

**MARCH 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 March 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 except lane 4. 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: 441933 | Passenger Vehicles: 413379 | Heavy Commercial Vehicles: 28554

Monthly Average Daily Traffic (MADT): 14256 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 921

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 Thursdays, 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), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 06 AM and 04 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 06 AM and 04 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 28554 HCVs, 3060 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.7% of total monthly volume, and 10.8% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, 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 93.1% 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 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 ,821 EB vehicles exceeded 88,000 pounds (537 vehicles were Class 9's; 175 vehicles were Class 10's). Of vehicles traveling WB,

53 EB vehicles exceeded 88,000 pounds (39 vehicles were Class 13's; 12 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from March 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in March 2018. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling EB, while there were more empty Class 9's than fully\_loaded traveling WB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the EB direction. In the WB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 197813 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (69%) than WB (31%). 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 441933 vehicles with a combined GVW of 2882177 kips (1 kip = 1,000 pounds = 0.5 tons) in March 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 18574 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 77.6% of all ESALs were recorded EB while 22.4% was observed WB. In particular, 69% of all ESALs were generated by the Class 9's (Class 9's

were also responsible for generating 24% 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).

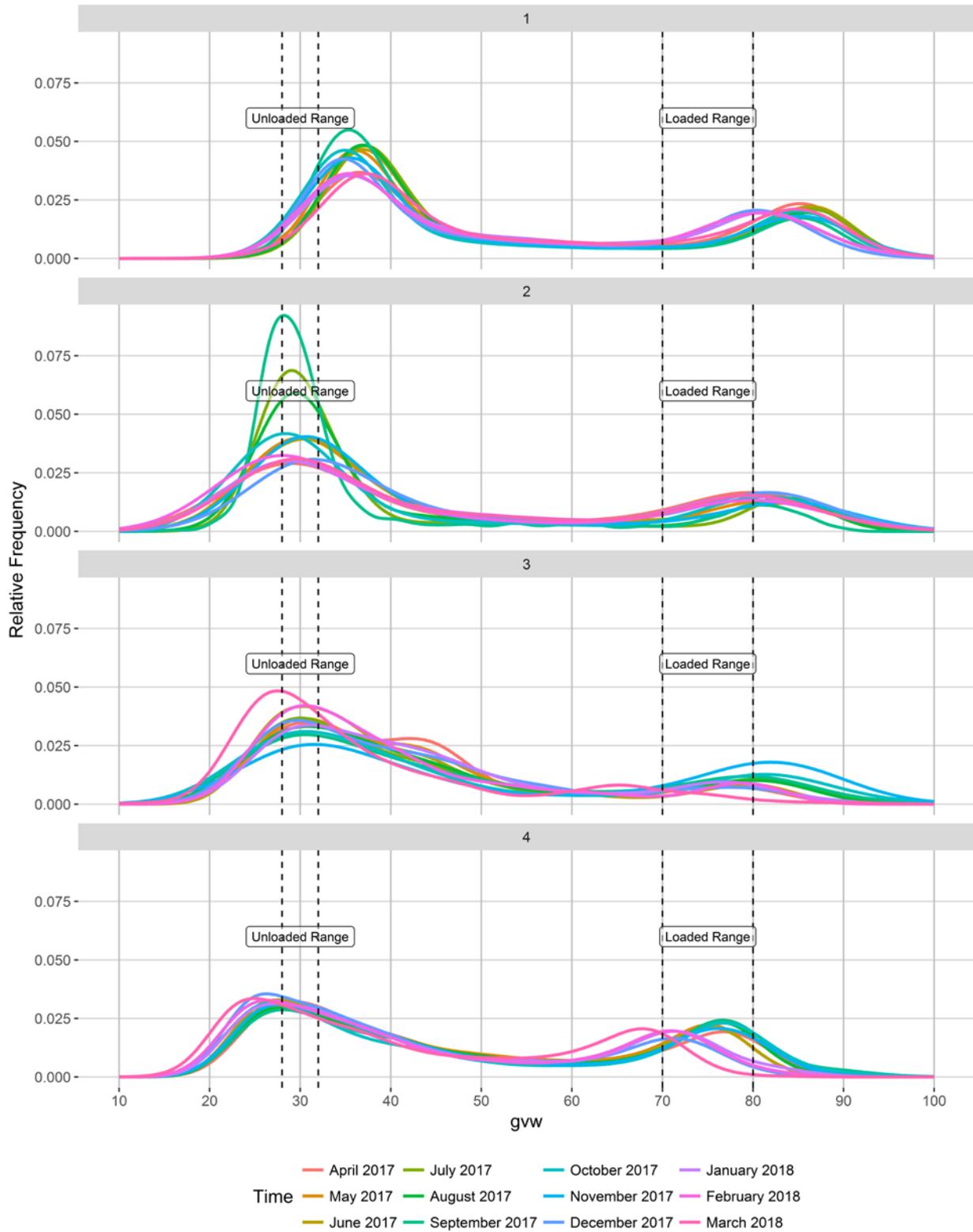
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

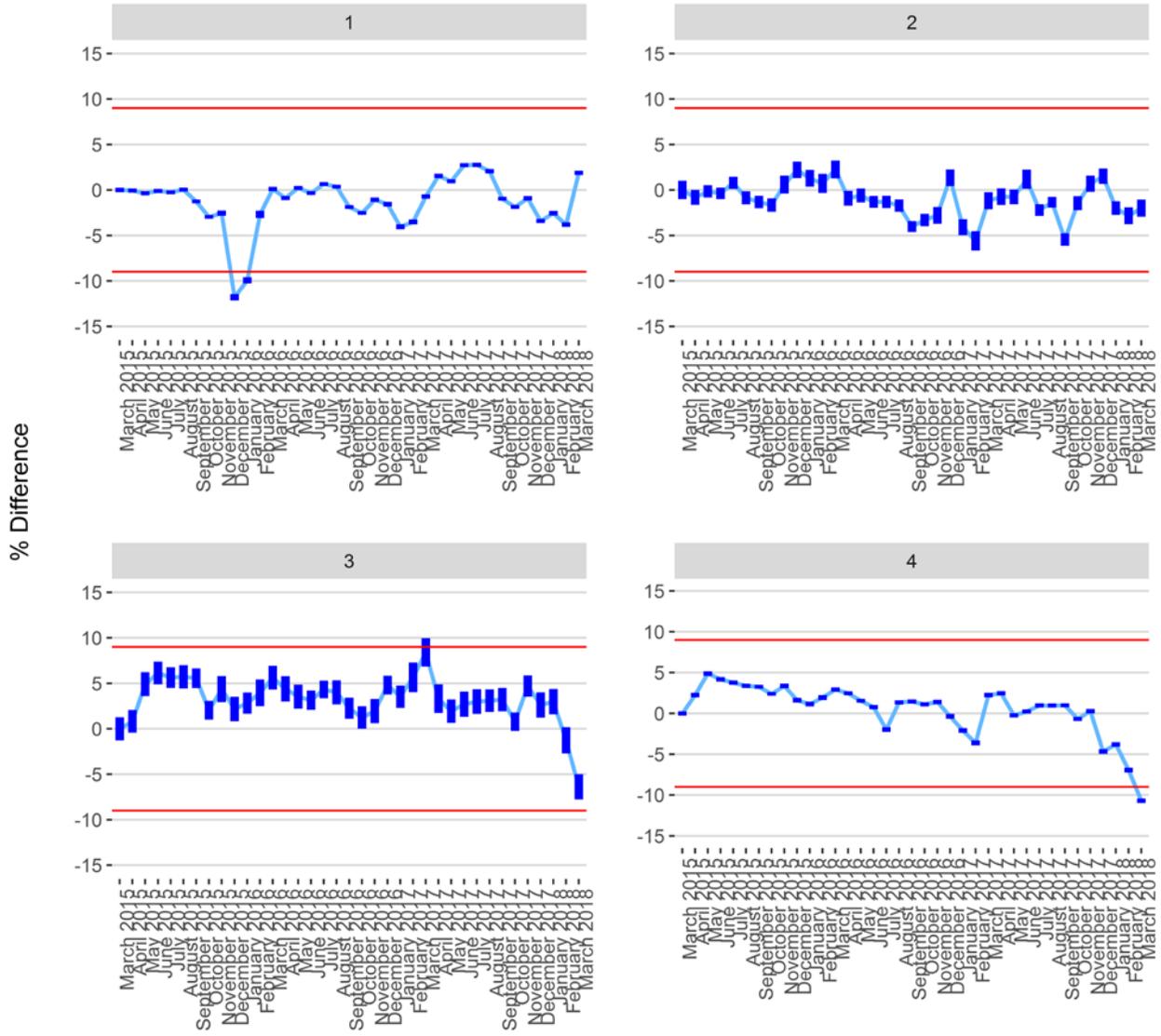
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Figure 1 - Monthly Class 9 GVW Histogram



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

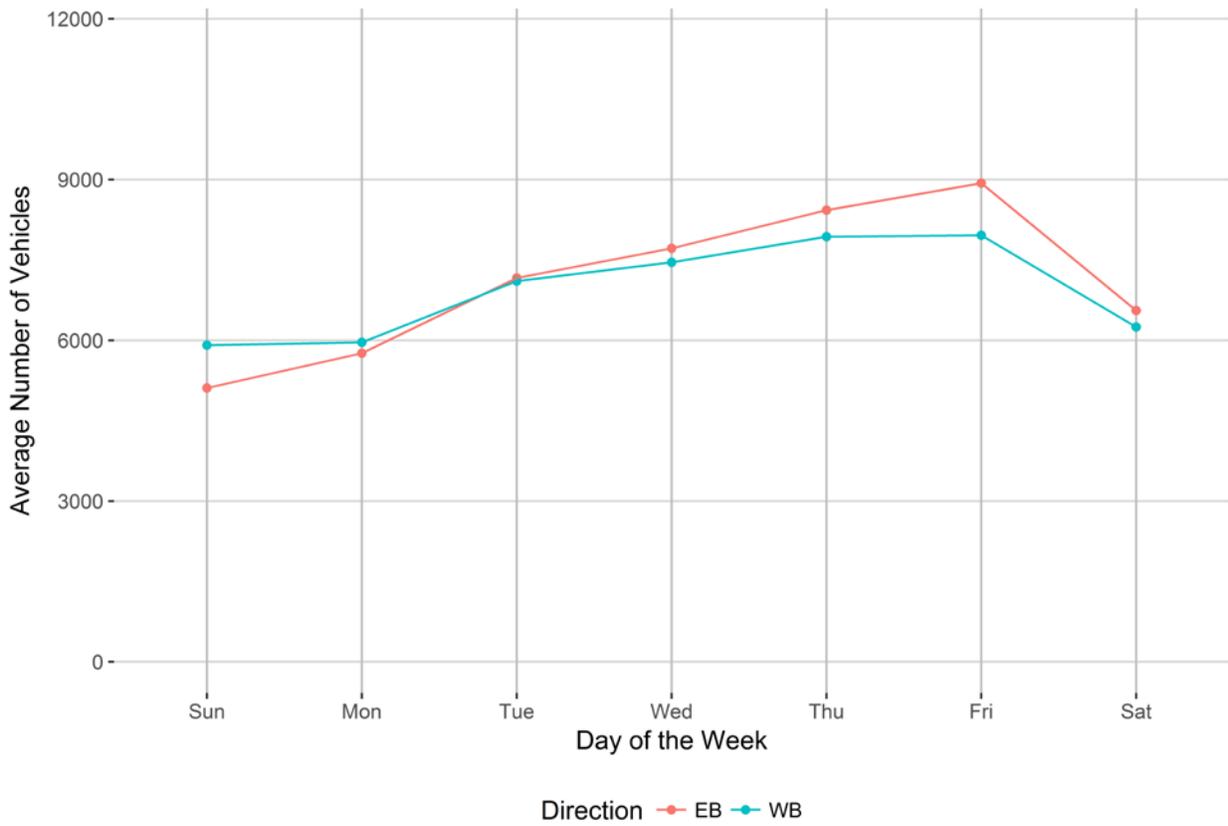


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

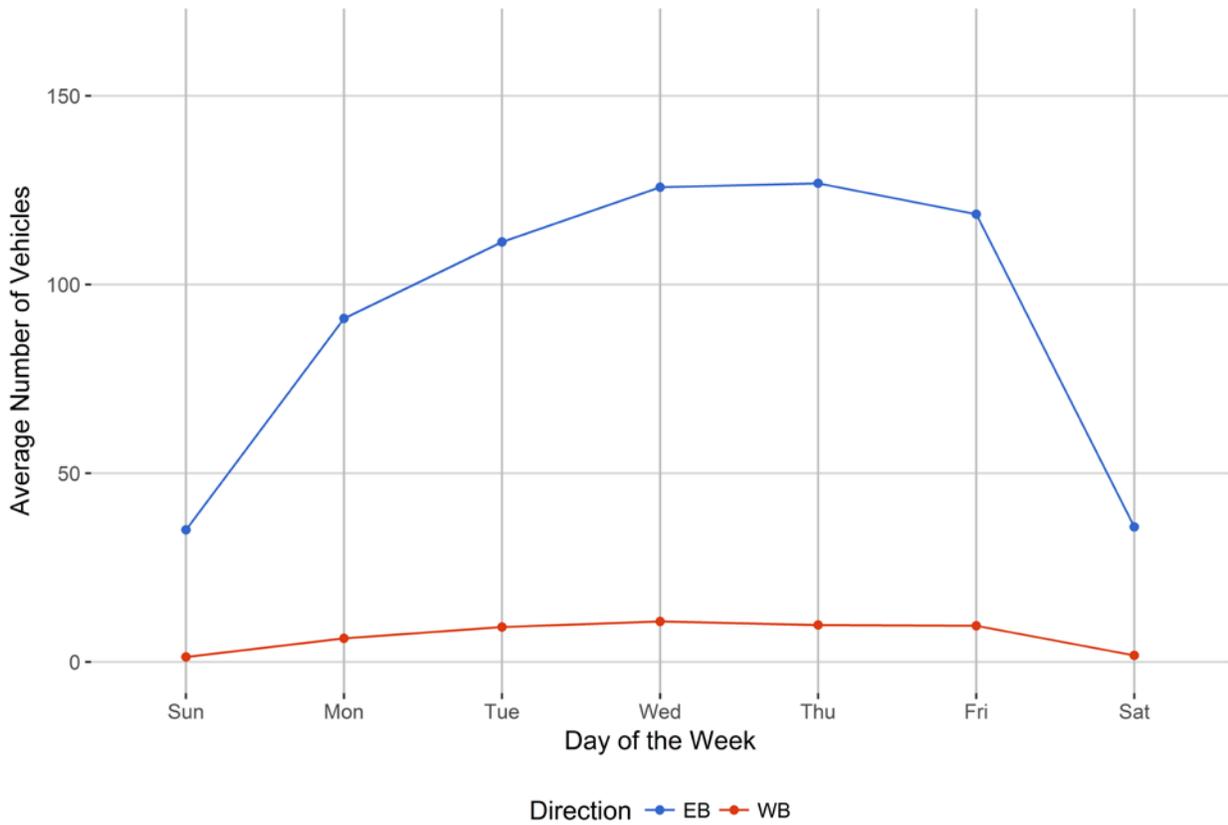


Figure 4 - Passenger Vehicles vs. Hour of the Day

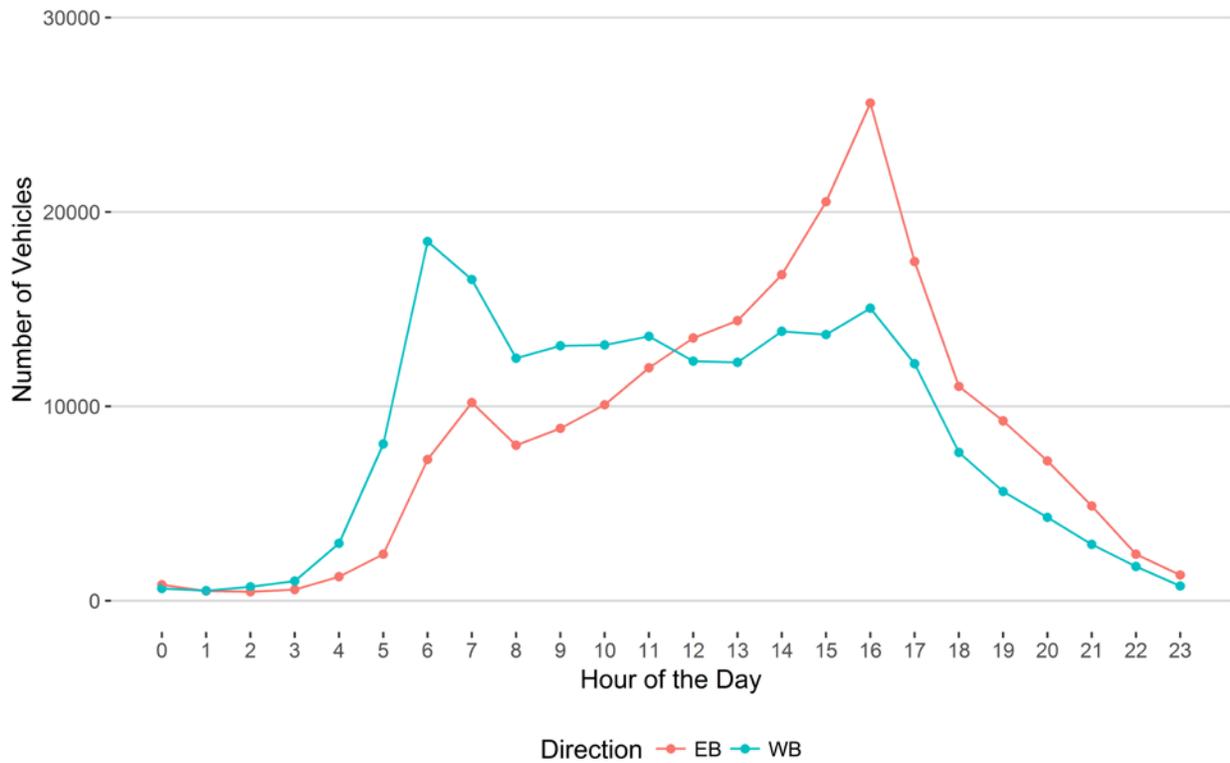


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

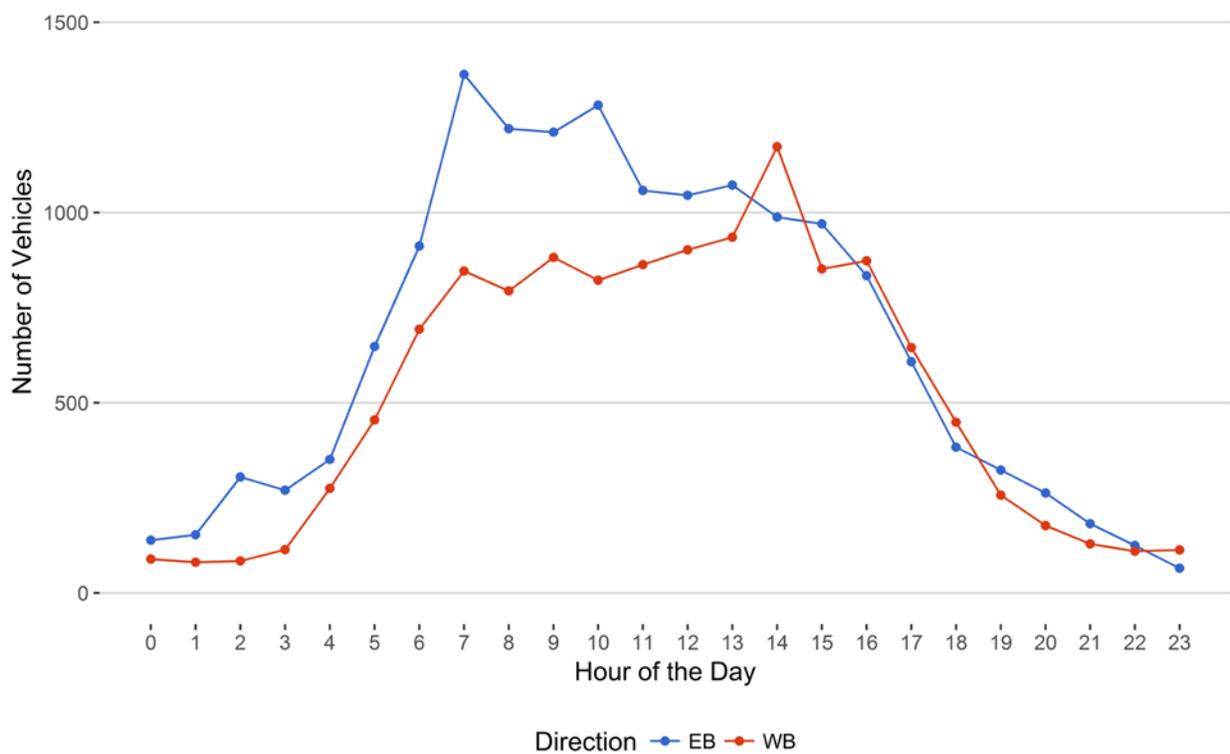


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

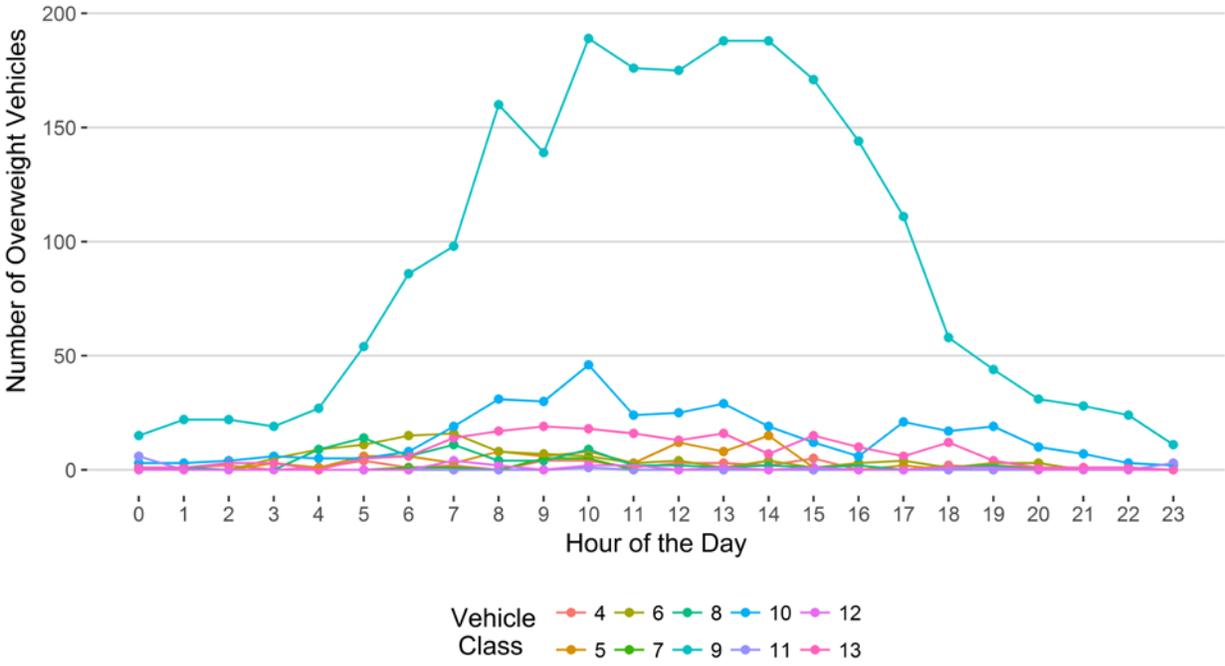


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

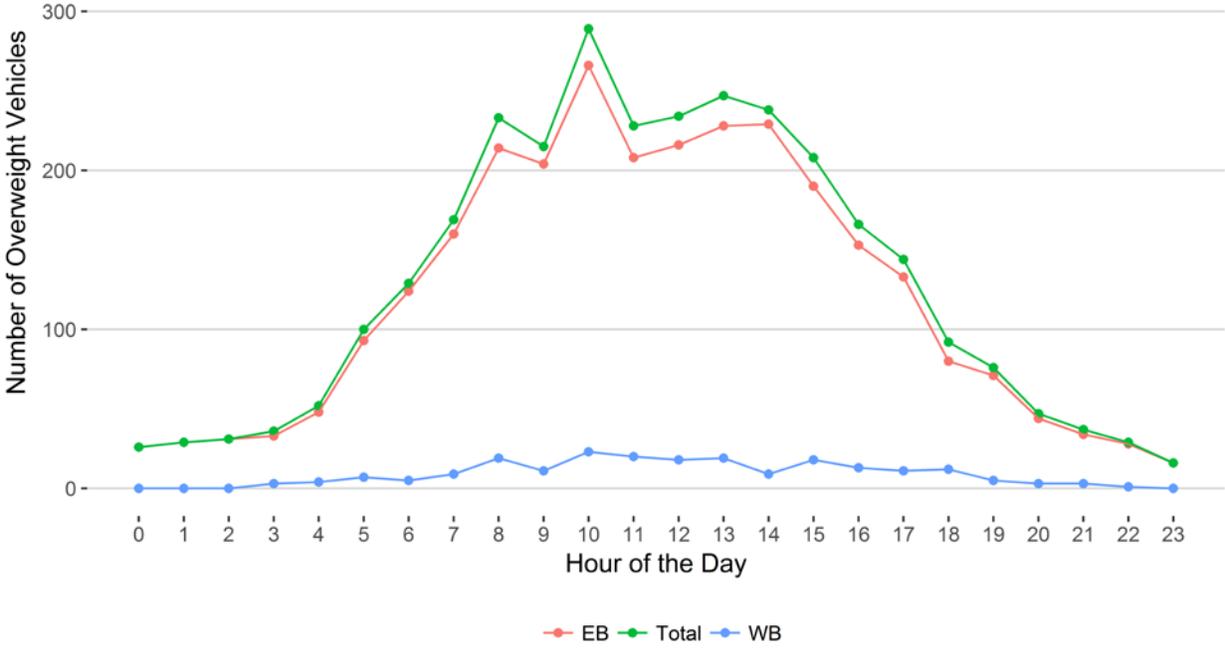
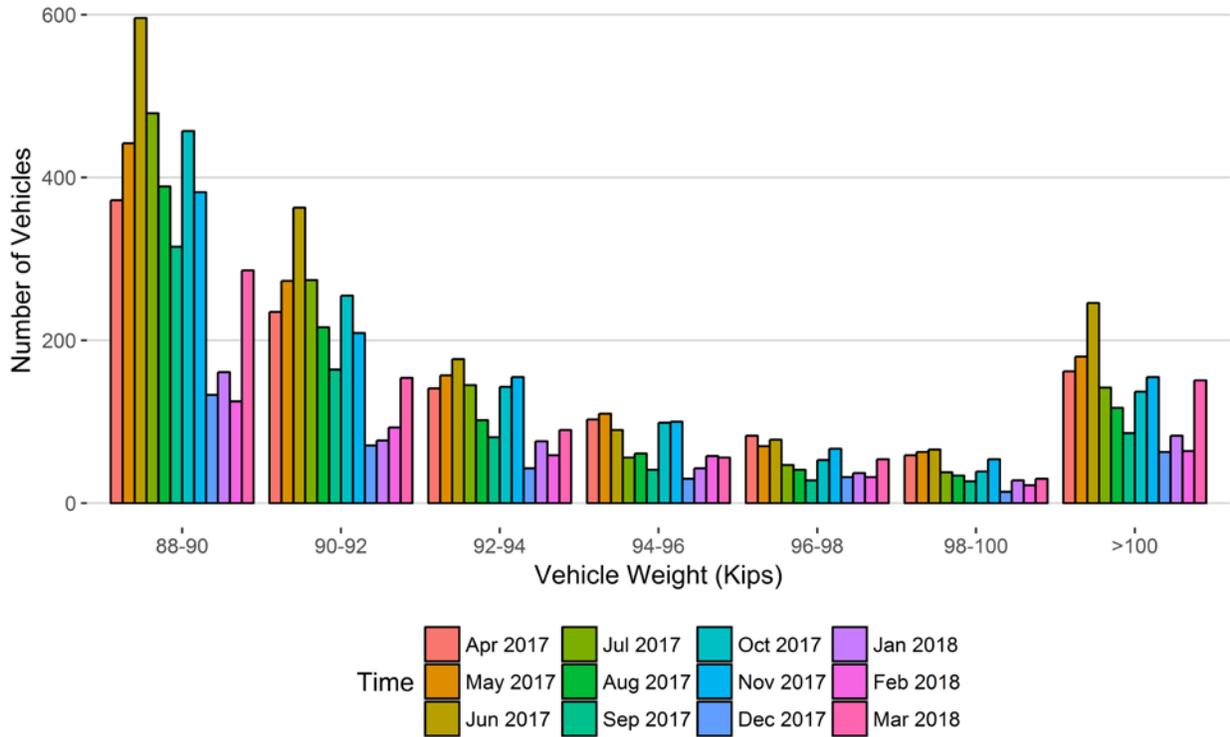
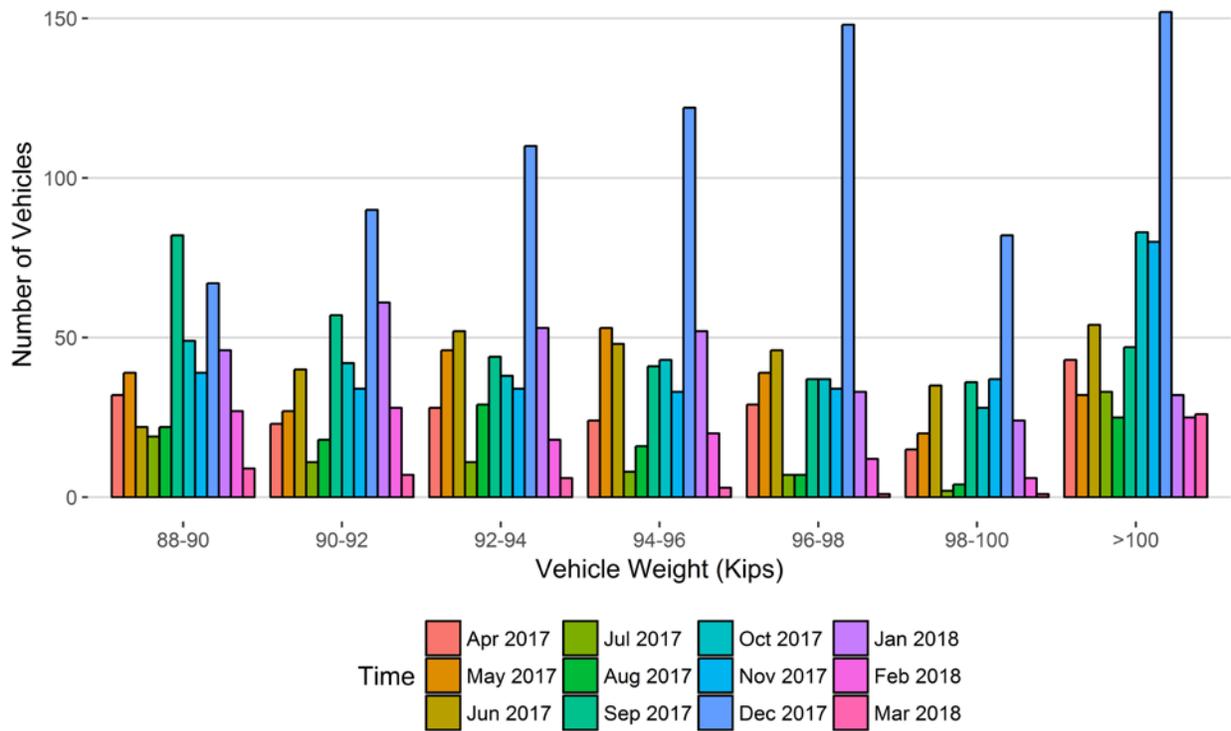


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018
88-90	372	442	596	479	389	315	457	382	133	161	125	286
90-92	235	273	363	274	216	164	255	209	71	77	93	154
92-94	141	157	177	145	102	81	143	155	43	76	59	90
94-96	103	110	90	56	61	41	99	100	30	43	58	56
96-98	83	70	78	47	41	28	53	67	32	37	32	54
98-100	59	63	66	38	34	27	39	54	14	28	22	30
>100	162	180	246	142	117	86	137	155	63	83	64	151
Total	1155	1295	1616	1181	960	742	1183	1122	386	505	453	821

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



Vehicle Weights (Kips)	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018
88-90	32	39	22	19	22	82	49	39	67	46	27	9
90-92	23	27	40	11	18	57	42	34	90	61	28	7
92-94	28	46	52	11	29	44	38	34	110	53	18	6
94-96	24	53	48	8	16	41	43	33	122	52	20	3
96-98	29	39	46	7	7	37	37	34	148	33	12	1
98-100	15	20	35	2	4	36	28	37	82	24	6	1
>100	43	32	54	33	25	47	83	80	152	32	25	26
Total	194	256	297	91	121	344	320	291	771	301	136	53

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

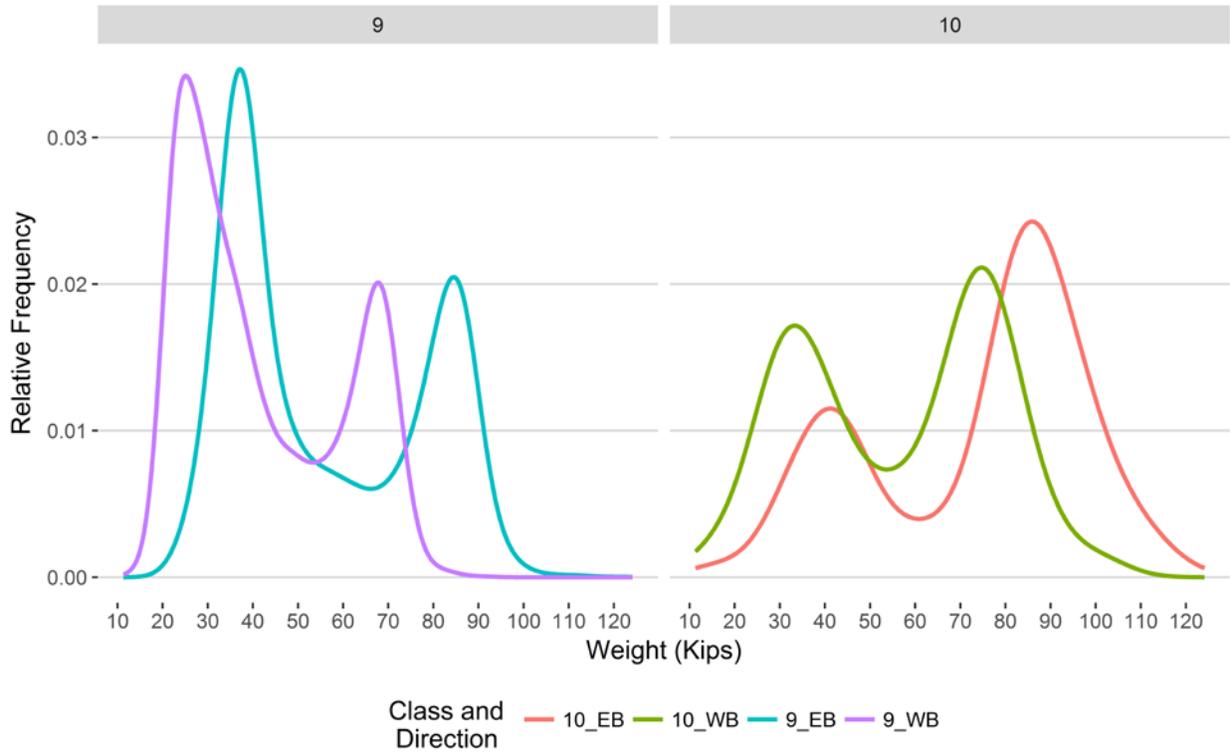


Figure 9 - Freight Percentage by Direction and Class

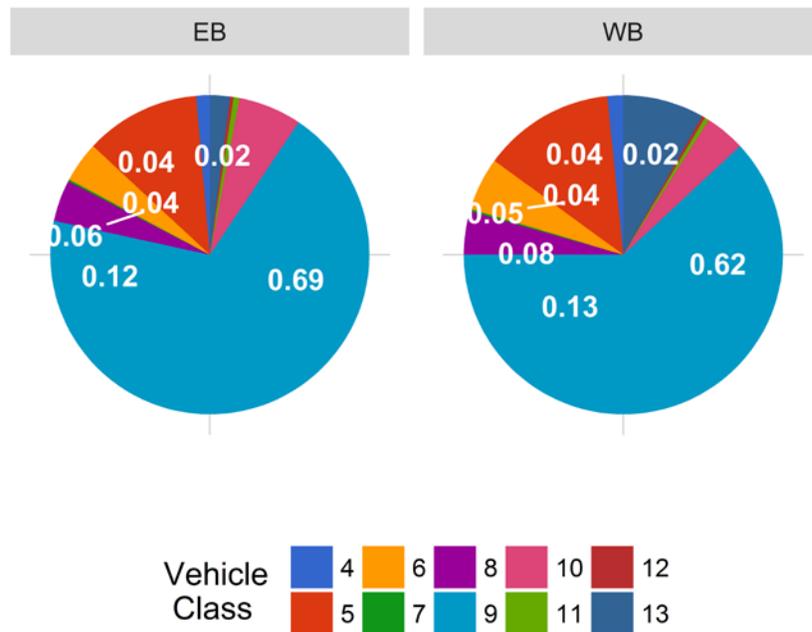


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

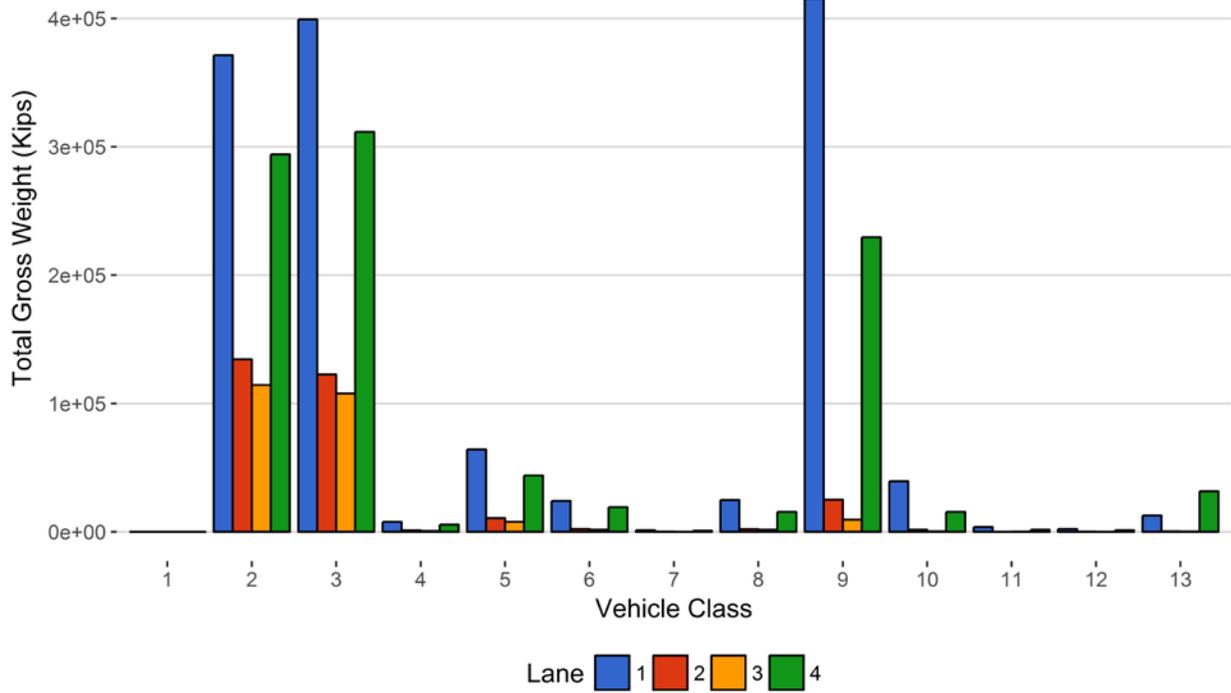


Figure 11 - Total Gross Vehicle Weight I

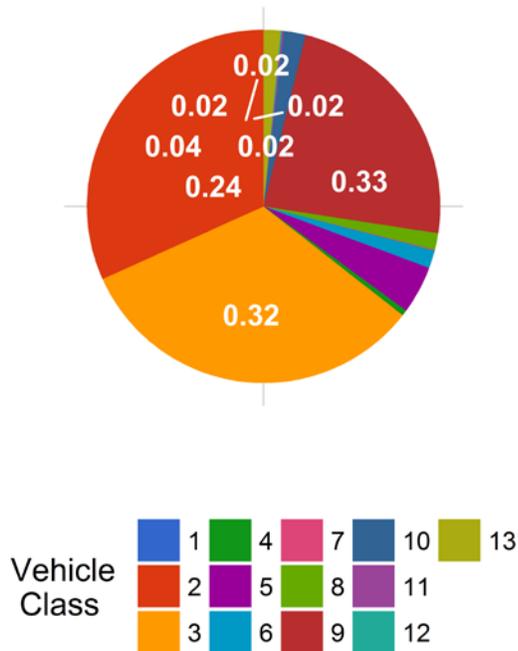


Figure 12 - Total ESALs by Class and Lane

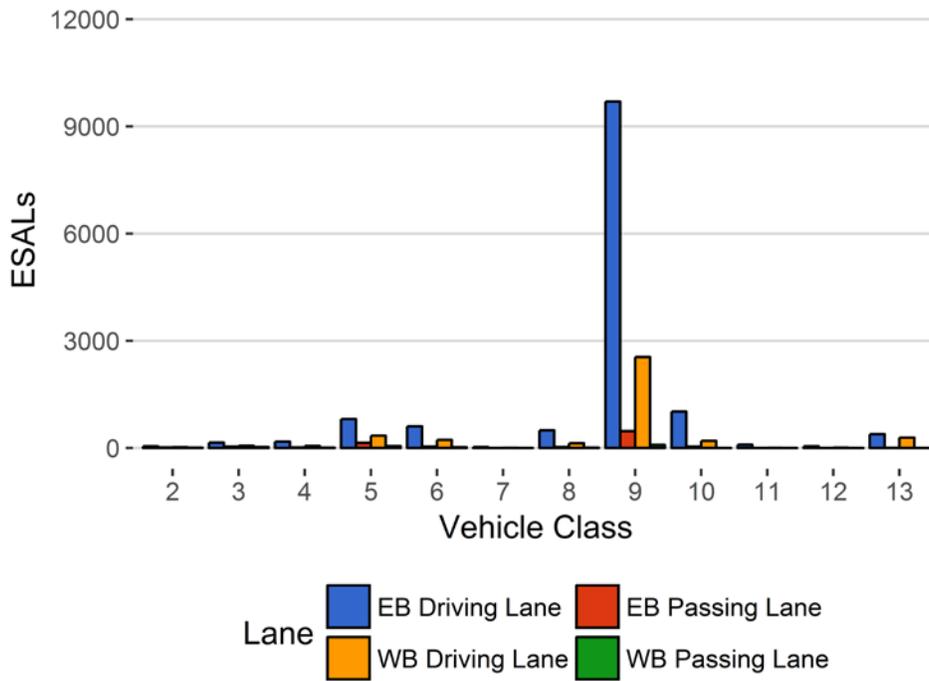
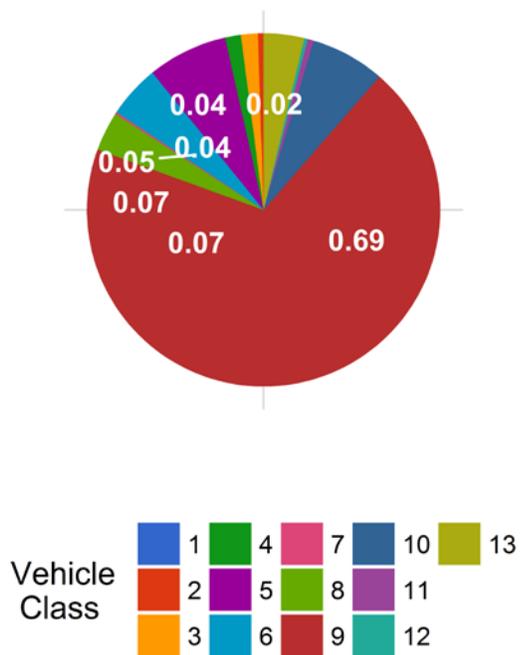


Figure 13 - ESALs by Class



**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>
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

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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

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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	0	5	0	0	0
2	7987	247603	56	0	0
3	5347	165771	37.5	0	0
4	20	619	0.1	40	1.3
5	314	9719	2.2	85	2.8
6	51	1583	0.4	105	3.4
7	1	42	0	12	0.4
8	45	1391	0.3	71	2.3
9	439	13624	3.1	2180	71.2
10	27	839	0.2	354	11.6
11	4	112	0	10	0.3
12	2	61	0	14	0.5
13	18	562	0.1	189	6.2
<b>TOTAL</b>	<b>14256</b>	<b>441933</b>	<b>100</b>	<b>3060</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>
2018-03-14	Wednesday	08:51:59	10	EB	1	124.15
2018-03-20	Tuesday	19:45:16	9	EB	1	122.7
2018-03-09	Friday	08:39:16	9	EB	1	119.51
2018-03-29	Thursday	20:05:47	10	EB	1	119.39
2018-03-21	Wednesday	14:02:40	10	EB	1	117.76
2018-03-09	Friday	10:30:50	10	EB	1	115.83
2018-03-28	Wednesday	05:41:21	10	EB	1	115.28
2018-03-16	Friday	13:04:45	10	EB	1	114.49
2018-03-08	Thursday	14:48:08	10	EB	1	114.12
2018-03-25	Sunday	19:54:14	10	EB	1	113.71

**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	329	84	25.5	7673	1108	1999
5	EB	8	5257	575	10.9	70582	4118	16563
6	EB	19	774	32	4.1	25632	555	5767
7	EB	11.5	22	0	0	1279	0	513
8	EB	31	752	201	26.7	22656	4199	2787
9	EB	33	7853	755	9.6	418037	22424	91902
10	EB	33.5	555	30	5.4	40201	805	11307
11	EB	36.5	68	2	2.9	3700	48	646
12	EB	36.5	36	3	8.3	2174	76	485
13	EB	31.5	124	0	0	13000	0	4547
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>15770</b>	<b>1682</b>	<b>****</b>	<b>604934</b>	<b>****</b>	<b>136515</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	286	125	43.7	4777	1431	1181
5	WB	8	4404	1545	35.1	41016	10503	9072
6	WB	19	800	262	32.8	16714	4108	3246
7	WB	11.5	20	0	0	871	0	321
8	WB	31	631	441	69.9	7018	9946	564
9	WB	33	5690	2459	43.2	175093	63785	34235
10	WB	33.5	279	63	22.6	14038	1737	3401
11	WB	36.5	43	15	34.9	1165	490	71
12	WB	36.5	25	2	8	1165	35	163
13	WB	31.5	435	0	0	31790	0	9044
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>12613</b>	<b>4912</b>	<b>****</b>	<b>293648</b>	<b>****</b>	<b>61298</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>28383</b>	<b>6594</b>	<b>384</b>	<b>898582</b>	<b>125369</b>	<b>197813</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	1	1	2	1	5	0
2	371415	134338	114340	294043	914136	31.8
3	399185	122563	107678	311610	941035	32.7
4	7734	1047	618	5590	14989	0.5
5	64108	10592	7704	43815	126218	4.4
6	24077	2111	1583	19239	47010	1.6
7	1147	132	0	871	2150	0.1
8	24808	2047	1504	15459	43818	1.5
9	415470	24992	9371	229507	679340	23.6
10	39420	1586	325	15451	56782	2
11	3748	0	51	1603	5402	0.2
12	2128	123	0	1201	3451	0.1
13	12621	379	250	31540	44791	1.6
<b>TOTAL</b>	<b>1365862</b>	<b>299910</b>	<b>243426</b>	<b>969931</b>	<b>2879128</b>	<b>100</b>
<b>GVW/LANE</b>	<b>47.44</b>	<b>10.42</b>	<b>8.45</b>	<b>33.69</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	0.1667
2	48	16	11	22	97	0.53	8e-04
3	154	38	28	66	285	1.54	0.0035
4	177	16	10	62	265	1.43	0.87
5	812	144	57	343	1357	7.33	0.28
6	604	38	24	227	893	4.83	1.14
7	26	2	0	8	36	0.2	1.62
8	492	29	11	133	665	3.6	0.96
9	9693	471	85	2547	12796	69.16	1.89
10	1017	39	3	202	1260	6.81	3.01
11	93	0	1	9	102	0.55	1.77
12	47	2	0	10	59	0.32	1.79
13	387	6	3	290	685	3.7	2.43
<b>TOTAL</b>	<b>13551</b>	<b>801</b>	<b>233</b>	<b>3919</b>	<b>18503</b>	<b>100</b>	<b>16</b>
<b>ESALS/LANE</b>	<b>73.2</b>	<b>4.3</b>	<b>1.3</b>	<b>21.2</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>
Apr 2017	488539	16285	1139	454362	93	34177.1	7	89.7	10.3
May 2017	561395	18110	1453	516354	92	45041.3	8	89.1	10.9
Jun 2017	559773	18659	1524	514056	91.8	45717.4	8.2	91.9	8.1
Jul 2017	585047	18872	1372	542522	92.7	42524.9	7.3	88.3	11.7
Aug 2017	572828	18478	1444	528060	92.2	44768.4	7.8	85.8	14.2
Sep 2017	543718	18124	1510	498405	91.7	45313.1	8.3	89.3	10.7
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
<b>TOTAL</b>	<b>6010785</b>	--	--	<b>5555144</b>	--	<b>455641</b>	--	--	--
<b>AVERAGE</b>	<b>500899</b>	<b>16457</b>	<b>1247</b>	<b>462929</b>	<b>92</b>	<b>37970</b>	<b>8</b>	<b>89</b>	<b>11</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>
Apr 2017	16232	1057	343	8444	26076	95	5	32.2
May 2017	18132	1483	537	11291	31443	94	6	23.9
Jun 2017	21224	974	445	11784	34427	96	4	26.4
Jul 2017	17260	1506	635	11781	31183	93	7	25.3
Aug 2017	16579	2177	798	12514	32068	91	9	21.3
Sep 2017	15635	1102	785	14097	31618	94	6	17.1
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
<b>TOTAL</b>	<b>185741</b>	<b>14890</b>	<b>6707</b>	<b>116025</b>	<b>323364</b>	--	--	--
<b>AVERAGE</b>	<b>15478</b>	<b>1241</b>	<b>559</b>	<b>9669</b>	<b>26947</b>	<b>93</b>	<b>7</b>	<b>24</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>
Apr 2017	1215655	297399	260387	1046064	2819505
May 2017	1146958	274818	231235	944277	2597288
Jun 2017	1366796	300326	243593	971462	2882177
Jul 2017	1520118	358341	292712	1292218	3463389
Aug 2017	1787908	492278	378306	1574381	4232873
Sep 2017	1942194	392446	326223	1676176	4337040
Oct 2017	1757274	474905	375892	1727042	4335113
Nov 2017	1654557	563627	405742	1708224	4332151
Dec 2017	1696672	438152	373450	1711459	4219734
Jan 2018	1784400	439650	370191	1734206	4328447
Feb 2018	1508075	372555	315789	1404211	3600629
Mar 2018	1274512	341067	275284	1133309	3024172
<b>TOTAL</b>	<b>18655121</b>	<b>4745564</b>	<b>3848805</b>	<b>16923028</b>	<b>44172518</b>
<b>AVERAGE</b>	<b>1554593</b>	<b>395464</b>	<b>320734</b>	<b>1410252</b>	<b>3681043</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>
Apr 2017	5102	1.1	15	1349	279
May 2017	5628	1	12.5	1551	295
Jun 2017	5859	1.1	12.8	1920	403
Jul 2017	5175	0.9	12.2	1280	216
Aug 2017	5332	0.9	11.9	1093	180
Sep 2017	5227	1	11.6	1087	196
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
<b>TOTAL</b>	<b>57152</b>	<b>--</b>	<b>--</b>	<b>14626</b>	<b>2987</b>
<b>AVERAGE</b>	<b>4762.7</b>	<b>1</b>	<b>12.4</b>	<b>1218.8</b>	<b>248.9</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>
Apr 2017	165098	111120	276218	59.8	40.2
May 2017	198381	175651	374033	53	47
Jun 2017	205673	184506	390179	52.7	47.3
Jul 2017	170681	187124	357805	47.7	52.3
Aug 2017	174415	190942	365356	47.7	52.3
Sep 2017	158341	222318	380659	41.6	58.4
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
<b>TOTAL</b>	<b>1910937</b>	<b>1764640</b>	<b>3675577</b>	--	--
<b>AVERAGE</b>	<b>159244.8</b>	<b>147053.3</b>	<b>306298</b>	<b>53.7</b>	<b>46.3</b>