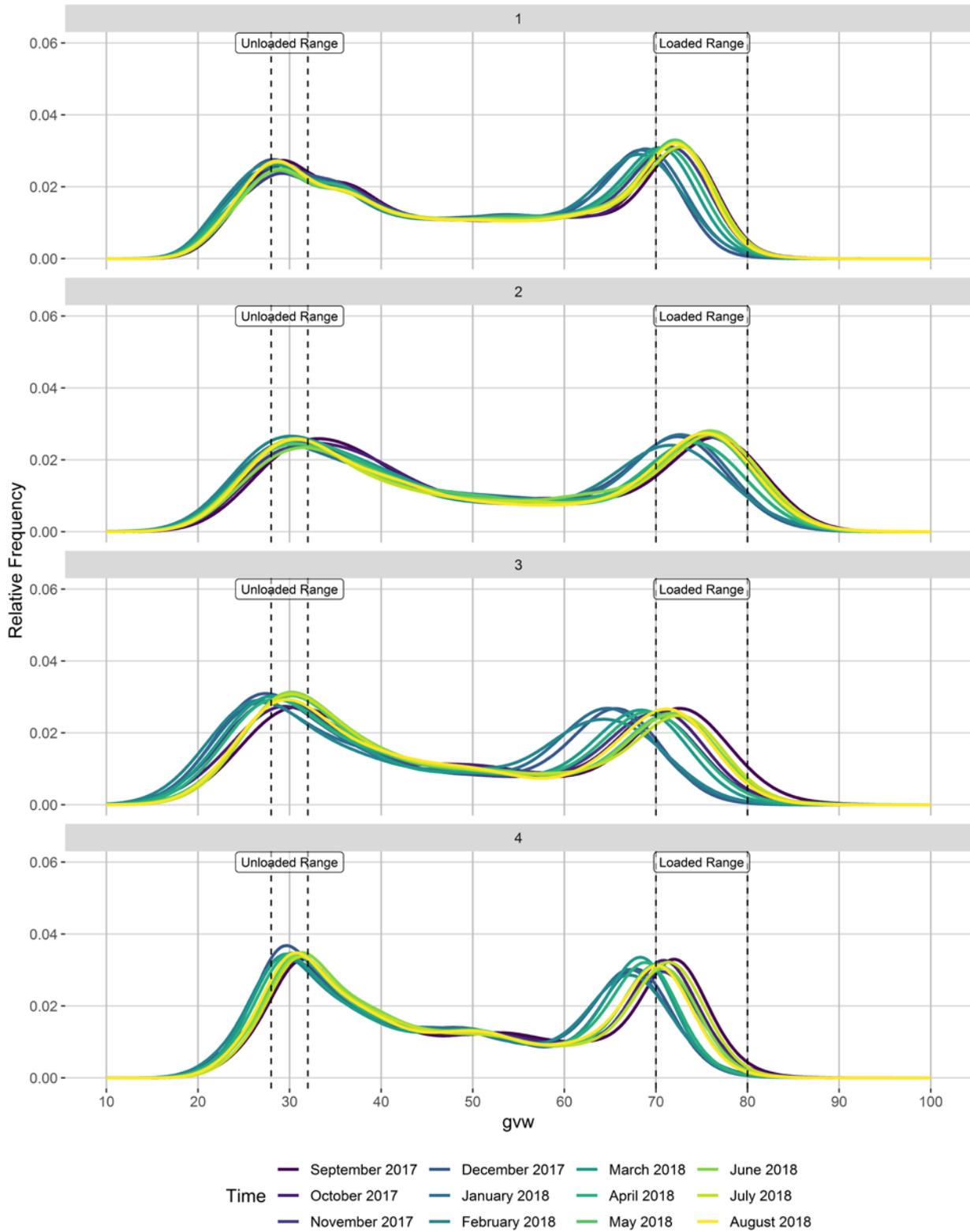
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

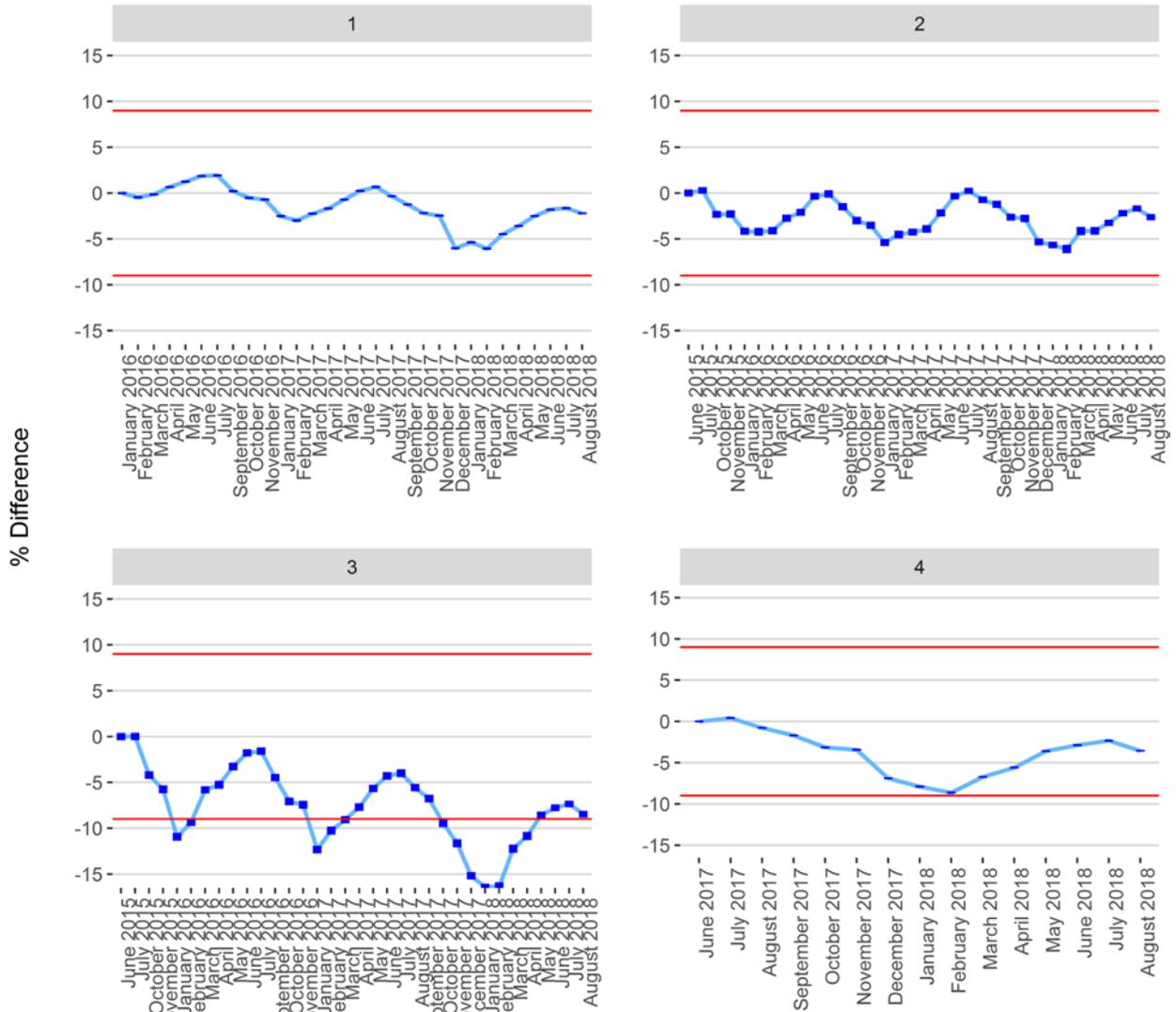
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Figure 1 - Monthly Class 9 GVW Histogram



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

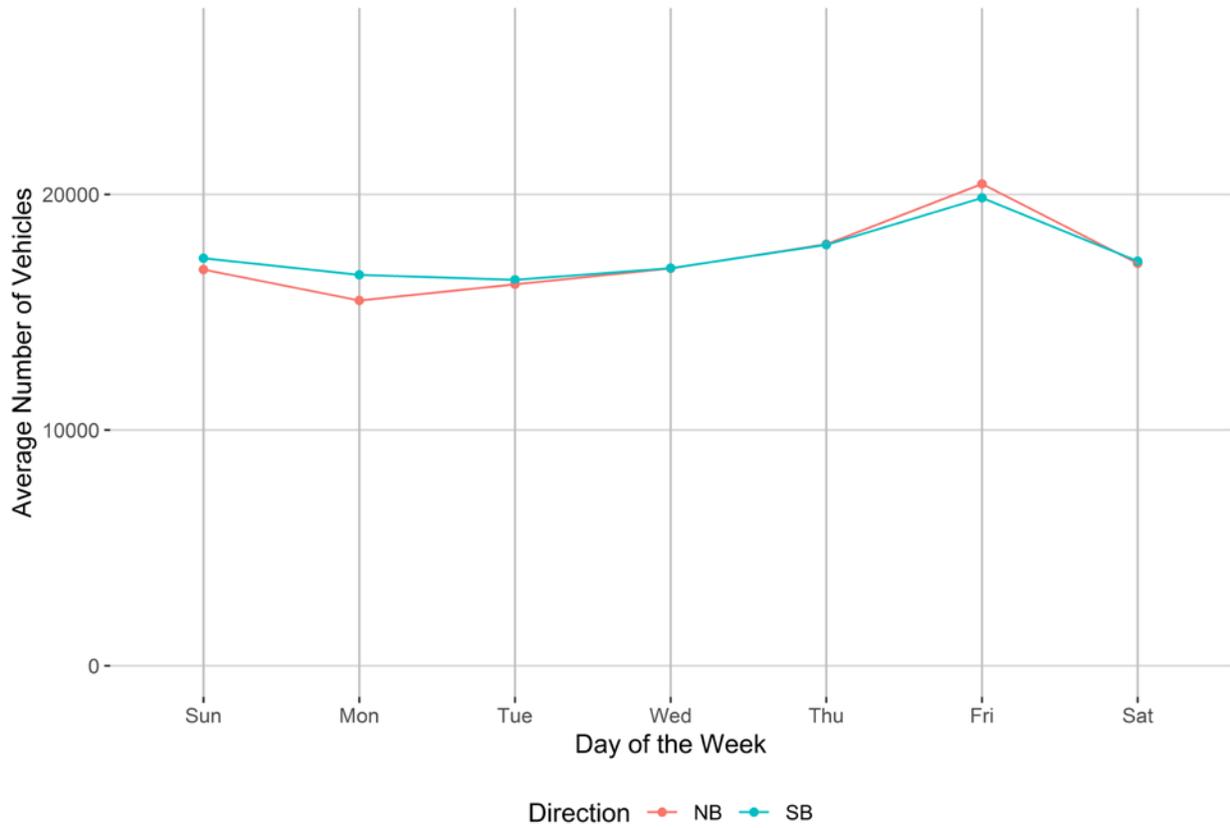


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

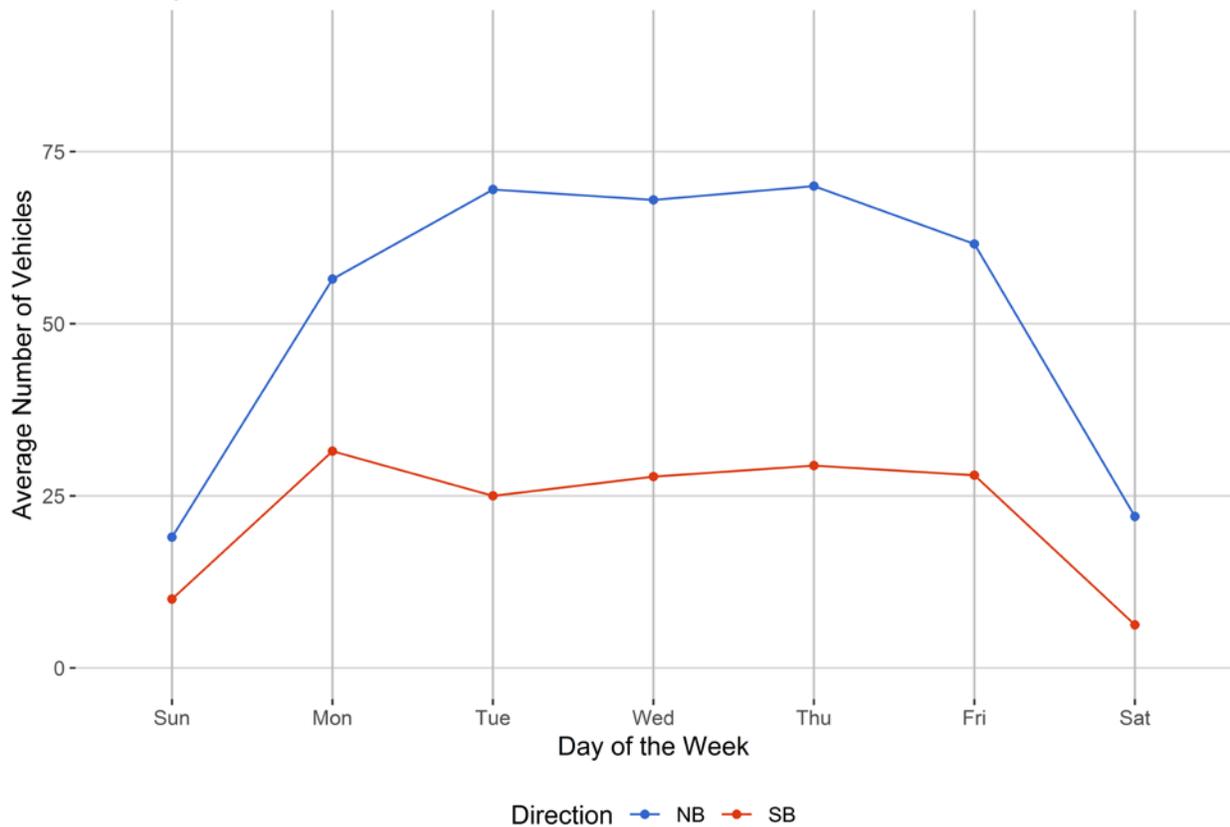


Figure 4 - Passenger Vehicles vs. Hour of the Day

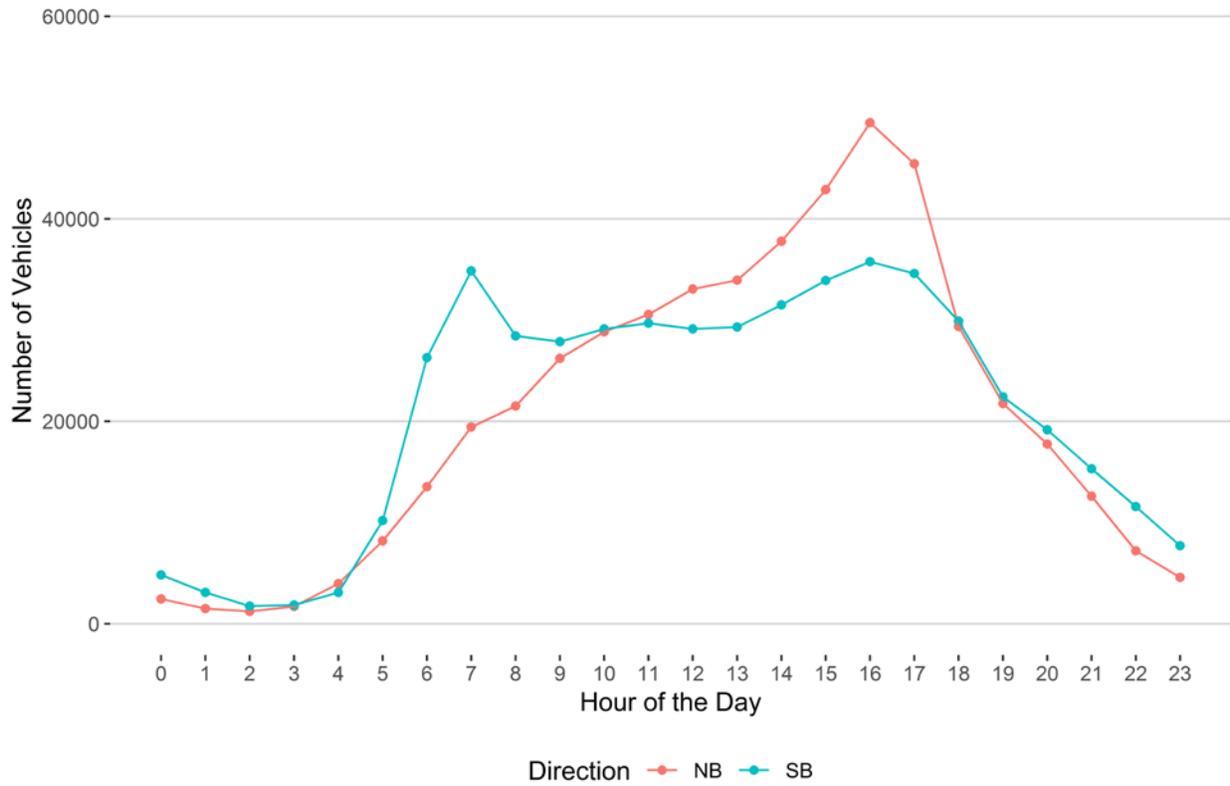


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

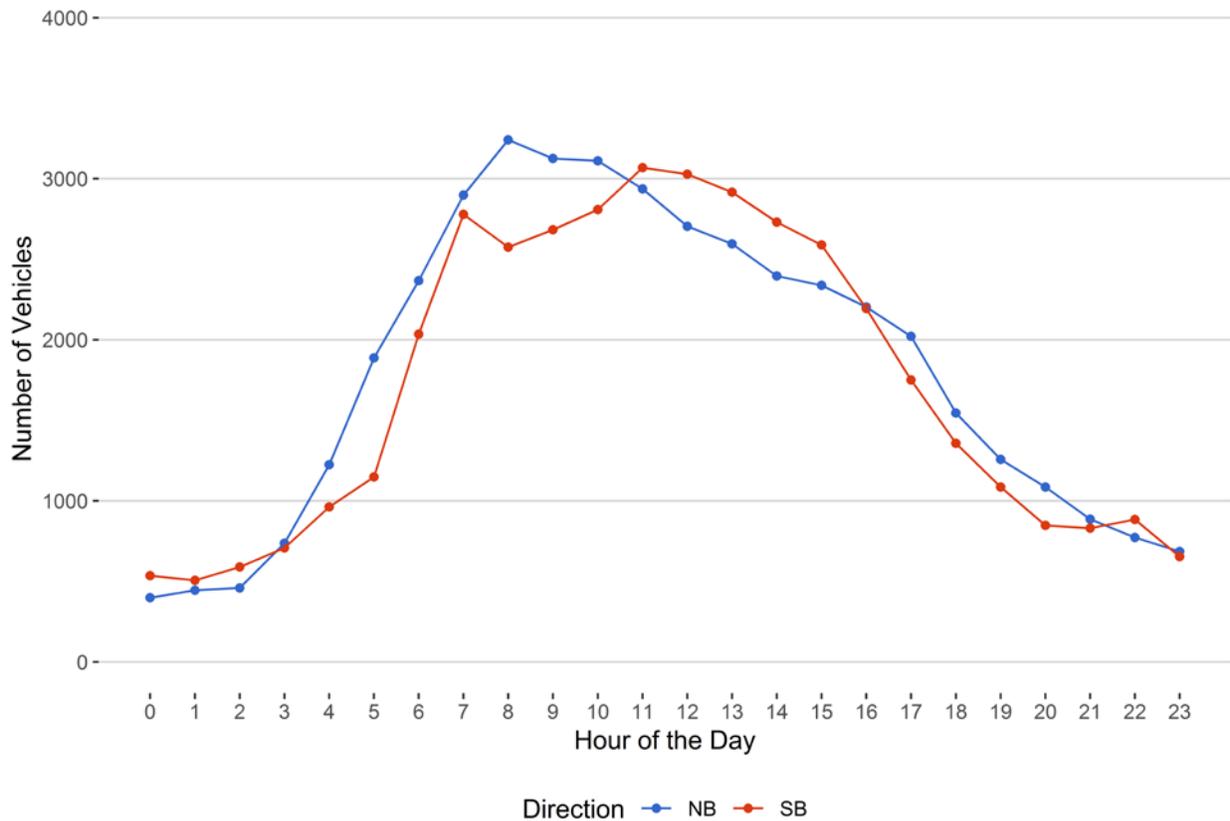


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

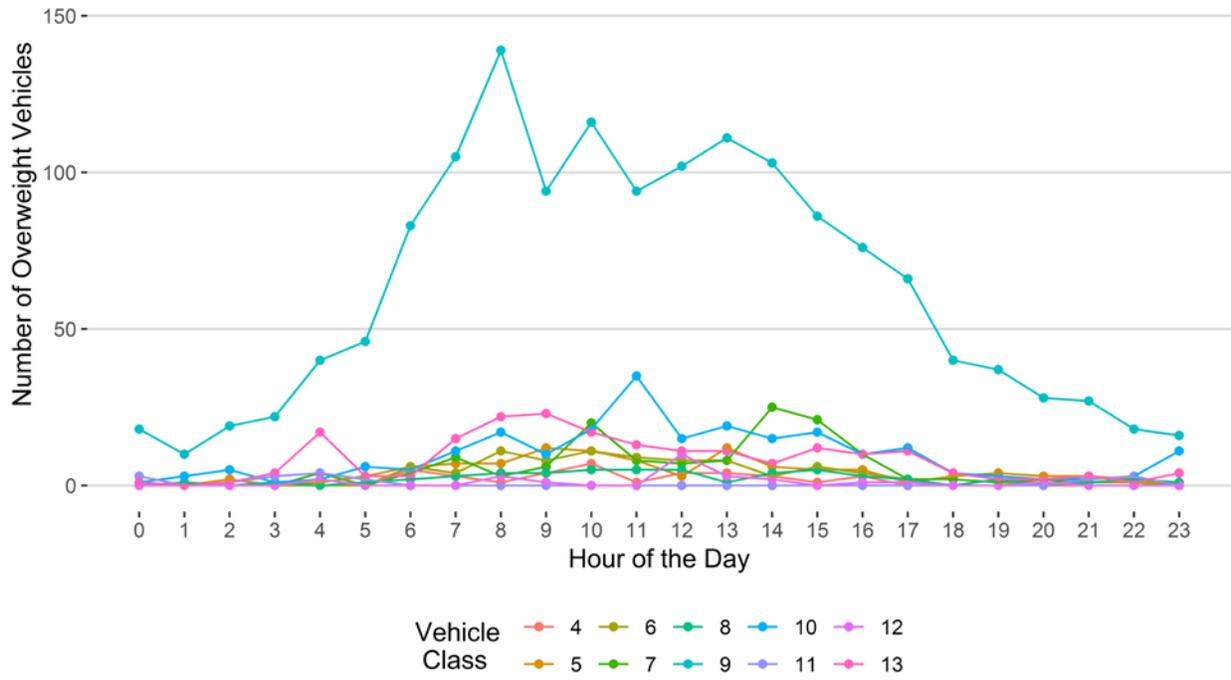


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

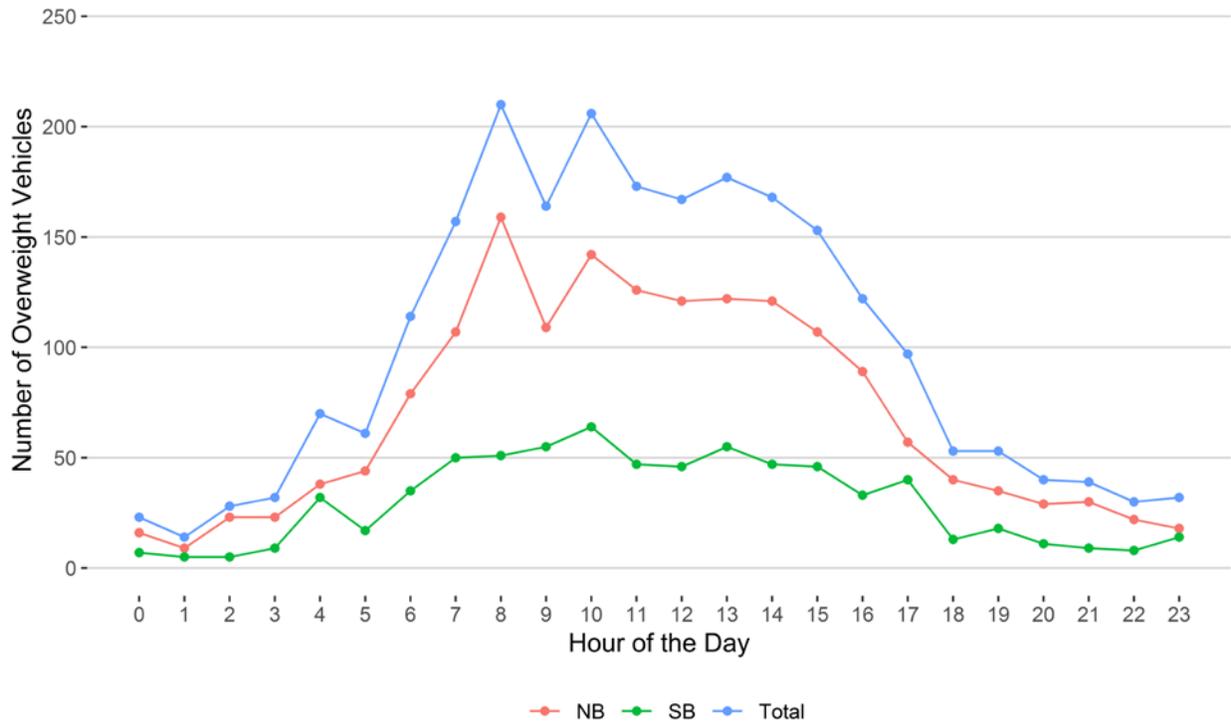
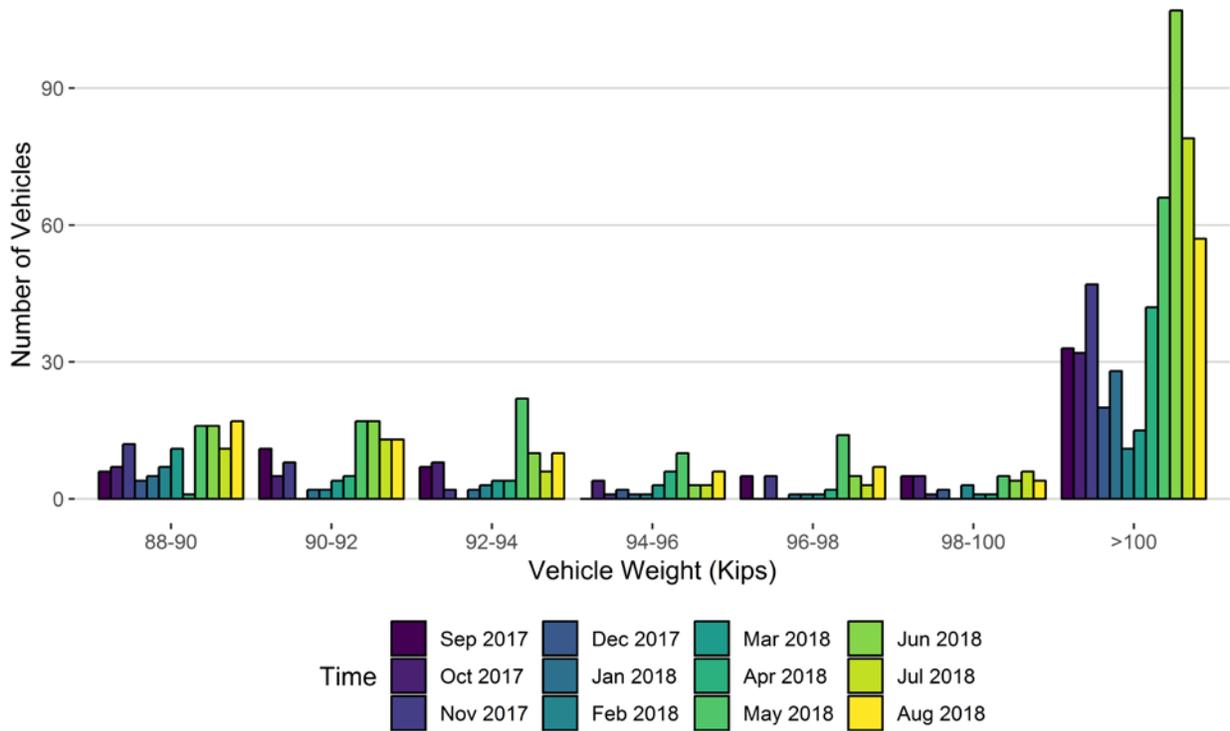
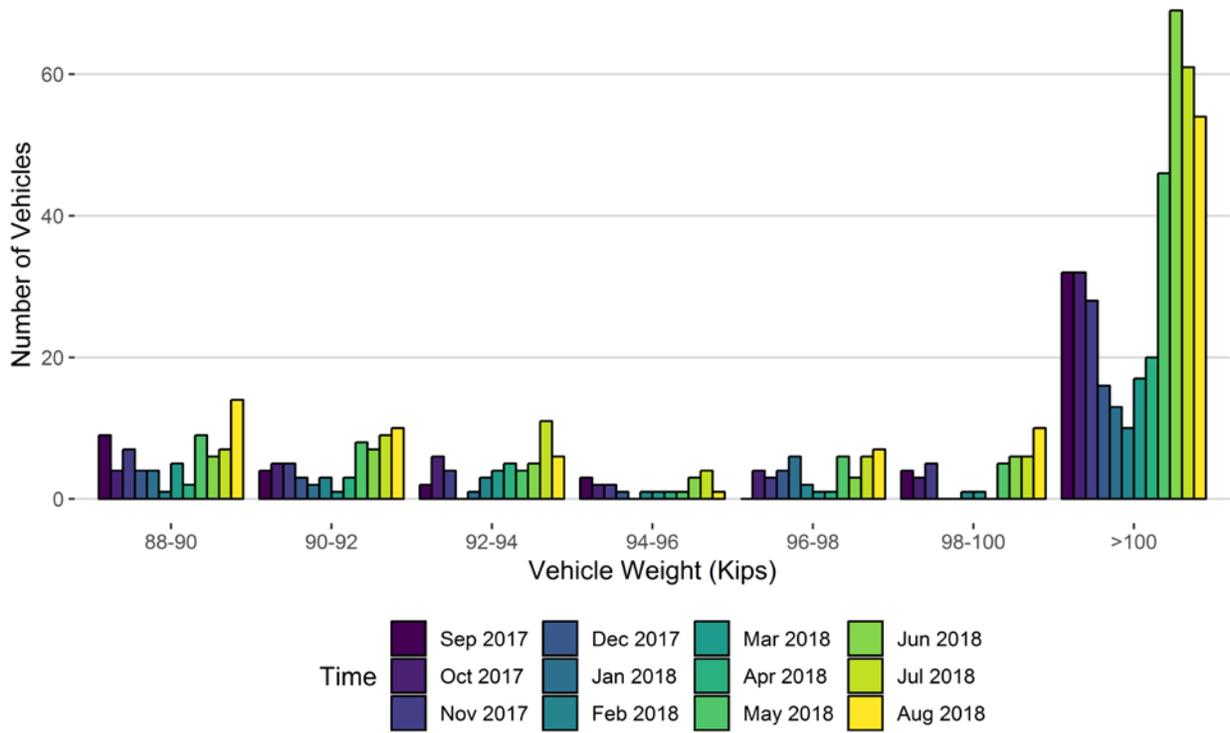


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



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	6	7	12	4	5	7	11	1	16	16	11	17
90-92	11	5	8	0	2	2	4	5	17	17	13	13
92-94	7	8	2	0	2	3	4	4	22	10	6	10
94-96	0	4	1	2	1	1	3	6	10	3	3	6
96-98	5	0	5	0	1	1	1	2	14	5	3	7
98-100	5	5	1	2	0	3	1	1	5	4	6	4
>100	33	32	47	20	28	11	15	42	66	107	79	57
Total	67	61	76	28	39	28	39	61	150	162	121	114

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	9	4	7	4	4	1	5	2	9	6	7	14
90-92	4	5	5	3	2	3	1	3	8	7	9	10
92-94	2	6	4	0	1	3	4	5	4	5	11	6
94-96	3	2	2	1	0	1	1	1	1	3	4	1
96-98	0	4	3	4	6	2	1	1	6	3	6	7
98-100	4	3	5	0	0	1	1	0	5	6	6	10
>100	32	32	28	16	13	10	17	20	46	69	61	54
Total	54	56	54	28	26	21	30	32	79	99	104	102

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

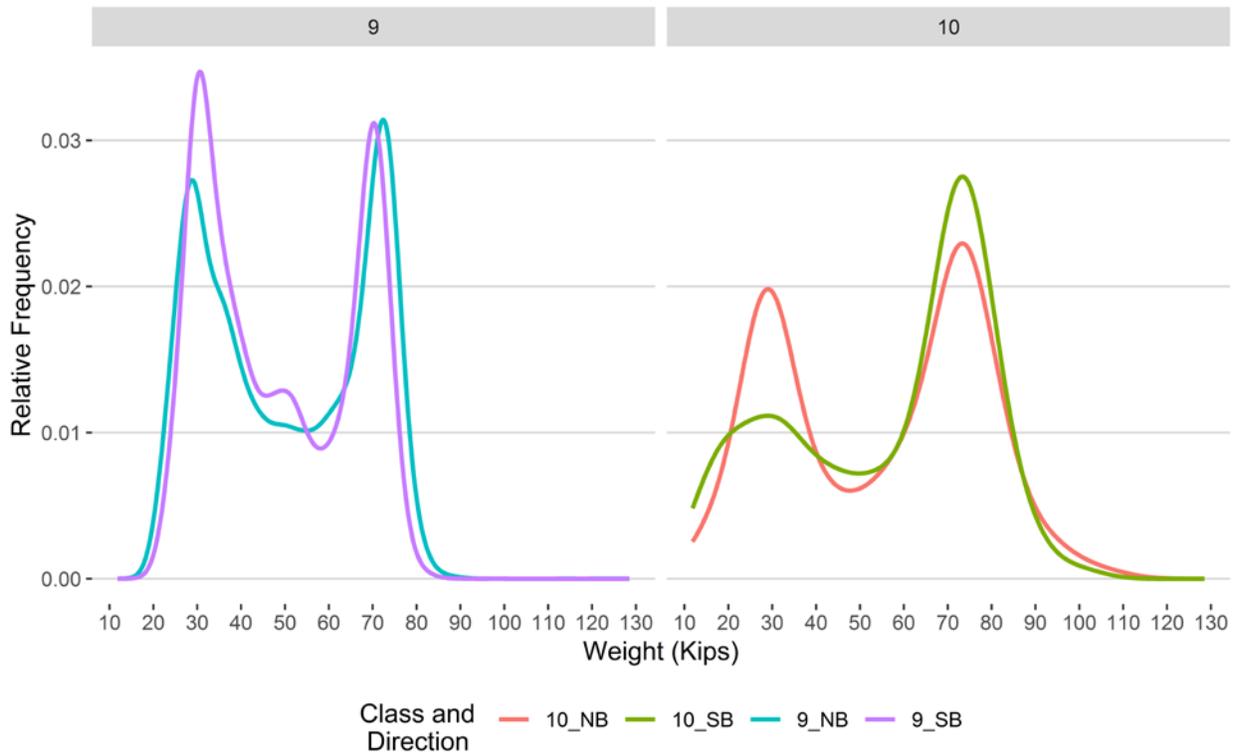


Figure 9 - Freight Percentage by Direction and Class

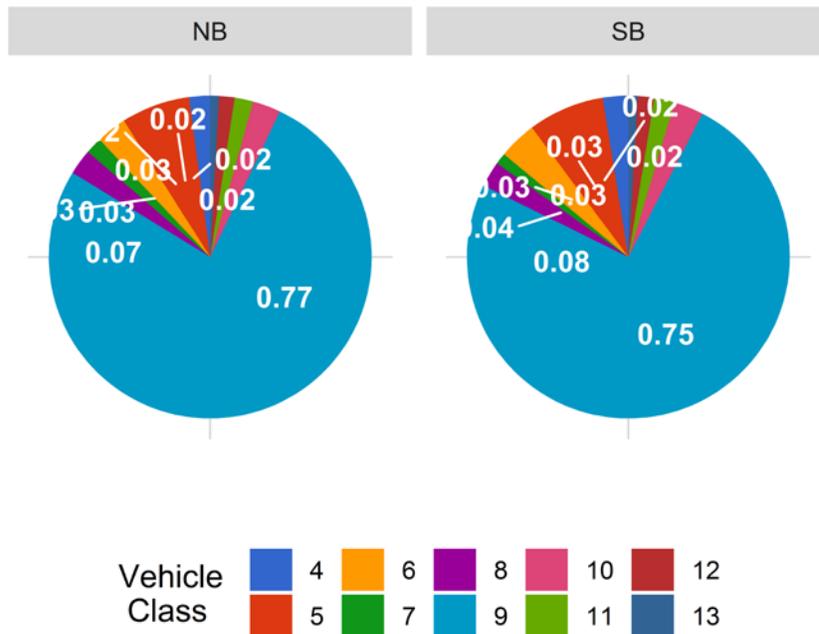


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

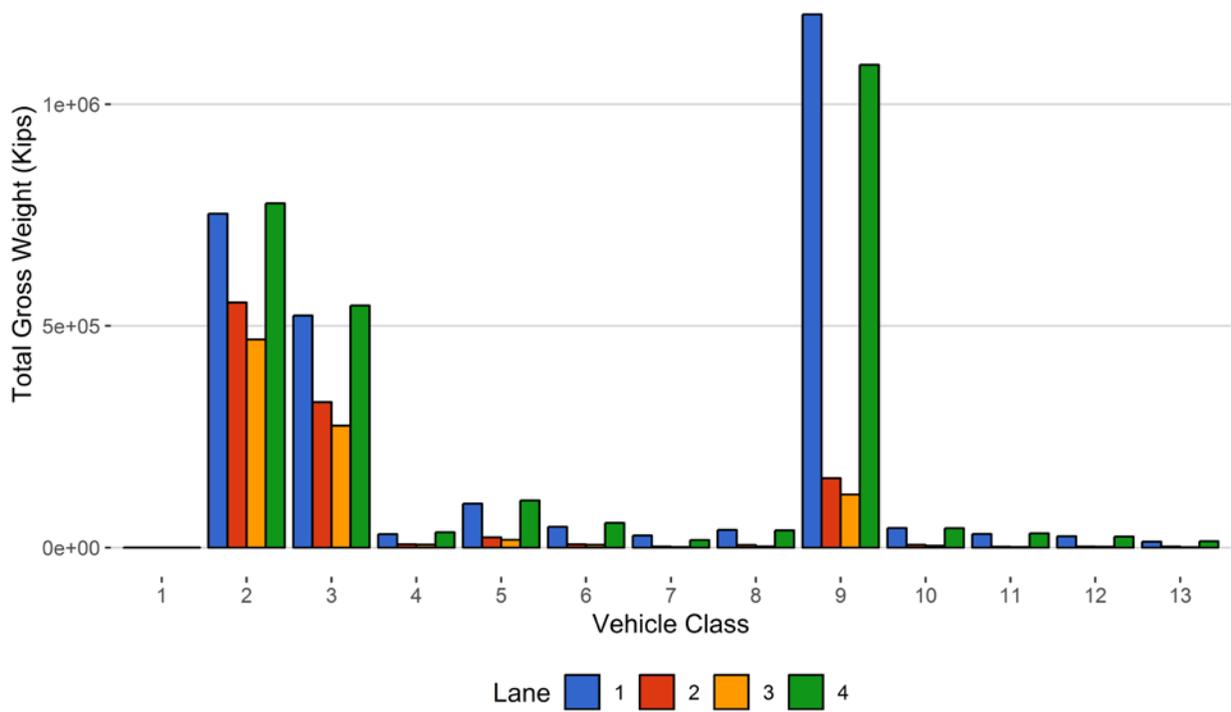


Figure 11 - Total Gross Vehicle Weight t

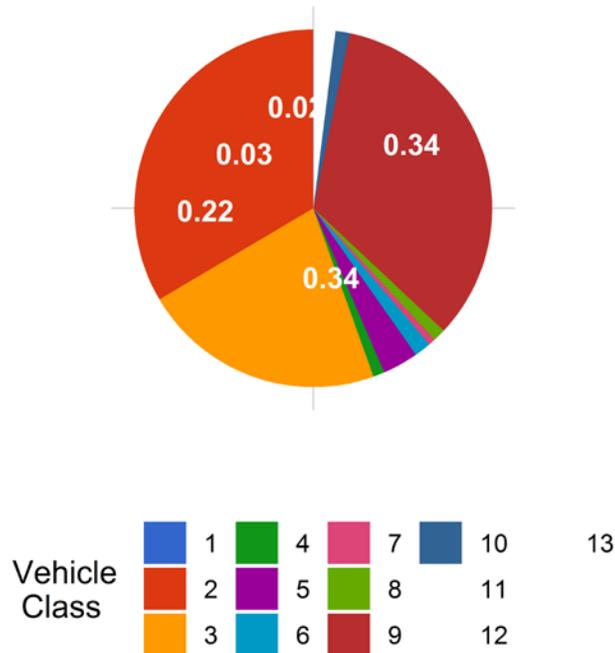


Figure 12 - Total ESALs by Class and Lane

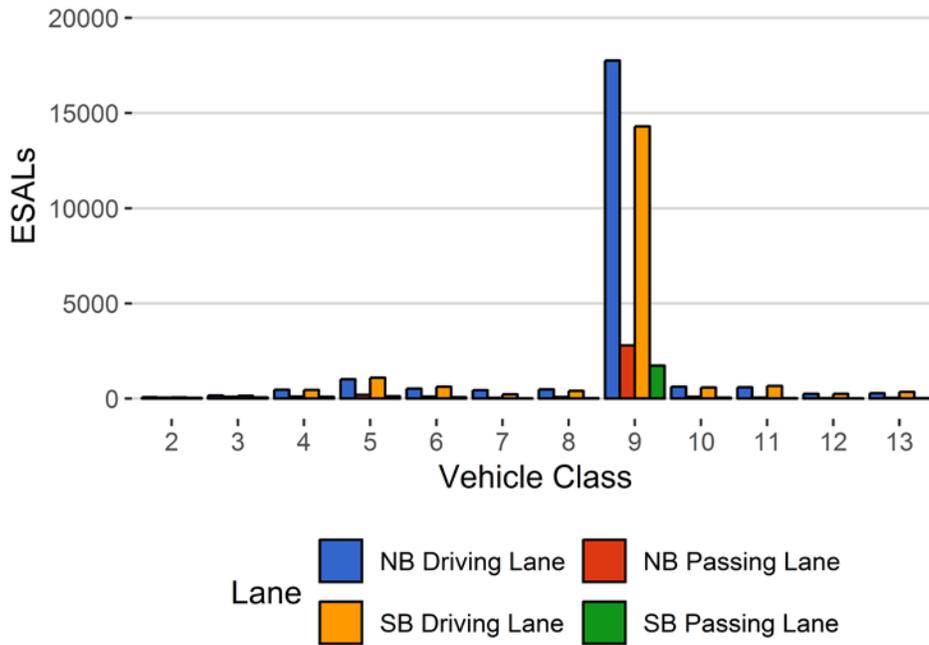
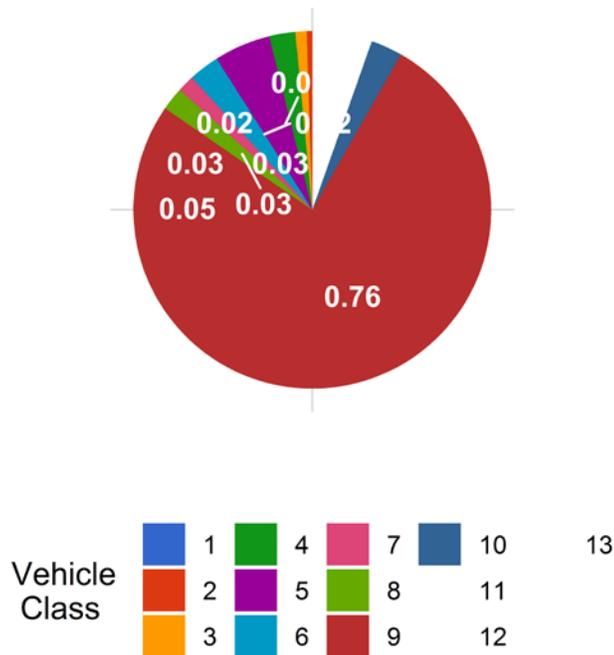


Figure 13 - ESALs by Class



**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	11.20	0.00	11.34	0.00	NA	NA
July 2015	NA	NA	11.23	0.30	11.35	0.02	NA	NA
October 2015	NA	NA	10.93	-2.33	10.87	-4.19	NA	NA
November 2015	NA	NA	10.94	-2.29	10.69	-5.77	NA	NA
January 2016	10.55	0.00	10.73	-4.17	10.10	-10.94	NA	NA
February 2016	10.50	-0.47	10.72	-4.22	10.29	-9.33	NA	NA
March 2016	10.53	-0.14	10.74	-4.11	10.68	-5.82	NA	NA
April 2016	10.62	0.67	10.89	-2.75	10.75	-5.26	NA	NA
May 2016	10.68	1.24	10.96	-2.10	10.97	-3.27	NA	NA
June 2016	10.74	1.86	11.16	-0.34	11.14	-1.78	NA	NA
July 2016	10.75	1.92	11.18	-0.10	11.16	-1.59	NA	NA
September 2016	10.57	0.21	11.03	-1.49	10.84	-4.47	NA	NA
October 2016	10.49	-0.52	10.86	-3.01	10.54	-7.07	NA	NA
November 2016	10.47	-0.71	10.80	-3.51	10.50	-7.44	NA	NA
January 2017	10.28	-2.51	10.59	-5.39	9.94	-12.34	NA	NA
February 2017	10.23	-2.99	10.69	-4.53	10.18	-10.26	NA	NA
March 2017	10.31	-2.25	10.72	-4.26	10.32	-9.07	NA	NA
April 2017	10.37	-1.68	10.76	-3.92	10.47	-7.71	NA	NA
May 2017	10.47	-0.72	10.95	-2.16	10.70	-5.67	NA	NA
June 2017	10.57	0.24	11.16	-0.34	10.86	-4.30	10.78	0.00
July 2017	10.62	0.68	11.22	0.24	10.89	-4.00	10.82	0.42
August 2017	10.51	-0.35	11.11	-0.73	10.71	-5.58	10.69	-0.78
September 2017	10.41	-1.25	11.06	-1.23	10.58	-6.78	10.60	-1.70
October 2017	10.31	-2.19	10.90	-2.63	10.27	-9.46	10.44	-3.15
November 2017	10.29	-2.46	10.89	-2.77	10.02	-11.64	10.41	-3.43
December 2017	9.91	-6.02	10.60	-5.33	9.62	-15.19	10.04	-6.89

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January 2018	9.98	-5.37	10.56	-5.67	9.48	-16.42	9.93	-7.89
February 2018	9.91	-6.06	10.51	-6.11	9.49	-16.37	9.85	-8.63
March 2018	10.07	-4.48	10.73	-4.14	9.96	-12.23	10.05	-6.73
April 2018	10.17	-3.58	10.73	-4.13	10.11	-10.86	10.18	-5.59
May 2018	10.28	-2.51	10.83	-3.25	10.37	-8.56	10.39	-3.60
June 2018	10.36	-1.80	10.95	-2.19	10.46	-7.78	10.47	-2.88
July 2018	10.37	-1.65	11.01	-1.69	10.51	-7.36	10.53	-2.34
August 2018	10.31	-2.21	10.90	-2.63	10.38	-8.46	10.39	-3.56

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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	16	501	0	0	0
2	22984	712491	65	0	0
3	9597	297496	27.1	0	0
4	92	2859	0.3	39	1.6
5	575	17830	1.6	104	4.4
6	142	4401	0.4	84	3.5
7	28	858	0.1	132	5.6
8	100	3104	0.3	52	2.2
9	1688	52320	4.8	1496	63
10	58	1783	0.2	227	9.6
11	40	1255	0.1	18	0.8
12	32	992	0.1	24	1
13	11	347	0	197	8.3
<b>TOTAL</b>	<b>35362</b>	<b>1096236</b>	<b>100</b>	<b>2373</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>
2018-08-14	Tuesday	04:30:43	9	NB	2	145.26
2018-08-07	Tuesday	03:53:21	9	NB	1	128.54
2018-08-28	Tuesday	03:51:20	9	NB	1	126.02
2018-08-10	Friday	04:11:36	9	NB	1	124.58
2018-08-31	Friday	23:30:18	9	NB	1	121.81
2018-08-23	Thursday	21:15:48	9	NB	1	114.28
2018-08-03	Friday	06:15:16	10	NB	2	110.24
2018-08-07	Tuesday	11:18:04	10	NB	1	108.16
2018-08-08	Wednesday	21:44:34	10	NB	1	106.36
2018-08-29	Wednesday	07:12:40	10	NB	1	106.33

**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	1301	159	12.2	35283	2013	9077
5	NB	8	8805	1299	14.8	112736	9331	26344
6	NB	19	2065	521	25.2	45672	8442	8168
7	NB	11.5	499	0	0	29376	0	11819
8	NB	31	1583	1024	64.7	22017	23518	2344
9	NB	33	26846	6958	25.9	1166284	192953	254990
10	NB	33.5	914	281	30.7	42696	7458	10745
11	NB	36.5	623	71	11.4	30694	2077	5273
12	NB	36.5	507	64	12.6	25521	2103	4676
13	NB	31.5	179	0	0	15468	0	4915
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>43322</b>	<b>10377</b>	<b>****</b>	<b>1525747</b>	<b>****</b>	<b>338350</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	1519	242	15.9	38170	3070	9507
5	SB	8	8784	1587	18.1	112325	11291	27374
6	SB	19	2277	458	20.1	54218	7586	9828
7	SB	11.5	347	1	0.3	18208	11	7115
8	SB	31	1479	975	65.9	19250	22343	1813
9	SB	33	24767	6650	26.9	1016031	192628	209085
10	SB	33.5	845	196	23.2	43290	4569	10774
11	SB	36.5	615	58	9.4	31578	1665	5624
12	SB	36.5	472	10	2.1	26296	314	4717
13	SB	31.5	163	0	0	15159	0	5012
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>41268</b>	<b>10177</b>	<b>****</b>	<b>1374525</b>	<b>****</b>	<b>290850</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>84590</b>	<b>20554</b>	<b>379</b>	<b>2900272</b>	<b>491374</b>	<b>629200</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	182	104	121	167	575	0
2	753044	552782	469119	776519	2551464	33.5
3	523223	328089	274773	546066	1672151	22
4	30217	7079	6598	34642	78536	1
5	99167	22900	17276	106340	245683	3.2
6	46963	7151	6292	55512	115918	1.5
7	27091	2285	1309	16911	47596	0.6
8	39848	5688	2824	38769	87129	1.1
9	1202859	156379	119721	1088938	2567896	33.7
10	44167	5987	4217	43642	98013	1.3
11	30709	2062	1123	32120	66014	0.9
12	25409	2215	1908	24703	54234	0.7
13	13175	2292	956	14203	30627	0.4
<b>TOTAL</b>	<b>2836053</b>	<b>1095015</b>	<b>906237</b>	<b>2778531</b>	<b>7615836</b>	<b>100</b>
<b>GVW/LANE</b>	<b>37.24</b>	<b>14.38</b>	<b>11.9</b>	<b>36.48</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	0.002
2	71	59	41	68	240	0.5	7e-04
3	169	99	68	154	490	1.02	0.0034
4	470	109	95	457	1130	2.36	0.8
5	1022	199	125	1098	2444	5.1	0.28
6	529	102	72	629	1331	2.78	0.61
7	444	47	19	227	737	1.54	1.74
8	490	83	25	407	1006	2.1	0.66
9	17757	2796	1734	14301	36588	76.35	1.42
10	630	98	53	585	1365	2.85	1.55
11	598	52	21	665	1335	2.79	2.15
12	260	25	19	252	555	1.16	1.13
13	285	40	20	353	698	1.46	3.97
<b>TOTAL</b>	<b>22724</b>	<b>3707</b>	<b>2292</b>	<b>19196</b>	<b>47919</b>	<b>100</b>	<b>14</b>
<b>ESALS/LANE</b>	<b>47.4</b>	<b>7.7</b>	<b>4.8</b>	<b>40.1</b>	<b>100</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	941075	31369	2573	863885	91.8	77190.3	8.2	89.1	10.9
Oct 2017	953108	30745	2606	872337	91.5	80770.9	8.5	89.1	10.9
Nov 2017	900902	30030	2391	829176	92	71725.8	8	89.1	10.9
Dec 2017	869439	28046	2065	805426	92.6	64013	7.4	88.2	11.8
Jan 2018	777133	25069	2126	711218	91.5	65915.4	8.5	87.3	12.7
Feb 2018	732422	26158	2134	672666	91.8	59756.2	8.2	89.1	10.9
Mar 2018	899645	29021	2200	831445	92.4	68199.7	7.6	90.2	9.8
Apr 2018	850664	28356	2215	784220	92.2	66444	7.8	89.5	10.5
May 2018	1039431	33530	2662	956910	92.1	82521.5	7.9	87.5	12.5
Jun 2018	1097500	36583	2770	1014403	92.4	83097.5	7.6	87.6	12.4
Jul 2018	1120144	36134	2761	1034542	92.4	85602.1	7.6	87.3	12.7
Aug 2018	1096236	35362	2766	1010488	92.2	85748.4	7.8	87.8	12.2
<b>TOTAL</b>	<b>11277699</b>	<b>-</b>	<b>-</b>	<b>10386716</b>	<b>-</b>	<b>890985</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERA GE</b>	<b>939808</b>	<b>30867</b>	<b>2439</b>	<b>865560</b>	<b>92</b>	<b>74249</b>	<b>8</b>	<b>88</b>	<b>12</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	20809	3103	2028	20608	46548	89	11	0.9
Oct 2017	22079	3110	1788	19884	46861	90	10	1.6
Nov 2017	19599	2736	1498	16531	40364	90	10	1.1
Dec 2017	14090	2504	1185	12527	30306	88	12	0.7
Jan 2018	15526	2839	1441	13237	33043	87	13	1.2
Feb 2018	14312	2062	1192	12404	29970	89	11	0.5
Mar 2018	17718	2055	1307	14249	35330	90	10	1.1
Apr 2018	17911	2401	1428	13971	35711	89	11	1.5
May 2018	22396	3529	2349	18747	47020	88	12	2
Jun 2018	23012	3694	2374	19307	48387	87	13	2.4
Jul 2018	22415	3858	2407	21343	50024	87	13	1.7
Aug 2018	22748	3715	2300	19232	47995	87	13	1.7
<b>TOTAL</b>	<b>232616</b>	<b>35606</b>	<b>21298</b>	<b>202039</b>	<b>491559</b>	-	-	-
<b>AVERAGE</b>	<b>19385</b>	<b>2967</b>	<b>1775</b>	<b>16837</b>	<b>40963</b>	<b>88</b>	<b>12</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>
Sep 2017	2084390	711458	548906	2059562	5404317
Oct 2017	1947717	627968	484577	1890136	4950397
Nov 2017	2337771	771441	616757	2244953	5970921
Dec 2017	2259387	759393	600722	2164611	5784113
Jan 2018	2707830	1023785	857182	2663473	7252270
Feb 2018	2805374	1107547	932861	2734606	7580388
Mar 2018	2846033	1123846	955181	2884472	7809531
Apr 2018	2838230	1095512	906826	2780943	7621510
May 2018	2534621	897107	740675	2614255	6786658
Jun 2018	2637284	907307	731619	2602728	6878938
Jul 2018	2414147	828796	668537	2357091	6268571
Aug 2018	2153551	784938	597727	2126715	5662931
<b>TOTAL</b>	<b>29566334</b>	<b>10639099</b>	<b>8641569</b>	<b>29123544</b>	<b>77970546</b>
<b>AVERAGE</b>	<b>2463861</b>	<b>886592</b>	<b>720131</b>	<b>2426962</b>	<b>6497545</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	2871	0.3	3.8	124	77
Oct 2017	2480	0.3	3.1	117	72
Nov 2017	1977	0.2	2.8	133	81
Dec 2017	868	0.1	1.4	61	38
Jan 2018	1147	0.1	1.8	65	41
Feb 2018	1037	0.1	1.7	50	26
Mar 2018	1066	0.1	1.6	70	34
Apr 2018	1338	0.2	2	93	63
May 2018	2314	0.2	2.8	232	122
Jun 2018	2666	0.2	3.2	261	186
Jul 2018	2866	0.3	3.4	226	152
Aug 2018	2383	0.2	2.8	216	125
<b>TOTAL</b>	<b>23013</b>	<b>-</b>	<b>-</b>	<b>1648</b>	<b>1017</b>
<b>AVERAGE</b>	<b>1917.8</b>	<b>0.2</b>	<b>2.5</b>	<b>137.3</b>	<b>84.8</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>
Sep 2017	301806	300251	602057	50.1	49.9
Oct 2017	327015	290927	617942	52.9	47.1
Nov 2017	288577	242461	531038	54.3	45.7
Dec 2017	226392	195594	421986	53.6	46.4
Jan 2018	243904	210402	454307	53.7	46.3
Feb 2018	217781	187177	404958	53.8	46.2
Mar 2018	259219	219426	478646	54.2	45.8
Apr 2018	262841	213385	476226	55.2	44.8
May 2018	329620	285332	614952	53.6	46.4
Jun 2018	339294	288144	627438	54.1	45.9
Jul 2018	337328	317763	655090	51.5	48.5
Aug 2018	338350	290850	629200	53.8	46.2
<b>TOTAL</b>	<b>3472128</b>	<b>3041712</b>	<b>6513840</b>	-	-
<b>AVERAGE</b>	<b>289344</b>	<b>253476</b>	<b>542820</b>	<b>53.4</b>	<b>46.6</b>