

SEPTEMBER 2018



**WIM #43  
US 10,  
MP 7.5  
MOORHEAD,  
MINNESOTA**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #43 is located on US 10 near Moorhead in Clay county.

## System Operation

WIM #43 was operational for the entire month of September 2018. Volume was computed using all monthly data.

## System Calibration

WIM #43 was most recently calibrated on 2015-02-04. 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: 547486 | Passenger Vehicles: 502315 | Heavy Commercial Vehicles: 45171

Monthly Average Daily Traffic (MADT): 18250 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1506

See Table 2 for vehicle class breakdown

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

**Volume trends.** EB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. WB vehicles typically reached highest volume levels on Mondays, 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), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 07 AM and 05 PM

## Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB 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 45171 HCVs, 5962 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 1.1% of total monthly volume, and 13.3% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Wednesdays, 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 62.7% of all overweight vehicles traveling EB 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 ,1764 EB vehicles exceeded 88,000 pounds (1247 vehicles were Class 9's; 361 vehicles were Class 10's). Of vehicles traveling WB,

317 EB vehicles exceeded 88,000 pounds (154 vehicles were Class 13's; 84 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 empty Class 9's than fully\_loaded Class 9's traveling EB, while there were more fully\_loaded Class 9's than empty traveling WB. Data also suggests that there were more empty Class 10's than fully\_loaded traveling in the EB direction. In the WB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 379681 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (53.3%) than EB (46.7%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 8528 (a box culvert) is approximately 1.3 miles east of WIM #43. Bridges No. 14001 and 5854 are approximately 0.8 miles west of WIM #43. US 10 also crosses the Buffalo River, specifically via Bridges No. 14001 (carrying EB traffic) and 5854 (carrying WB traffic). WIM #43 recorded a total of 547486 vehicles with a combined GVW of 4291408 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 33709 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 58.7% of all ESALs were recorded EB while 41.3% was observed WB. In particular, 58% of all ESALs were generated by the Class 9's (Class 9's

were also responsible for generating 23% 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).

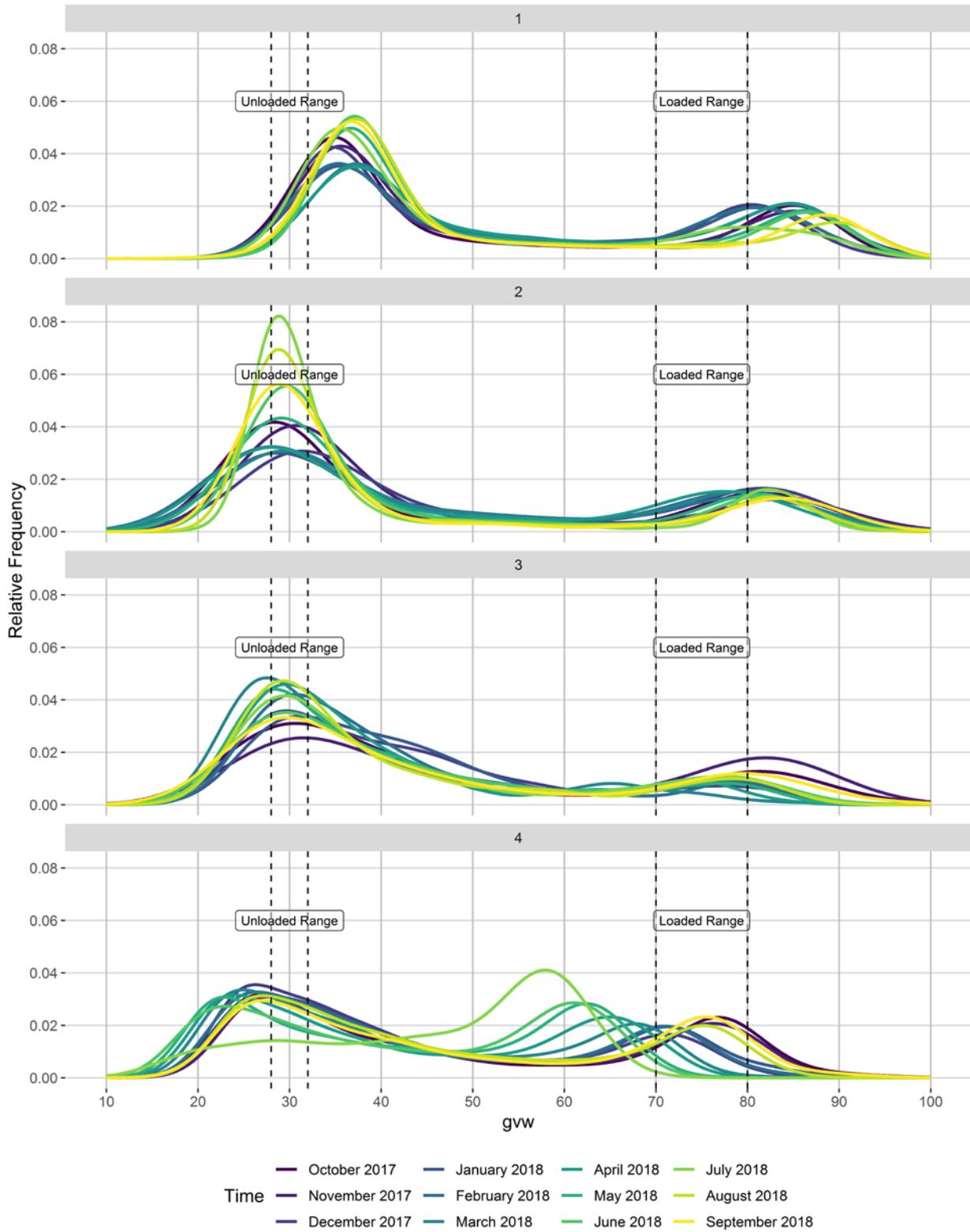
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

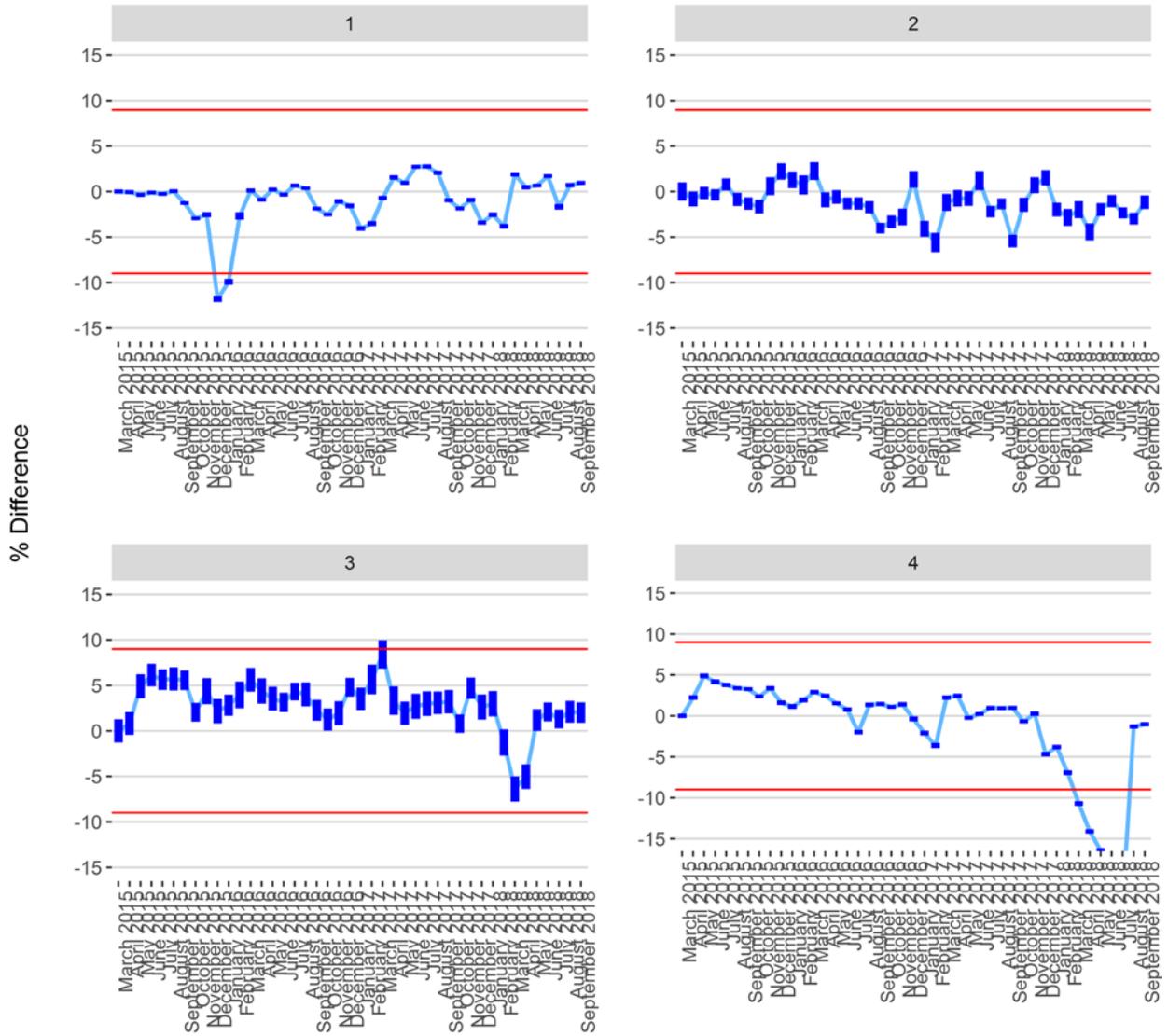
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Figure 1 - Monthly Class 9 GVW Histogram



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

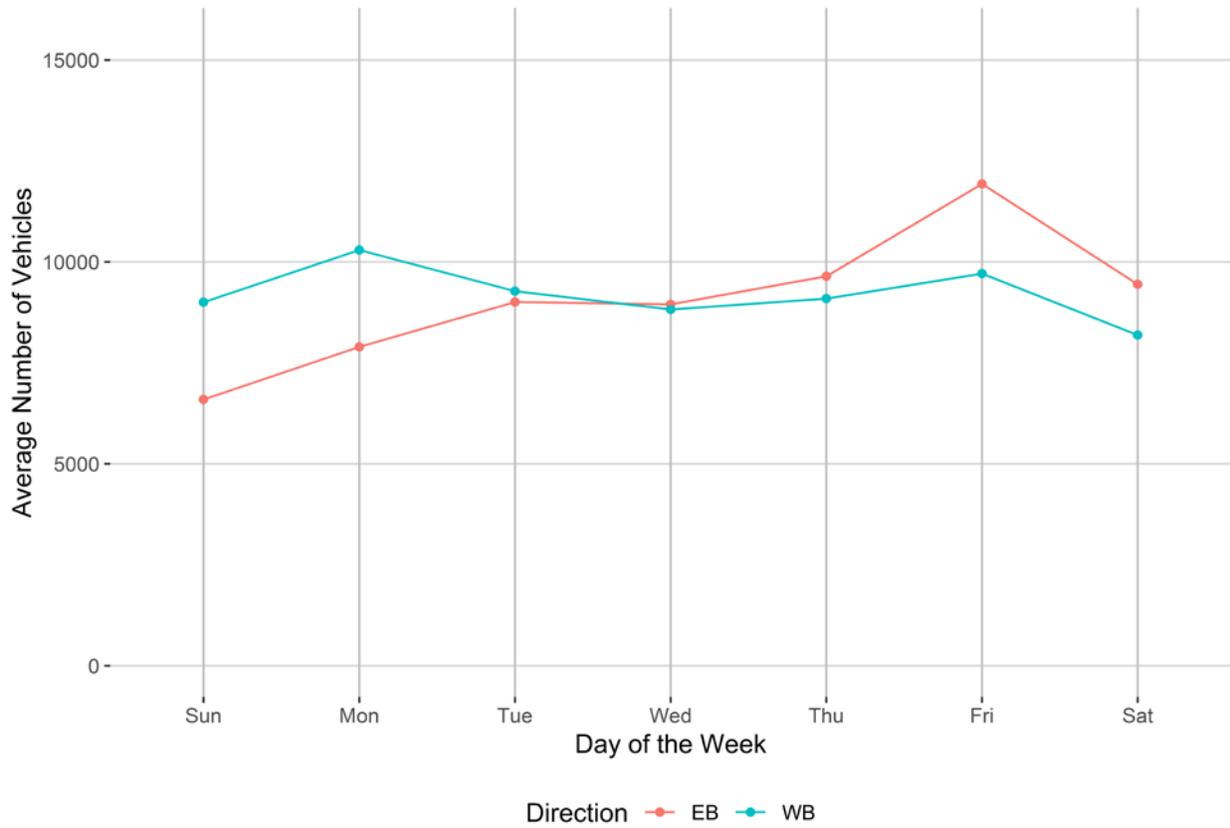


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

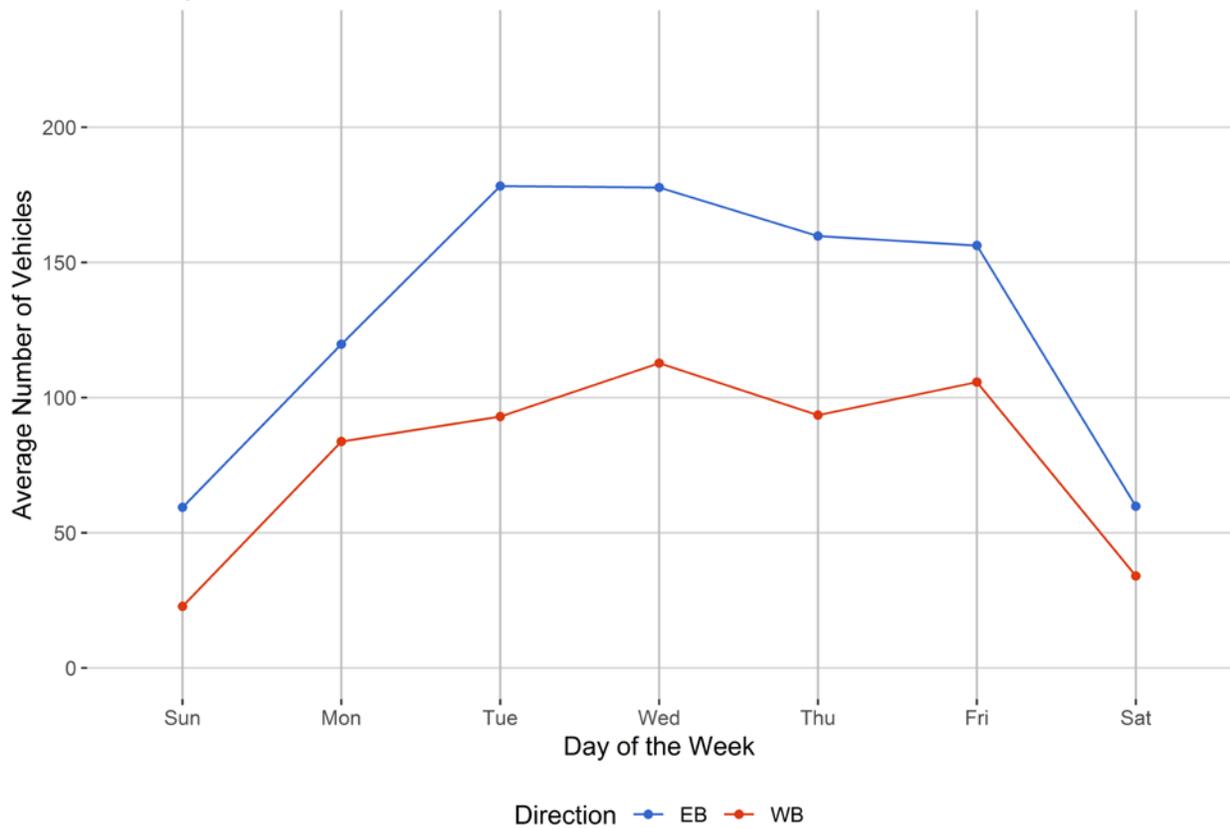


Figure 4 - Passenger Vehicles vs. Hour of the Day

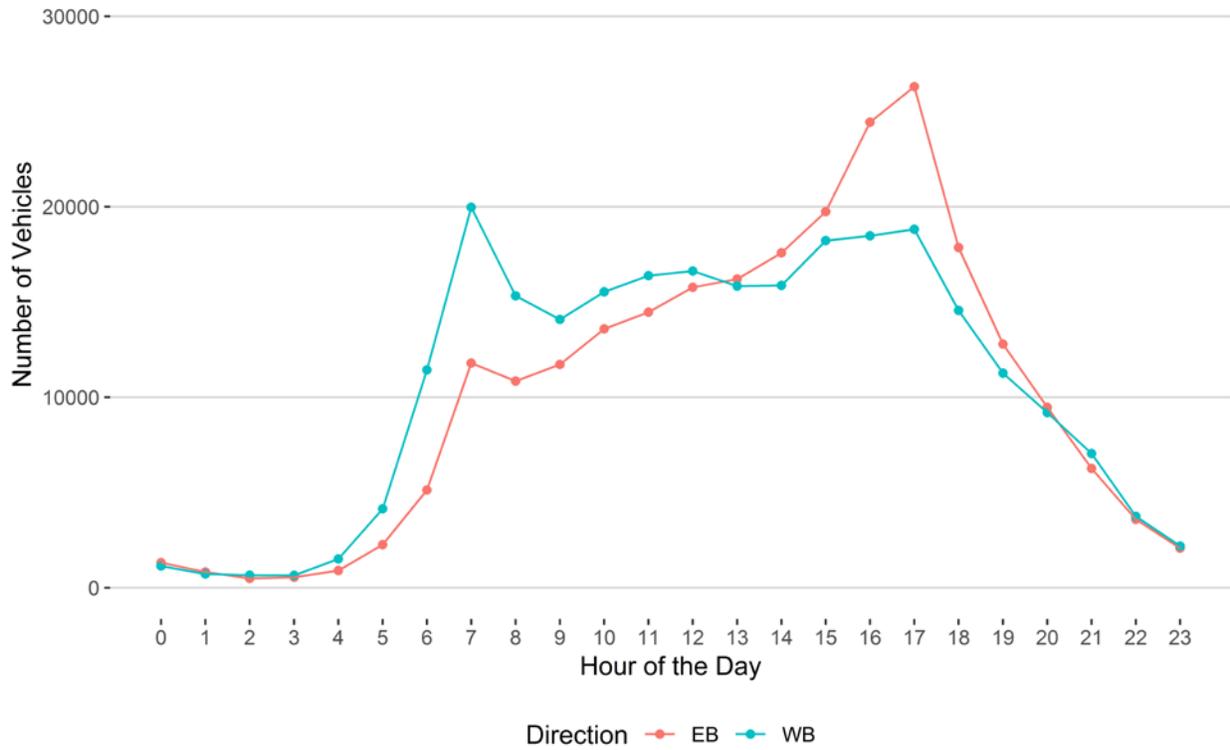


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

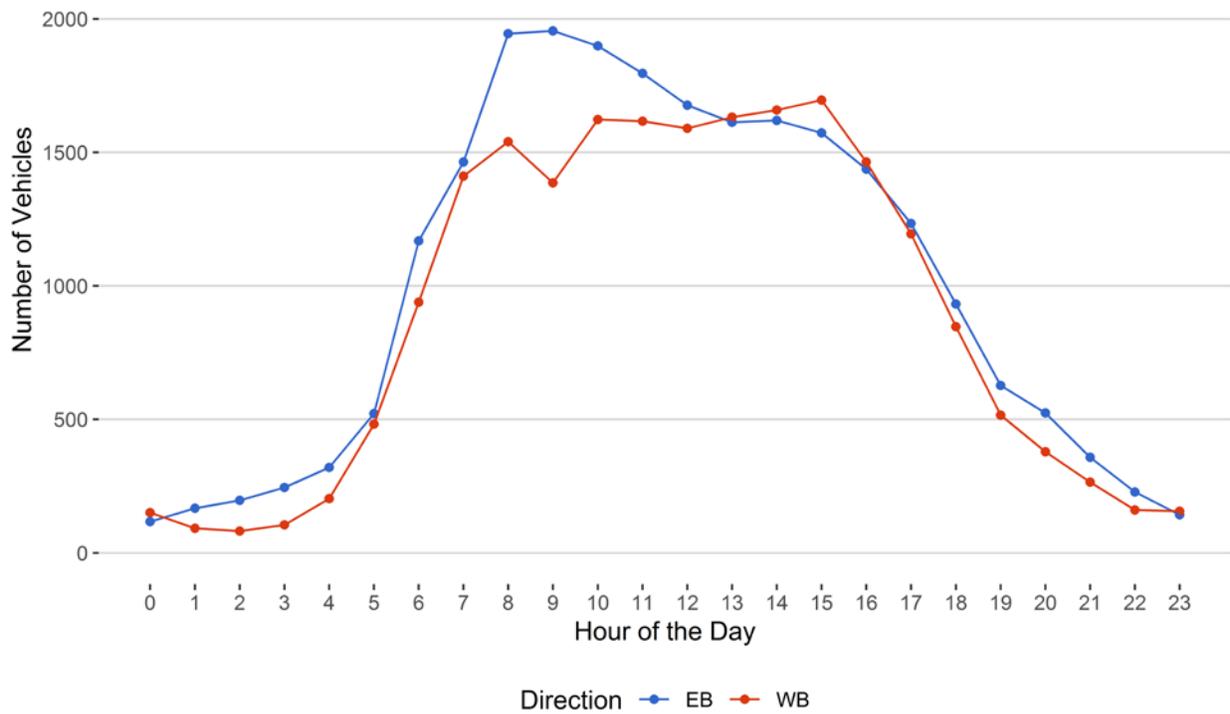


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

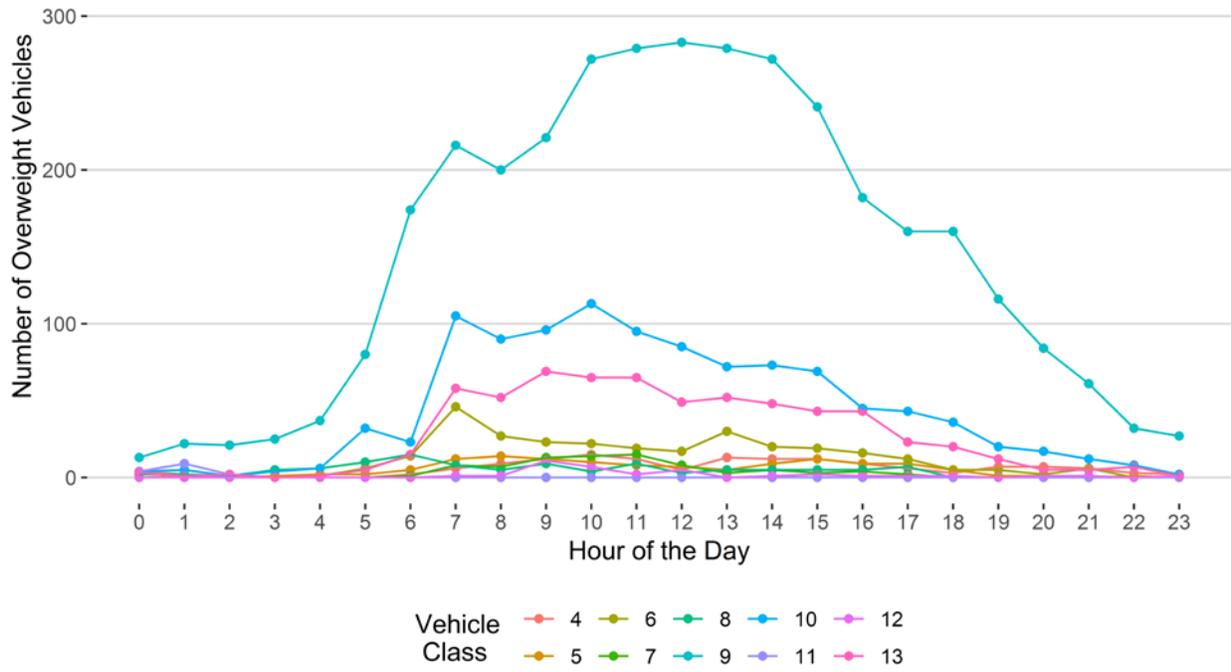


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

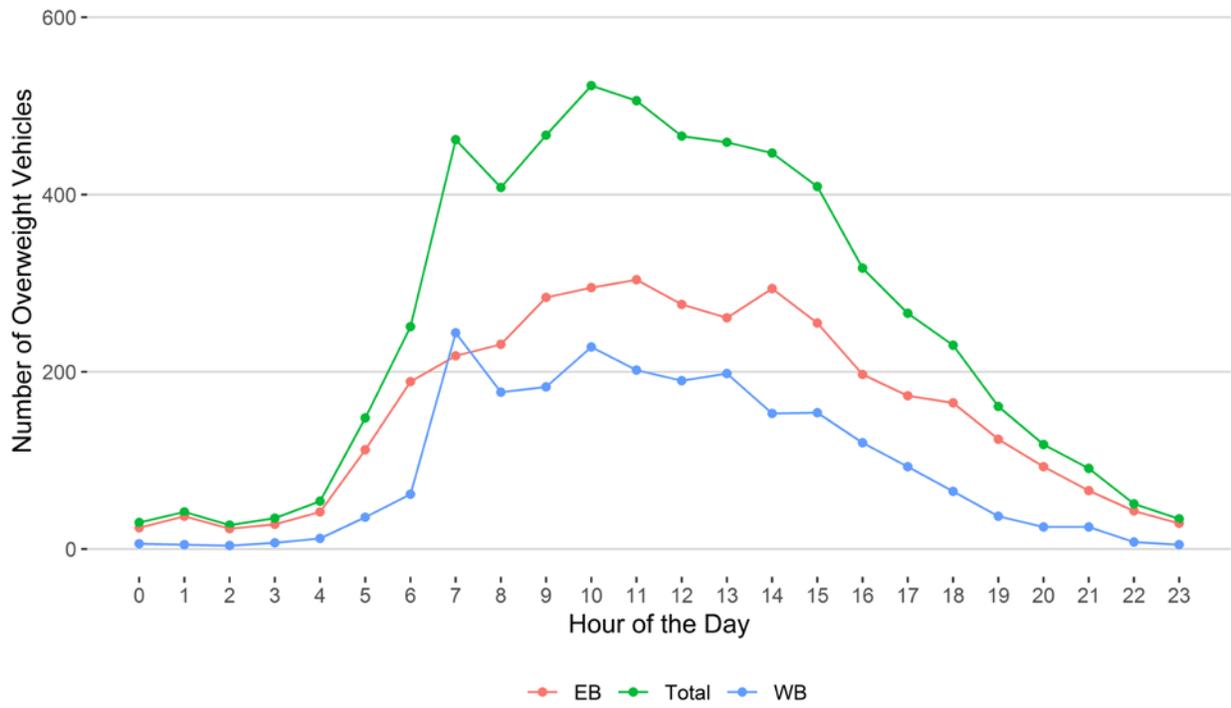
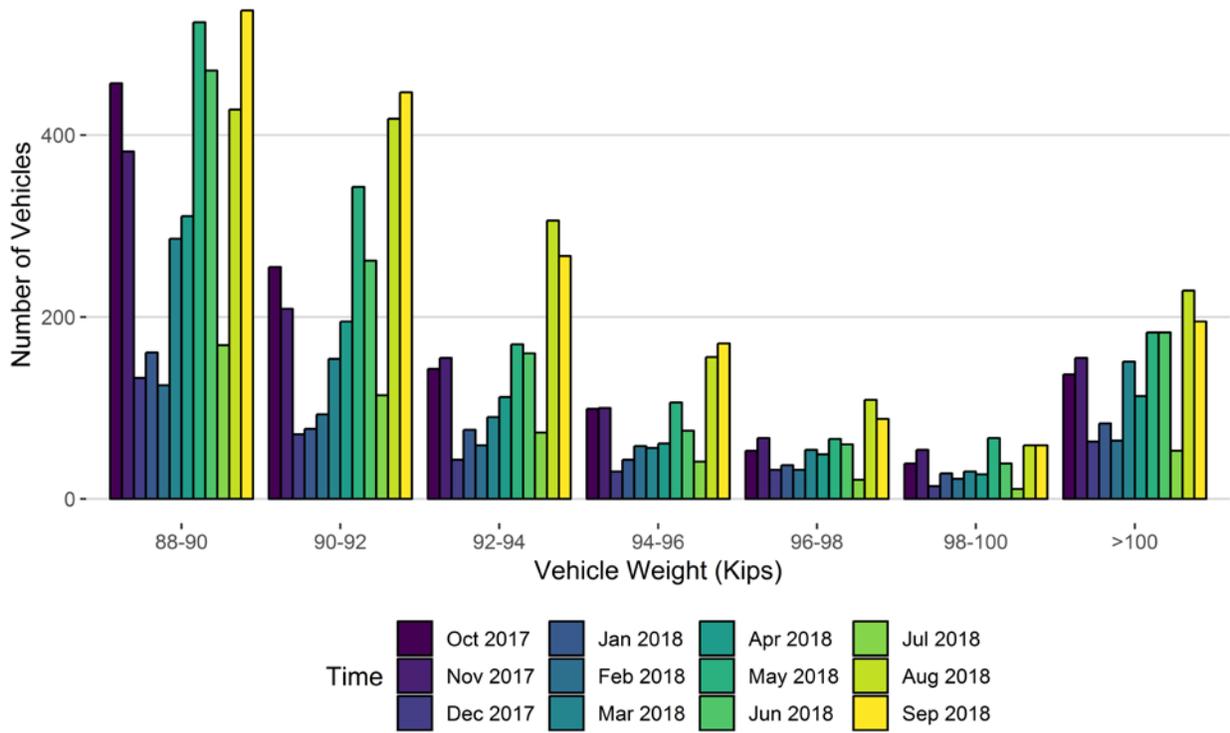
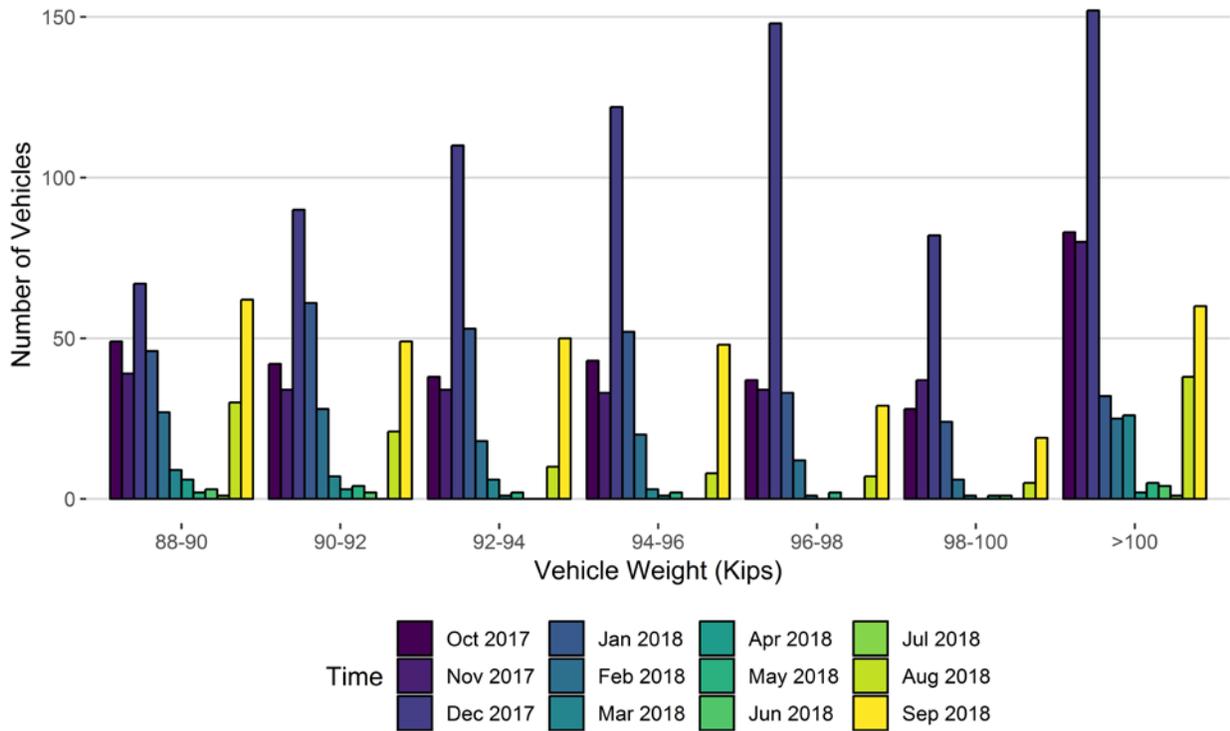


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



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	457	382	133	161	125	286	311	524	471	169	428	537
90-92	255	209	71	77	93	154	195	343	262	114	418	447
92-94	143	155	43	76	59	90	112	170	160	73	306	267
94-96	99	100	30	43	58	56	61	106	75	41	156	171
96-98	53	67	32	37	32	54	49	66	60	21	109	88
98-100	39	54	14	28	22	30	27	67	39	11	59	59
>100	137	155	63	83	64	151	113	183	183	53	229	195
Total	1183	1122	386	505	453	821	868	1459	1250	482	1705	1764

Figure 8 - Histogram of WB 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	49	39	67	46	27	9	6	2	3	1	30	62
90-92	42	34	90	61	28	7	3	4	2	0	21	49
92-94	38	34	110	53	18	6	1	2	0	0	10	50
94-96	43	33	122	52	20	3	1	2	0	0	8	48
96-98	37	34	148	33	12	1	0	2	0	0	7	29
98-100	28	37	82	24	6	1	0	1	1	0	5	19
>100	83	80	152	32	25	26	2	5	4	1	38	60
Total	320	291	771	301	136	53	13	18	10	2	119	317

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

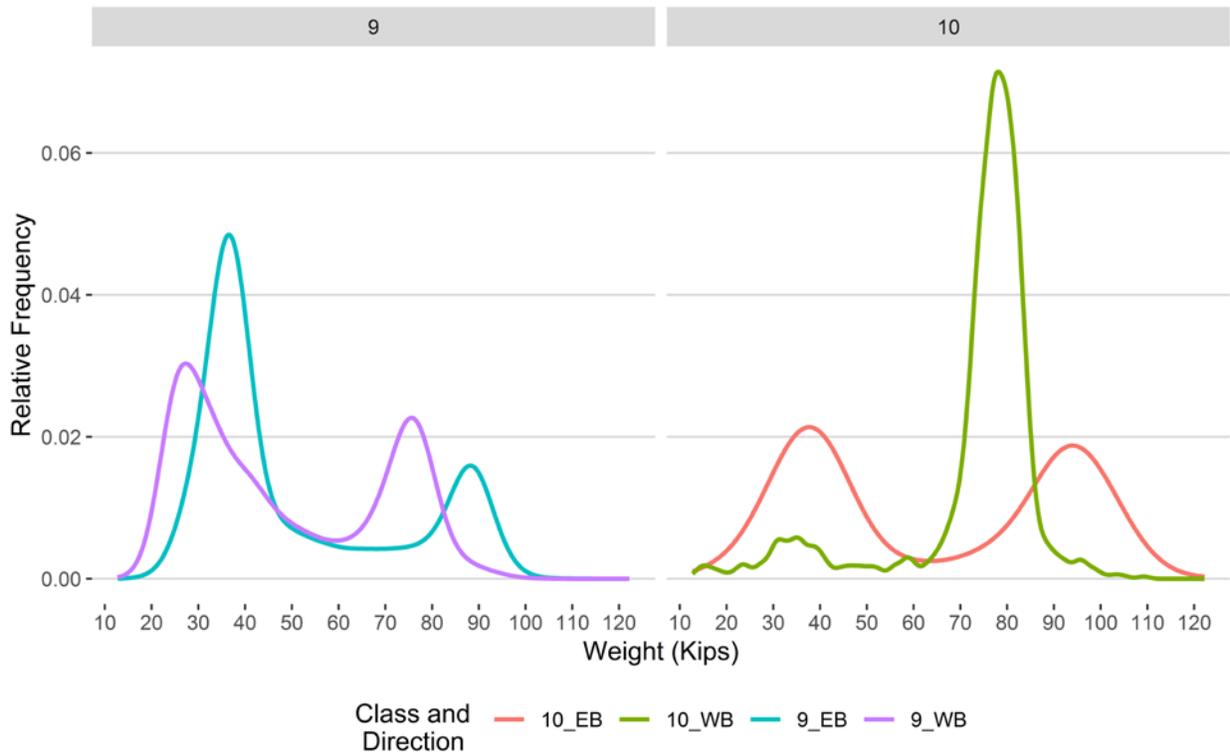


Figure 9 - Freight Percentage by Direction and Class

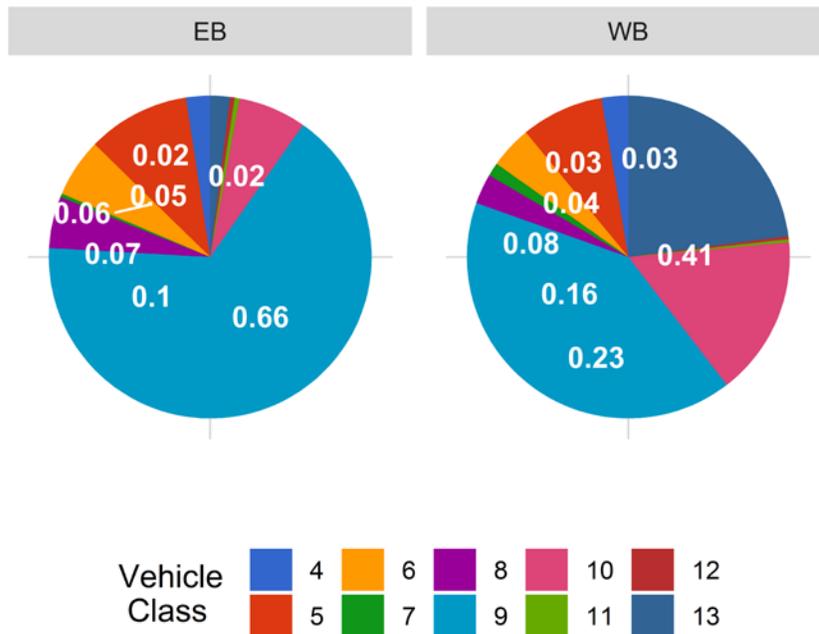


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

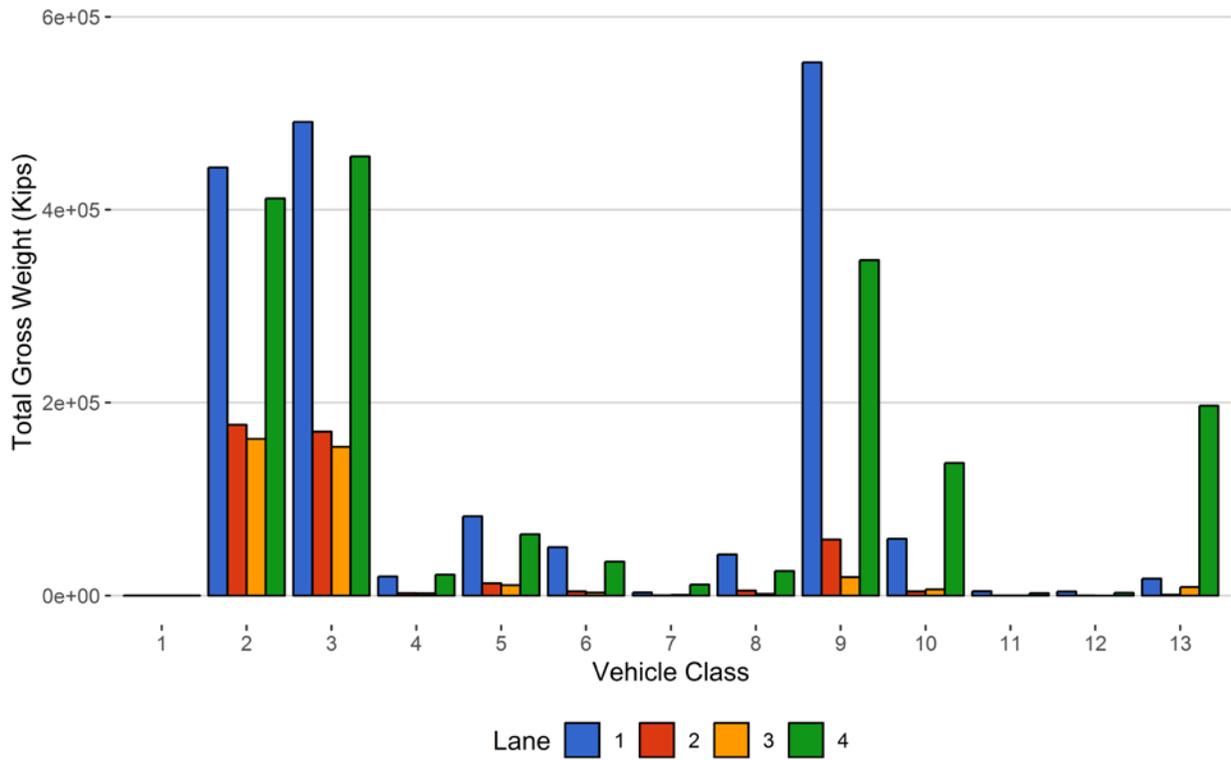


Figure 11 - Total Gross Vehicle Weight t

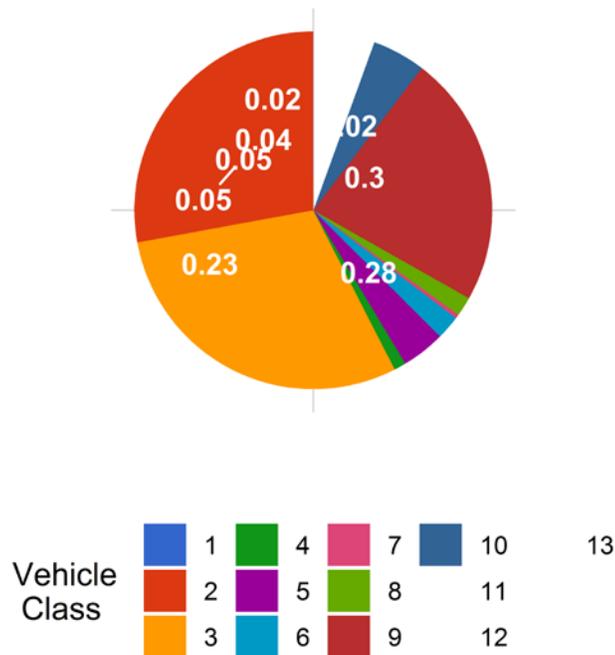


Figure 12 - Total ESALs by Class and Lane

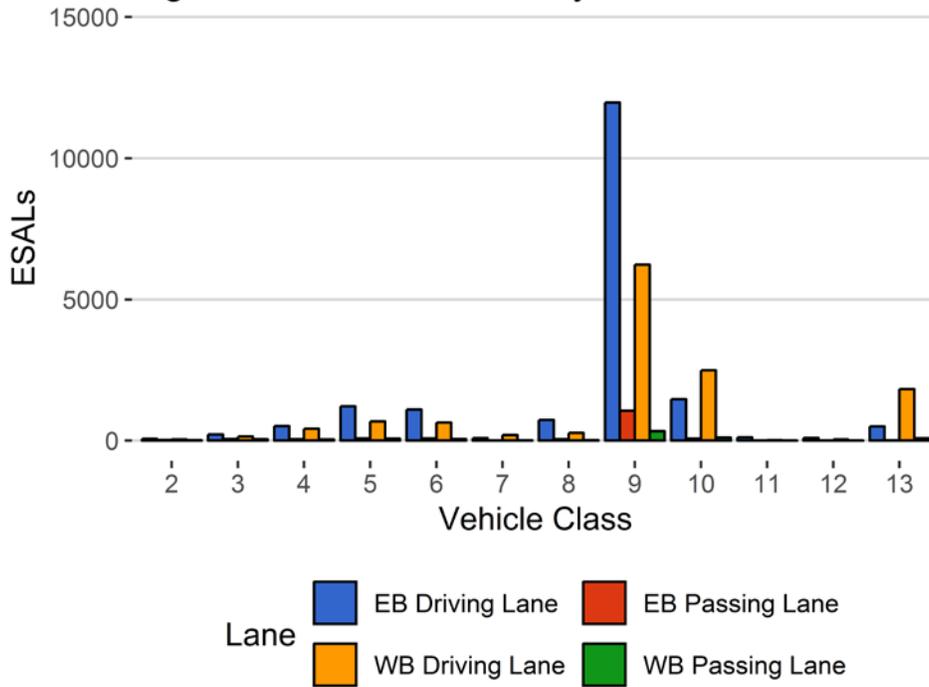
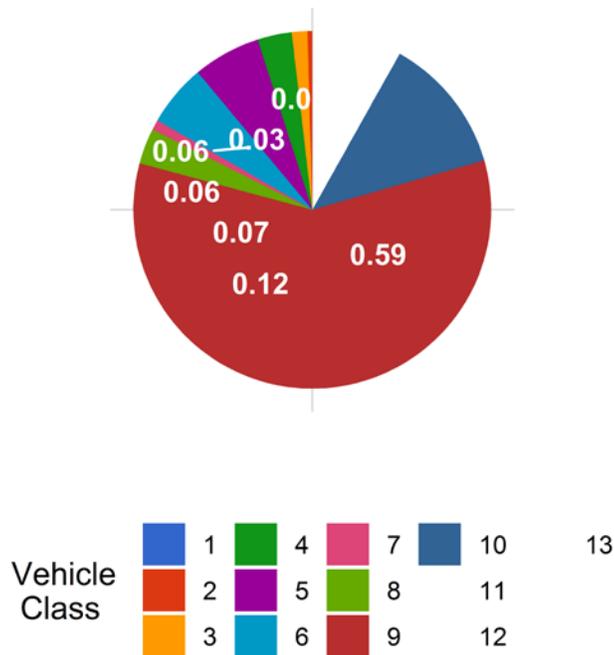


Figure 13 - ESALs by Class



**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>
March 2015	12.58	0.00	11.72	0.00	10.94	0.00	10.81	0.00
April 2015	12.58	-0.06	11.63	-0.82	11.03	0.81	11.05	2.25
May 2015	12.54	-0.36	11.70	-0.16	11.47	4.90	11.34	4.88
June 2015	12.57	-0.11	11.68	-0.38	11.61	6.13	11.26	4.17
July 2015	12.55	-0.25	11.81	0.79	11.55	5.63	11.22	3.77
August 2015	12.59	0.04	11.62	-0.86	11.56	5.72	11.18	3.38
September 2015	12.42	-1.27	11.57	-1.32	11.55	5.56	11.16	3.26
October 2015	12.21	-2.95	11.53	-1.66	11.16	2.04	11.07	2.39
November 2015	12.26	-2.55	11.79	0.60	11.41	4.37	11.18	3.37
December 2015	11.10	-11.79	11.98	2.22	11.18	2.18	10.99	1.62
January 2016	11.33	-9.93	11.87	1.28	11.25	2.82	10.93	1.14
February 2016	12.25	-2.68	11.81	0.72	11.37	3.95	11.02	1.94
March 2016	12.60	0.11	11.99	2.26	11.55	5.61	11.13	2.92
April 2016	12.47	-0.88	11.62	-0.91	11.42	4.39	11.08	2.45
May 2016	12.61	0.22	11.65	-0.59	11.32	3.54	10.98	1.54
June 2016	12.54	-0.34	11.57	-1.30	11.28	3.14	10.90	0.78
July 2016	12.67	0.66	11.57	-1.31	11.41	4.33	10.60	-1.98
August 2016	12.63	0.37	11.52	-1.72	11.38	4.01	10.96	1.35
September 2016	12.35	-1.88	11.25	-4.02	11.18	2.26	10.97	1.46
October 2016	12.26	-2.54	11.34	-3.30	11.07	1.24	10.93	1.10
November 2016	12.45	-1.08	11.40	-2.79	11.15	1.94	10.96	1.41
December 2016	12.39	-1.56	11.88	1.33	11.46	4.80	10.77	-0.36
January 2017	12.07	-4.05	11.24	-4.09	11.32	3.53	10.59	-2.09
February 2017	12.14	-3.51	11.07	-5.59	11.56	5.66	10.42	-3.61
March 2017	12.49	-0.72	11.58	-1.19	11.86	8.40	11.05	2.24

April 2017	12.78	1.54	11.64	-0.73	11.30	3.31	11.08	2.46
May 2017	12.70	0.96	11.63	-0.76	11.15	1.94	10.79	-0.24
June 2017	12.93	2.73	11.86	1.19	11.23	2.71	10.84	0.23
July 2017	12.93	2.77	11.46	-2.21	11.26	2.99	10.92	0.97
August 2017	12.84	2.05	11.56	-1.35	11.27	3.08	10.92	0.96
September 2017	12.46	-0.96	11.08	-5.44	11.29	3.21	10.92	0.99
October 2017	12.35	-1.86	11.55	-1.45	11.02	0.78	10.74	-0.67
November 2017	12.47	-0.91	11.80	0.69	11.45	4.70	10.84	0.27
December 2017	12.15	-3.41	11.90	1.51	11.22	2.62	10.31	-4.67
January 2018	12.26	-2.55	11.49	-1.99	11.26	2.98	10.40	-3.80
February 2018	12.10	-3.81	11.39	-2.84	10.80	-1.28	10.06	-6.93
March 2018	12.82	1.88	11.49	-1.99	10.24	-6.39	9.66	-10.70
April 2018	12.64	0.47	11.20	-4.43	10.39	-5.03	9.29	-14.10
May 2018	12.67	0.66	11.49	-1.98	11.07	1.19	9.04	-16.43
June 2018	12.80	1.69	11.60	-1.05	11.16	2.08	8.86	-18.02
July 2018	12.37	-1.68	11.45	-2.34	11.08	1.30	8.36	-22.67
August 2018	12.67	0.70	11.37	-2.98	11.17	2.11	10.67	-1.31
September 2018	12.70	0.95	11.59	-1.17	11.16	2.01	10.70	-1.03

**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	6	172	0	0	0
2	10004	300114	54.8	0	0
3	6734	202030	36.9	0	0
4	51	1543	0.3	147	2.5
5	409	12271	2.2	125	2.1
6	96	2868	0.5	292	4.9
7	9	282	0.1	83	1.4
8	80	2389	0.4	107	1.8
9	657	19712	3.6	3457	58
10	99	2958	0.5	1056	17.7
11	5	160	0	15	0.3
12	4	113	0	36	0.6
13	96	2875	0.5	644	10.8
<b>TOTAL</b>	<b>18250</b>	<b>547486</b>	<b>100</b>	<b>5962</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>
2018-09-09	Sunday	17:18:59	10	EB	1	122.23
2018-09-12	Wednesday	14:49:14	10	EB	1	116.06
2018-09-05	Wednesday	15:12:42	10	EB	1	113.64
2018-09-16	Sunday	14:40:04	10	EB	1	112
2018-09-26	Wednesday	10:06:37	10	EB	1	111.74
2018-09-17	Monday	18:06:11	9	EB	1	111.58
2018-09-25	Tuesday	15:47:21	10	EB	1	109.75
2018-09-07	Friday	14:39:37	10	WB	4	109.67
2018-09-12	Wednesday	10:44:05	10	EB	1	108.98
2018-09-22	Saturday	07:16:58	10	WB	3	108.73

**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	EB	15	757	87	11.5	21149	1146	5550
5	EB	8	6513	439	6.7	91655	3203	21532
6	EB	19	1640	48	2.9	53592	826	11672
7	EB	11.5	59	0	0	3328	0	1325
8	EB	31	1411	449	31.8	38337	9411	4258
9	EB	33	12067	1796	14.9	557899	53034	109478
10	EB	33.5	980	122	12.4	59653	3442	15455
11	EB	36.5	84	15	17.9	4144	359	813
12	EB	36.5	66	5	7.6	4058	138	916
13	EB	31.5	185	2	1.1	18209	57	6222
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>23762</b>	<b>2963</b>	<b>****</b>	<b>852025</b>	<b>****</b>	<b>177219</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	WB	15	779	138	17.7	22251	1767	6318
5	WB	8	5699	1173	20.6	65872	8342	14832
6	WB	19	1214	195	16.1	34863	3258	7751
7	WB	11.5	222	1	0.5	12037	10	4748
8	WB	31	966	593	61.4	14220	12871	1329
9	WB	33	7550	2643	35	295352	71448	66711
10	WB	33.5	1964	97	4.9	141201	2523	39328
11	WB	36.5	75	31	41.3	1952	689	173
12	WB	36.5	46	3	6.5	2740	61	585
13	WB	31.5	2676	1	0	205638	30	60688
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>21191</b>	<b>4875</b>	<b>****</b>	<b>796126</b>	<b>****</b>	<b>202462</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>44953</b>	<b>7838</b>	<b>311</b>	<b>1648151</b>	<b>172614</b>	<b>379681</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	74	26	29	76	205	0
2	443744	177044	162317	411796	1194902	27.9
3	490902	169883	154244	455258	1270288	29.6
4	19711	2585	2279	21740	46314	1.1
5	82172	12686	10747	63467	169072	3.9
6	50180	4238	2914	35207	92539	2.2
7	3126	202	673	11374	15375	0.4
8	42609	5139	1711	25380	74839	1.7
9	552802	58131	19065	347735	977733	22.8
10	58819	4276	6308	137416	206819	4.8
11	4411	92	93	2548	7144	0.2
12	4057	139	0	2800	6996	0.2
13	17419	846	8803	196865	223933	5.2
<b>TOTAL</b>	<b>1770027</b>	<b>435288</b>	<b>369183</b>	<b>1711662</b>	<b>4286160</b>	<b>100</b>
<b>GVW/LANE</b>	<b>41.3</b>	<b>10.16</b>	<b>8.61</b>	<b>39.93</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0058
2	62	22	19	41	144	0.43	0.001
3	220	60	49	144	473	1.41	0.0047
4	521	52	44	420	1037	3.1	1.35
5	1213	75	73	679	2041	6.11	0.33
6	1104	77	54	641	1876	5.61	1.32
7	92	4	12	198	307	0.92	2.16
8	732	53	14	277	1076	3.22	0.91
9	11971	1059	338	6229	19596	58.65	2
10	1469	71	114	2493	4147	12.41	2.82
11	121	1	0	17	140	0.42	1.71
12	99	4	0	43	146	0.44	2.45
13	504	13	84	1826	2428	7.27	1.7
<b>TOTAL</b>	<b>18109</b>	<b>1490</b>	<b>802</b>	<b>13008</b>	<b>33410</b>	<b>100</b>	<b>17</b>
<b>ESALS/LANE</b>	<b>54.2</b>	<b>4.5</b>	<b>2.4</b>	<b>38.9</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>
Oct 2017	530968	17128	1588	481744	90.7	49224.1	9.3	89.2	10.8
Nov 2017	460963	15365	1276	422680	91.7	38282.8	8.3	89.8	10.2
Dec 2017	444435	14337	931	415573	93.5	28862	6.5	89.1	10.9
Jan 2018	421505	13597	893	393834	93.4	27670.6	6.6	89.4	10.6
Feb 2018	399681	14274	911	374175	93.6	25505.8	6.4	89.4	10.6
Mar 2018	441933	14256	921	413379	93.5	28553.8	6.5	90.2	9.8
Apr 2018	464908	15497	959	436131	93.8	28777.1	6.2	89.8	10.2
May 2018	584842	18866	1279	545195	93.2	39647	6.8	86.8	13.2
Jun 2018	595965	19866	1159	561188	94.2	34777.4	5.8	84.2	15.8
Jul 2018	631964	20386	805	606994	96	24969.5	4	77.4	22.6
Aug 2018	610595	19697	1555	562401	92.1	48194.3	7.9	88.8	11.2
Sep 2018	547486	18250	1506	502315	91.7	45170.6	8.3	89.3	10.7
<b>TOTAL</b>	<b>6135245</b>	<b>-</b>	<b>-</b>	<b>5715609</b>	<b>-</b>	<b>419635</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>511270</b>	<b>16793</b>	<b>1149</b>	<b>476301</b>	<b>93</b>	<b>34970</b>	<b>7</b>	<b>88</b>	<b>12</b>

## ESALS

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB 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	19830	1849	879	14888	37446	93	7	23
Nov 2017	16359	1194	817	10596	28965	93	7	29.8
Dec 2017	10498	1048	518	6237	18301	91	9	12.9
Jan 2018	10573	891	407	5804	17674	93	7	21.9
Feb 2018	9827	797	311	4654	15589	93	7	21.3
Mar 2018	13593	813	233	3935	18574	94	6	28.9
Apr 2018	14038	759	286	3390	18474	94	6	26.8
May 2018	19915	1449	633	3295	25292	92	8	29.1
Jun 2018	17634	1549	856	1756	21795	89	11	25.5
Jul 2018	9545	1486	759	589	12378	82	18	16.5
Aug 2018	17346	1529	783	13764	33422	93	7	40.7
Sep 2018	18309	1493	802	13104	33709	93	7	40.7
<b>TOTAL</b>	<b>177466</b>	<b>14857</b>	<b>7282</b>	<b>82013</b>	<b>281618</b>	-	-	-
<b>AVERAGE</b>	<b>14789</b>	<b>1238</b>	<b>607</b>	<b>6834</b>	<b>23468</b>	<b>92</b>	<b>8</b>	<b>26</b>

## Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
Oct 2017	1215655	297399	260387	1046064	2819505
Nov 2017	1146958	274818	231235	944277	2597288
Dec 2017	1366796	300326	243593	971462	2882177
Jan 2018	1429509	300988	258663	955064	2944223
Feb 2018	1919649	486092	384335	1105460	3895536
Mar 2018	1873989	527355	405817	977118	3784280
Apr 2018	1484105	532750	442390	949621	3408866
May 2018	1827123	516522	412675	1913186	4669506
Jun 2018	1772922	435625	369201	1713661	4291408
Jul 2018	1784400	439650	370191	1734206	4328447
Aug 2018	1508075	372555	315789	1404211	3600629
Sep 2018	1274512	341067	275284	1133309	3024172
<b>TOTAL</b>	<b>18603692</b>	<b>4825146</b>	<b>3969561</b>	<b>14847638</b>	<b>42246037</b>
<b>AVERAGE</b>	<b>1550308</b>	<b>402096</b>	<b>330797</b>	<b>1237303</b>	<b>3520503</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	7072	1.3	14.4	1505	287
Nov 2017	5725	1.3	15	1413	326
Dec 2017	3501	0.8	12.1	1157	311
Jan 2018	2988	0.7	10.8	806	167
Feb 2018	2472	0.6	9.7	591	119
Mar 2018	3071	0.7	10.7	874	208
Apr 2018	3136	0.7	10.9	881	142
May 2018	4427	0.8	11.4	1479	256
Jun 2018	3884	0.7	11.5	1260	227
Jul 2018	2060	0.4	8.8	485	65
Aug 2018	5463	0.9	11.4	1825	331
Sep 2018	6002	1.1	13.3	2081	333
<b>TOTAL</b>	<b>49801</b>	<b>-</b>	<b>-</b>	<b>14357</b>	<b>2772</b>
<b>AVERAGE</b>	<b>4150.1</b>	<b>0.8</b>	<b>11.7</b>	<b>1196.4</b>	<b>231</b>

## Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
Oct 2017	202975	224828	427804	47.4	52.6
Nov 2017	163802	166130	329932	49.6	50.4
Dec 2017	115489	96584	212072	54.5	45.5
Jan 2018	114301	79373	193674	59	41
Feb 2018	105266	64764	170030	61.9	38.1
Mar 2018	136515	61298	197813	69	31
Apr 2018	144385	57829	202213	71.4	28.6
May 2018	202268	76571	278839	72.5	27.5
Jun 2018	179547	49025	228572	78.6	21.4
Jul 2018	111388	22324	133712	83.3	16.7
Aug 2018	173814	236610	410424	42.3	57.7
Sep 2018	177219	202462	379681	46.7	53.3
<b>TOTAL</b>	<b>1826969</b>	<b>1337798</b>	<b>3164767</b>	-	-
<b>AVERAGE</b>	<b>152247.4</b>	<b>111483.2</b>	<b>263730.6</b>	<b>61.4</b>	<b>38.6</b>