

NOVEMBER 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 November 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: 146400 | Passenger Vehicles: 132552 | Heavy Commercial Vehicles: 13848

Monthly Average Daily Traffic (MADT): 5048 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 462

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 Saturdays (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 13848 HCVs, 871 of them were overweight³. These overweight HCVs contributed to 0.6% of total monthly volume, and 6.2% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Fridays, with lowest volumes reported on Mondays. See Figure 3 .

The top two overweight violators by class were the class 13 and class 9 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 61.1% of all overweight vehicles traveling WB 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 report⁴.

Using normal load limits ,71 EB vehicles exceeded 88,000 pounds (63 vehicles were Class 13's; 7 vehicles were Class 10's). Of vehicles traveling WB,

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

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in November 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 fully_loaded Class 9's than empty 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 113139 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (57%) than EB (43%). 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 146400 vehicles with a combined GVW of 1175118 kips (1 kip = 1,000 pounds = 0.5 tons) in November 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 7741 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 52.6% of all ESALs were recorded WB while 47.4% was observed EB. In particular, 48% 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).

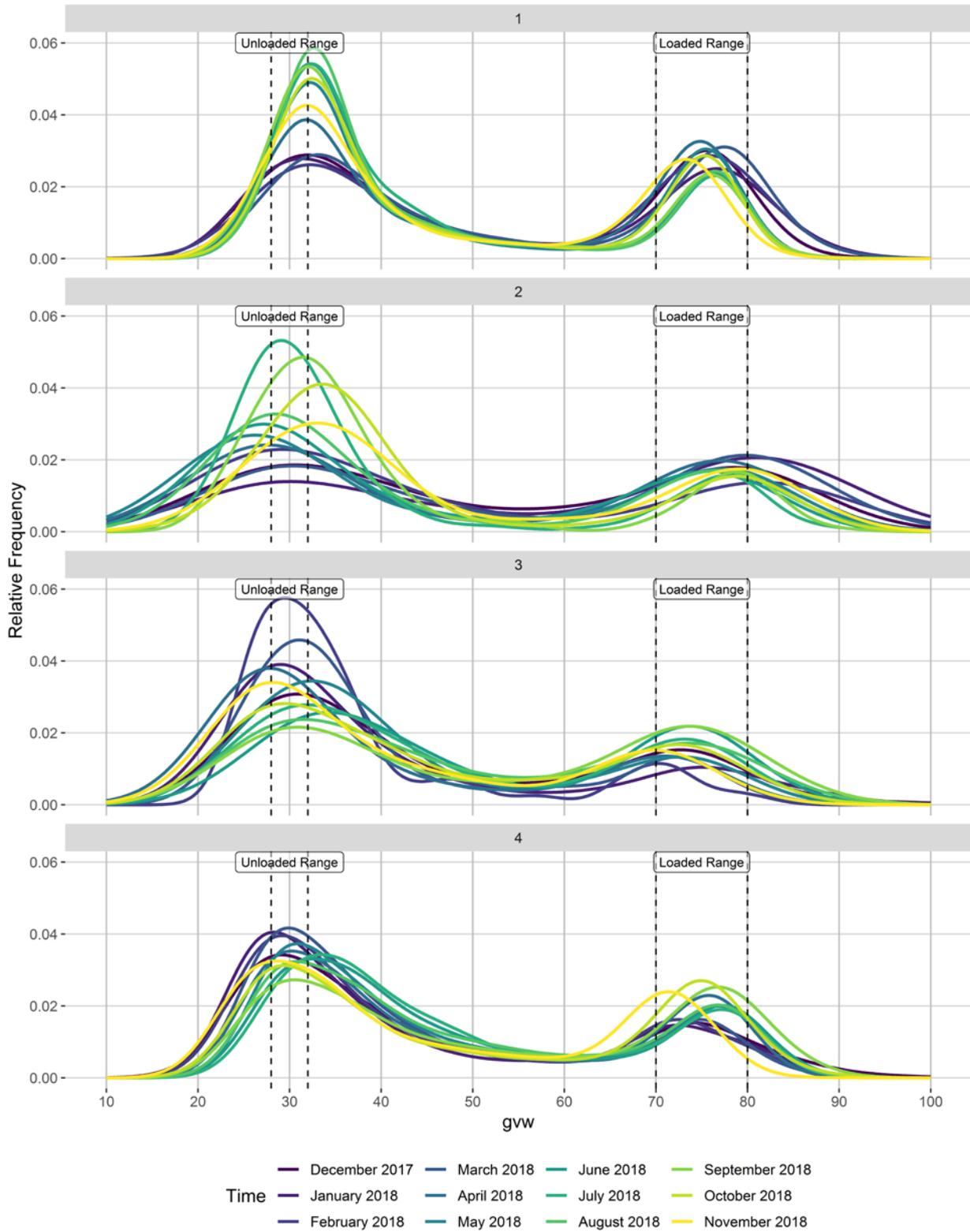
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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.

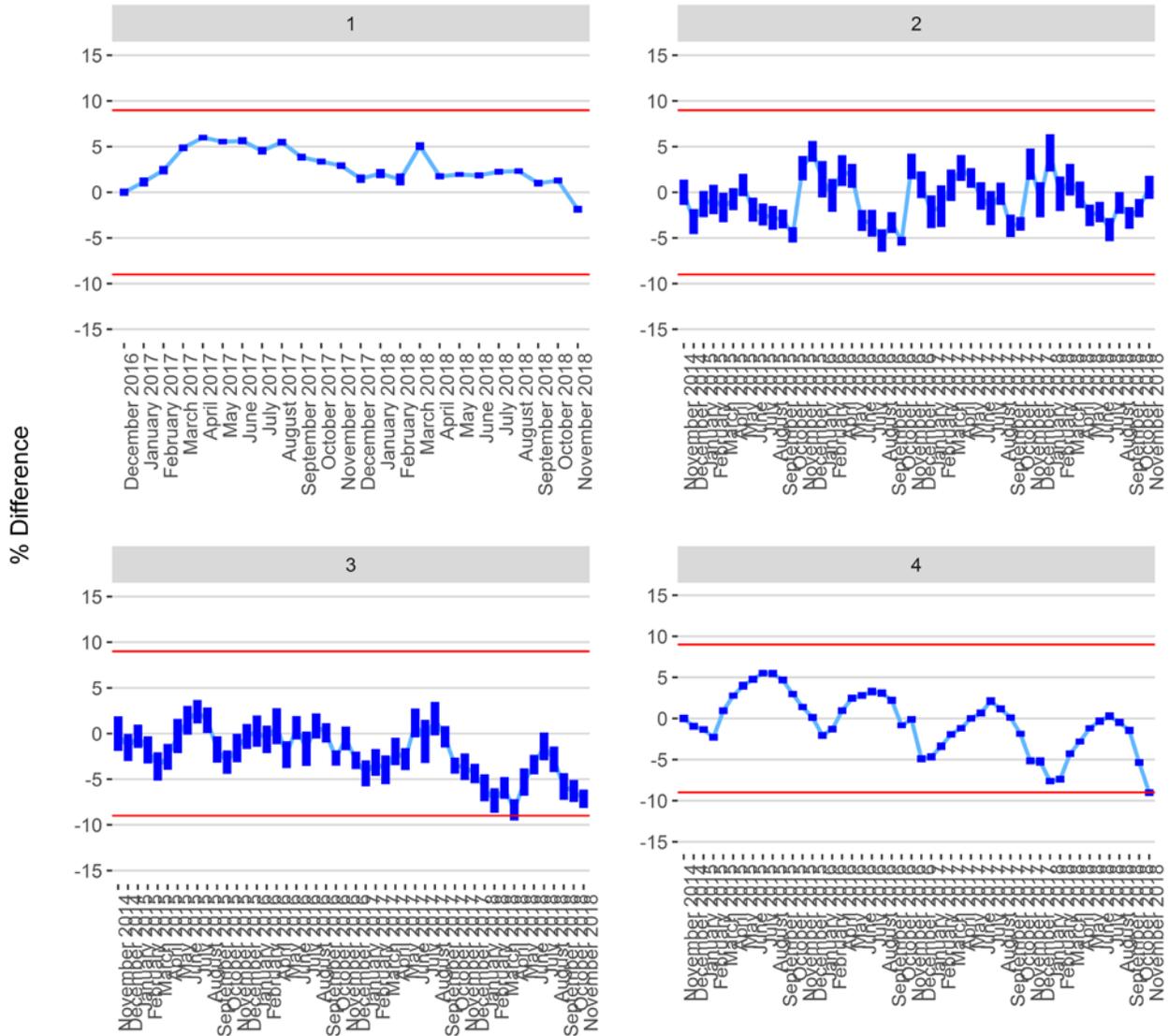
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

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

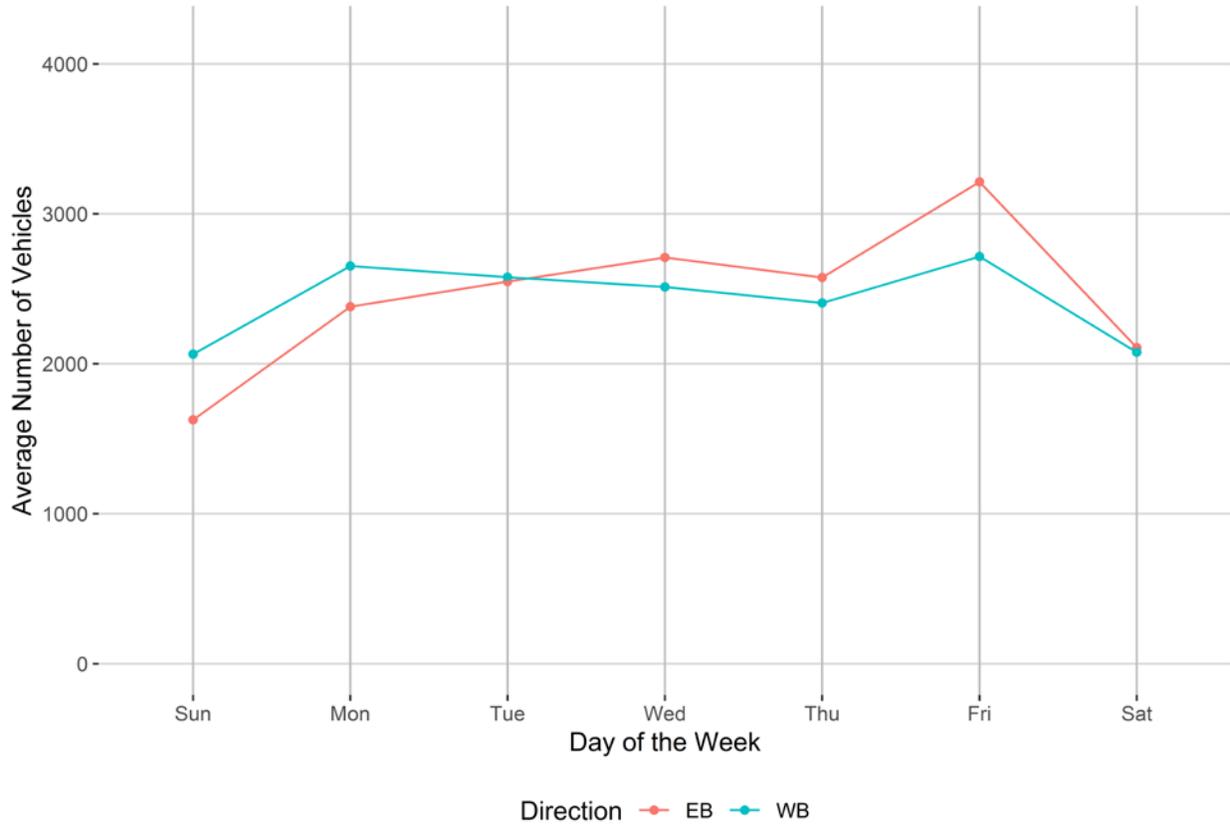


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

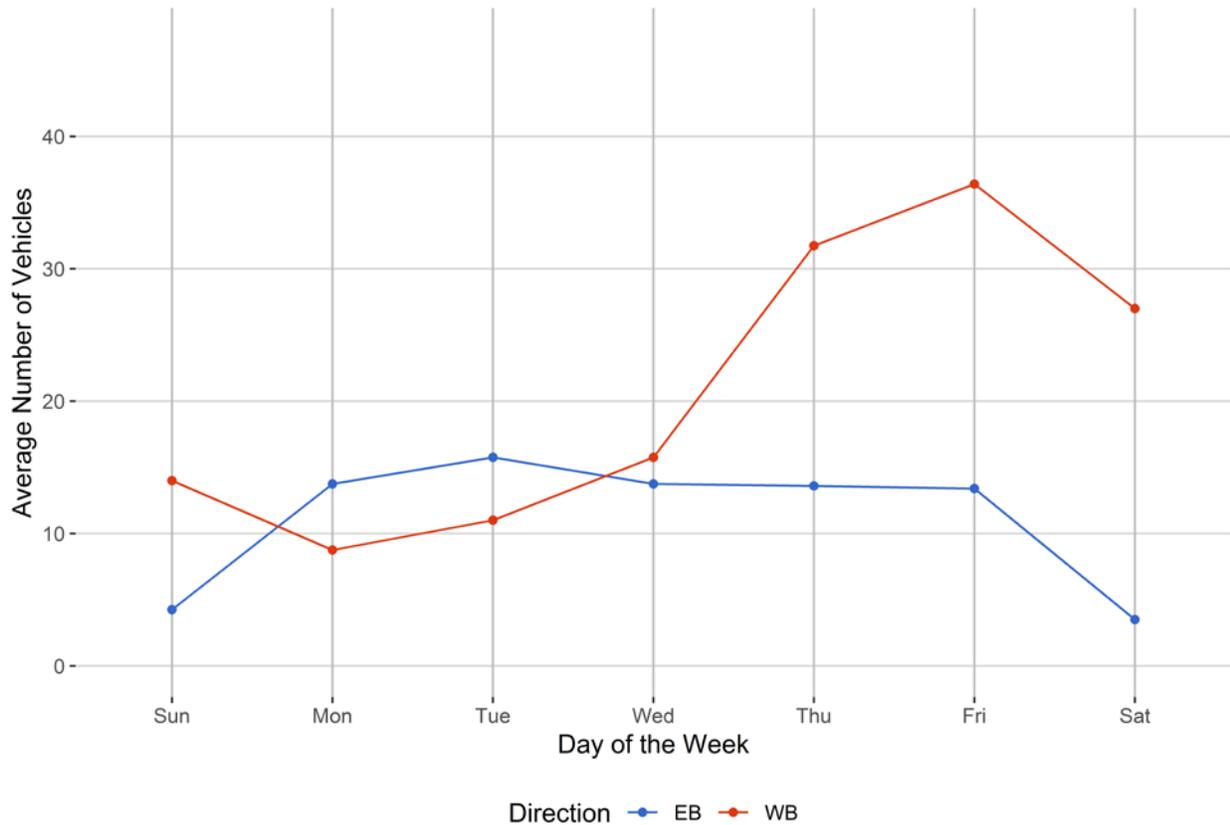


Figure 4 - Passenger Vehicles vs. Hour of the Day

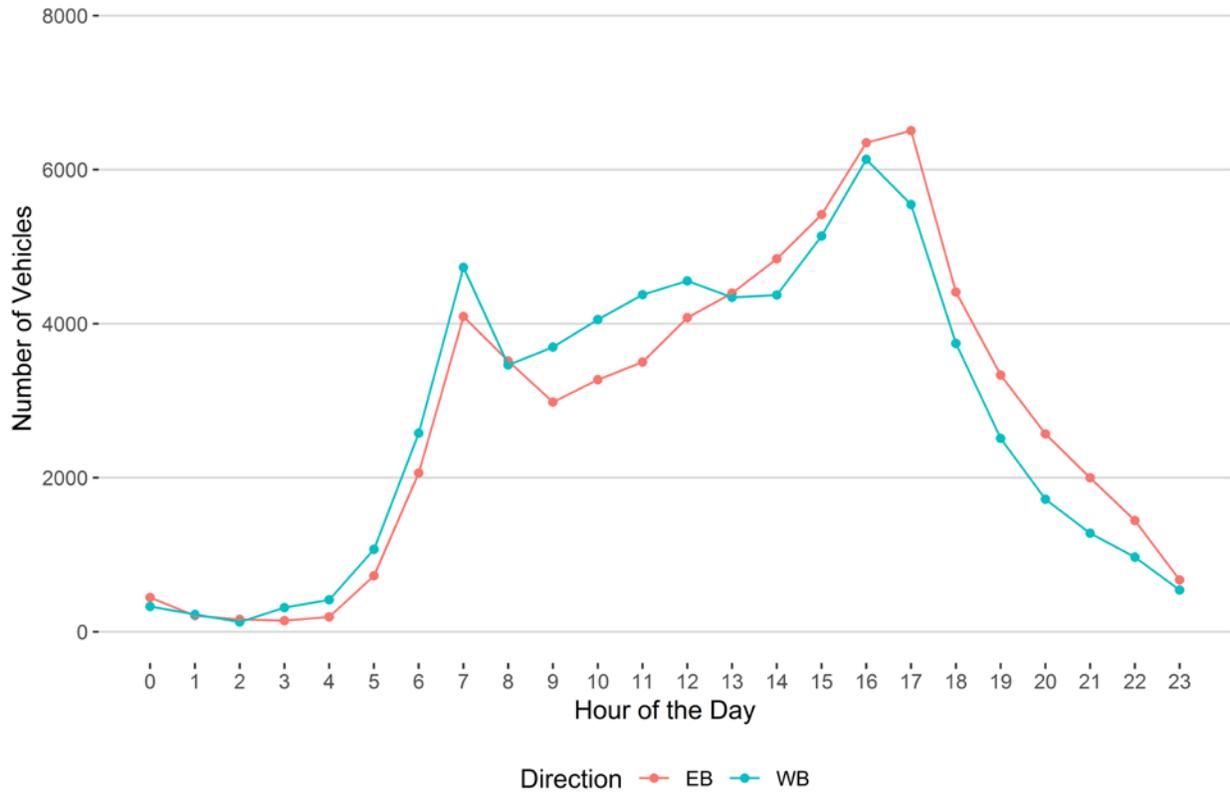


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

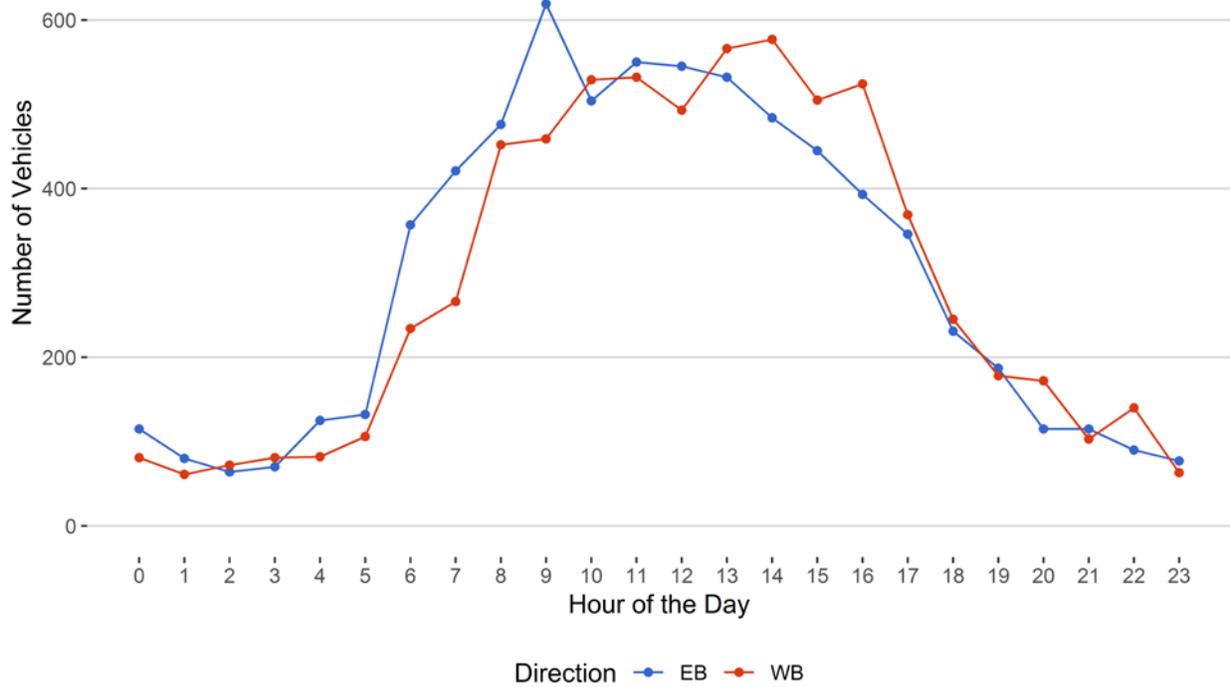


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

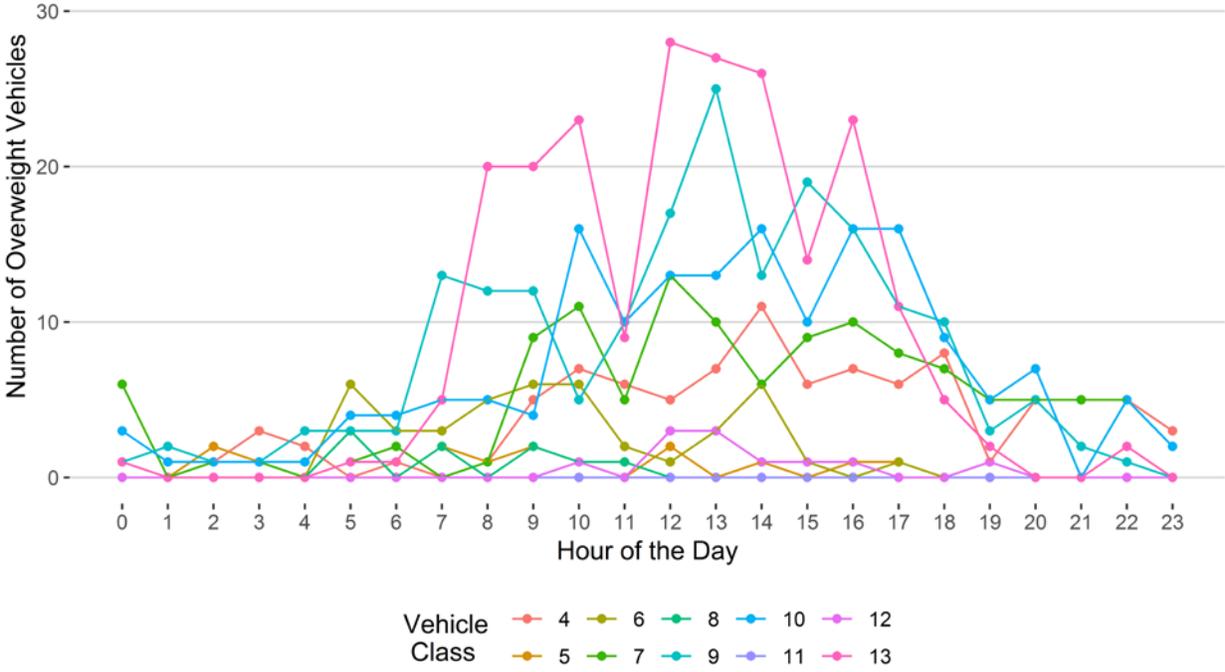


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

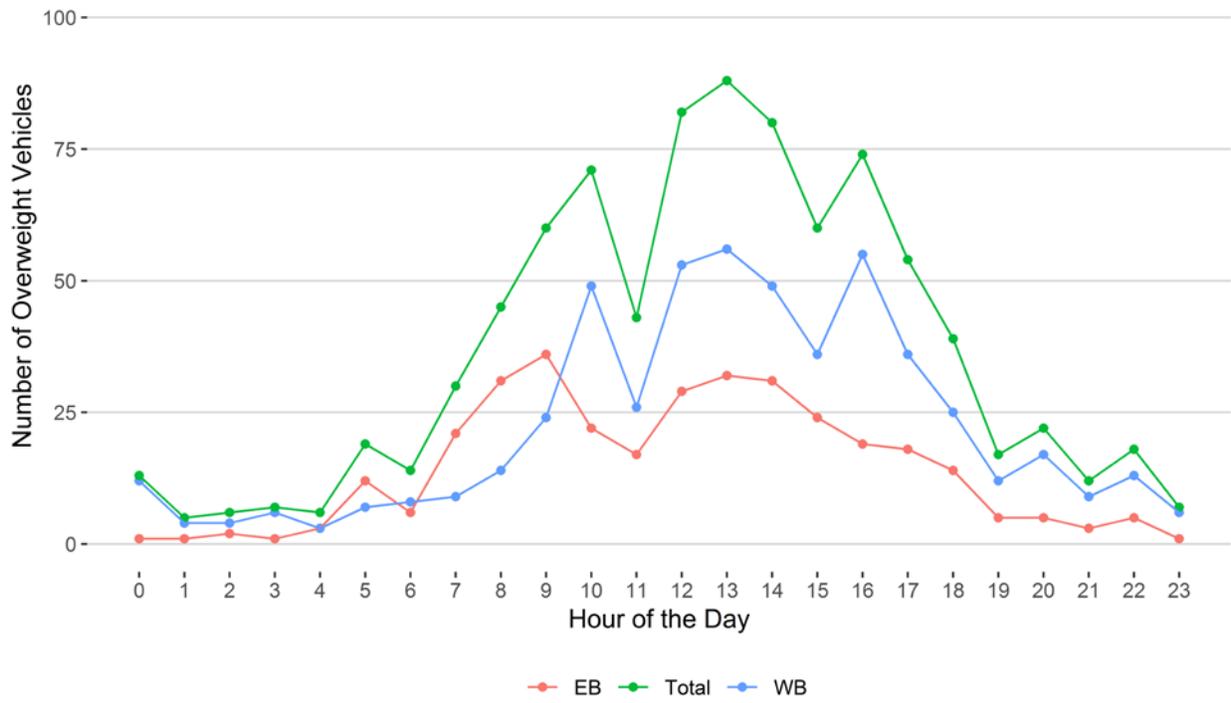
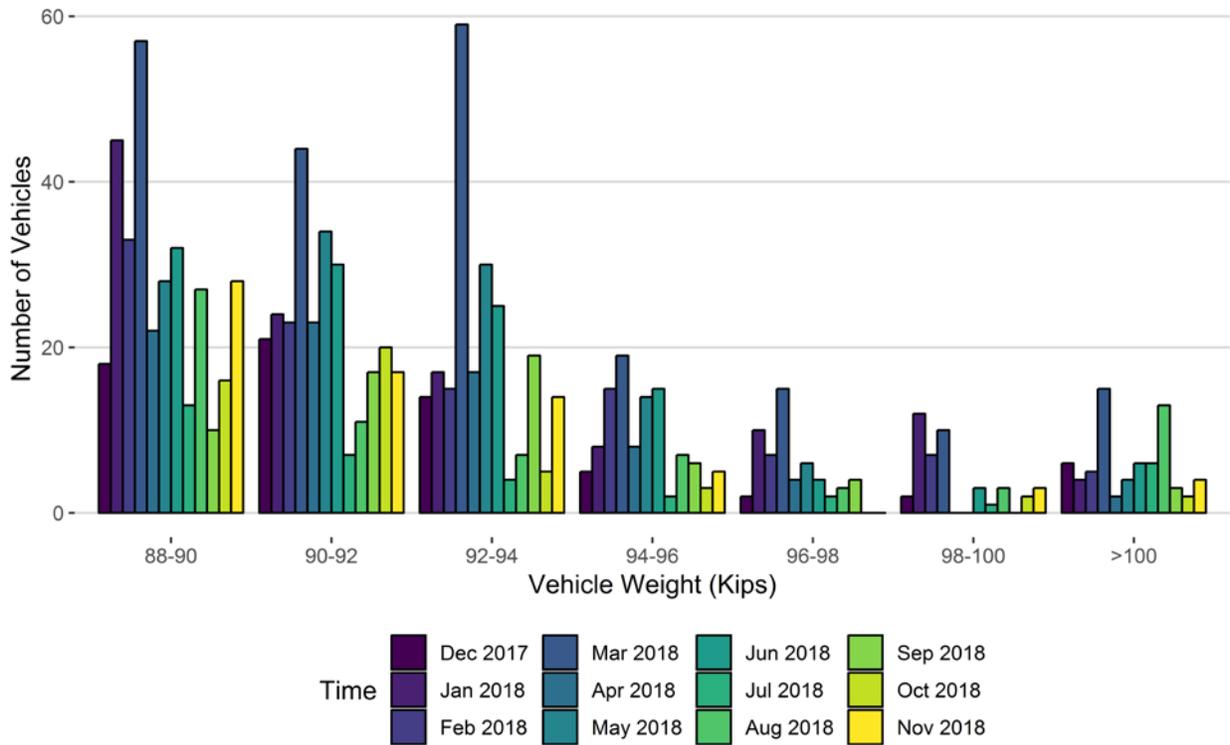
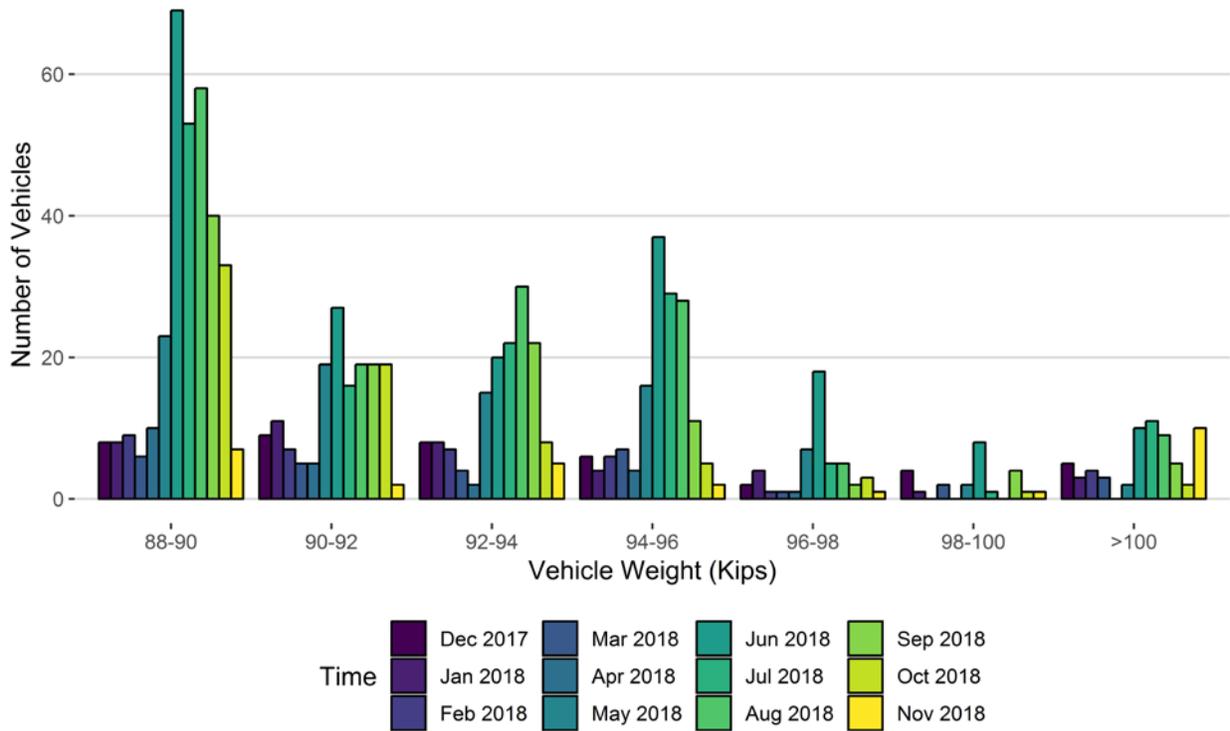


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018
88-90	18	45	33	57	22	28	32	13	27	10	16	28
90-92	21	24	23	44	23	34	30	7	11	17	20	17
92-94	14	17	15	59	17	30	25	4	7	19	5	14
94-96	5	8	15	19	8	14	15	2	7	6	3	5
96-98	2	10	7	15	4	6	4	2	3	4	0	0
98-100	2	12	7	10	0	0	3	1	3	0	2	3
>100	6	4	5	15	2	4	6	6	13	3	2	4
Total	68	120	105	219	76	116	115	35	71	59	48	71

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



Vehicle Weights (Kips)	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018
88-90	8	8	9	6	10	23	69	53	58	40	33	7
90-92	9	11	7	5	5	19	27	16	19	19	19	2
92-94	8	8	7	4	2	15	20	22	30	22	8	5
94-96	6	4	6	7	4	16	37	29	28	11	5	2
96-98	2	4	1	1	1	7	18	5	5	2	3	1
98-100	4	1	0	2	0	2	8	1	0	4	1	1
>100	5	3	4	3	0	2	10	11	9	5	2	10
Total	42	39	34	28	22	84	189	137	149	103	71	28

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

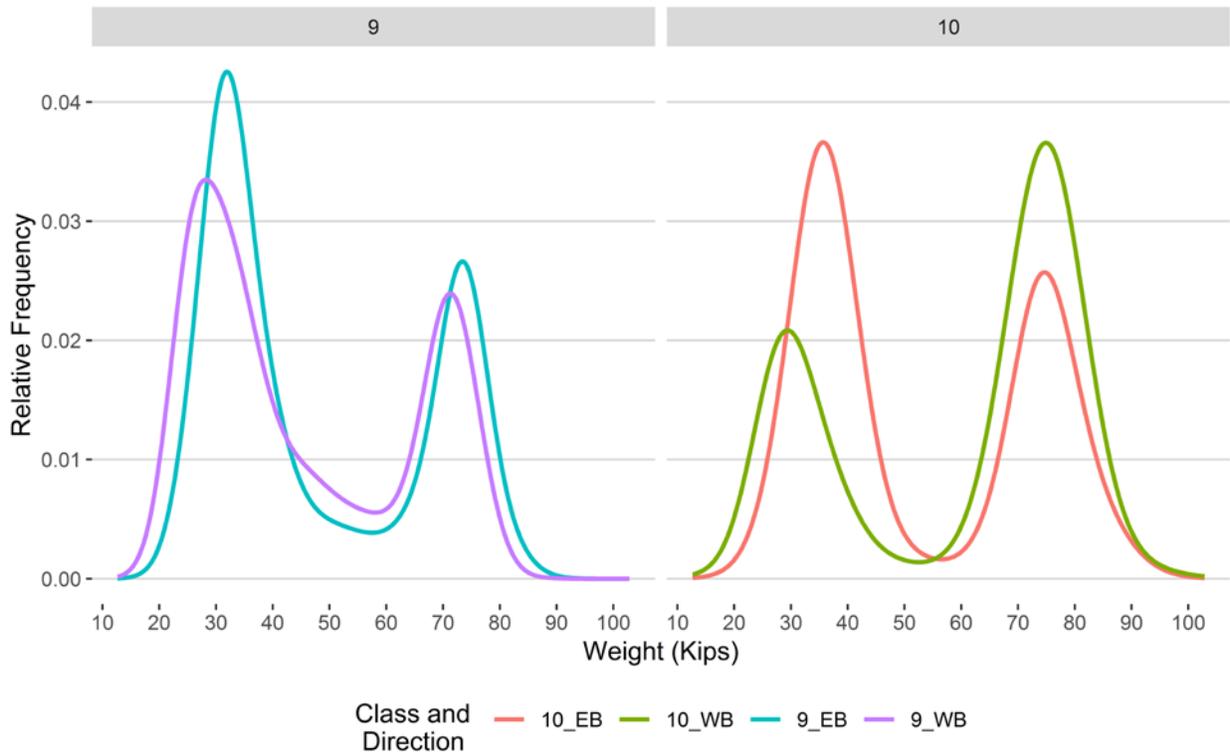


Figure 9 - Freight Percentage by Direction and Class

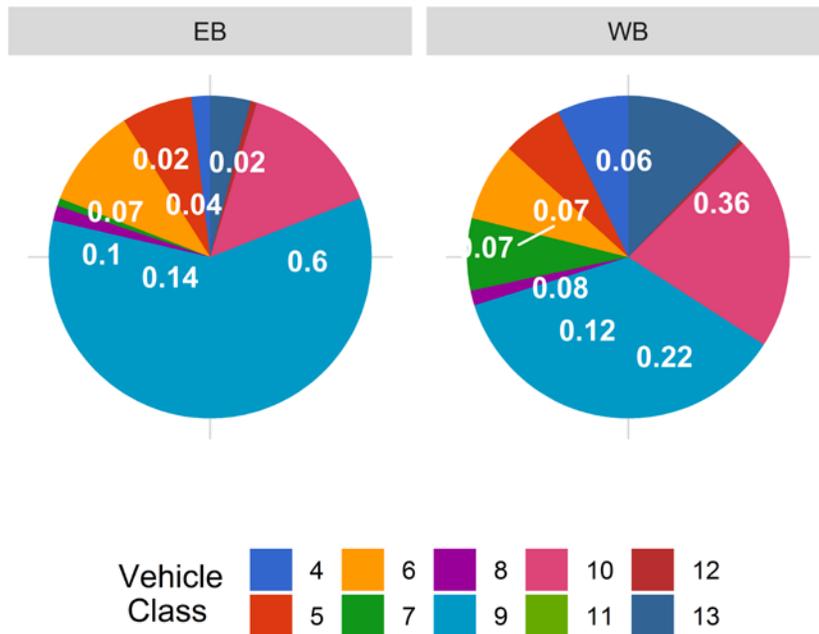


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

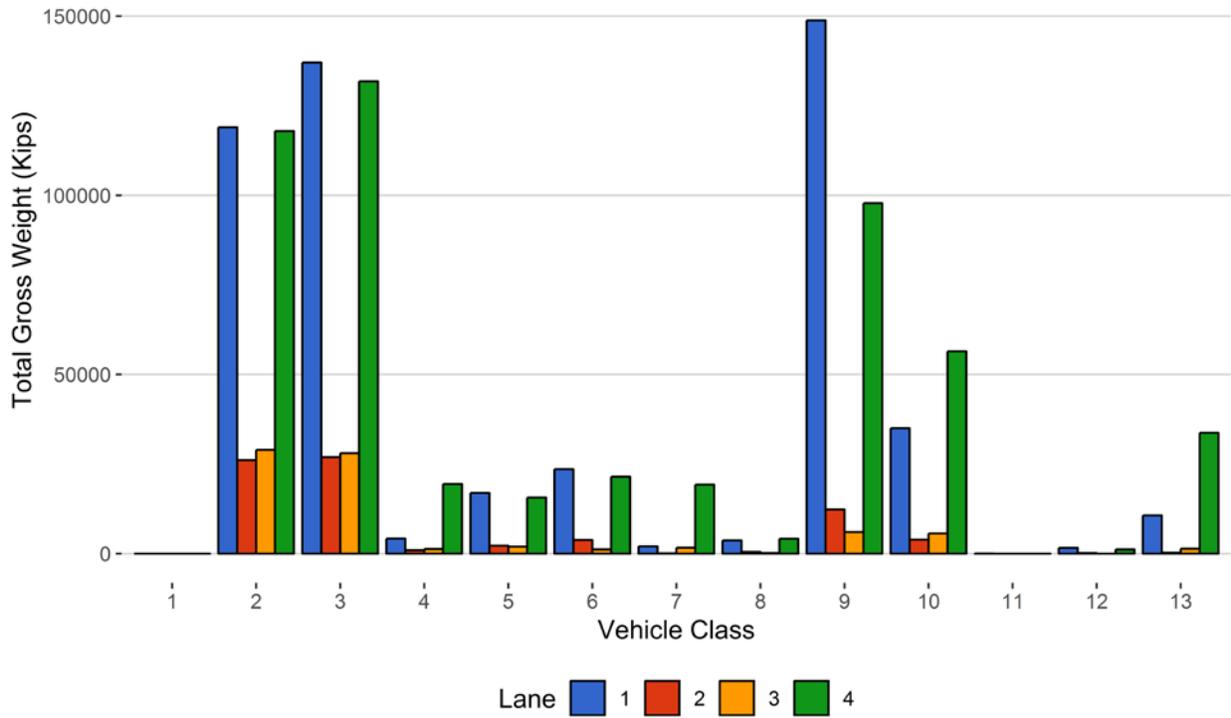


Figure 11 - Total Gross Vehicle Weight t

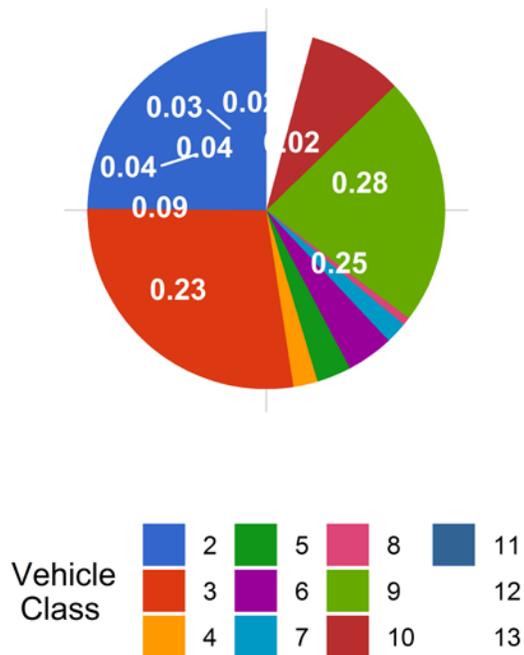


Figure 12 - Total ESALs by Class and Lane

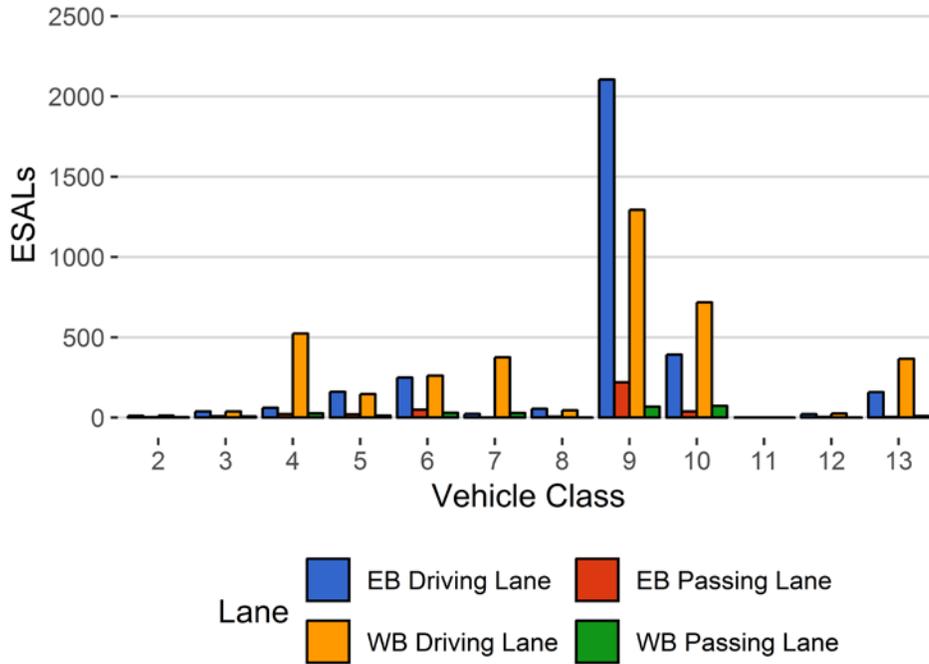


Figure 13 - ESALs by Class

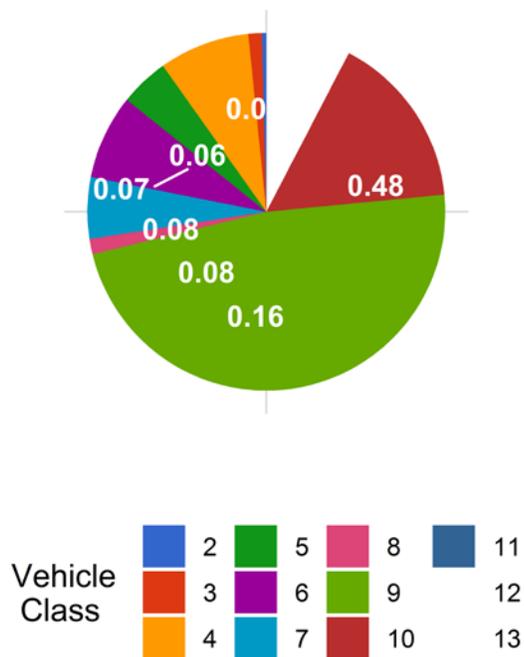


Table 1 Class 9 Front Axle Weight by Lane

<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>
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
February 2018	10.94	1.41	11.16	-0.18	10.07	-7.34	10.61	-7.39
March 2018	11.34	5.06	11.33	1.38	10.22	-5.97	10.96	-4.29
April 2018	10.98	1.76	11.14	-0.27	9.96	-8.36	11.13	-2.80
May 2018	11.00	1.95	10.89	-2.53	10.29	-5.31	11.32	-1.18
June 2018	10.99	1.85	10.93	-2.16	10.50	-3.40	11.42	-0.32
July 2018	11.03	2.26	10.72	-4.09	10.72	-1.41	11.49	0.29
August 2018	11.04	2.33	11.05	-1.15	10.56	-2.82	11.40	-0.47
September 2018	10.90	1.00	10.86	-2.81	10.24	-5.80	11.29	-1.44
October 2018	10.93	1.28	10.98	-1.73	10.19	-6.29	10.84	-5.34
November 2018	10.59	-1.87	11.24	0.54	10.10	-7.14	10.42	-9.02

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	2564	76908	52.5	0	0
3	1855	55644	38	0	0
4	21	621	0.4	98	11.3
5	94	2826	1.9	14	1.6
6	59	1758	1.2	44	5.1
7	12	374	0.3	122	14
8	9	285	0.2	9	1
9	187	5603	3.8	188	21.6
10	59	1761	1.2	167	19.2
11	0	1	0	0	0
12	1	43	0	11	1.3
13	19	575	0.4	218	25
TOTAL	4880	146400	100	871	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>
2018-11-14	Wednesday	20:51:53	10	WB	4	102.85
2018-11-18	Sunday	19:15:53	10	EB	1	98.15
2018-11-12	Monday	20:37:29	10	WB	4	96.12
2018-11-18	Sunday	21:27:54	10	EB	1	95.64
2018-11-19	Monday	18:52:58	10	WB	4	95.44
2018-11-01	Thursday	03:47:53	10	EB	2	95.12
2018-11-23	Friday	13:26:46	10	WB	4	94.67
2018-11-13	Tuesday	19:14:02	10	WB	4	93.88
2018-11-30	Friday	11:43:13	10	WB	4	93.77
2018-11-16	Friday	22:41:04	10	WB	4	93.06

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	189	32	16.9	4745	363	1195
5	EB	8	1487	343	23.1	16670	2443	3759
6	EB	19	952	41	4.3	26644	720	4667
7	EB	11.5	56	0	0	2089	0	722
8	EB	31	134	73	54.5	2518	1573	314
9	EB	33	3365	1145	34	127124	34003	26932
10	EB	33.5	737	100	13.6	35780	3073	7220
11	EB	36.5	1	1	100	0	21	0
12	EB	36.5	26	0	0	1729	0	390
13	EB	31.5	126	0	0	10905	0	3468
TOTAL	****	****	7073	1735	****	228202	****	48667
<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	437	32	7.3	20295	374	7110
5	WB	8	1363	298	21.9	15384	2170	3432
6	WB	19	821	85	10.4	21123	1499	3569
7	WB	11.5	321	0	0	20851	0	8580
8	WB	31	153	107	69.9	1778	2517	176
9	WB	33	2285	884	38.7	79512	24292	16639
10	WB	33.5	1039	262	25.2	54672	7443	14321
12	WB	36.5	17	0	0	1147	0	263
13	WB	31.5	454	0	0	35062	0	10380
TOTAL	****	****	6890	1668	****	249824	****	64472
GRAND TOTAL	****	****	13963	3403	420	478026	80491	113139

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>
2	118966	26083	28942	117928	291919	24.9
3	137024	26887	28022	131812	323745	27.6
4	4175	932	1279	19389	25775	2.2
5	16925	2187	1943	15611	36666	3.1
6	23565	3800	1173	21449	49986	4.3
7	2001	88	1620	19232	22940	2
8	3652	440	147	4148	8387	0.7
9	148833	12294	6002	97802	264931	22.6
10	34984	3868	5636	56479	100967	8.6
11	21	0	0	0	21	0
12	1587	142	0	1147	2876	0.2
13	10646	259	1350	33712	45966	3.9
TOTAL	502379	76979	76114	518708	1174180	100
GVW/LANE	42.79	6.56	6.48	44.18	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>
2	12	3	3	12	30	0.39	8e-04
3	38	9	8	39	94	1.22	0.0034
4	61	22	26	524	633	8.2	2.03
5	162	21	13	147	342	4.43	0.24
6	250	49	30	261	591	7.65	0.67
7	23	0	29	376	428	5.55	2.26
8	55	6	1	46	107	1.39	0.76
9	2105	220	69	1294	3687	47.72	1.31
10	393	39	73	718	1224	15.84	1.38
11	0	0	0	0	0	0	0.92
12	22	4	0	26	51	0.66	2.09
13	159	4	10	366	539	6.97	1.85
TOTAL	3280	378	262	3808	7727	100	14
ESALS/LANE	42.4	4.9	3.4	49.3	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>
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
Feb 2018	128586	4592	296	120299	93.6	8287	6.4	90.2	9.8
Mar 2018	147026	4743	372	135498	92.2	11527.9	7.8	91.6	8.4
Apr 2018	156295	5210	441	143071	91.5	13223.9	8.5	93.1	6.9
May 2018	179157	5779	583	161070	89.9	18086.7	10.1	92.6	7.4
Jun 2018	178339	5945	528	162486	91.1	15852.8	8.9	92.1	7.9
Jul 2018	187457	6047	498	172008	91.8	15449.5	8.2	91.5	8.5
Aug 2018	189491	6113	576	171625	90.6	17865.9	9.4	91.5	8.5
Sep 2018	168517	5617	525	152759	90.6	15757.7	9.4	91.2	8.8
Oct 2018	175064	5647	711	153012	87.4	22051.6	12.6	89.2	10.8
Nov 2018	146400	5048	462	132552	90.5	13847.6	9.5	91.4	8.6
TOTAL	1929490	-	-	1758474	-	171015	-	-	-
AVERAGE	160791	5296	467	146540	91	14251	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>
Dec 2017	2437	331	325	2125	5219	87	13	1.8
Jan 2018	2742	416	151	2307	5616	90	10	8
Feb 2018	2005	355	104	1975	4439	90	10	3.8
Mar 2018	4473	386	162	2259	7280	92	8	6.2
Apr 2018	4067	263	157	3281	7768	95	5	1.2
May 2018	5208	391	241	5212	11052	94	6	2.1
Jun 2018	4076	352	282	4730	9440	93	7	3.1
Jul 2018	3610	253	348	4731	8941	93	7	2.9
Aug 2018	4167	399	303	5520	10389	93	7	2.1
Sep 2018	3524	307	339	5483	9653	93	7	3.5
Oct 2018	4662	506	752	8373	14293	91	9	2
Nov 2018	3290	378	262	3812	7741	92	8	1.3
TOTAL	44261	4336	3425	49808	101830	-	-	-
AVERAGE	3688	361	285	4151	8486	92	8	3

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>
Dec 2017	385504	62910	65368	395469	909251
Jan 2018	334284	61064	56862	368752	820963
Feb 2018	506396	69561	76066	422764	1074787
Mar 2018	534510	68082	78348	507327	1188267
Apr 2018	660275	91193	101268	669489	1522225
May 2018	609413	90675	98359	614691	1413138
Jun 2018	597282	85253	111704	637970	1432208
Jul 2018	641388	100345	97626	700129	1539488
Aug 2018	557433	83173	93969	617052	1351626
Sep 2018	660765	114150	125855	750518	1651289
Oct 2018	502997	76986	76124	519011	1175118
Nov 2018	389939	68885	89194	375618	923635
TOTAL	6380186	972277	1070743	6578790	15001995
AVERAGE	531682	81023	89229	548232	1250166

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>
Dec 2017	678	0.5	7.4	110	17
Jan 2018	1113	0.8	11.6	159	20
Feb 2018	831	0.7	10.3	139	16
Mar 2018	1338	0.9	11.7	248	31
Apr 2018	989	0.6	7.5	98	2
May 2018	2065	1.2	11.5	200	8
Jun 2018	1910	1.1	12.1	304	27
Jul 2018	1614	0.9	10.5	172	19
Aug 2018	2231	1.2	12.5	220	25
Sep 2018	1839	1.1	11.7	162	12
Oct 2018	2676	1.6	12.3	120	8
Nov 2018	872	0.6	6.2	99	18
TOTAL	18156	-	-	2031	203
AVERAGE	1513	0.9	10.4	169.2	16.9

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>
Dec 2017	33019	28429	61447	53.7	46.3
Jan 2018	36260	29867	66127	54.8	45.2
Feb 2018	28116	25775	53891	52.2	47.8
Mar 2018	56286	29140	85426	65.9	34.1
Apr 2018	53992	49179	103171	52.3	47.7
May 2018	67034	85846	152880	43.8	56.2
Jun 2018	51670	70903	122572	42.2	57.8
Jul 2018	43024	71900	114923	37.4	62.6
Aug 2018	51937	91718	143655	36.2	63.8
Sep 2018	45085	79834	124919	36.1	63.9
Oct 2018	66772	132772	199544	33.5	66.5
Nov 2018	48667	64472	113139	43	57
TOTAL	581859	759835	1341695	-	-
AVERAGE	48488.3	63319.6	111807.9	45.9	54.1