

JANUARY 2018



**WIM #31
US 2, MP 8.0
EAST GRAND
FORKS, MN**

**MONTHLY
REPORT**



Your Destination...Our Priority



WIM Site Location

WIM #31 is located on US 2 near East Grand Forks in Polk county.

System Operation

WIM #31 was operational for the entire month of January 2018. Volume was computed using all monthly data.

System Calibration

WIM #31 was most recently calibrated on 2016-11-01. Table 1 summarizes the front axle weights of class 9s by lane ¹. 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 ². 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: 133966 | Passenger Vehicles: 124200 | Heavy Commercial Vehicles: 9766

Monthly Average Daily Traffic (MADT): 4321 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 315

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 Fridays, with lowest volumes reported on Sundays (see Figure 3 and 4).

Passenger Vehicles (PVs)

Volume trends. On an average 24-hour day (see Figure 5), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 03 PM 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 03 PM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

Overweight HCVs

Volume trends. Of a total of 9766 HCVs, 1113 of them were overweight³. These overweight HCVs contributed to 0.9% of total monthly volume, and 11.7% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Fridays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Wednesdays, 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 66% 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 October.

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 report⁴.

Using normal load limits ,120 EB vehicles exceeded 88,000 pounds (49 vehicles were Class 10's; 32 vehicles were Class 13's). Of vehicles traveling WB,

39 EB vehicles exceeded 88,000 pounds (18 vehicles were Class 13's; 16 vehicles were Class 10'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 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 empty class 10 vehicles.

Freight Totals. A total of 66127 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (54.8%) than WB (45.2%). See Table 4 and Figure 11 for more freight information.

Infrastructure Considerations

Bridge. Bridge No. 8023 (a box culvert) is approximately 14.6 miles east of WIM #31, and Bridge No. 4700 is 6.4 miles west of WIM #31. WIM #31 recorded a total of 133966 vehicles with a combined GVW of 909251 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 5616 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 56.2% of all ESALs were recorded EB while 43.8% was observed WB. In particular, 62% 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).

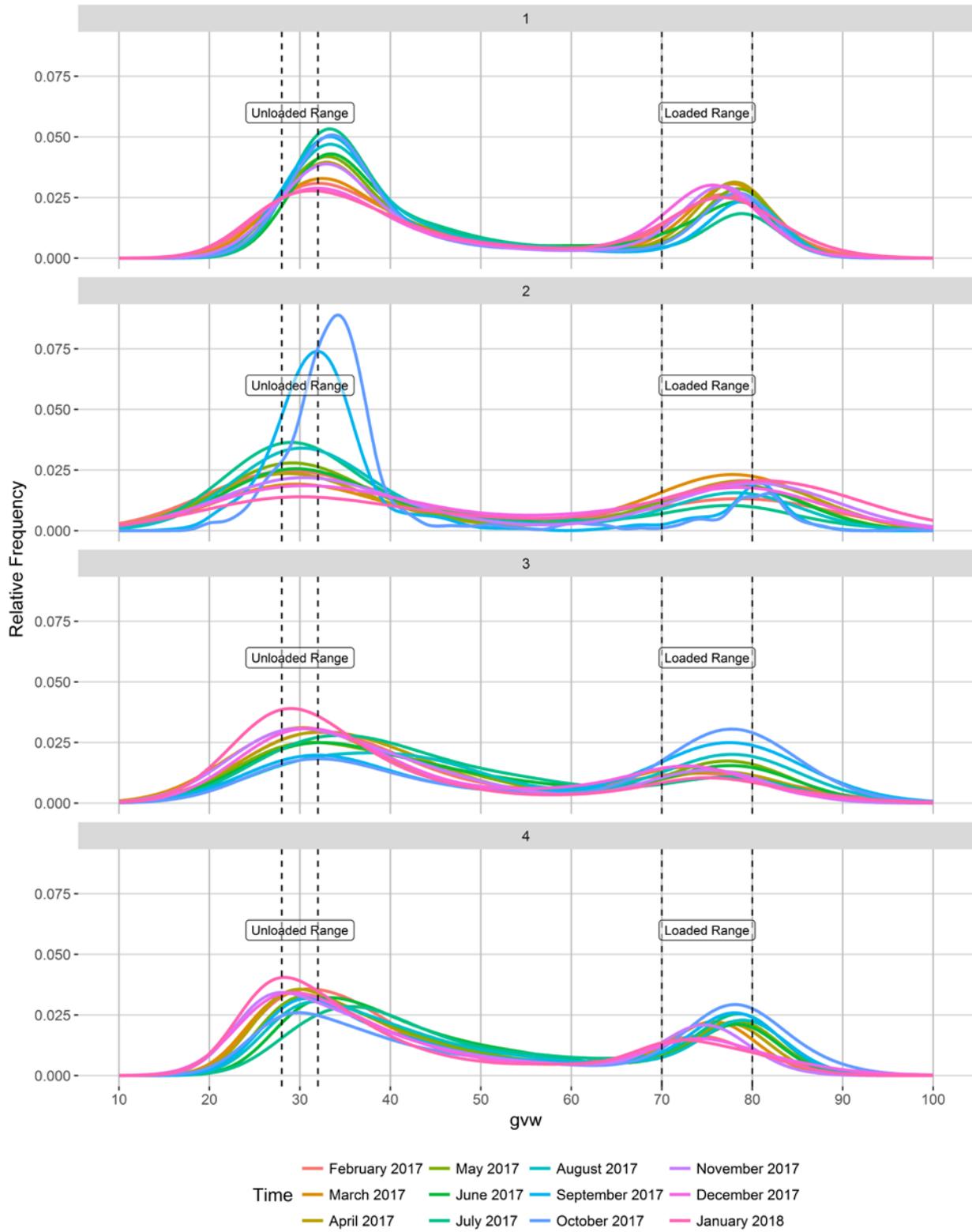
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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>

- ¹ 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
- ² 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.
- ³ 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
- ⁴ 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.

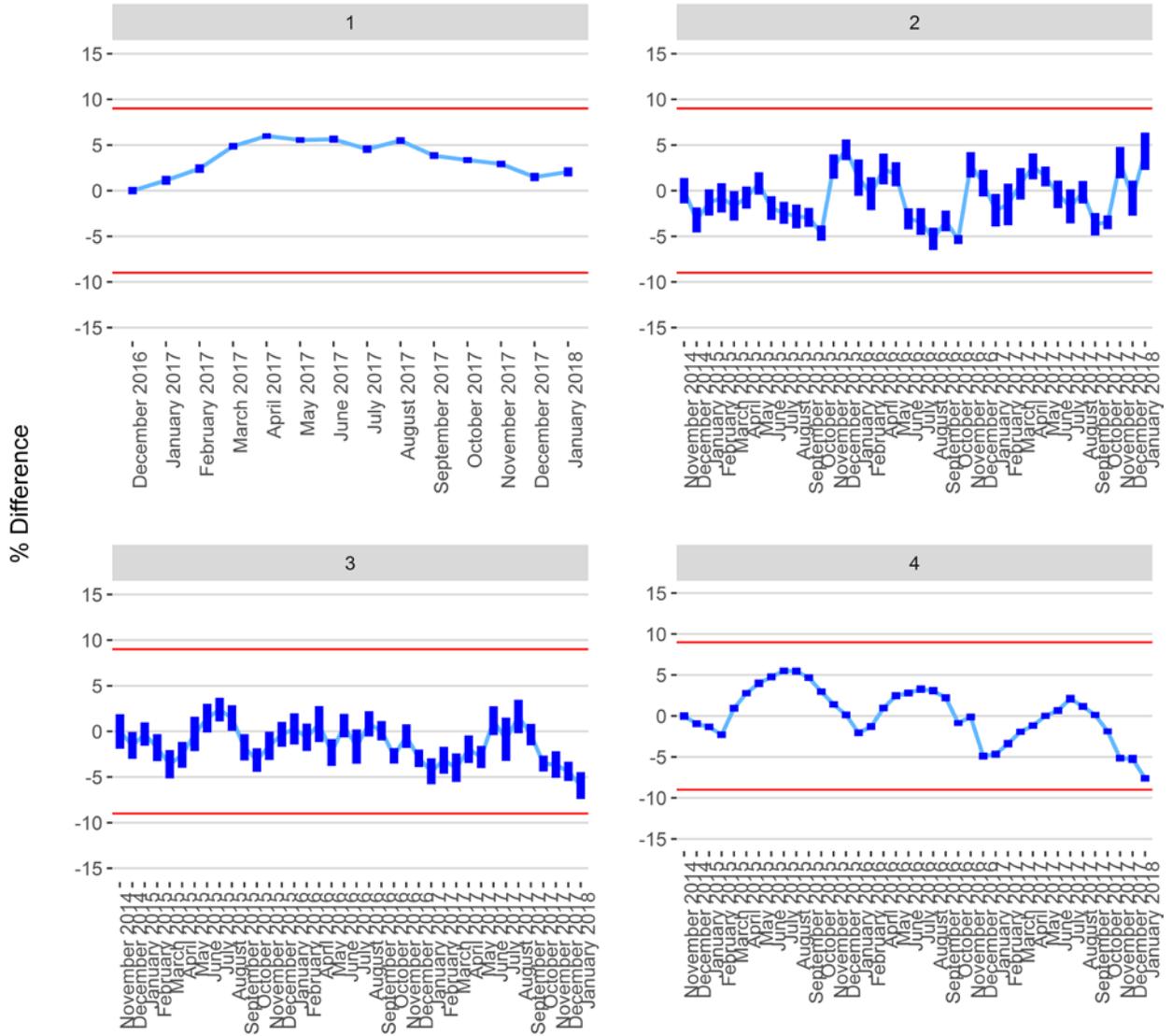
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

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

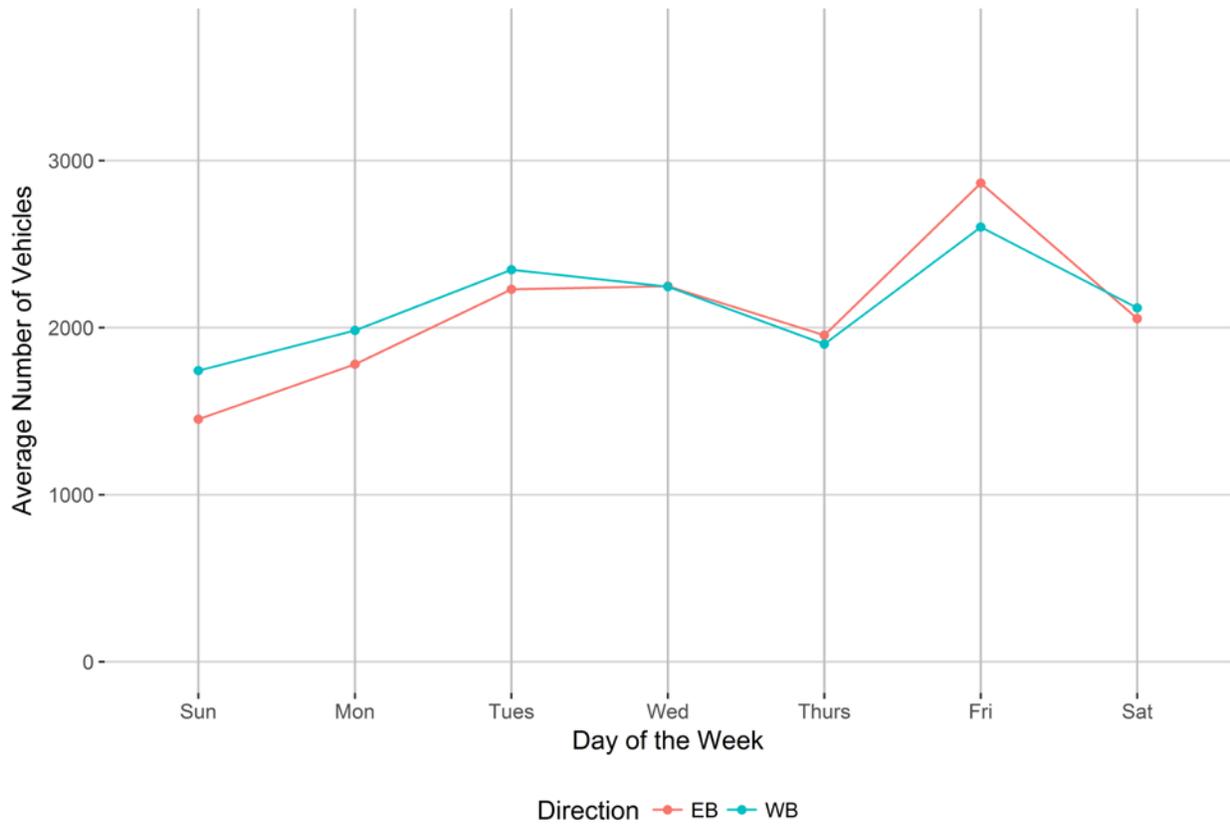


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

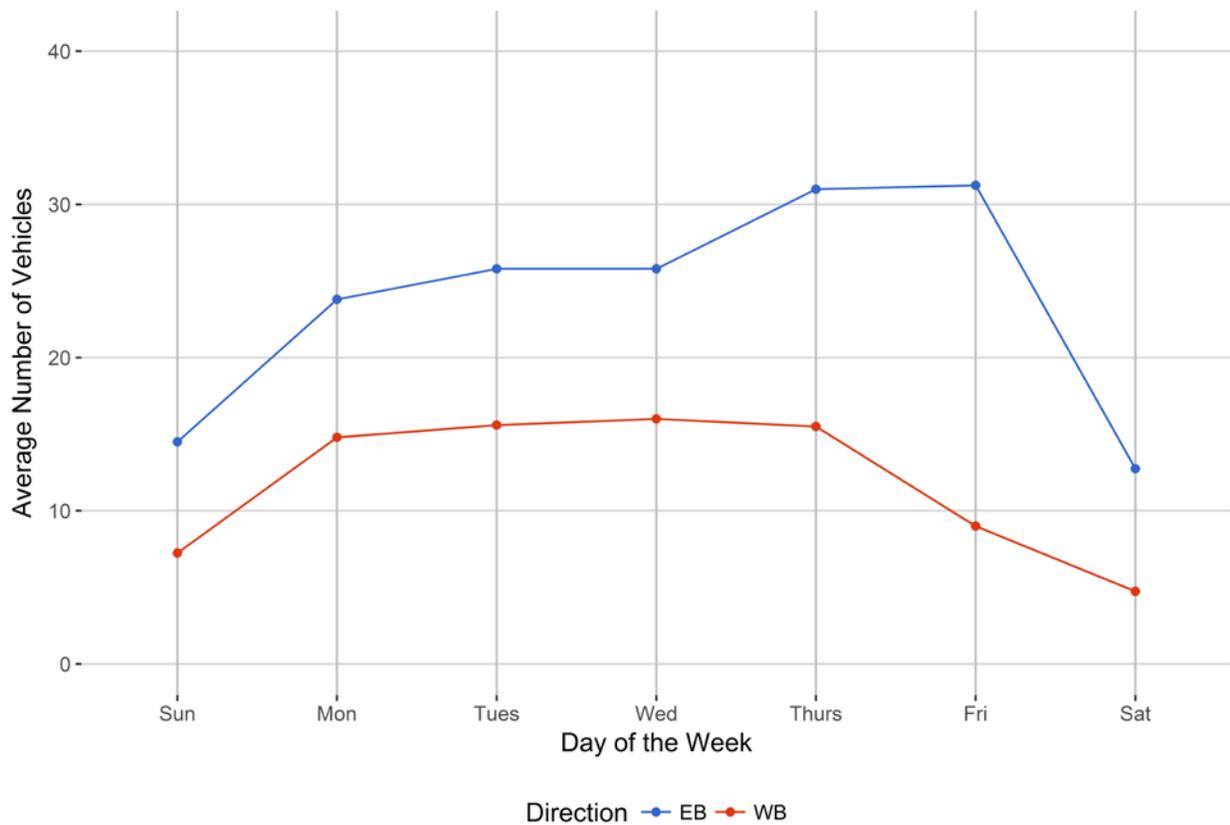


Figure 4 - Passenger Vehicles vs. Hour of the Day

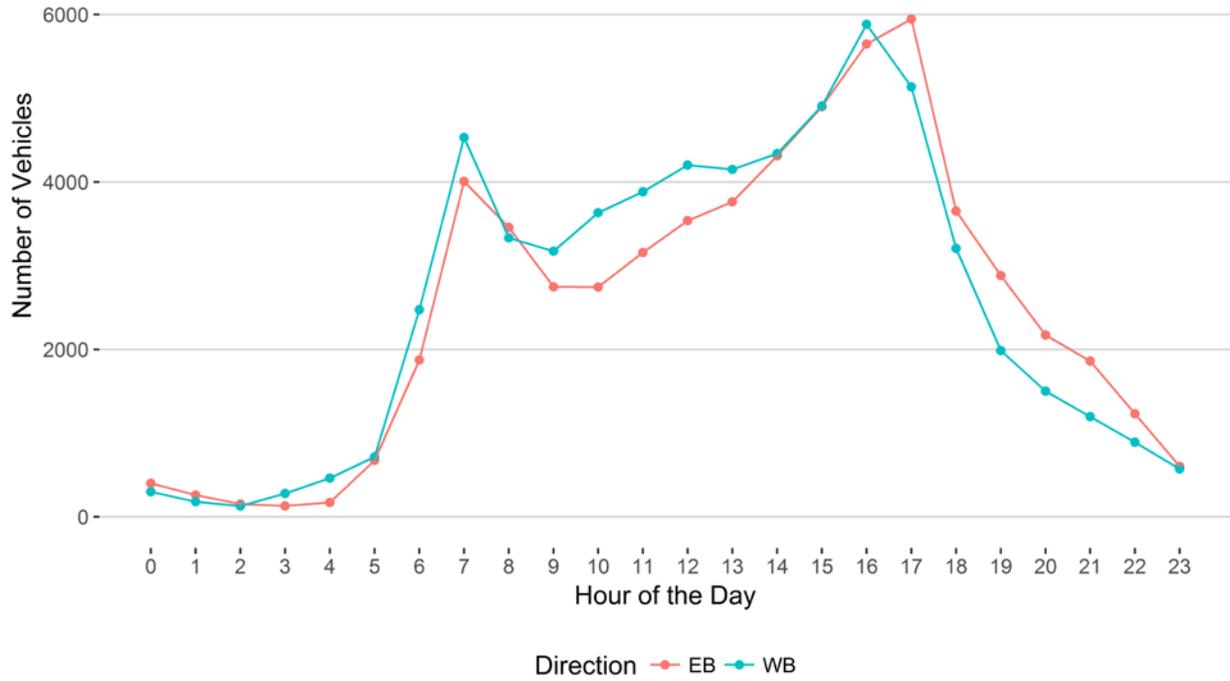


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

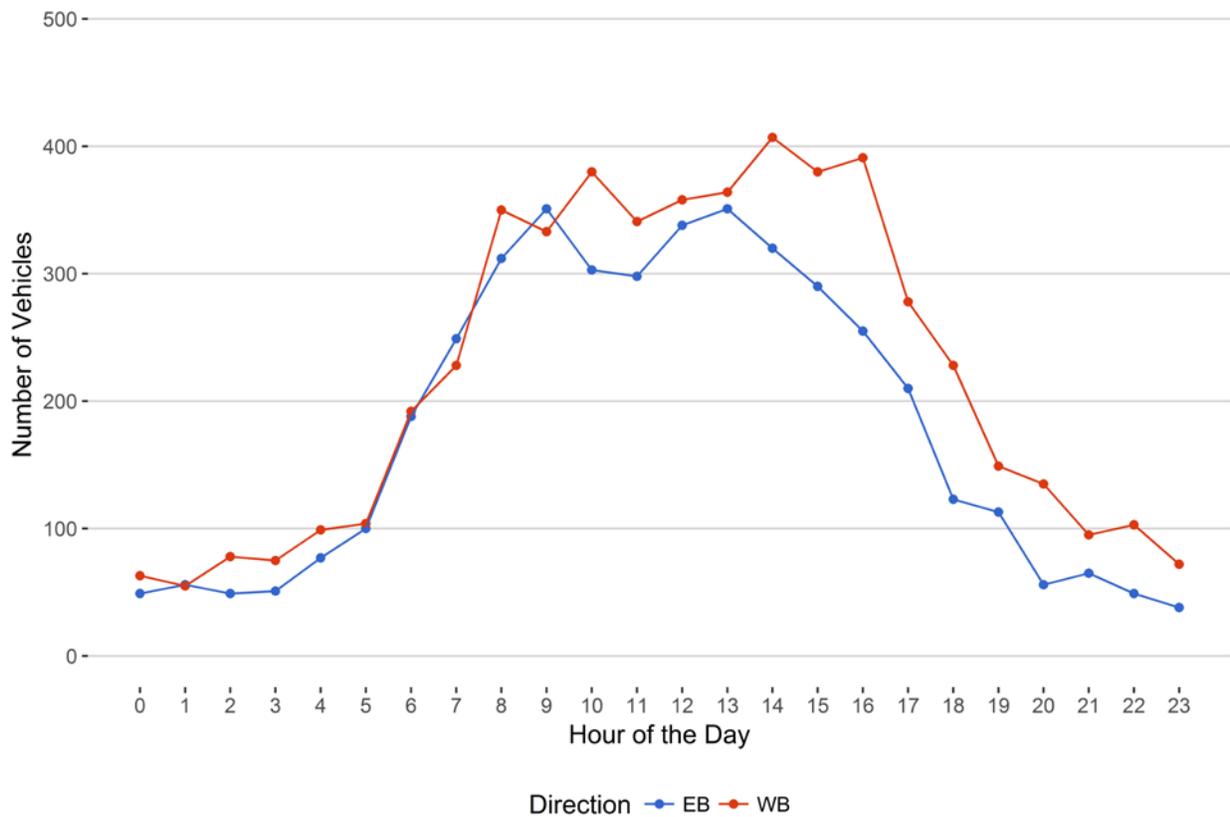


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

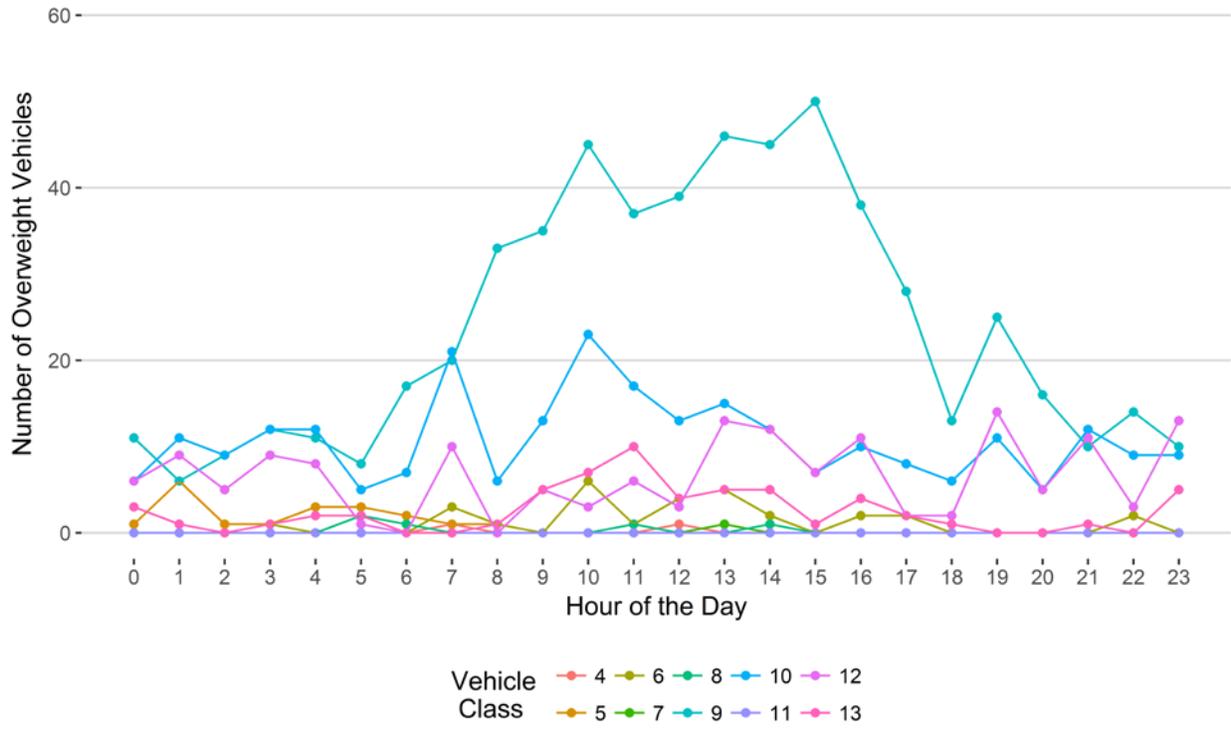


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

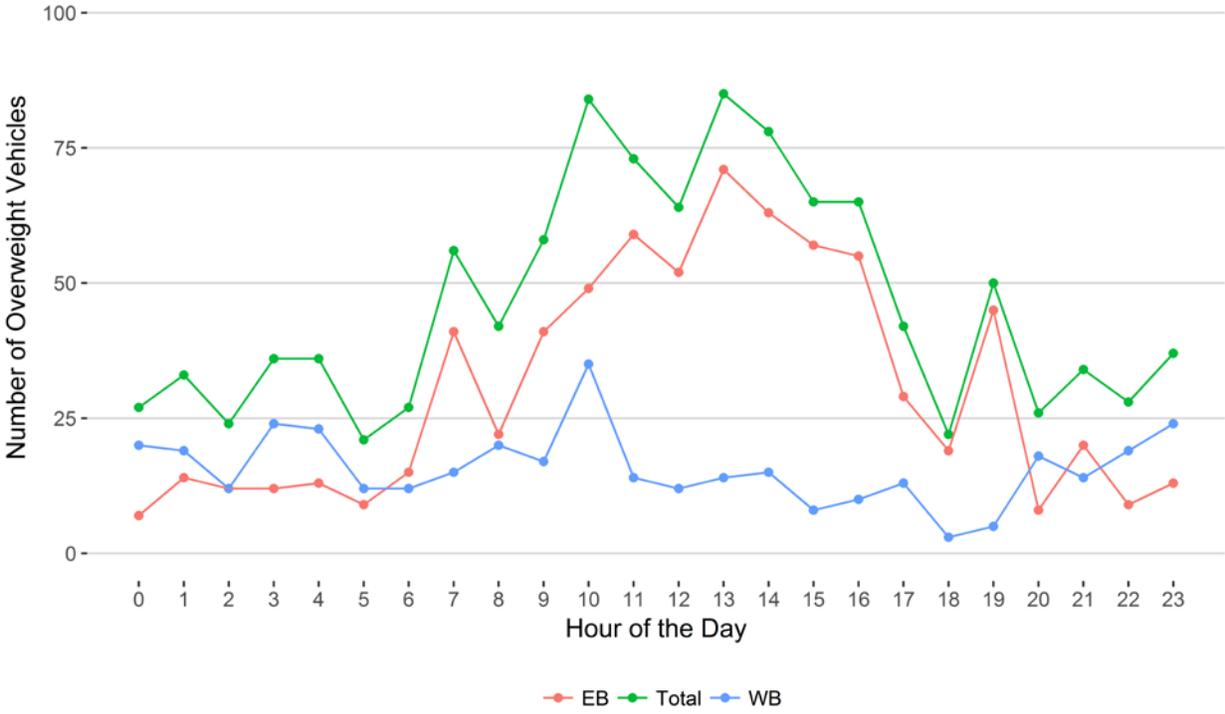
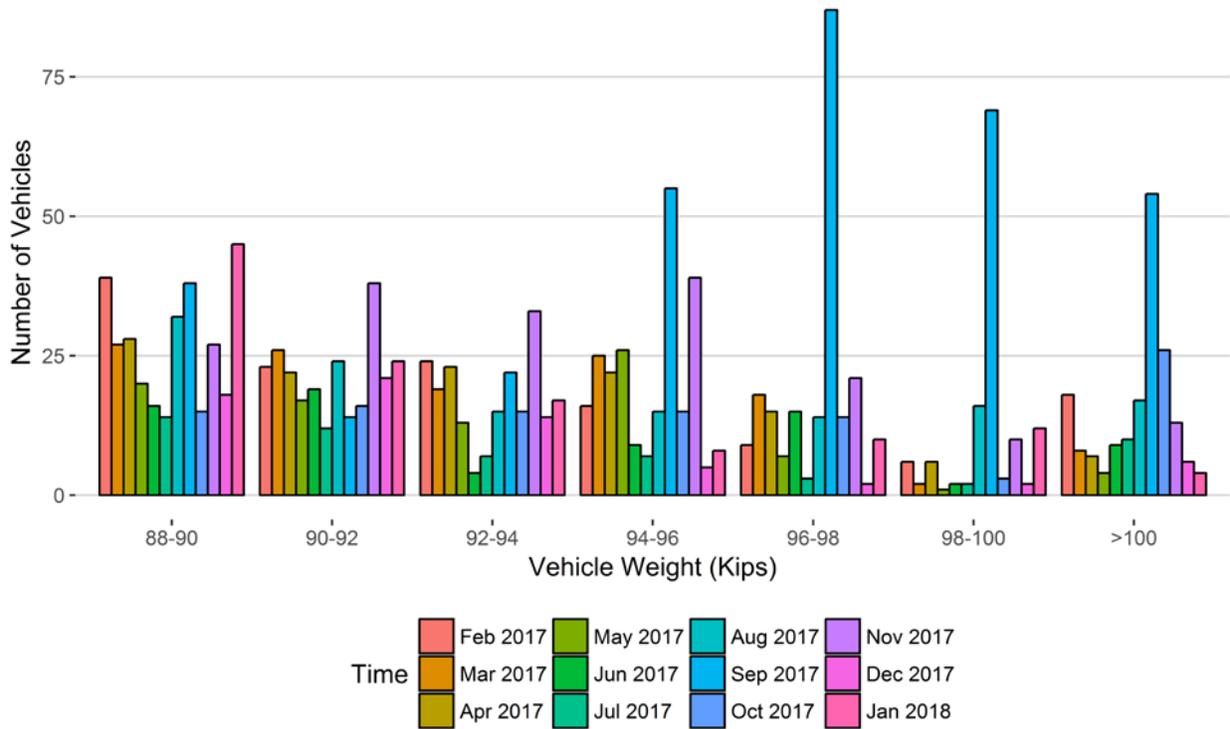
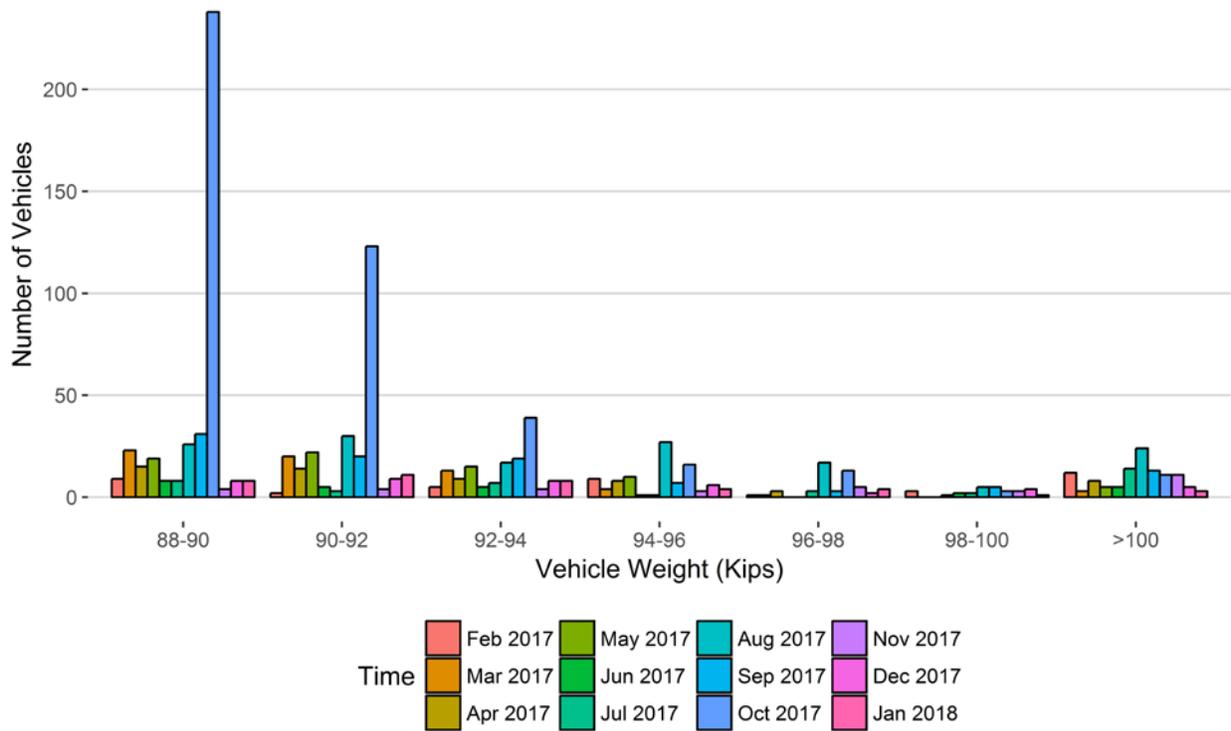


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	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	39	27	28	20	16	14	32	38	15	27	18	45
90-92	23	26	22	17	19	12	24	14	16	38	21	24
92-94	24	19	23	13	4	7	15	22	15	33	14	17
94-96	16	25	22	26	9	7	15	55	15	39	5	8
96-98	9	18	15	7	15	3	14	87	14	21	2	10
98-100	6	2	6	1	2	2	16	69	3	10	2	12
>100	18	8	7	4	9	10	17	54	26	13	6	4
Total	135	125	123	88	74	55	133	339	104	181	68	120

Figure 8 - Histogram of WB 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	23	15	19	8	8	26	31	238	4	8	8
90-92	2	20	14	22	5	3	30	20	123	4	9	11
92-94	5	13	9	15	5	7	17	19	39	4	8	8
94-96	9	4	8	10	1	1	27	7	16	3	6	4
96-98	1	1	3	0	0	3	17	3	13	5	2	4
98-100	3	0	0	1	2	2	5	5	3	3	4	1
>100	12	3	8	5	5	14	24	13	11	11	5	3
Total	41	64	57	72	26	38	146	98	443	34	42	39

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

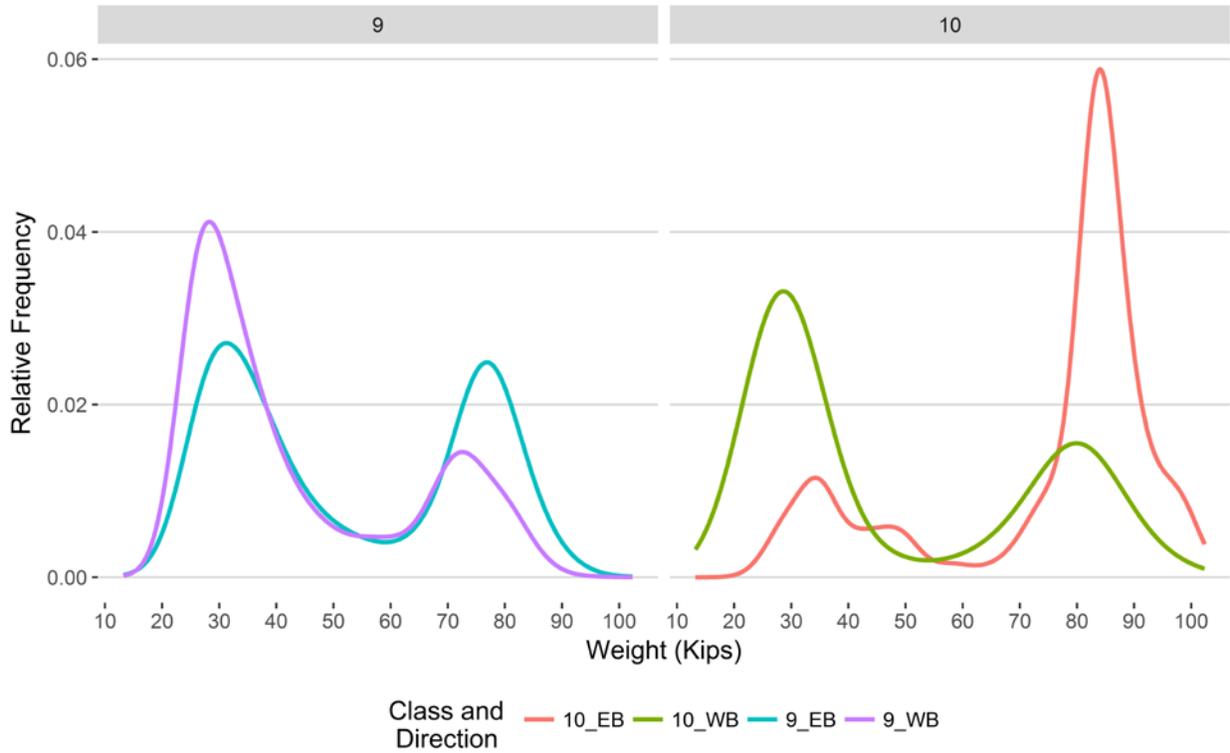


Figure 9 - Freight Percentage by Direction and Class

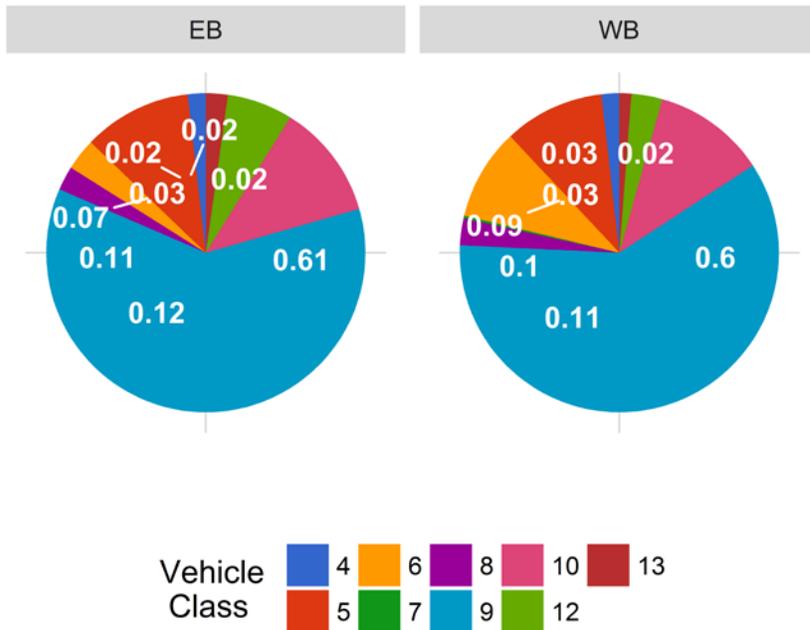


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

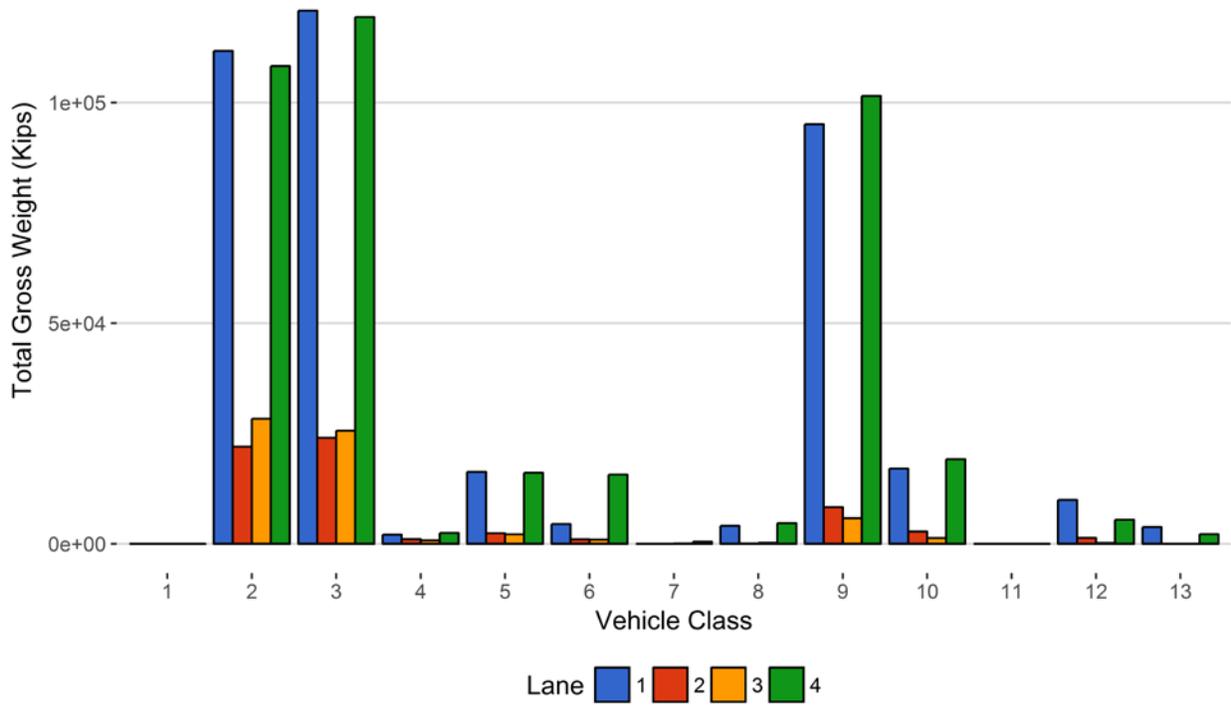


Figure 11 - Total Gross Vehicle Weight I

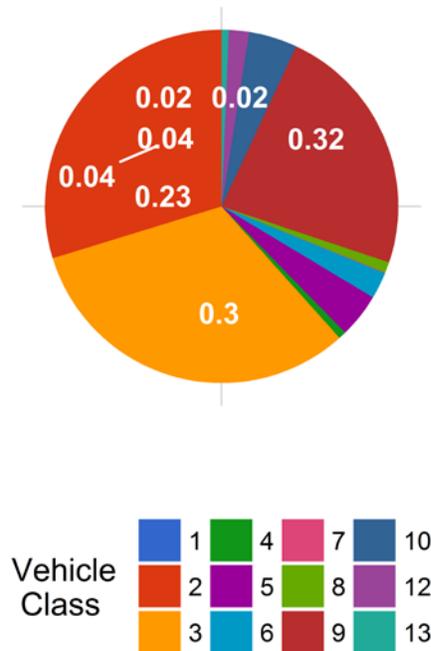


Figure 12 - Total ESALs by Class and Lane

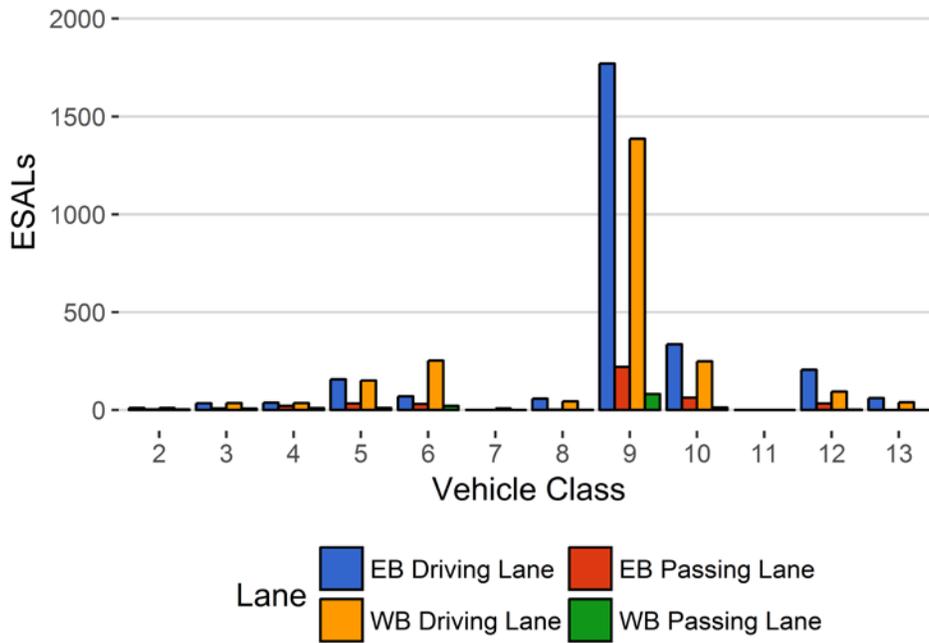


Figure 13 - ESALs by Class

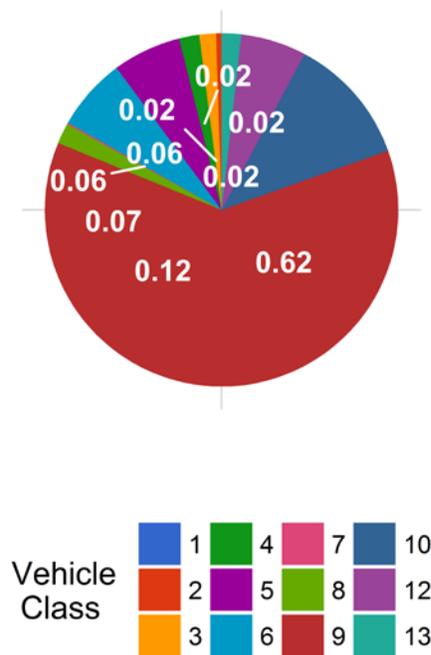


Table 1 Class 9 Front Axle Weight by Lane

<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>
November 2014	NA	NA	11.17	0.00	10.87	0.00	11.45	0.00
December 2014	NA	NA	10.82	-3.20	10.70	-1.53	11.34	-0.95
January 2015	NA	NA	11.03	-1.29	10.84	-0.29	11.30	-1.33
February 2015	NA	NA	11.09	-0.79	10.68	-1.79	11.19	-2.29
March 2015	NA	NA	10.99	-1.66	10.48	-3.60	11.56	0.95
April 2015	NA	NA	11.09	-0.76	10.59	-2.56	11.77	2.78
May 2015	NA	NA	11.26	0.80	10.84	-0.28	11.91	3.99
June 2015	NA	NA	10.96	-1.90	11.03	1.45	12.00	4.78
July 2015	NA	NA	10.90	-2.43	11.13	2.38	12.08	5.52
August 2015	NA	NA	10.86	-2.82	11.03	1.47	12.08	5.47
September 2015	NA	NA	10.85	-2.92	10.68	-1.74	11.99	4.67
October 2015	NA	NA	10.65	-4.66	10.53	-3.13	11.79	2.97
November 2015	NA	NA	11.47	2.64	10.70	-1.58	11.61	1.41
December 2015	NA	NA	11.68	4.48	10.84	-0.32	11.47	0.13
January 2016	NA	NA	11.33	1.43	10.90	0.27	11.22	-2.05
February 2016	NA	NA	11.14	-0.34	10.80	-0.64	11.30	-1.29
April 2016	NA	NA	11.44	2.37	10.96	0.81	11.56	0.96
May 2016	NA	NA	11.38	1.80	10.62	-2.31	11.74	2.47
June 2016	NA	NA	10.83	-3.09	10.94	0.63	11.77	2.80
July 2016	NA	NA	10.80	-3.39	10.69	-1.66	11.83	3.28
August 2016	NA	NA	10.58	-5.29	10.96	0.83	11.81	3.09
September 2016	NA	NA	10.80	-3.32	10.88	0.07	11.71	2.22
October 2016	NA	NA	10.58	-5.35	10.58	-2.68	11.35	-0.85
November 2016	NA	NA	11.49	2.83	10.82	-0.52	11.44	-0.11
December 2016	10.79	0.00	11.27	0.83	10.55	-2.94	10.89	-4.89

January 2017	10.91	1.14	10.94	-2.14	10.40	-4.36	10.92	-4.67
February 2017	11.05	2.42	11.01	-1.51	10.53	-3.16	11.07	-3.37
March 2017	11.32	4.87	11.26	0.76	10.44	-3.97	11.23	-1.92
April 2017	11.44	5.99	11.47	2.65	10.66	-1.96	11.32	-1.17
May 2017	11.39	5.55	11.35	1.56	10.57	-2.80	11.45	0.02
June 2017	11.40	5.64	11.13	-0.40	11.00	1.16	11.53	0.67
July 2017	11.28	4.55	10.98	-1.72	10.78	-0.86	11.69	2.12
August 2017	11.38	5.49	11.16	-0.18	11.05	1.63	11.59	1.17
September 2017	11.21	3.85	10.76	-3.67	10.83	-0.35	11.47	0.12
October 2017	11.15	3.35	10.79	-3.47	10.49	-3.52	11.24	-1.87
November 2017	11.11	2.93	11.52	3.08	10.48	-3.64	10.86	-5.15
December 2017	10.95	1.49	11.08	-0.83	10.39	-4.38	10.85	-5.24
January 2018	11.01	2.05	11.66	4.31	10.23	-5.93	10.58	-7.61

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	1	0	0	0
2	2358	73092	54.6	0	0
3	1649	51106	38.1	0	0
4	7	221	0.2	3	0.3
5	98	3024	2.3	20	1.8
6	23	704	0.5	29	2.6
7	0	11	0	1	0.1
8	10	303	0.2	5	0.4
9	146	4514	3.4	578	51.9
10	23	709	0.5	259	23.3
11	0	0	0	0	0
12	7	212	0.2	158	14.2
13	2	69	0.1	60	5.4
TOTAL	4321	133966	100	1113	100

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>
2018-01-29	Monday	09:02:09	10	EB	1	104.91
2018-01-25	Thursday	17:35:48	10	EB	2	102.35
2018-01-16	Tuesday	10:48:24	10	EB	1	101.74
2018-01-23	Tuesday	06:44:53	10	EB	1	100.82
2018-01-03	Wednesday	20:27:25	10	WB	4	100.66
2018-01-08	Monday	02:37:52	9	EB	2	99.77
2018-01-18	Thursday	10:04:38	10	EB	2	99.55
2018-01-23	Tuesday	13:55:57	10	EB	2	99.34
2018-01-23	Tuesday	10:06:30	10	EB	1	99.29
2018-01-18	Thursday	12:50:46	10	EB	1	98.99

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	108	21	19.4	2911	185	803
5	EB	8	1477	347	23.5	16157	2497	3559
6	EB	19	180	30	16.7	4954	512	1052
8	EB	31	129	61	47.3	2750	1406	321
9	EB	33	1954	532	27.2	88185	15205	20630
10	EB	33.5	265	17	6.4	19323	506	5508
12	EB	36.5	135	0	0	11268	0	3170
13	EB	31.5	43	1	2.3	3759	25	1218
TOTAL	****	****	4291	1009	****	149307	****	36260
<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	108	19	17.6	2985	233	825
5	WB	8	1480	386	26.1	15425	2784	3336
6	WB	19	508	48	9.4	15790	827	3525
7	WB	11.5	11	0	0	494	0	184
8	WB	31	167	102	61.1	2330	2533	157
9	WB	33	2460	1103	44.8	76662	30661	15941
10	WB	33.5	428	235	54.9	13856	6613	3695
12	WB	36.5	72	0	0	5616	0	1494
13	WB	31.5	24	1	4.2	2143	28	709
TOTAL	****	****	5258	1894	****	135302	****	29867
GRAND TOTAL	****	****	9549	2903	361	284609	64014	66127

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	0	1	0	0	1	0
2	111689	22003	28317	108288	270297	29.7
3	120852	23993	25626	119402	289874	31.9
4	2052	1044	752	2467	6314	0.7
5	16271	2383	2125	16083	36862	4.1
6	4465	1001	958	15659	22083	2.4
7	0	0	47	447	494	0.1
8	4088	68	202	4660	9018	1
9	95104	8287	5808	101516	210715	23.2
10	17060	2769	1308	19161	40298	4.4
12	9955	1313	160	5456	16884	1.9
13	3784	0	0	2171	5954	0.7
TOTAL	385319	62862	65303	395311	908795	100
GVW/LANE	42.4	6.92	7.19	43.5	100	0.01

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	0.5
2	11	3	3	11	28	0.51	8e-04
3	35	8	7	35	85	1.52	0.0035
4	37	21	10	35	103	1.84	0.96
5	157	33	11	151	352	6.27	0.24
6	70	31	20	253	373	6.65	1.09
7	0	0	0	8	8	0.15	1.3
8	58	2	1	44	106	1.89	0.73
9	1770	220	82	1386	3458	61.63	1.58
10	336	63	13	249	661	11.78	1.91
12	205	33	3	94	336	5.98	3.15
13	61	0	0	39	100	1.79	2.69
TOTAL	2740	415	151	2305	5611	100	14
ESALS/LANE	48.8	7.4	2.7	41.1	100	--	--

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	135487	6234	340	125973	93	9514.5	7	91.8	8.2
Mar 2017	154682	4990	387	142700	92.3	11982	7.7	92.5	7.5
Apr 2017	159674	5322	461	145835	91.3	13839.3	8.7	93.2	6.8
May 2017	179690	5796	518	163644	91.1	16046.4	8.9	91.9	8.1
Jun 2017	184852	6162	533	168867	91.4	15985	8.6	90	10
Jul 2017	189815	6123	452	175793	92.6	14022.4	7.4	92	8
Aug 2017	190414	6142	549	173403	91.1	17011.3	8.9	91.6	8.4
Sep 2017	180227	6008	606	162055	89.9	18171.9	10.1	89.8	10.2
Oct 2017	184171	5941	796	159487	86.6	24684	13.4	88.2	11.8
Nov 2017	151412	5047	442	138141	91.2	13270.9	8.8	91.9	8.1
Dec 2017	139192	4490	300	129894	93.3	9298.2	6.7	86.8	13.2
Jan 2018	133966	4322	315	124200	92.7	9766.2	7.3	91	9
TOTAL	1983582	--	--	1809992	--	173592	--	--	--
AVERAGE	165298	5548	475	150833	91	14466	9	91	9

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>
Feb 2017	3142	292	182	2225	5842	92	8	5.4
Mar 2017	4067	315	154	2898	7434	94	6	4.7
Apr 2017	4960	328	209	3545	9041	94	6	5.9
May 2017	5090	423	305	4508	10326	93	7	2.9
Jun 2017	4569	462	418	4251	9700	91	9	2.7
Jul 2017	3610	215	261	4173	8258	94	6	2.6
Aug 2017	4706	374	393	5821	11295	93	7	3.9
Sep 2017	4959	323	916	6416	12613	90	10	3.7
Oct 2017	5562	553	1181	11877	19173	91	9	9.2
Nov 2017	4174	329	271	3265	8039	93	7	3.2
Dec 2017	2437	331	325	2125	5219	87	13	1.8
Jan 2018	2742	416	151	2307	5616	90	10	8
TOTAL	50018	4362	4766	53410	112556	--	--	--
AVERAGE	4168	364	397	4451	9380	92	8	4

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>
Feb 2017	385504	62910	65368	395469	909251
Mar 2017	415920	61257	65518	391343	934038
Apr 2017	511921	72227	76256	462282	1122686
May 2017	579170	73894	83816	523732	1260611
Jun 2017	636717	94284	104485	604489	1439975
Jul 2017	619486	108046	110675	587864	1426070
Aug 2017	588872	87852	106948	607181	1390854
Sep 2017	641135	102892	109419	668499	1521944
Oct 2017	651148	96051	132295	661776	1541269
Nov 2017	722064	131001	156238	862366	1871669
Dec 2017	522471	74817	84942	486693	1168923
Jan 2018	389939	68885	89194	375618	923635
TOTAL	6664345	1034115	1185153	6627312	15510925
AVERAGE	555362	86176	98763	552276	1292577

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	1177	0.9	12.5	176	39
Mar 2017	1155	0.8	9.7	190	13
Apr 2017	1618	1	11.7	180	21
May 2017	2116	1.2	13.2	160	11
Jun 2017	1991	1.1	12.7	100	18
Jul 2017	1595	0.8	11.4	94	29
Aug 2017	2710	1.4	16	281	64
Sep 2017	3123	1.8	17.3	437	141
Oct 2017	5291	2.9	21.7	547	43
Nov 2017	1039	0.7	7.9	216	38
Dec 2017	678	0.5	7.4	110	17
Jan 2018	1113	0.8	11.6	159	20
TOTAL	23606	--	--	2650	454
AVERAGE	1967.2	1.2	12.8	220.8	37.8

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>
Feb 2017	41956	28764	70720	59.3	40.7
Mar 2017	52171	38171	90342	57.7	42.3
Apr 2017	61731	51916	113647	54.3	45.7
May 2017	63680	65831	129512	49.2	50.8
Jun 2017	57114	63587	120702	47.3	52.7
Jul 2017	42908	57812	100720	42.6	57.4
Aug 2017	57510	80312	137822	41.7	58.3
Sep 2017	63214	94251	157465	40.1	59.9
Oct 2017	72458	170001	242460	29.9	70.1
Nov 2017	53063	50595	103659	51.2	48.8
Dec 2017	33019	28429	61447	53.7	46.3
Jan 2018	36260	29867	66127	54.8	45.2
TOTAL	635084	759538	1394622	--	--
AVERAGE	52923.7	63294.8	116218.5	48.5	51.5