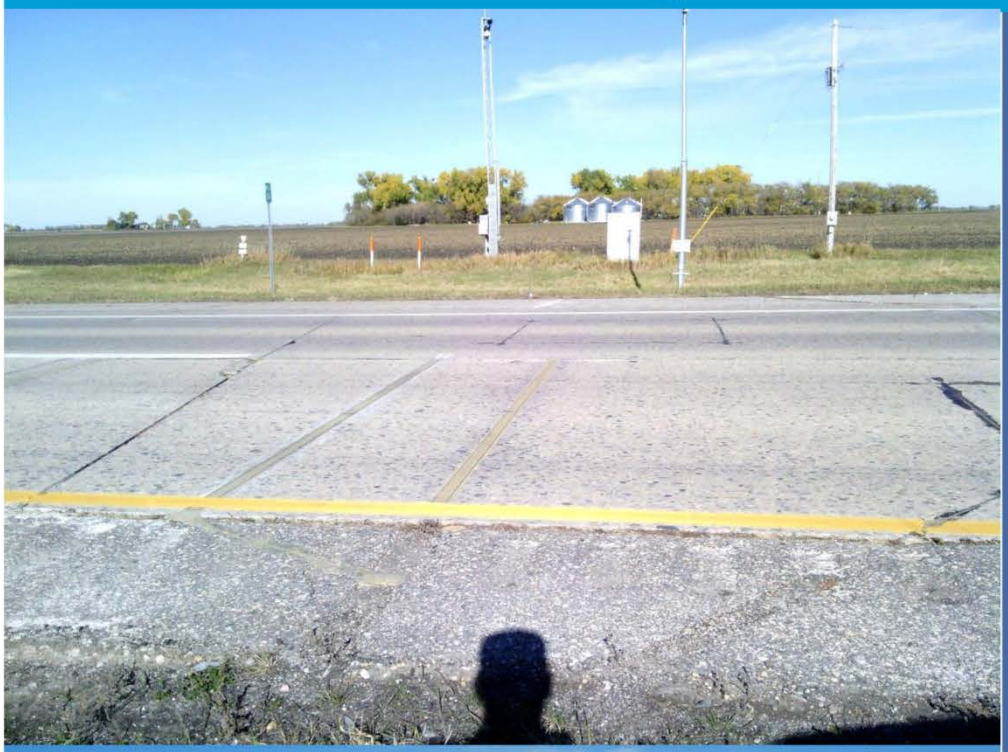
MARCH 2019



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 March 2019. 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]. 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: 141065 | Passenger Vehicles: 130102 | Heavy Commercial Vehicles: 10963

Monthly Average Daily Traffic (MADT): 4550 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 354

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 Thursdays (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 10963 HCVs, 595 of them were overweight [3]. These overweight HCVs contributed to 0.4% of total monthly volume, and 5.6% 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 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 71.6% 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 [4].
Using normal load limits ,57 EB vehicles exceeded 88,000 pounds (40 vehicles were Class 13's; 13 vehicles were Class 10's). Of vehicles traveling WB,

15 EB vehicles exceeded 88,000 pounds (11 vehicles were Class 13's; 3 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from March 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in March 2019. 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 empty class 10 vehicles.

Freight Totals. A total of 75695 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (58.9%) than WB (41.1%). 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 141065 vehicles with a combined GVW of 997018 kips (1 kip = 1,000 pounds = 0.5 tons) in March 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 5866 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 61.3% of all ESALs were recorded EB while 38.7% was observed WB. In particular, 66% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 26% 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.

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Figure 1 - Monthly Class 9 GVW Histogram

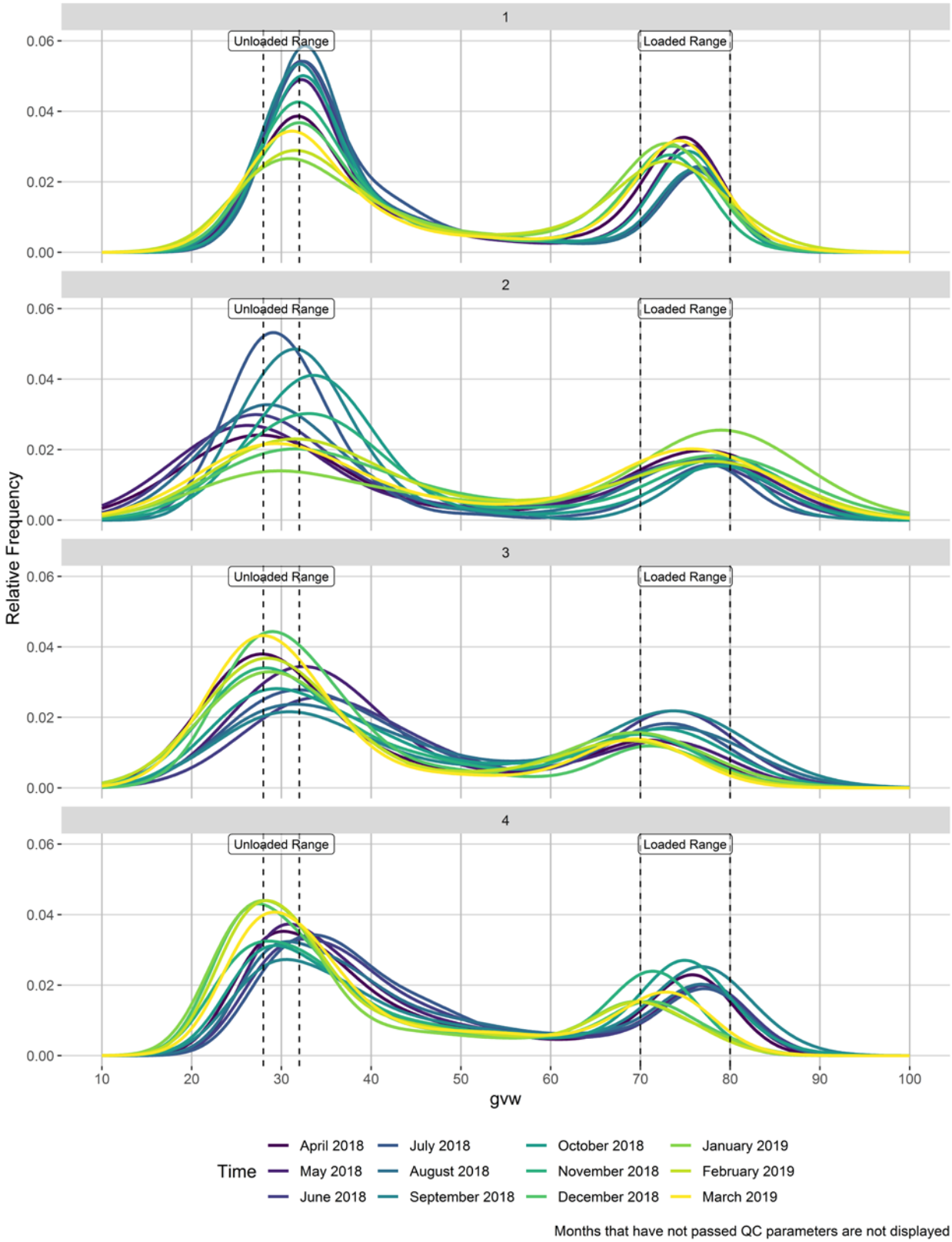
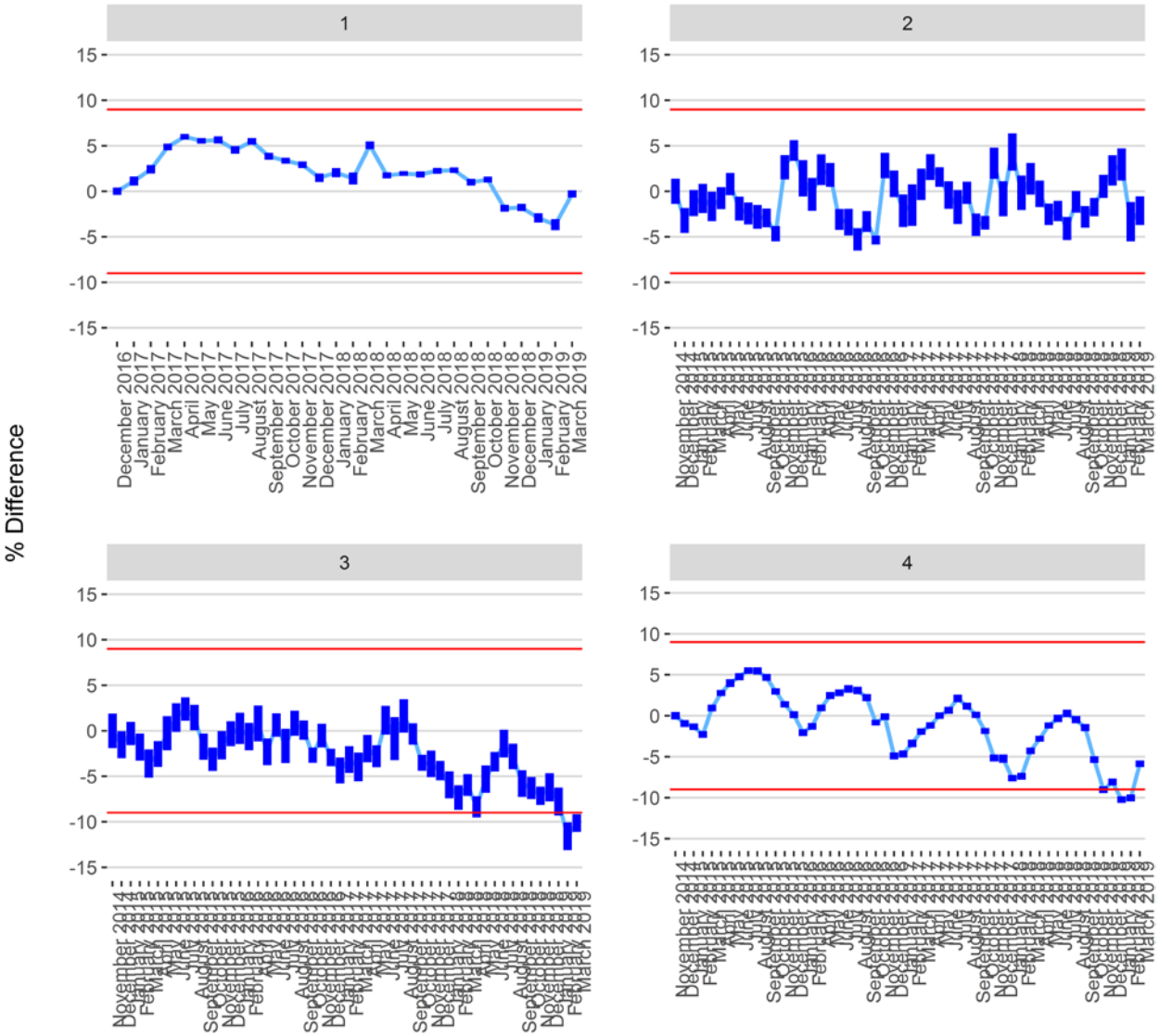


Figure 2 - Percent Difference of Front Axle Weight from Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume vs. Day of the Week

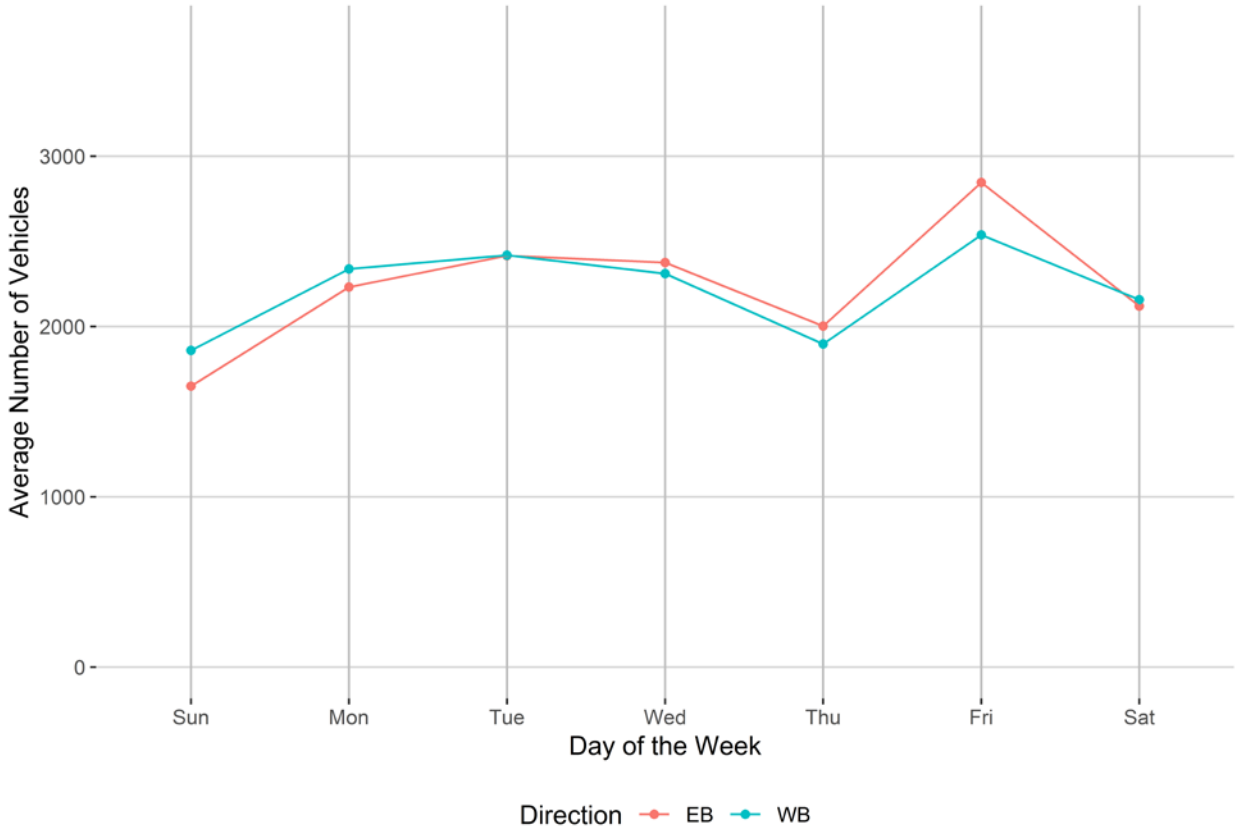


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

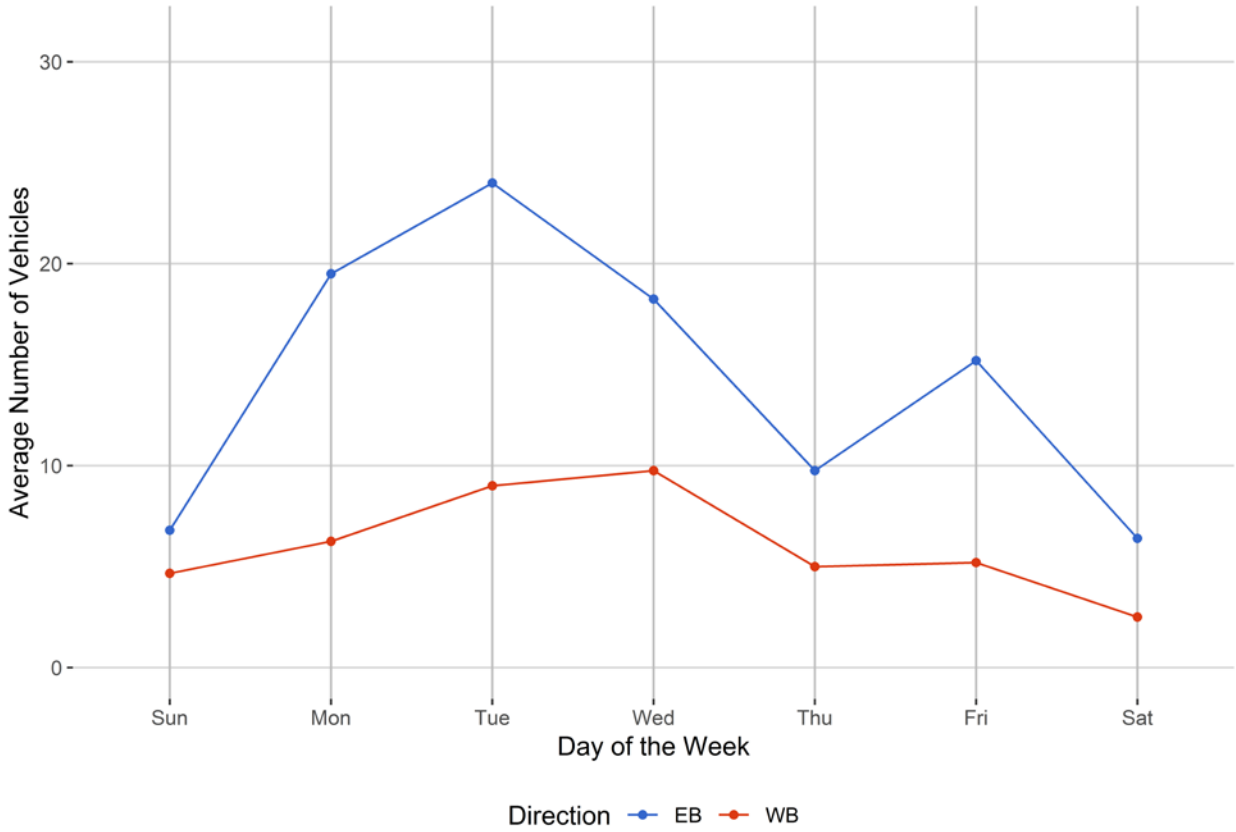


Figure 4 - Passenger Vehicles vs. Hour of the Day

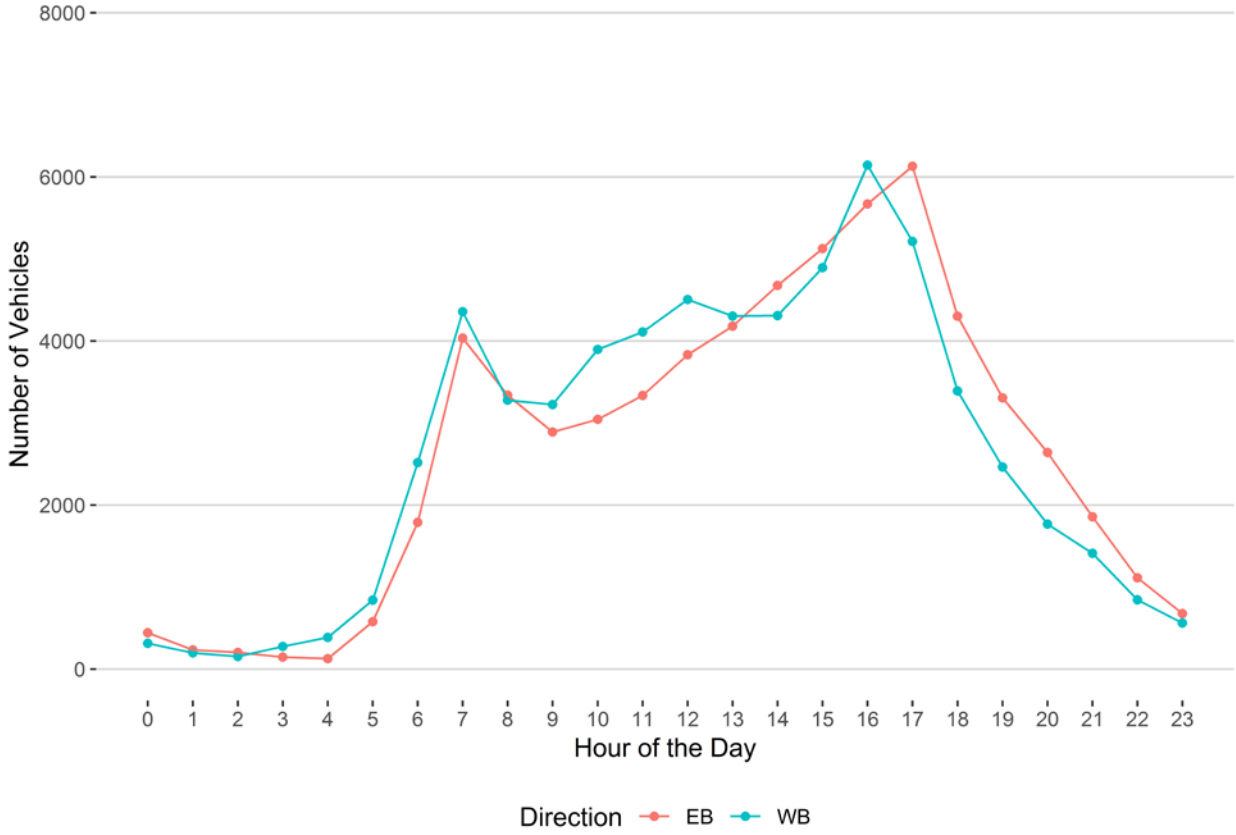


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

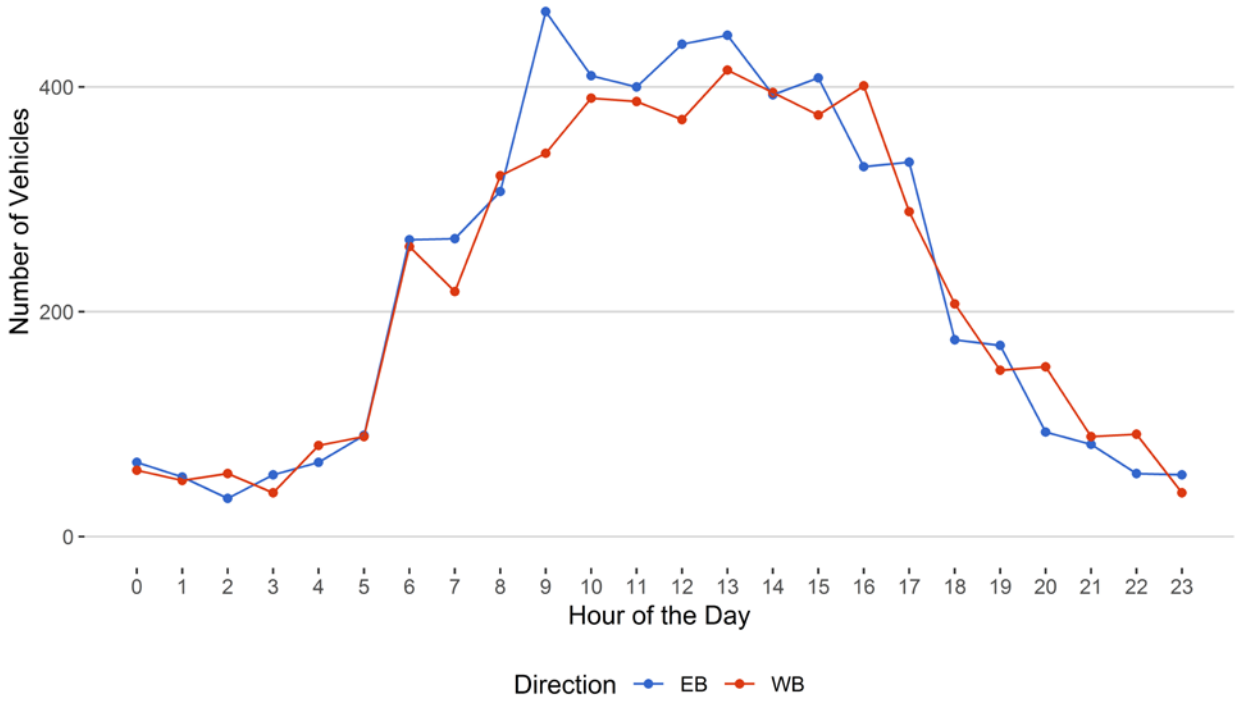


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

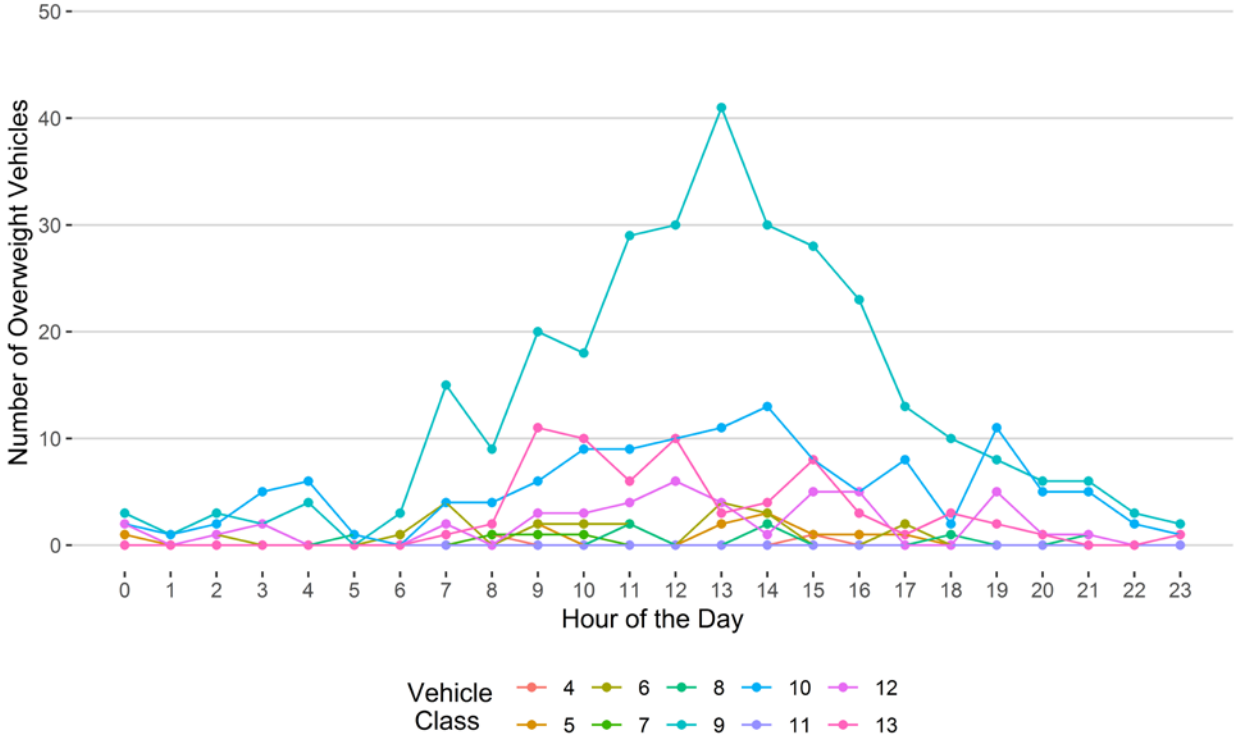
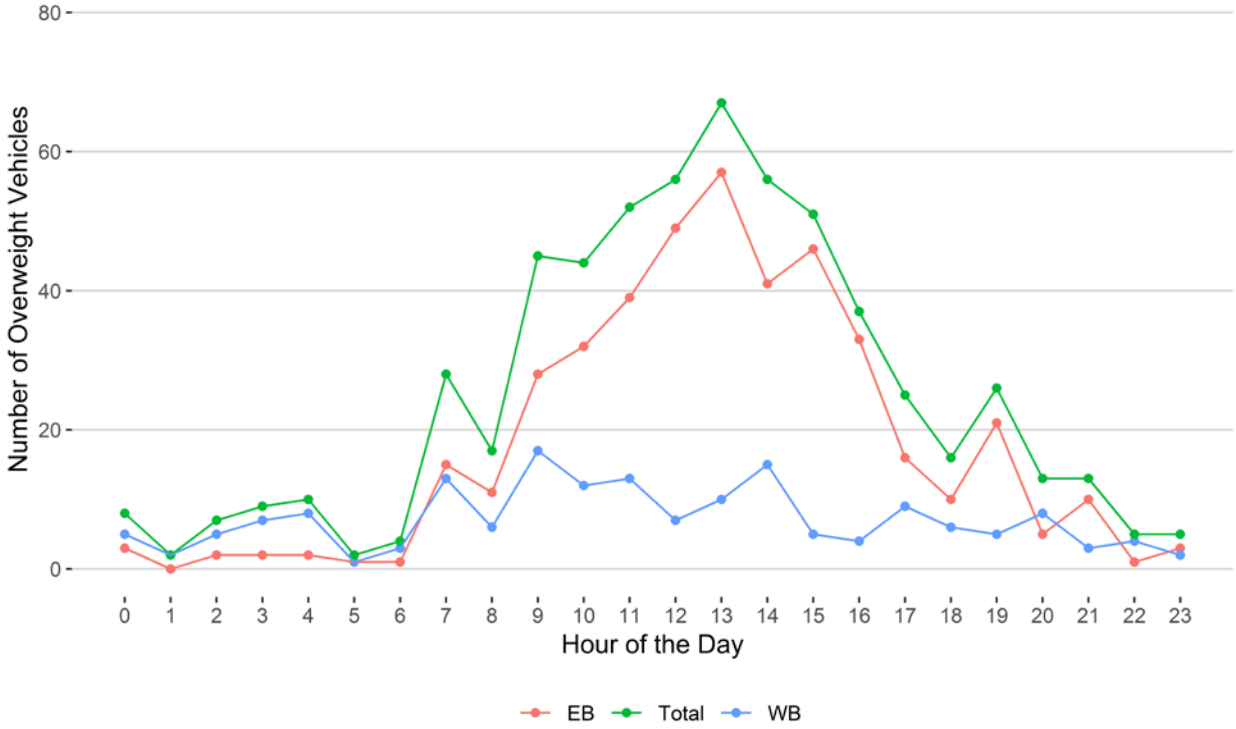
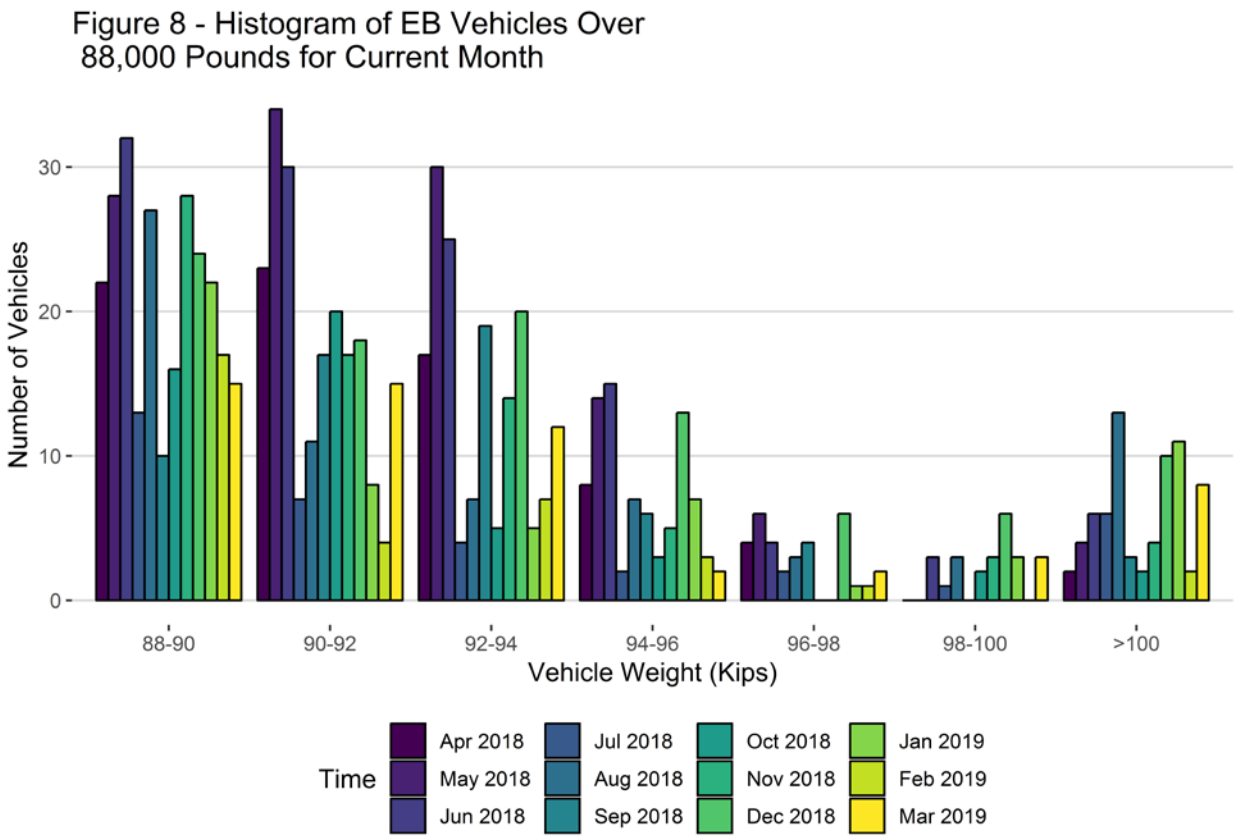
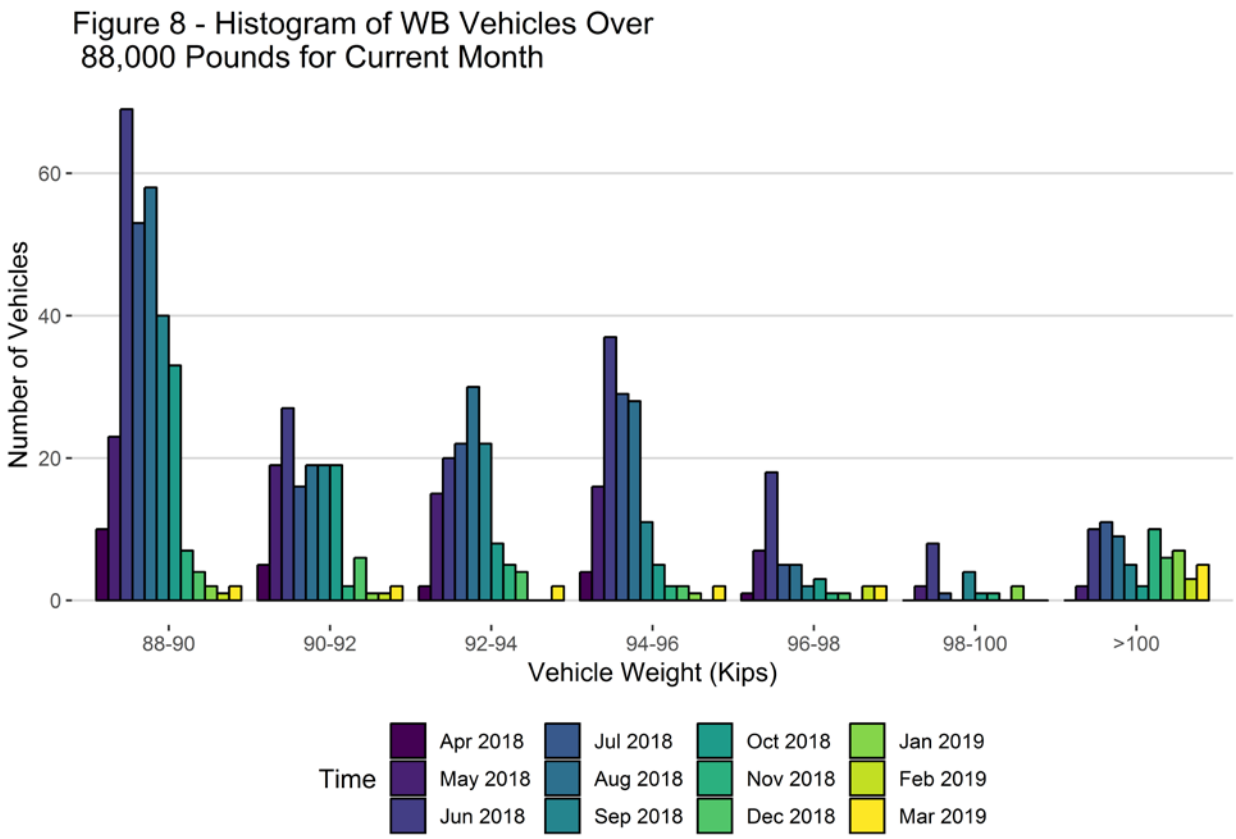


Figure 7 - Overweight Vehicles by Direction
Hour of the Day





Vehicle Weights (Kips)	*Apr 2018*	*May 2018*	*Jun 2018*	*Jul 2018*	*Aug 2018*	*Sep 2018*	*Oct 2018*	*Nov 2018*	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*
88-90	22	28	32	13	27	10	16	28	24	22	17	15
90-92	23	34	30	7	11	17	20	17	18	8	4	15
92-94	17	30	25	4	7	19	5	14	20	5	7	12
94-96	8	14	15	2	7	6	3	5	13	7	3	2
96-98	4	6	4	2	3	4	0	0	6	1	1	2
98-100	0	0	3	1	3	0	2	3	6	3	0	3
>100	2	4	6	6	13	3	2	4	10	11	2	8
Total	76	116	115	35	71	59	48	71	97	57	34	57



Vehicle Weights (Kips)	*Apr 2018*	*May 2018*	*Jun 2018*	*Jul 2018*	*Aug 2018*	*Sep 2018*	*Oct 2018*	*Nov 2018*	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*
88-90	10	23	69	53	58	40	33	7	4	2	1	2
90-92	5	19	27	16	19	19	19	2	6	1	1	2
92-94	2	15	20	22	30	22	8	5	4	0	0	2
94-96	4	16	37	29	28	11	5	2	2	1	0	2
96-98	1	7	18	5	5	2	3	1	1	0	2	2
98-100	0	2	8	1	0	4	1	1	0	2	0	0
>100	0	2	10	11	9	5	2	10	6	7	3	5
Total	22	84	189	137	149	103	71	28	23	13	7	15

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

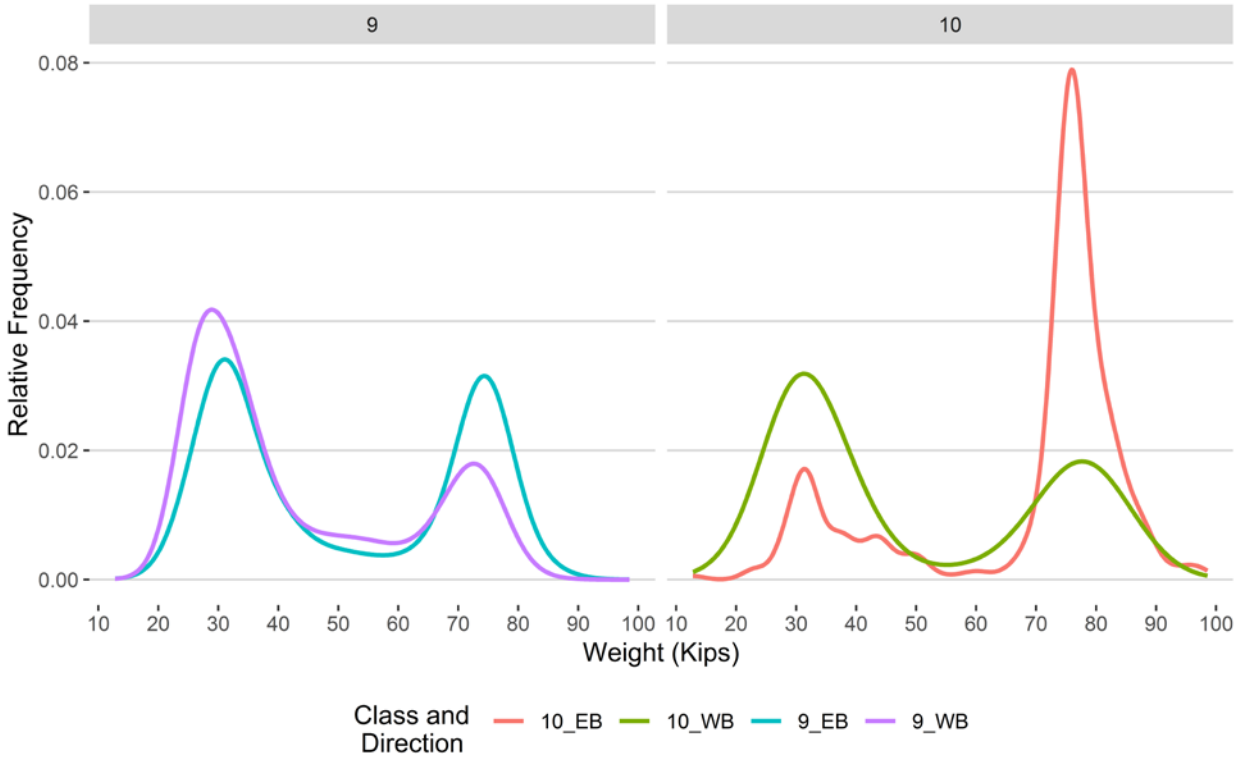


Figure 9 - Freight Percentage by Direction and Class

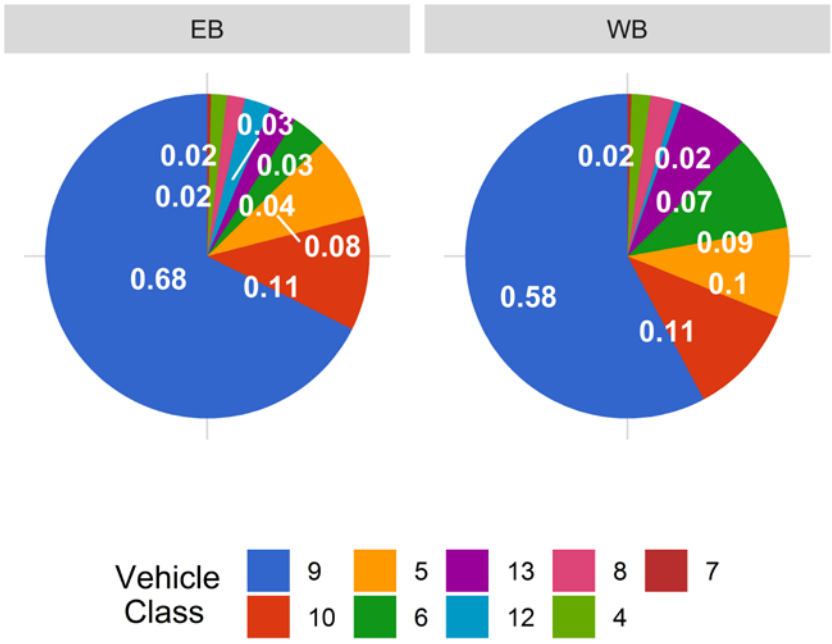


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

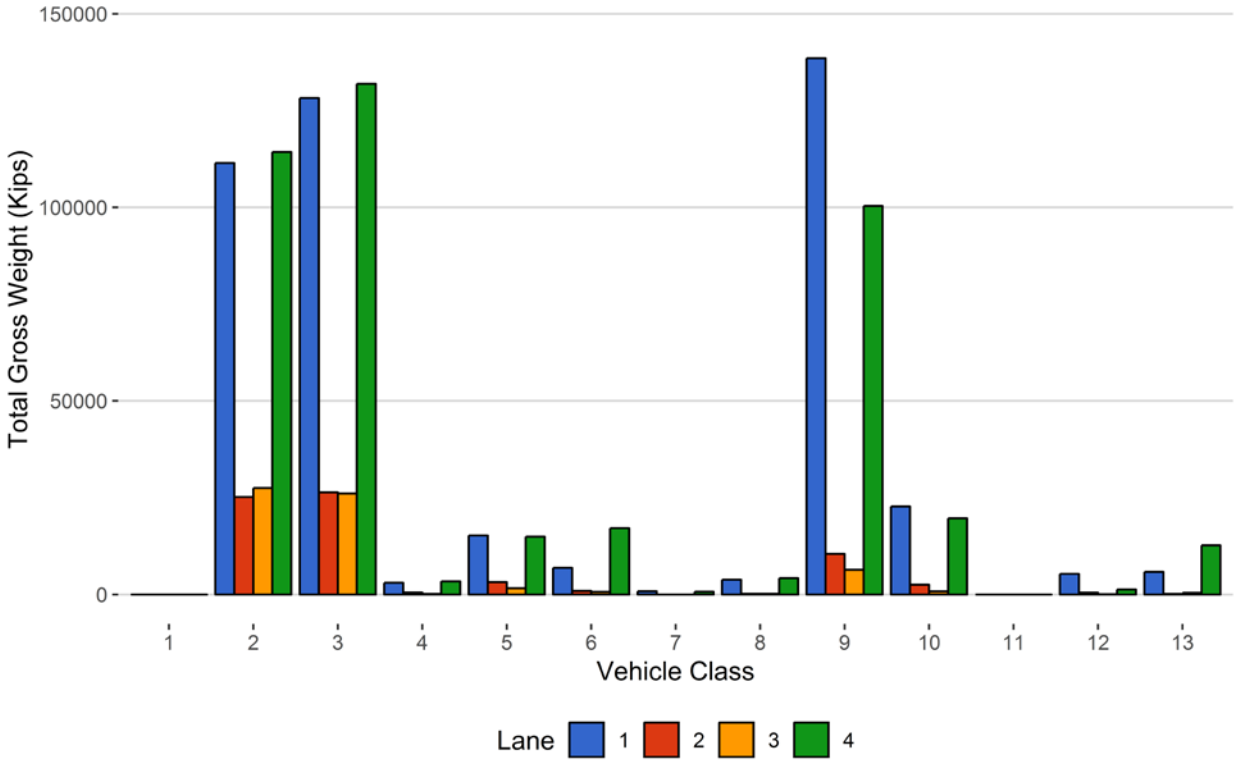


Figure 11 - Total Gross Vehicle Weight b

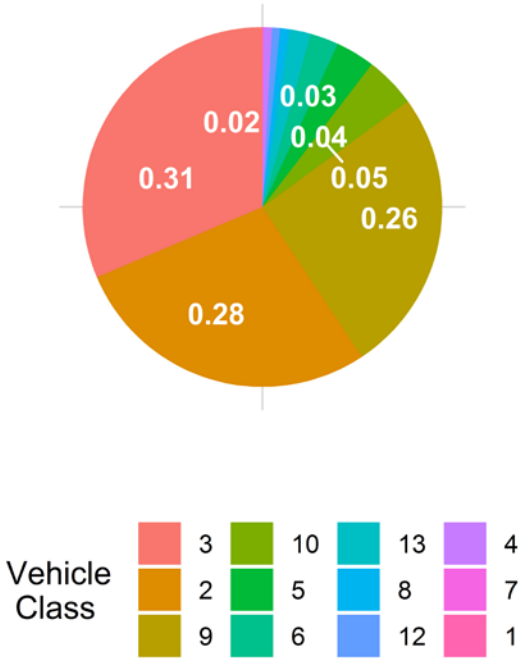


Figure 12 - Total ESALs by Class and Lane

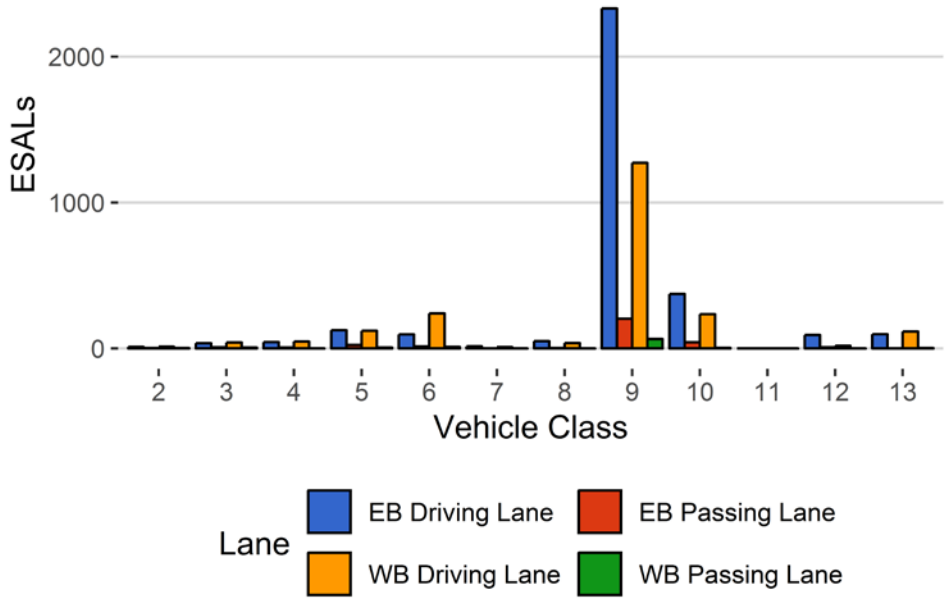


Figure 13 - ESALs by Class

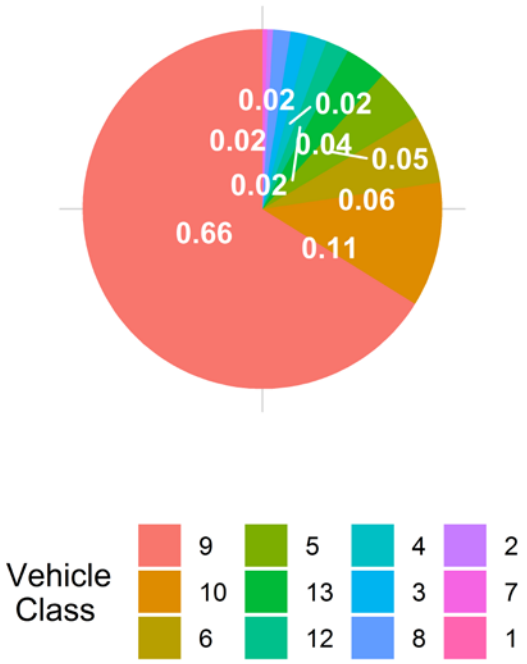


Table 1 Class 9 Front Axle Weight by Lane

Month	*Lane 1 (Kips)*	*Front Axle +/- 9%*	*Lane 2 (Kips)*	*Front Axle +/- 9%*	*Lane 3 (Kips)*	*Front Axle +/- 9%*	*Lane 4 (kips)*	*Front Axle +/- 9%*
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
December 2018	10.60	-1.78	11.43	2.31	10.20	-6.22	10.53	-8.09
January 2019	10.48	-2.92	11.50	2.95	10.03	-7.77	10.28	-10.23
February 2019	10.40	-3.67	10.80	-3.34	9.61	-11.58	10.30	-10.03
March 2019	10.76	-0.28	10.94	-2.13	9.77	-10.14	10.78	-5.86

Table 2 Vehicle Classification Data

Vehicle Class	*Monthly Average Daily Volume*	*Monthly Total Volume*	*Monthly Total Volume Percentage*	*Monthly Total Overweight Vehicles*	*Monthly Total Overweight Percentage*
1	0	5	0	0	0
2	2417	74919	53.1	0	0
3	1780	55178	39.1	0	0
4	9	265	0.2	2	0.3
5	93	2879	2	13	2.2
6	28	869	0.6	21	3.5
7	1	30	0	3	0.5
8	9	292	0.2	7	1.2
9	177	5493	3.9	307	51.6
10	26	801	0.6	130	21.8
11	0	0	0	0	0
12	3	94	0.1	46	7.7
13	8	240	0.2	66	11.1
TOTAL	**4550**	**141065**	**100**	**595**	**100**

Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10

Date	*Day of Week*	*Time*	*Vehicle Class*	*Direction*	*Lane*	*GVW (lbs)*
2019-03-12	Tuesday	12:13:49	10	EB	1	98.56
2019-03-18	Monday	13:02:29	10	EB	1	96.72
2019-03-05	Tuesday	15:46:14	10	EB	1	96.02
2019-03-07	Thursday	13:15:36	10	EB	1	95.83
2019-03-12	Tuesday	10:45:16	10	EB	1	93.73
2019-03-31	Sunday	09:53:35	10	EB	1	92.53
2019-03-17	Sunday	10:56:00	10	WB	4	92.31
2019-03-21	Thursday	21:47:34	10	EB	1	91.1
2019-03-13	Wednesday	17:09:44	10	WB	4	90.73
2019-03-18	Monday	22:25:36	9	EB	1	90.73

Table 4 Freight Summary

Vehicle Class	*Direction*	*Weight of Empty Vehicle (Kips)*	*Total Number of Vehicles*	*Number of Empty Vehicles*	*Percentage of Empty Vehicles*	*Total Weight of Vehicles with Freight (Kips)*	*Total Weight of Empty Vehicles (Kips)*	*Total Weight of Freight (Tons)*
4	EB	15	136	36	26.5	3182	329	841
5	EB	8	1491	371	24.9	15787	2612	3413
6	EB	19	261	34	13	7249	566	1468
7	EB	11.5	15	0	0	833	0	330
8	EB	31	131	71	54.2	2348	1634	244
9	EB	33	2912	980	33.7	120329	28668	28286
10	EB	33.5	370	44	11.9	23931	1315	6505
12	EB	36.5	73	0	0	5781	0	1558
13	EB	31.5	66	0	0	5963	0	1942
TOTAL	****	****	**5455**	**1536**	****	**185402**	****	**44588**
Vehicle Class	Direction	Weight of Empty Vehicle (Kips)	Total Number of Vehicles	Number of Empty Vehicles	Percentage of Empty Vehicles	Total Weight of Vehicles with Freight (Kips)	Total Weight of Empty Vehicles (Kips)	Total Weight of Freight (Tons)
4	WB	15	123	17	13.8	3331	188	871
5	WB	8	1323	301	22.8	14335	2209	3079
6	WB	19	588	62	10.5	16733	1068	3369
7	WB	11.5	14	0	0	715	0	277
8	WB	31	154	106	68.8	1716	2699	114
9	WB	33	2457	1079	43.9	76490	30210	15508
10	WB	33.5	413	176	42.6	15293	5198	3677
12	WB	36.5	19	0	0	1328	0	317
13	WB	31.5	169	0	0	13112	0	3894
TOTAL	****	****	**5260**	**1741**	****	**143053**	****	**31107**
GRAND TOTAL	****	****	**10715**	**3277**	**367**	**328456**	**76697**	**75695**

Table 5 Gross Vehicle Weight by Class and Lane

Vehicle Class	*EB Driving Lane*	*EB Passing Lane*	*WB Passing Lane*	*WB Driving Lane*	*Total*	*Percentage*
1	2	0	2	3	6	0
2	111467	25179	27515	114306	278468	28
3	128267	26374	26086	131931	312658	31.4
4	3003	508	142	3378	7030	0.7
5	15217	3182	1615	14929	34943	3.5
6	6896	919	689	17112	25616	2.6
7	833	0	0	715	1548	0.2
8	3804	179	199	4216	8398	0.8
9	138541	10456	6352	100349	255697	25.7
10	22729	2517	803	19688	45737	4.6
12	5305	476	54	1274	7109	0.7
13	5815	148	427	12684	19075	1.9
TOTAL	**441879**	**69938**	**63884**	**420585**	**996285**	**100**
GVW/LANE	**44.35**	**7.02**	**6.41**	**42.22**	**100**	**0.01**

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

Vehicle Class	*EB Driving Lane*	*EB Passing Lane*	*WB Passing Lane*	*WB Driving Lane*	*Total*	*Percentage*	*Flexible ESAL Factor*
1	0	0	0	0	0	0	0.1667
2	11	3	3	13	30	0.51	8e-04
3	36	8	7	41	93	1.58	0.0035
4	45	7	1	48	101	1.72	0.79
5	126	25	8	122	281	4.8	0.2
6	97	13	12	240	362	6.18	0.86
7	15	0	0	10	25	0.44	1.62
8	50	3	1	38	92	1.58	0.66
9	2330	204	65	1272	3871	66.15	1.45
10	374	43	4	236	657	11.23	1.68
12	92	9	0	19	121	2.06	2.46
13	98	1	3	117	220	3.75	1.84
TOTAL	**3275**	**316**	**104**	**2156**	**5852**	**100**	**12**
ESALS/LANE	**56**	**5.4**	**1.8**	**36.8**	**100**	**–**	**–**

Table 7 Site Summary: Volume and Vehicle Class

Month	*Total Volume*	*Monthly ADT*	*Monthly HCADT*	*Passenger Vehicles*	*Passenger Vehicles %*	*Heavy Commercial Vehicles*	*Heavy Commercial Vehicles %*	*Heavy Commercial Vehicles in Driving Lane %*	*Heavy Commercial Vehicles in Passing Lane %*
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
Dec 2018	125409	4645	311	115779	92.3	9630.4	7.7	92.7	7.3
Jan 2019	133289	4300	300	123974	93	9315.4	7	91	9
Feb 2019	119410	4265	291	111272	93.2	8137.7	6.8	90.3	9.7
Mar 2019	141065	4550	354	130102	92.2	10963.3	7.8	91.3	8.7
TOTAL	**1899893**	**–**	**–**	**1729710**	**–**	**170183**	**–**	**–**	**–**
AVERAGE	**158324**	**5264**	**465**	**144142**	**91**	**14182**	**9**	**92**	**8**

ESALs

Month	*ESALS EB Passing Lane*	*ESALS EB Driving Lane*	*ESALS WB Driving Lane*	*ESALS WB Passing Lane*	*Total ESALS*	*Driving Lane ESALS %*	*Passing Lane ESALS %*	*Pavement Life Decrease Months*
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
Dec 2018	3015	294	125	1999	5432	92	8	6.9
Jan 2019	2027	357	125	1772	4281	89	11	6.7
Feb 2019	1543	263	101	1555	3462	89	11	0
Mar 2019	3281	317	107	2161	5866	93	7	1.7
TOTAL	**42470**	**4079**	**3140**	**48629**	**98318**	**–**	**–**	**–**
AVERAGE	**3539**	**340**	**262**	**4052**	**8193**	**92**	**8**	**3**

Gross Vehicle Weight

Month	*GVW EB Passing Lane*	*GVW EB Driving Lane*	*GVW WB Passing Lane*	*GVW WB Driving Lane*	*Total GVW Kips*
Apr 18	534510	68082	78348	507327	1188267
May 18	660275	91193	101268	669489	1522225
Jun 18	609413	90675	98359	614691	1413138
Jul 18	597282	85253	111704	637970	1432208
Aug 18	641388	100345	97626	700129	1539488
Sep 18	557433	83173	93969	617052	1351626
Oct 18	660765	114150	125855	750518	1651289
Nov 18	502997	76986	76124	519011	1175118
Dec 18	431771	60619	59298	411800	963489
Jan 19	348573	60504	57163	381731	847971
Feb 19	298570	50034	51160	343533	743297
Mar 19	442275	70004	63946	420794	997018
TOTAL	**6285251**	**951017**	**1014820**	**6574046**	**14825134**
AVERAGE	**523771**	**79251**	**84568**	**547837**	**1235428**

Overweight Vehicles

Month	*Total Number of Overweight Vehicles*	*Overweight / Total Volume*	*Overweight / Heavy Commercial Volume*	*Number Over 88,000 lbs*	*Number Over 98,000 lbs*
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
Dec 2018	697	0.5	6.6	121	23
Jan 2019	502	0.4	5.5	70	23
Feb 2019	363	0.3	4.7	41	5
Mar 2019	598	0.4	5.5	72	16
TOTAL	**16356**	**–**	**–**	**1679**	**186**
AVERAGE	**1363**	**0.8**	**8.9**	**139.9**	**15.5**

Freight

Month	*EB Freight Tons*	*WB Freight Tons*	*Total Freight*	*EB Freight %*	*WB Freight %*
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
Dec 2018	42425	31221	73646	57.6	42.4
Jan 2019	30643	25215	55858	54.9	45.1
Feb 2019	22499	22257	44756	50.3	49.7
Mar 2019	44588	31107	75695	58.9	41.1
TOTAL	**568334**	**756424**	**1324759**	**–**	**–**
AVERAGE	**47361.2**	**63035.4**	**110396.5**	**45.5**	**54.5**