

JANUARY 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 January 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: 181841 | Passenger Vehicles: 170202 | Heavy Commercial Vehicles: 11639

Monthly Average Daily Traffic (MADT): 5866 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 375

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 Mondays (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 15's and Class 9's.

## Overweight HCVs

**Volume trends.** Of a total of 11639 HCVs, 2451 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 1.4% of total monthly volume, and 21.3% of total monthly HCV volume. NB overweight vehicles typically reached highest numbers on Fridays, 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 94.4% 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 July.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report <sup>4</sup>.

Using normal load limits ,319 NB vehicles exceeded 88,000 pounds (200 vehicles were Class 10's; 91 vehicles were Class 9's). Of vehicles traveling SB,

96 NB vehicles exceeded 88,000 pounds (61 vehicles were Class 10's; 35 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from January 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in January 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 124479 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (93.7%) than SB (6.3%). 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 181841 vehicles with a combined GVW of 1172186 kips (1 kip = 1,000 pounds = 0.5 tons) in January 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 22244 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 94.7% of all ESALs were recorded NB while 5.3% was observed SB. In particular, 47% 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).

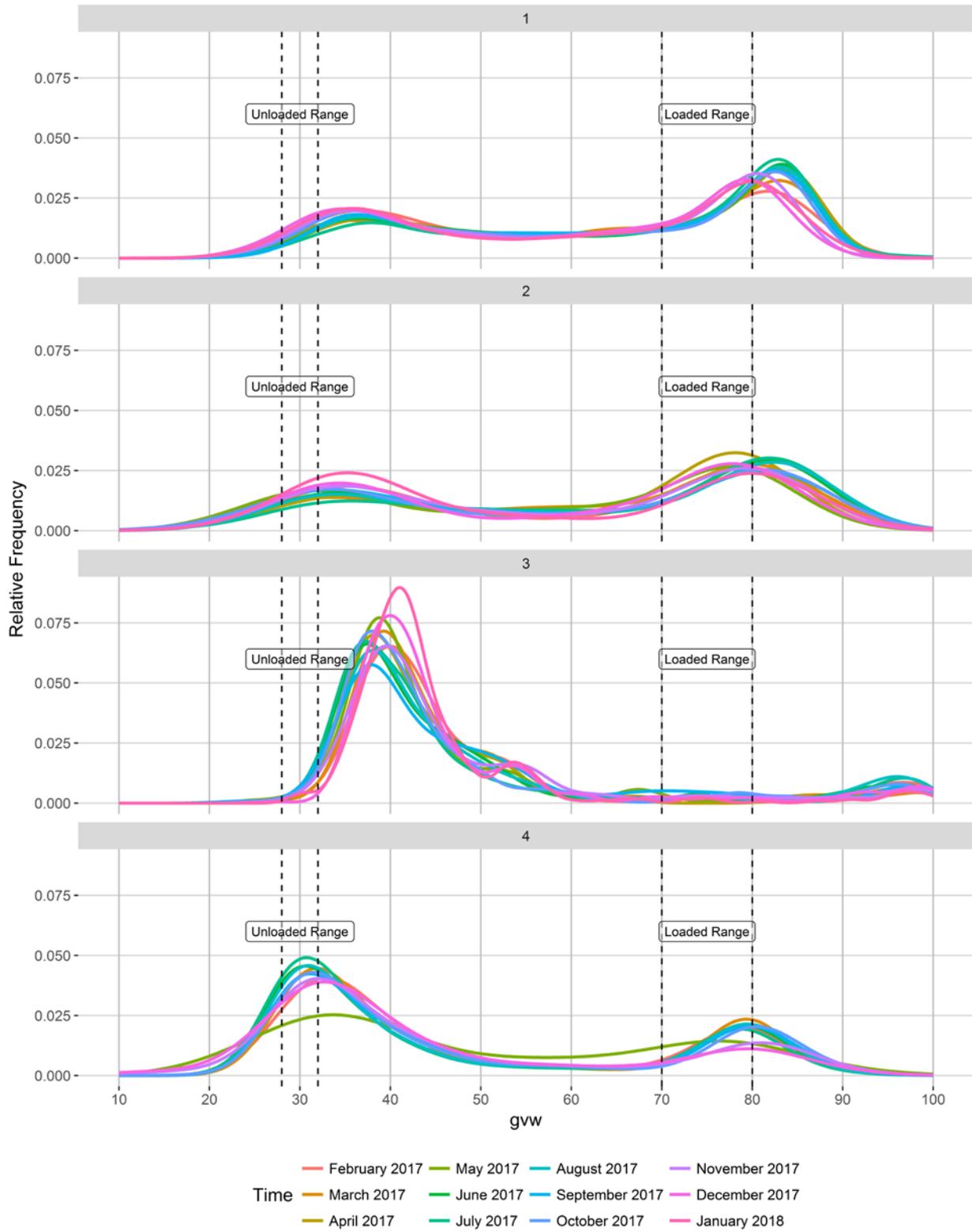
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

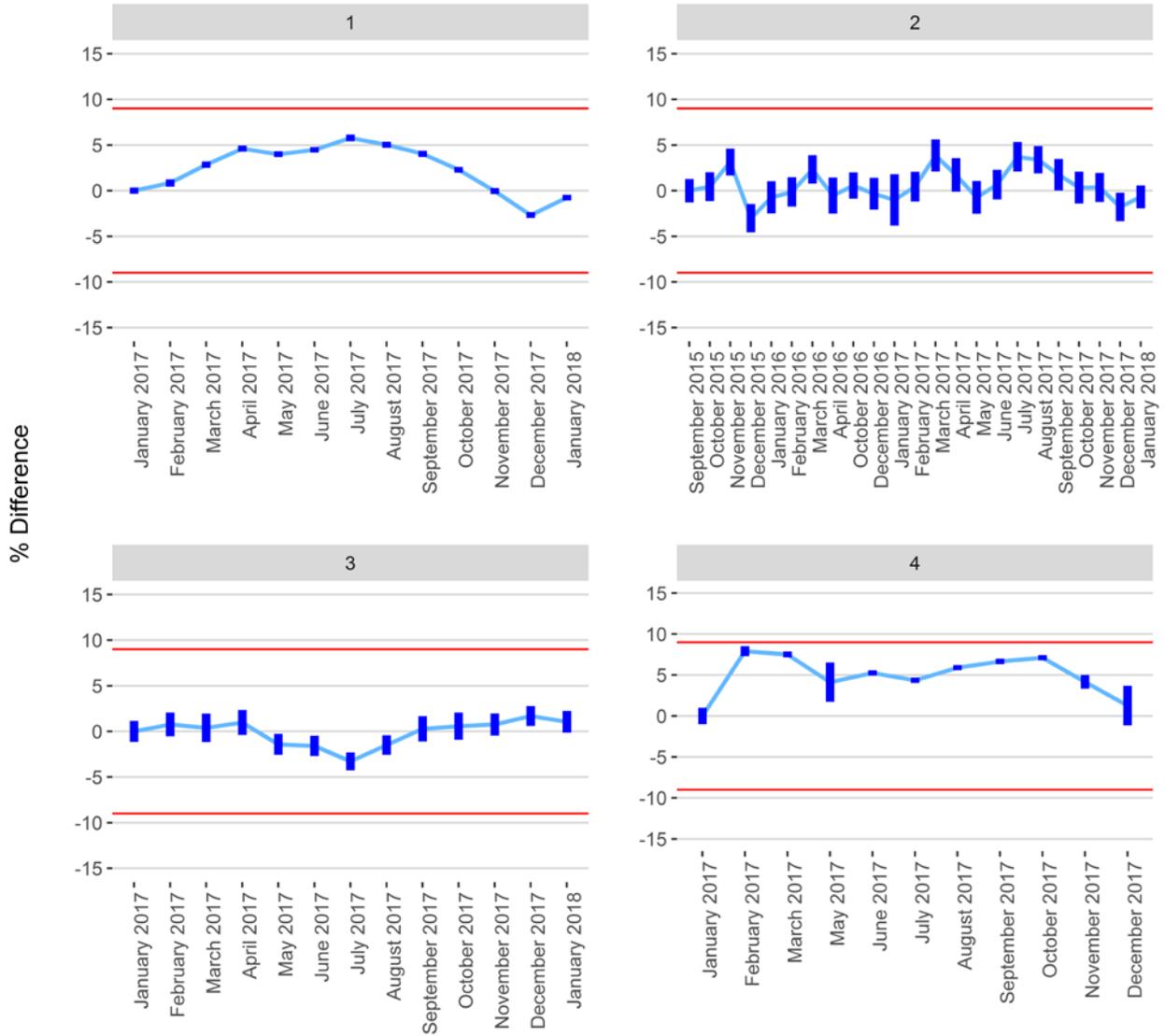
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Figure 1 - Monthly Class 9 GVW Histogram



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

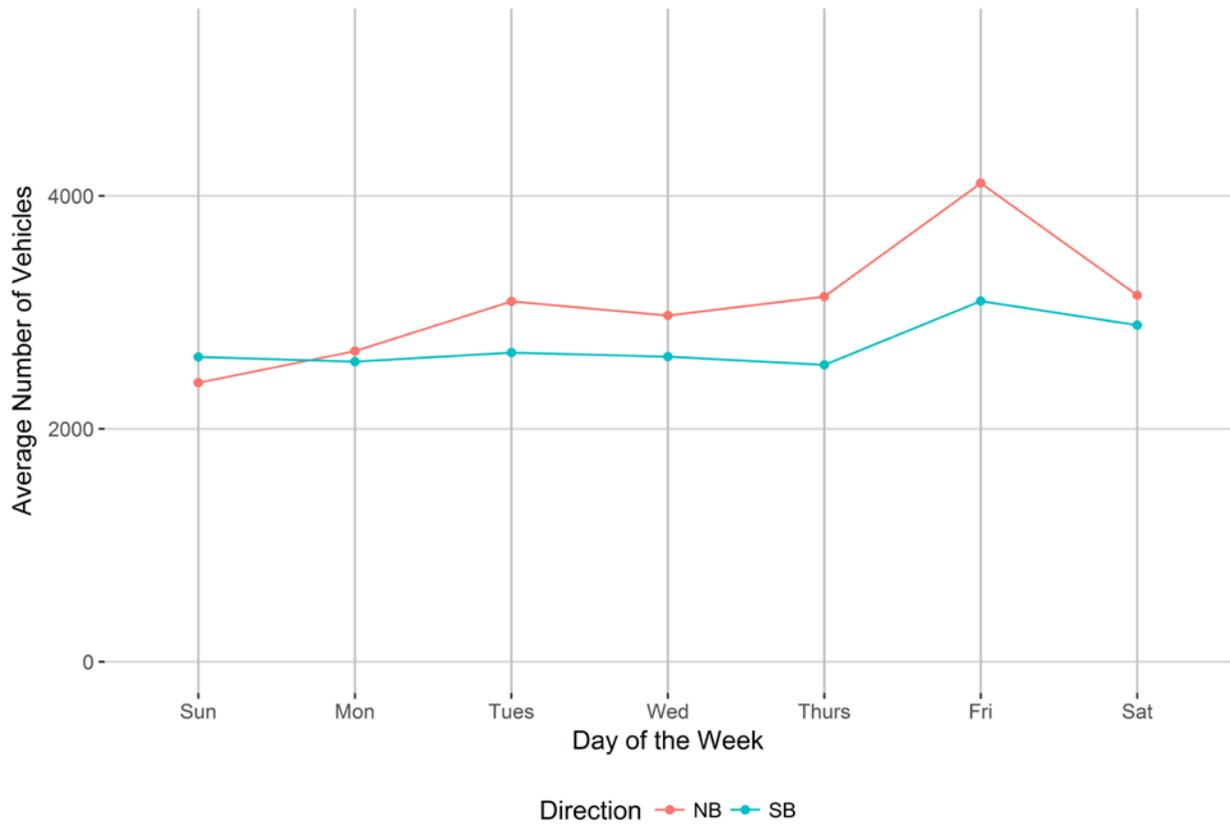


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

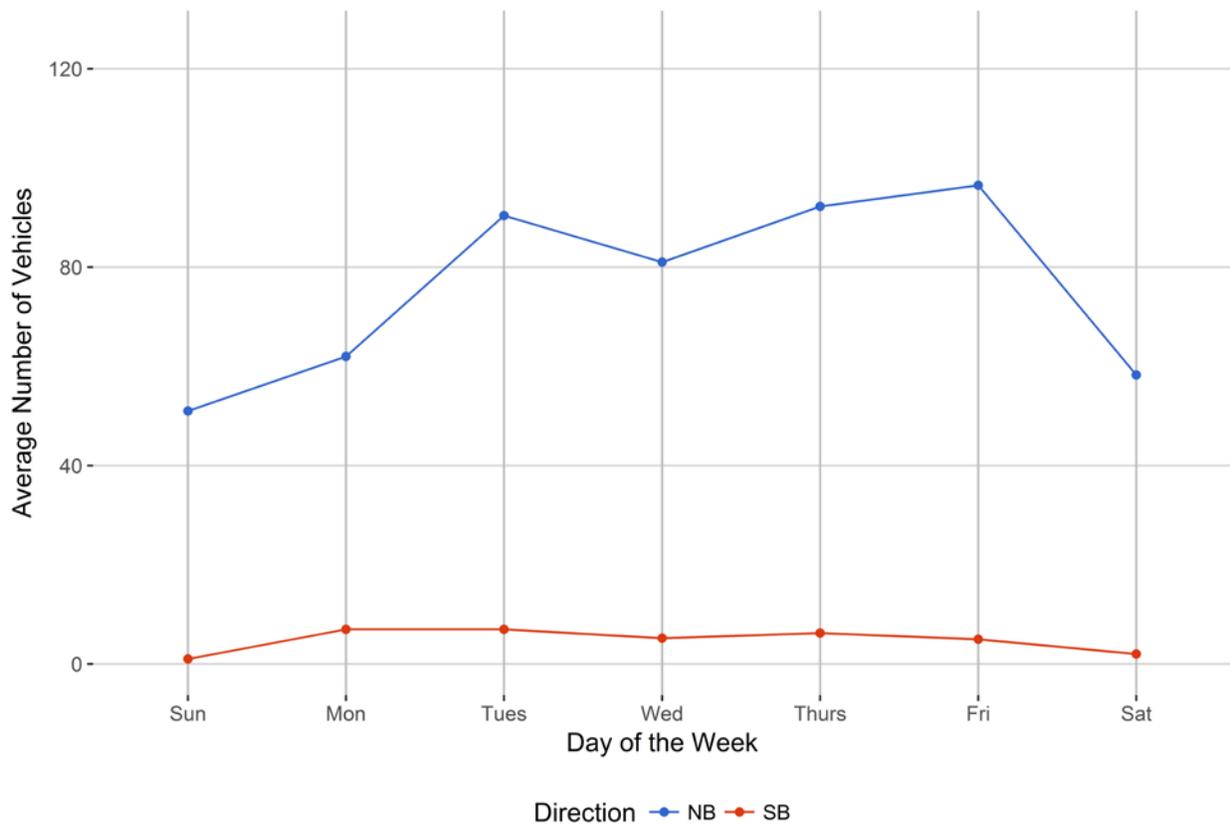


Figure 4 - Passenger Vehicles vs. Hour of the Day

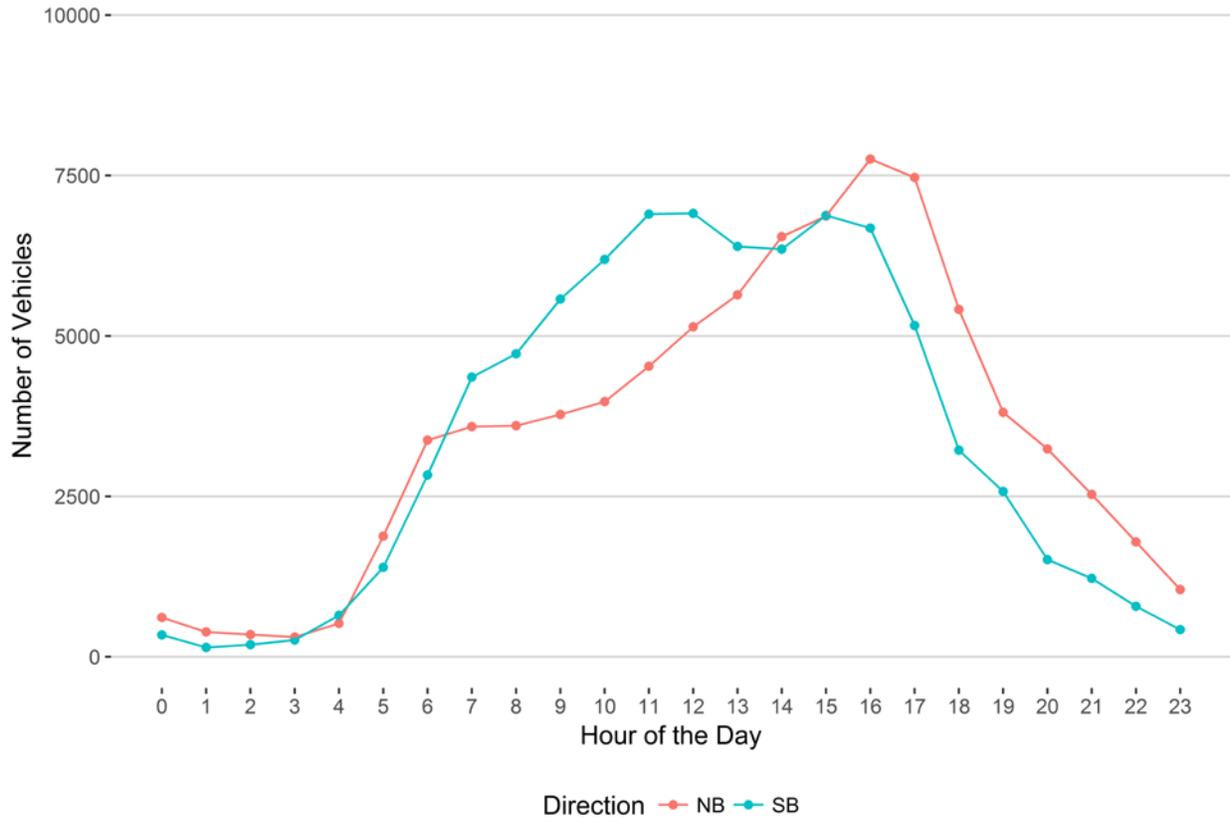


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

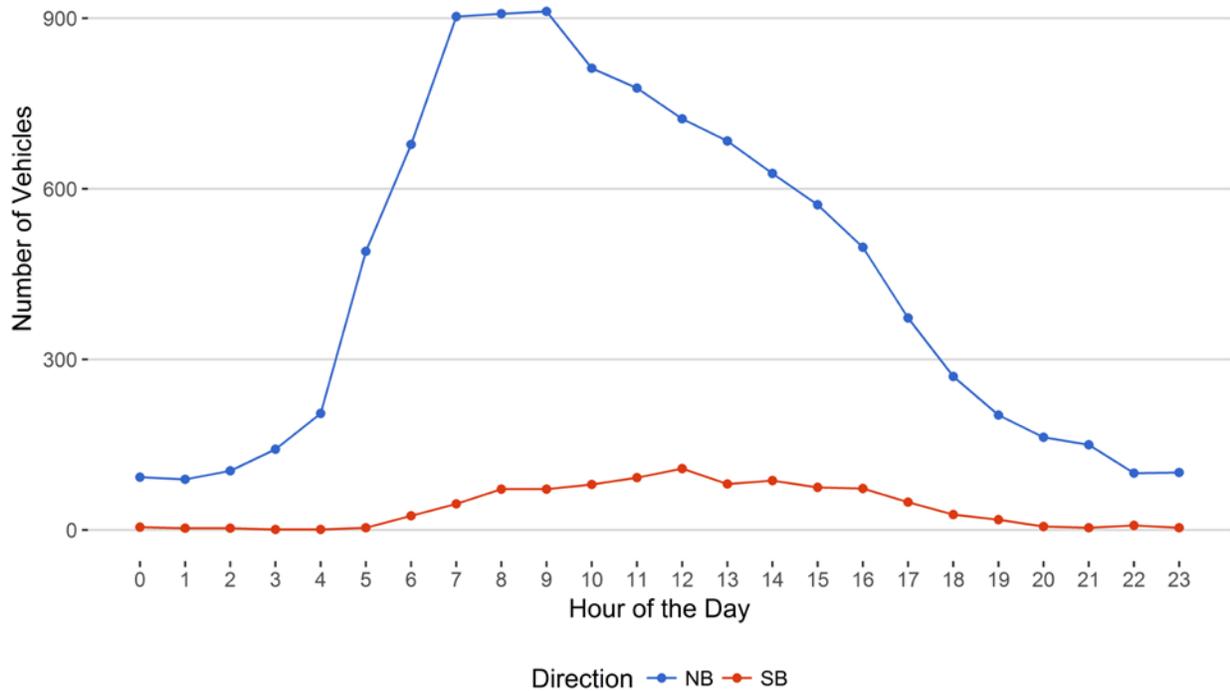




Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

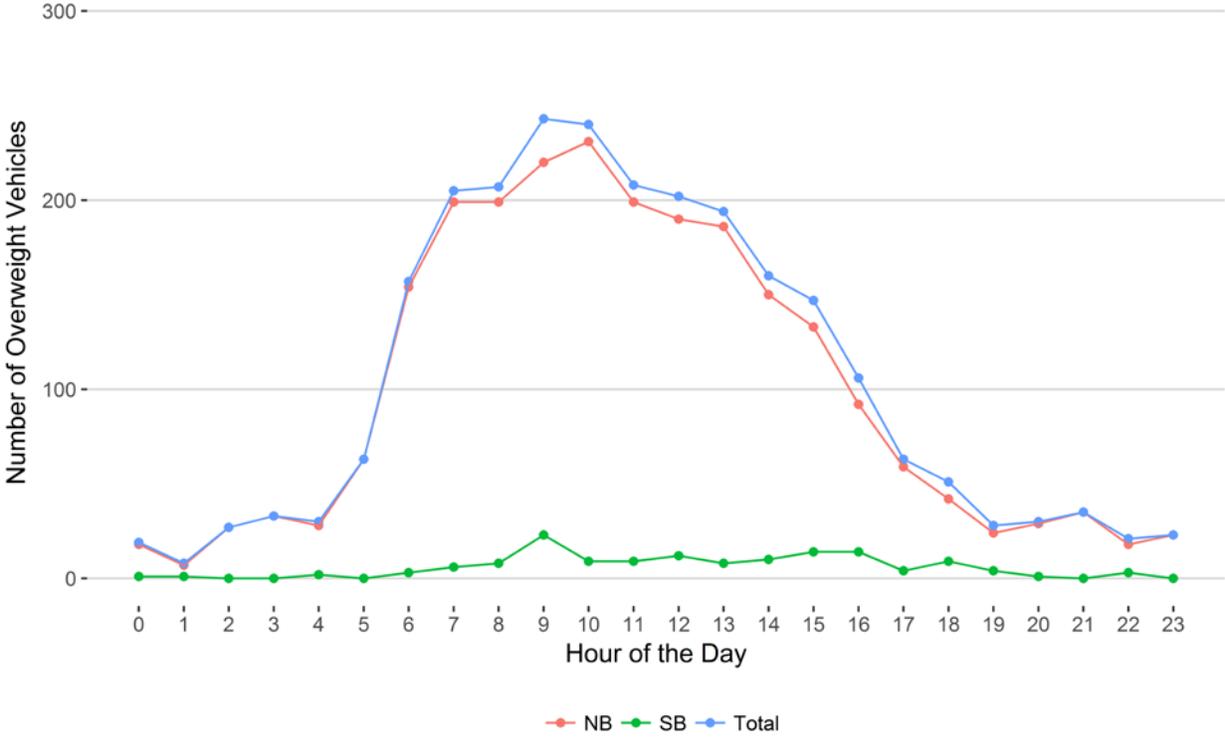
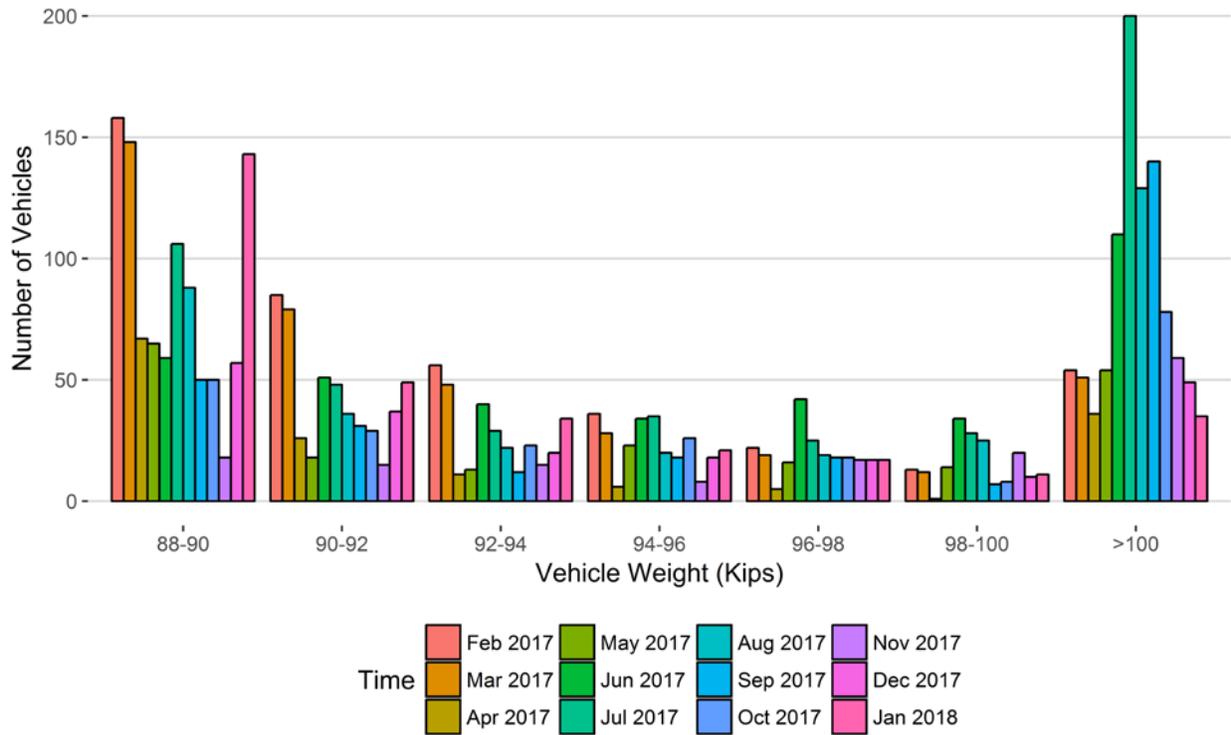
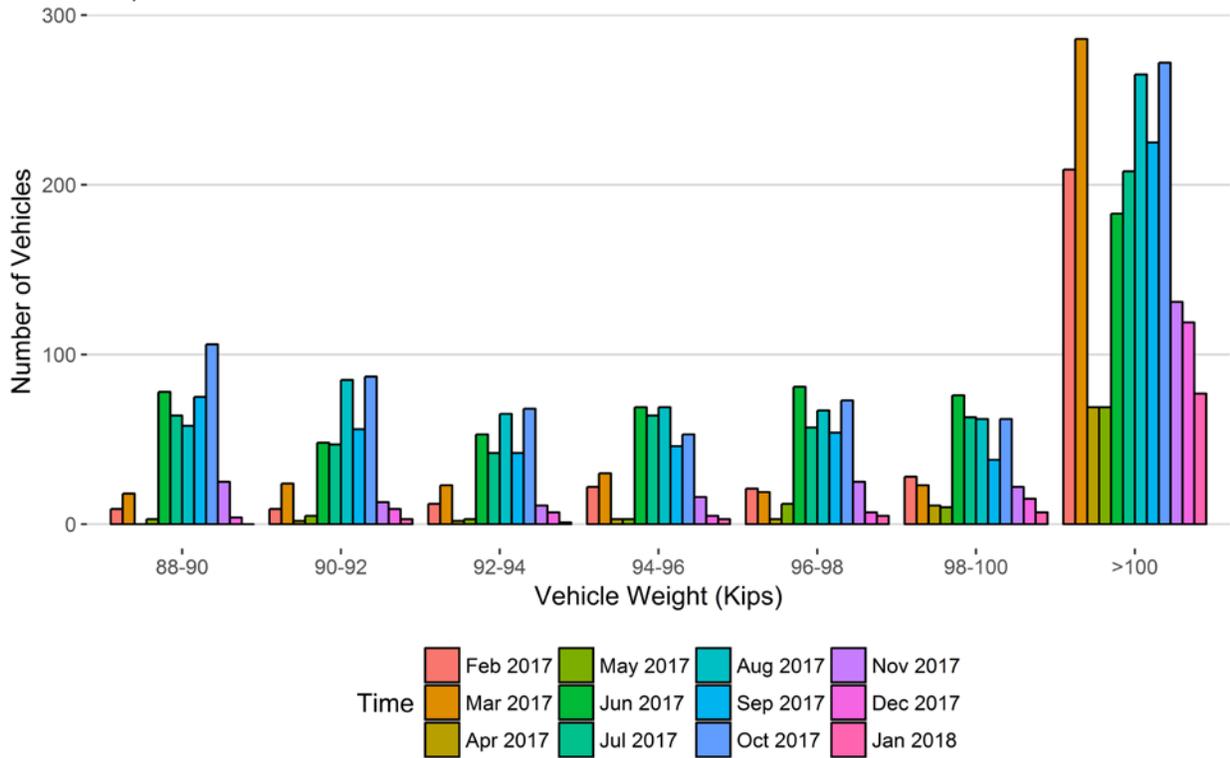


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018
88-90	158	148	67	65	59	106	88	50	50	18	57	143
90-92	85	79	26	18	51	48	36	31	29	15	37	49
92-94	56	48	11	13	40	29	22	12	23	15	20	34
94-96	36	28	6	23	34	35	20	18	26	8	18	21
96-98	22	19	5	16	42	25	19	18	18	17	17	17
98-100	13	12	1	14	34	28	25	7	8	20	10	11
>100	54	51	36	54	110	200	129	140	78	59	49	35
Total	424	385	152	203	370	471	339	276	232	152	208	310

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



Vehicle Weights (Kips)	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018
88-90	9	18	0	3	78	64	58	75	106	25	4	0
90-92	9	24	2	5	48	47	85	56	87	13	9	3
92-94	12	23	2	3	53	42	65	42	68	11	7	1
94-96	22	30	3	3	69	64	69	46	53	16	5	3
96-98	21	19	3	12	81	57	67	54	73	25	7	5
98-100	28	23	11	10	76	63	62	38	62	22	15	7
>100	209	286	69	69	183	208	265	225	272	131	119	77
Total	310	423	90	105	588	545	671	536	721	243	166	96

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

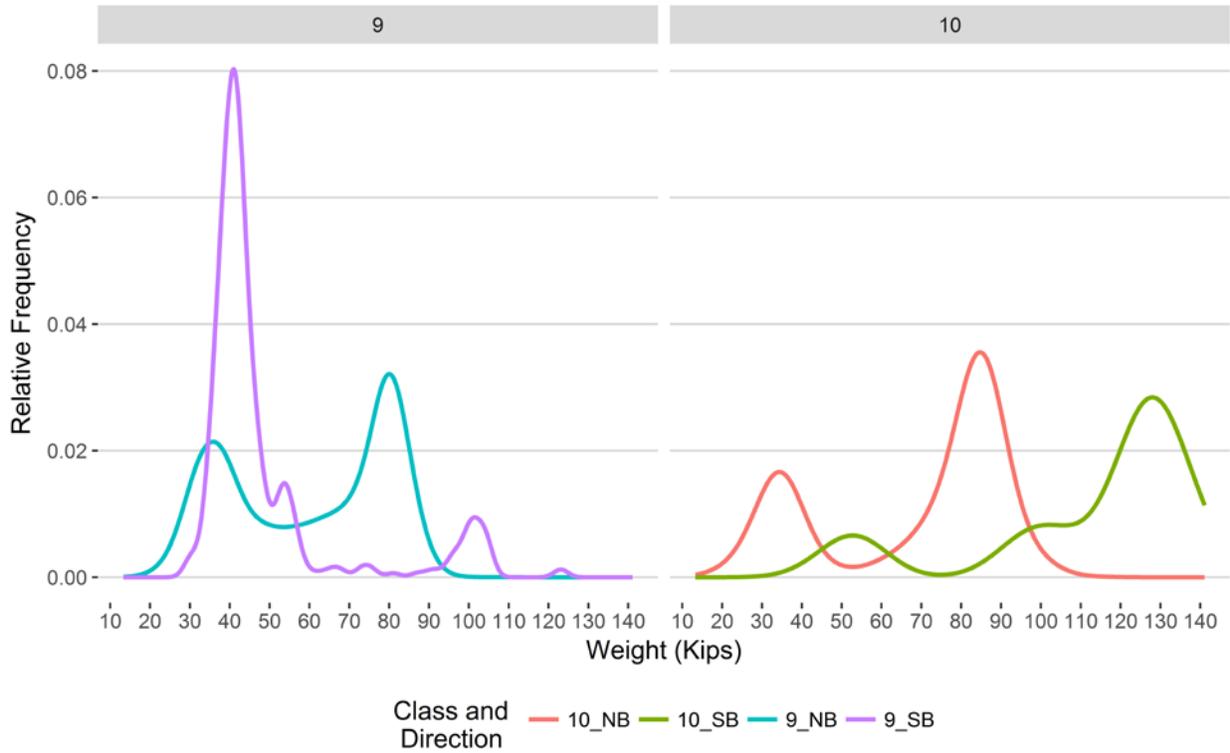


Figure 9 - Freight Percentage by Direction and Class

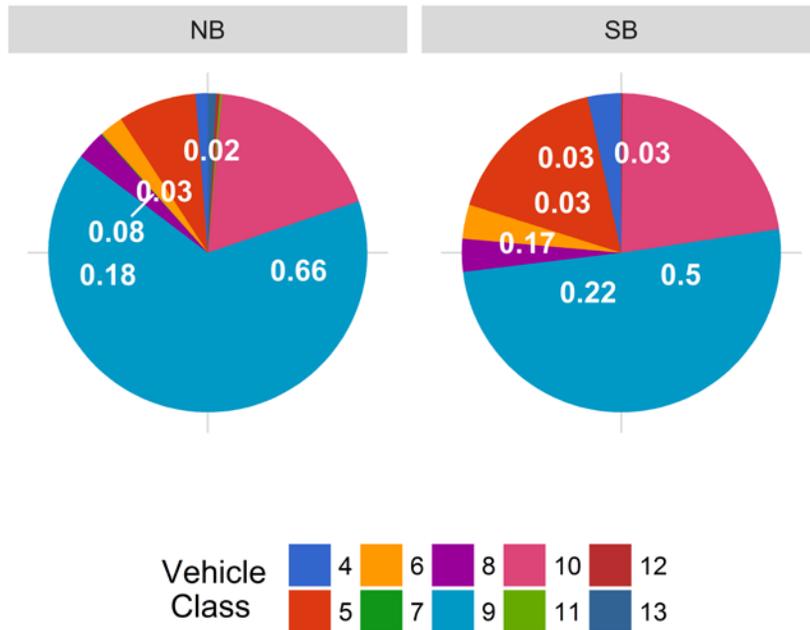


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

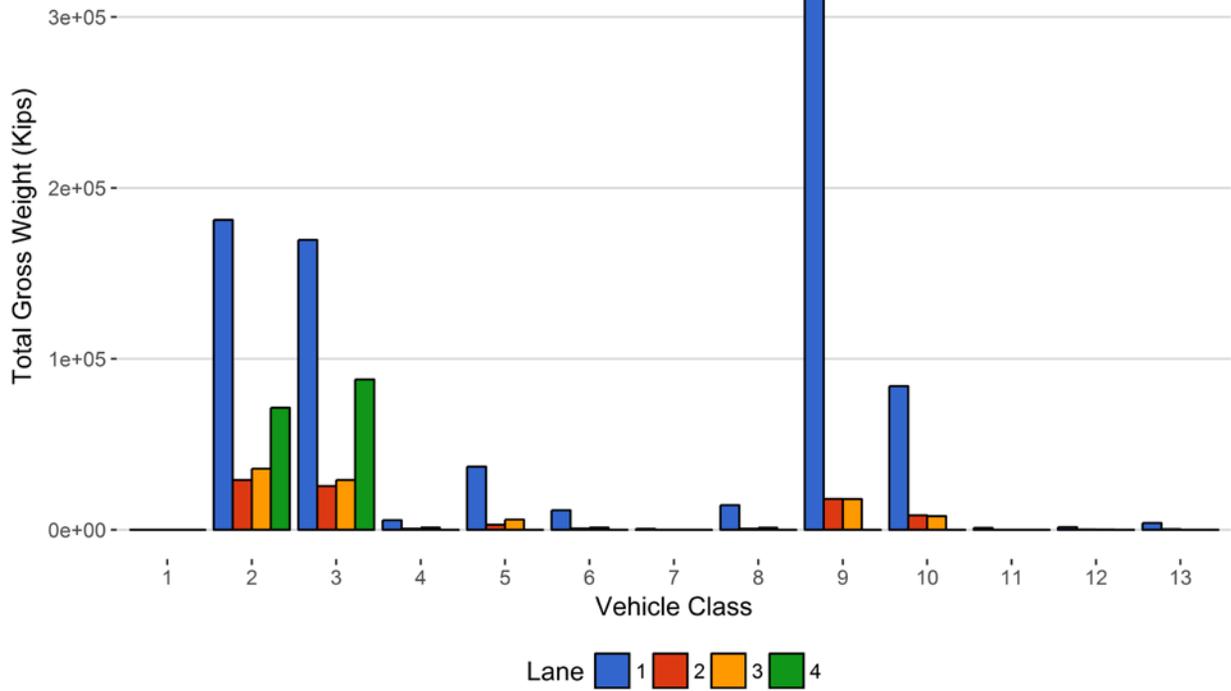


Figure 11 - Total Gross Vehicle Weight I

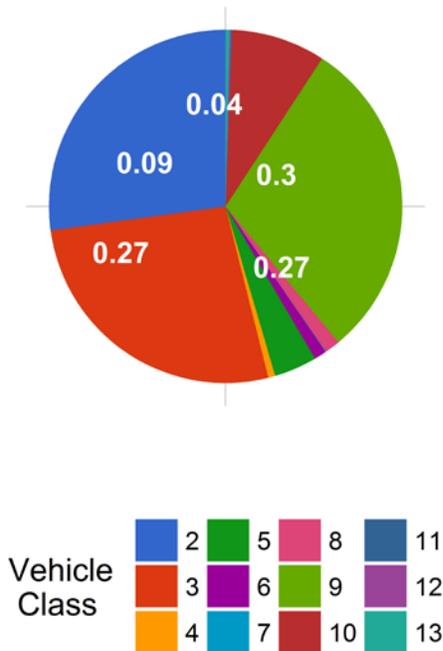


Figure 12 - Total ESALs by Class and Lane

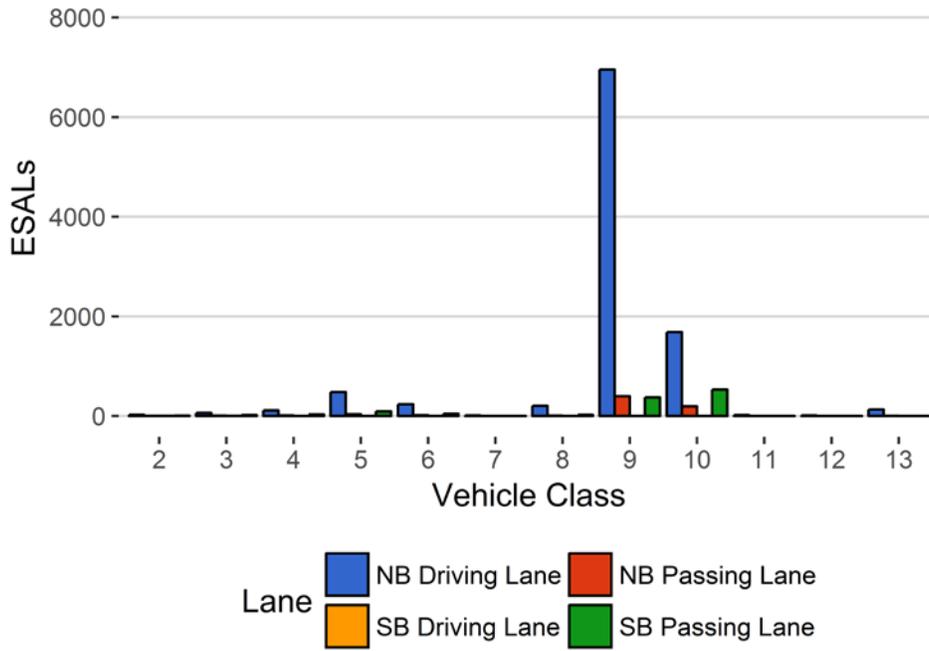
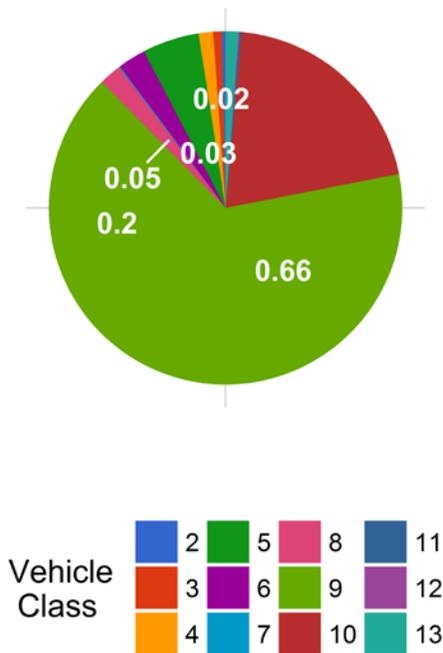


Figure 13 - ESALs by Class



**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

**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	0	0	0	0	0
2	3071	95210	52.4	0	0
3	2419	74991	41.2	0	0
4	8	246	0.1	19	0.8
5	99	3054	1.7	49	2
6	13	398	0.2	32	1.3
7	0	9	0	3	0.1
8	16	493	0.3	12	0.5
9	191	5913	3.3	1531	62.5
10	46	1424	0.8	780	31.8
11	1	20	0	0	0
12	1	34	0	1	0
13	2	49	0	24	1
<b>TOTAL</b>	<b>5866</b>	<b>181841</b>	<b>100</b>	<b>2451</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>
2018-01-30	Tuesday	16:53:39	10	SB	3	141.1
2018-01-03	Wednesday	16:44:10	10	SB	3	138.57
2018-01-27	Saturday	09:35:16	10	SB	3	138.34
2018-01-09	Tuesday	16:22:50	10	SB	3	137.85
2018-01-23	Tuesday	06:40:44	10	SB	3	137.15
2018-01-02	Tuesday	15:04:36	10	SB	3	136.89
2018-01-22	Monday	18:04:59	9	SB	3	134.9
2018-01-29	Monday	13:27:45	10	SB	3	134.87
2018-01-04	Thursday	18:22:27	10	SB	3	134.85
2018-01-10	Wednesday	09:04:12	10	SB	3	134.37

**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	200	34	17	5818	429	1664
5	NB	8	2628	201	7.6	38497	1441	9541
6	NB	19	365	35	9.6	11455	609	2592
7	NB	11.5	9	0	0	505	0	201
8	NB	31	449	144	32.1	11793	3260	1169
9	NB	33	5485	602	11	312212	17815	75536
10	NB	33.5	1338	154	11.5	87901	4545	24118
11	NB	36.5	20	1	5	1030	18	168
12	NB	36.5	33	0	0	1712	0	254
13	NB	31.5	48	0	0	4280	0	1384
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>10575</b>	<b>1171</b>	<b>****</b>	<b>475203</b>	<b>****</b>	<b>116628</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	43	3	7	1166	44	283
5	SB	8	394	0	0	5940	0	1394
6	SB	19	29	1	3.4	1212	19	340
8	SB	31	39	19	48.7	842	344	111
9	SB	33	367	5	1.4	17772	151	2913
10	SB	33.5	71	0	0	7977	0	2799
12	SB	36.5	1	0	0	60	0	12
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>944</b>	<b>28</b>	<b>****</b>	<b>34968</b>	<b>****</b>	<b>7851</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>11519</b>	<b>1199</b>	<b>154</b>	<b>510171</b>	<b>28676</b>	<b>124479</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>
2	181355	29139	35751	71373	317618	27.2
3	169568	25568	29125	87929	312189	26.7
4	5591	656	1210	0	7456	0.6
5	36926	3013	5940	0	45878	3.9
6	11396	668	1230	0	13294	1.1
7	505	0	0	0	505	0
8	14444	610	1186	0	16239	1.4
9	311948	18079	17923	0	347950	29.8
10	83992	8454	7977	0	100423	8.6
11	1048	0	0	0	1048	0.1
12	1542	170	60	0	1772	0.2
13	3933	347	0	0	4280	0.4
<b>TOTAL</b>	<b>822247</b>	<b>86703</b>	<b>100402</b>	<b>159302</b>	<b>1168654</b>	<b>100</b>
<b>GVW/LANE</b>	<b>70.36</b>	<b>7.42</b>	<b>8.59</b>	<b>13.63</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>
2	23	4	9	3	38	0.33	9e-04
3	63	9	19	4	95	0.81	0.0026
4	111	11	32	0	155	1.31	1.27
5	482	37	92	0	611	5.2	0.41
6	236	15	49	0	300	2.55	1.52
7	14	0	0	0	14	0.12	2.14
8	204	10	24	0	239	2.03	0.98
9	6954	398	375	0	7726	65.74	2.65
10	1682	192	531	0	2405	20.47	3.41
11	20	0	0	0	20	0.17	1.63
12	11	1	0	0	13	0.11	0.83
13	132	6	0	0	138	1.17	4.75
<b>TOTAL</b>	<b>9932</b>	<b>682</b>	<b>1131</b>	<b>7</b>	<b>11753</b>	<b>100</b>	<b>20</b>
<b>ESALS/LANE</b>	<b>84.5</b>	<b>5.8</b>	<b>9.6</b>	<b>0.1</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>
Feb 2017	191649	6845	492	177863	92.8	13785.8	7.2	87.5	12.5
Mar 2017	215426	6949	654	195162	90.6	20263.9	9.4	92	8
Apr 2017	215331	7178	444	202022	93.8	13309.4	6.2	89	11
May 2017	271582	8761	575	253750	93.4	17831.8	6.6	88	12
Jun 2017	319238	10641	930	291338	91.3	27899.8	8.7	91.1	8.9
Jul 2017	341612	11020	954	312053	91.3	29559.5	8.7	91.4	8.6
Aug 2017	323990	10451	906	295913	91.3	28077.5	8.7	91.7	8.3
Sep 2017	286867	9562	835	261811	91.3	25055.9	8.7	91.8	8.2
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
<b>TOTAL</b>	<b>3028906</b>	<b>--</b>	<b>--</b>	<b>2788164</b>	<b>--</b>	<b>240743</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>AVERAGE</b>	<b>252409</b>	<b>8290</b>	<b>658</b>	<b>232347</b>	<b>92</b>	<b>20062</b>	<b>8</b>	<b>90</b>	<b>10</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>
Feb 2017	69816	606	1298	3871	75590	97	3	21.6
Mar 2017	13937	611	719	6568	21835	94	6	12.9
Apr 2017	9922	460	773	436	11591	89	11	4.4
May 2017	12532	589	941	752	14814	90	10	5.2
Jun 2017	13372	929	1116	9528	24945	92	8	9.3
Jul 2017	15823	887	1206	8865	26780	92	8	23.7
Aug 2017	16638	861	1147	10280	28927	93	7	13
Sep 2017	13397	688	893	8999	23977	93	7	9.7
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
<b>TOTAL</b>	<b>237577</b>	<b>8201</b>	<b>12832</b>	<b>96299</b>	<b>354908</b>	--	--	--
<b>AVERAGE</b>	<b>19798</b>	<b>683</b>	<b>1069</b>	<b>8025</b>	<b>29576</b>	<b>93</b>	<b>7</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>
Feb 2017	825230	86740	100718	162052	1174740
Mar 2017	692727	87979	113101	405952	1299759
Apr 2017	870708	104232	99559	691060	1765558
May 2017	849503	98129	100461	375945	1424039
Jun 2017	1093082	151887	154874	445317	1845160
Jul 2017	1226497	207142	212959	1067914	2714512
Aug 2017	1285190	212694	240911	1100208	2839003
Sep 2017	1208868	202501	206603	1102509	2720481
Oct 2017	1055974	165403	173645	982897	2377919
Nov 2017	1034880	137948	160634	994865	2328327
Dec 2017	864848	109802	135880	388739	1499269
Jan 2018	847068	95361	130293	218569	1291292
<b>TOTAL</b>	<b>11854575</b>	<b>1659818</b>	<b>1829638</b>	<b>7936029</b>	<b>23280060</b>
<b>AVERAGE</b>	<b>987881</b>	<b>138318</b>	<b>152470</b>	<b>661336</b>	<b>1940005</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>
Feb 2017	2660	1.5	19.7	789	350
Mar 2017	4079	2	20.7	811	375
Apr 2017	2531	1.2	20	243	117
May 2017	3145	1.2	18.8	308	147
Jun 2017	5558	1.8	20	960	404
Jul 2017	5908	1.8	20.1	1025	508
Aug 2017	5699	1.8	20.4	1016	485
Sep 2017	4749	1.7	19.1	817	414
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
<b>TOTAL</b>	<b>47404</b>	<b>--</b>	<b>--</b>	<b>8180</b>	<b>3842</b>
<b>AVERAGE</b>	<b>3950.3</b>	<b>1.6</b>	<b>19.3</b>	<b>681.7</b>	<b>320.2</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>
Feb 2017	87401	34932	122332	71.4	28.6
Mar 2017	121390	69662	191052	63.5	36.5
Apr 2017	110430	12575	123005	89.8	10.2
May 2017	137051	18215	155266	88.3	11.7
Jun 2017	146355	105381	251736	58.1	41.9
Jul 2017	165781	98437	264218	62.7	37.3
Aug 2017	149028	108771	257798	57.8	42.2
Sep 2017	127781	96029	223811	57.1	42.9
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
<b>TOTAL</b>	<b>1524173</b>	<b>710063</b>	<b>2234236</b>	--	--
<b>AVERAGE</b>	<b>127014.4</b>	<b>59171.9</b>	<b>186186.3</b>	<b>72</b>	<b>28</b>