NOVEMBER 2019

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 November 2019. Volume was computed using all monthly data.

System Calibration

WIM #43 was most recently calibrated on 2019-06-12. 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: 460436 | Passenger Vehicles: 422919 | Heavy Commercial Vehicles: 37517

Monthly Average Daily Traffic (MADT): 15625 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1251

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 07 AM and 05 PM

Heavy Commercial Vehicles (HCVs)

Volume trends. On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB peaked between 07 AM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

Overweight HCVs

Volume trends. Of a total of 37517 HCVs, 2487 of them were overweight [3]. These overweight HCVs contributed to 0.5% of total monthly volume, and 6.7% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Fridays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Mondays, 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 64.4% 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 April.
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 ,232 EB vehicles exceeded 88,000 pounds (95 vehicles were Class 13's; 84 vehicles were Class 9's). Of vehicles traveling WB,

90 EB vehicles exceeded 88,000 pounds (55 vehicles were Class 13's; 32 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from November 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in November 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 fully_loaded class 10 vehicles.

Freight Totals. A total of 258998 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (50.7%) than WB (49.3%). 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 460436 vehicles with a combined GVW of 3328178 kips (1 kip = 1,000 pounds = 0.5 tons) in November 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 19753 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 57.7% of all ESALs were recorded EB while 42.3% was observed WB. In particular, 59% 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.

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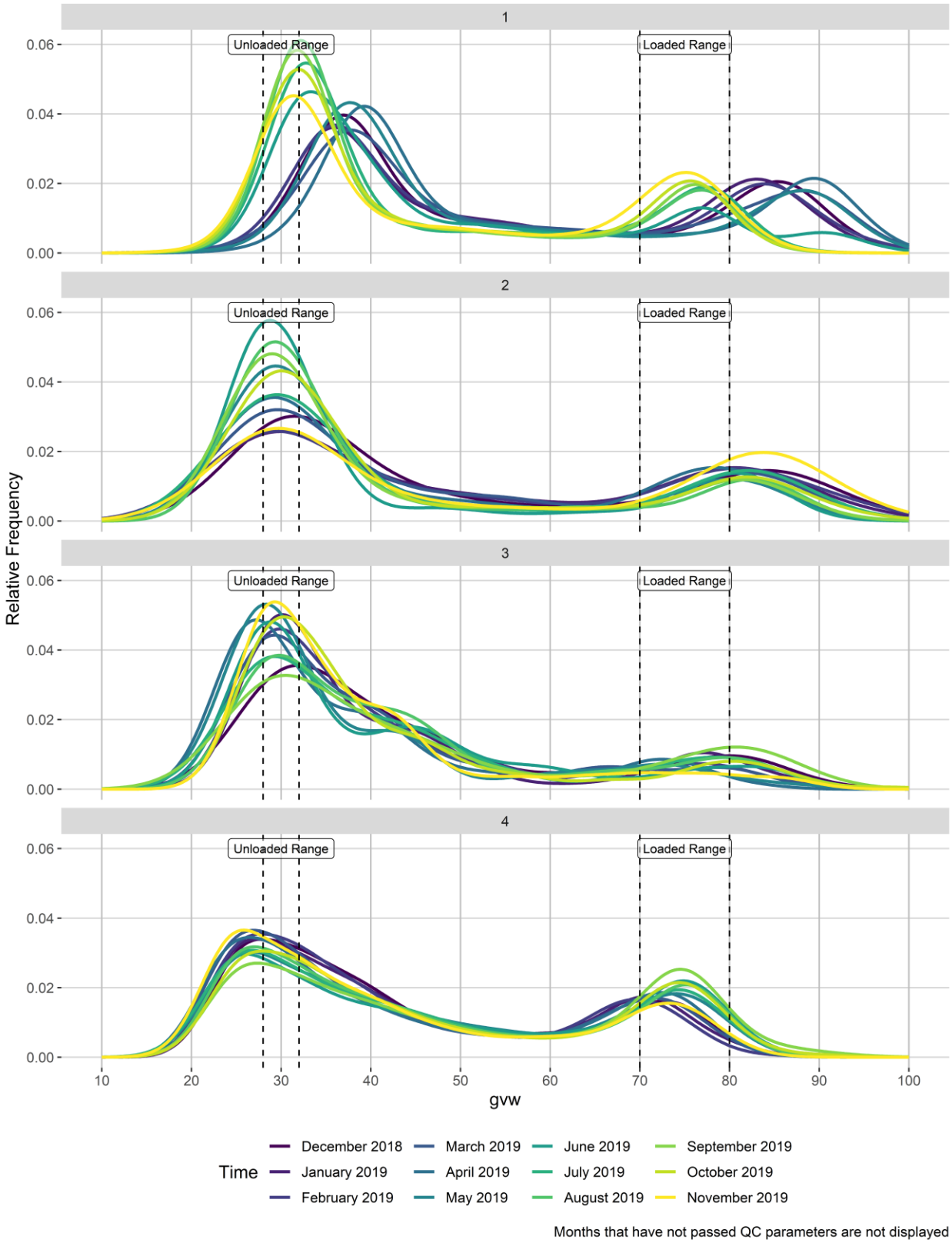
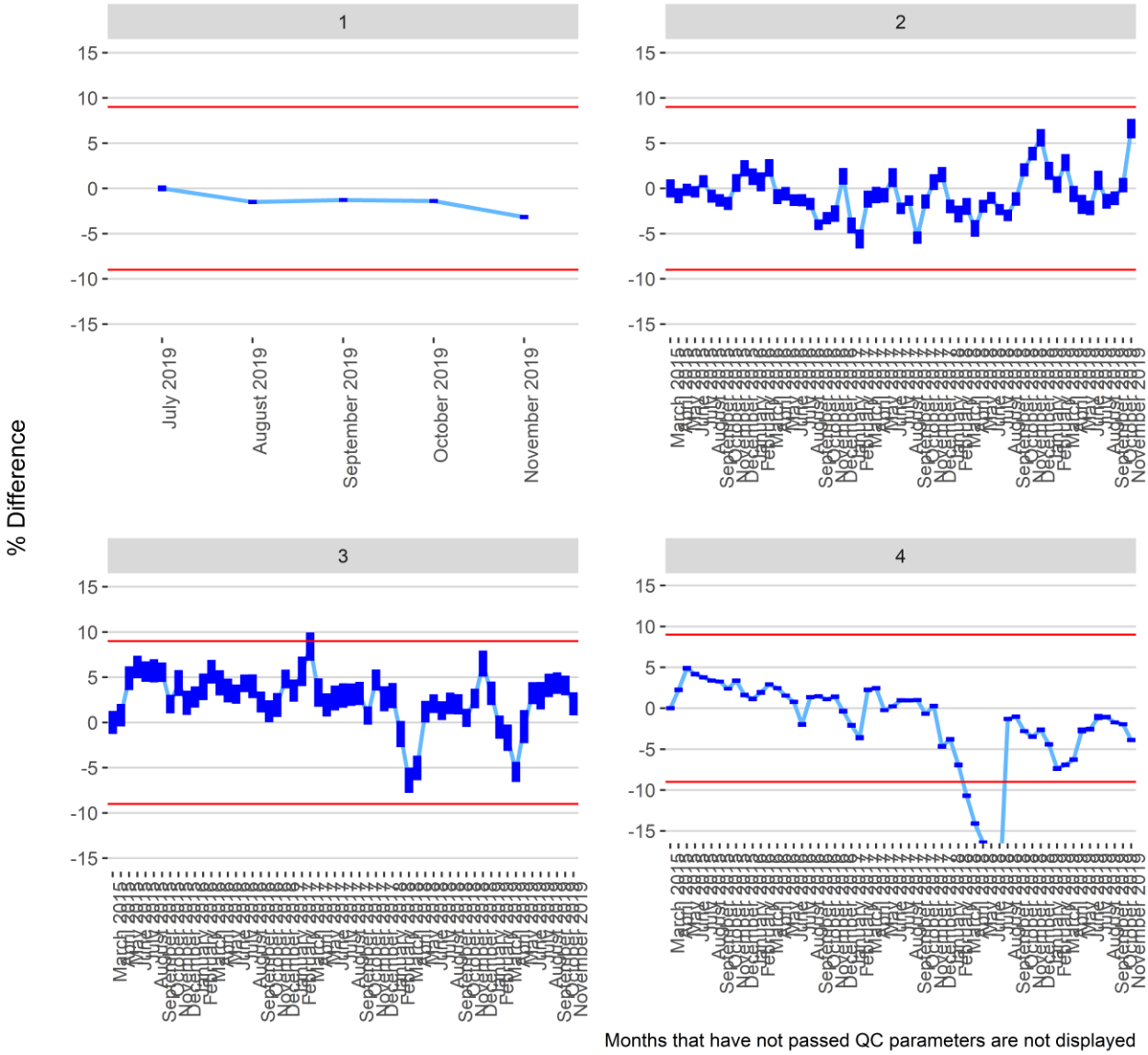
Figure 1 - Monthly Class 9 GVW Histogram



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

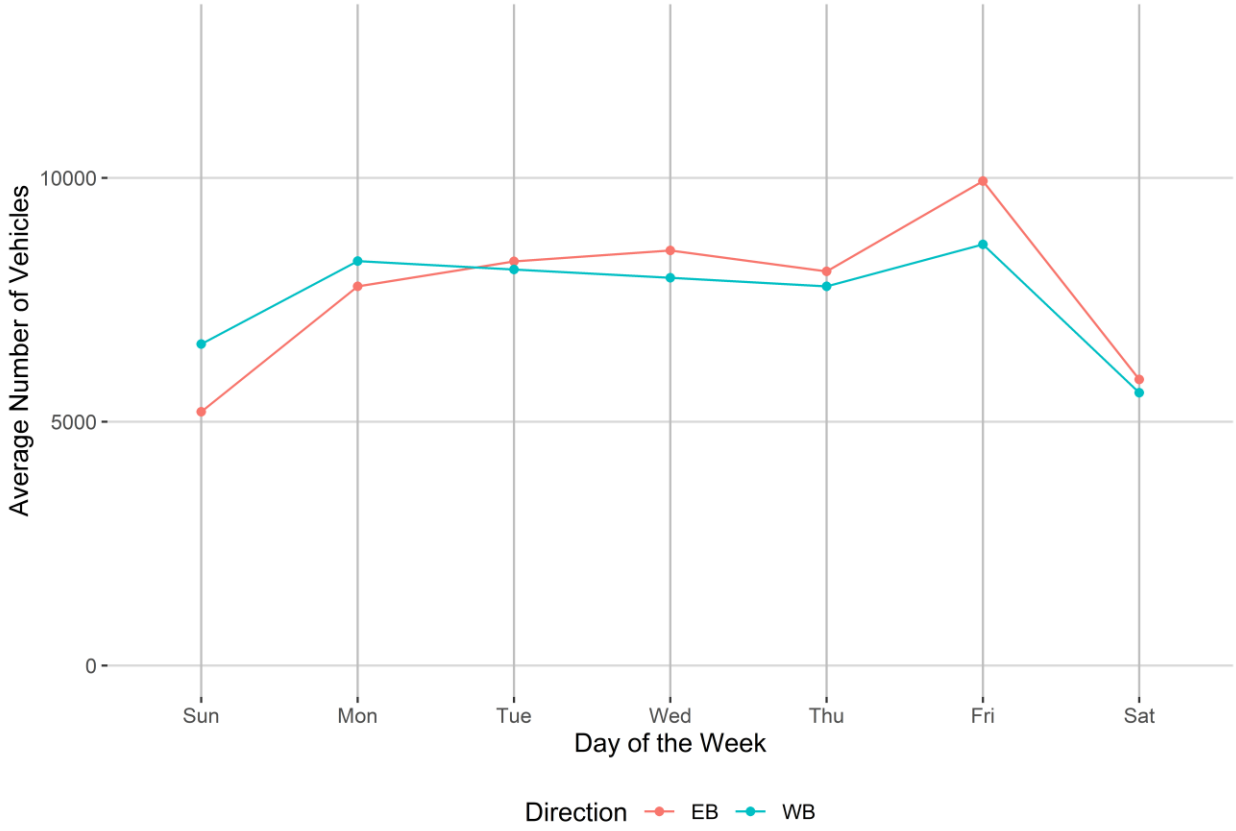


Figure 3 - Average Overweight Vehicle Volume
vs. Day of the Week

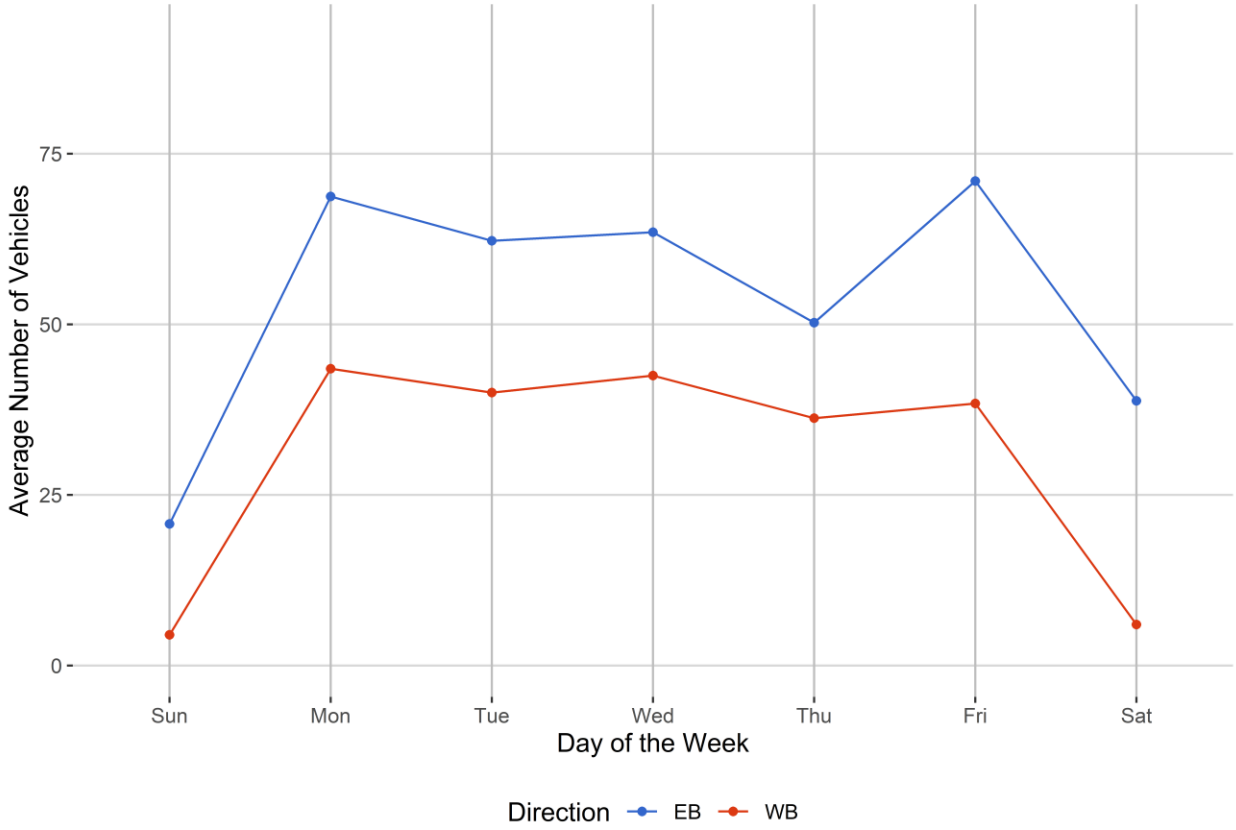


Figure 4 - Passenger Vehicles
vs. Hour of the Day

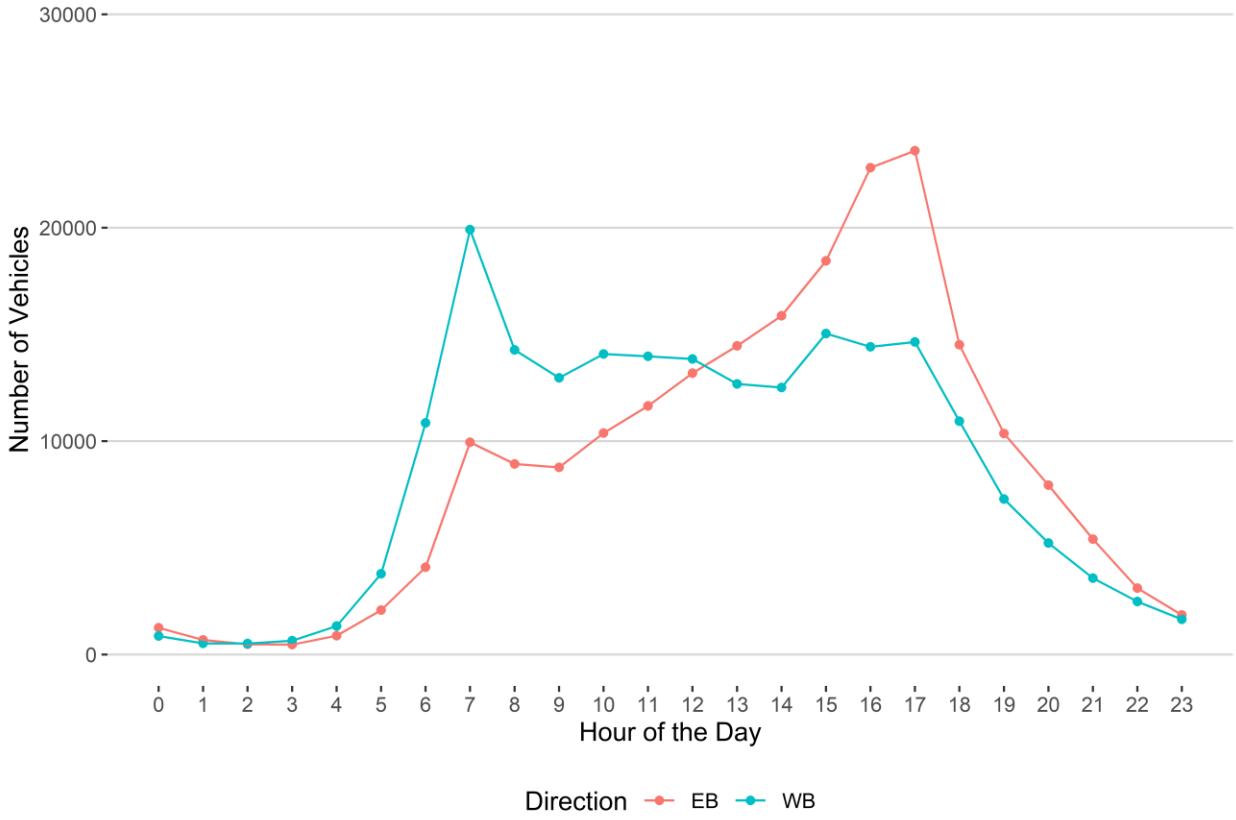


Figure 5 - Heavy Commercial Vehicles
vs. Hour of the Day

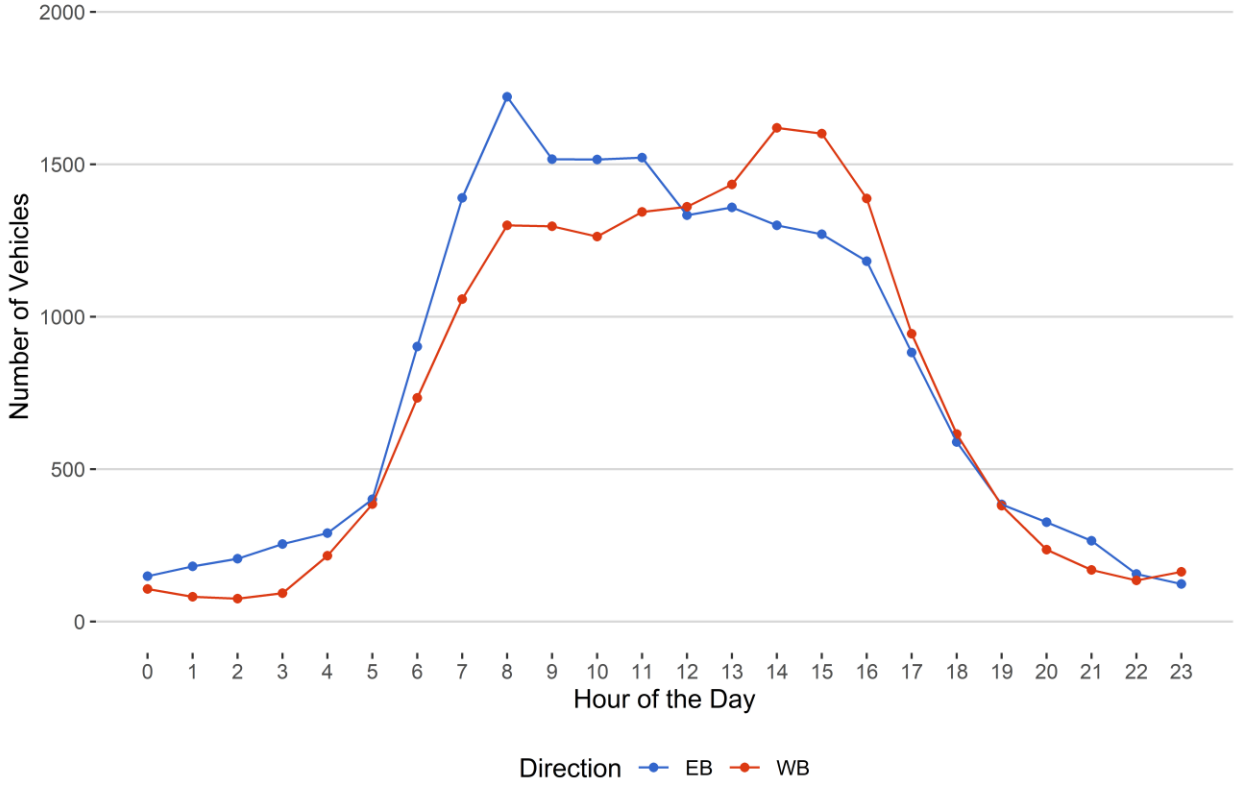


Figure 6 - Overweight Vehicles by Class
vs. Hour of the Day

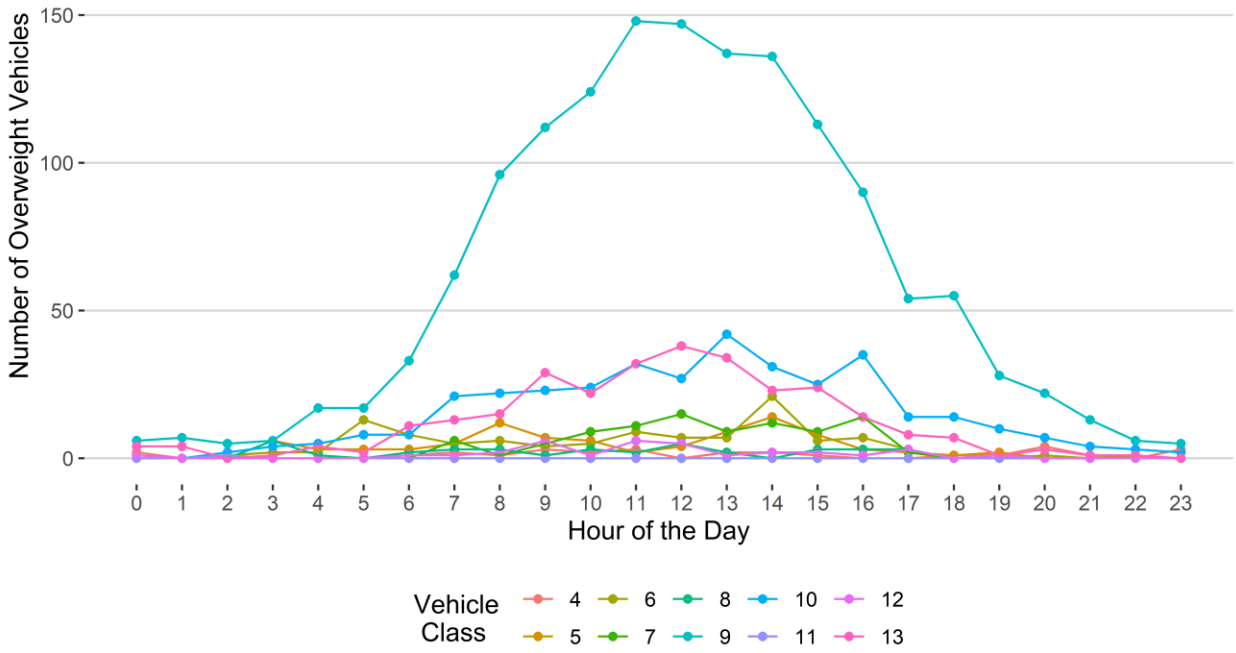


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

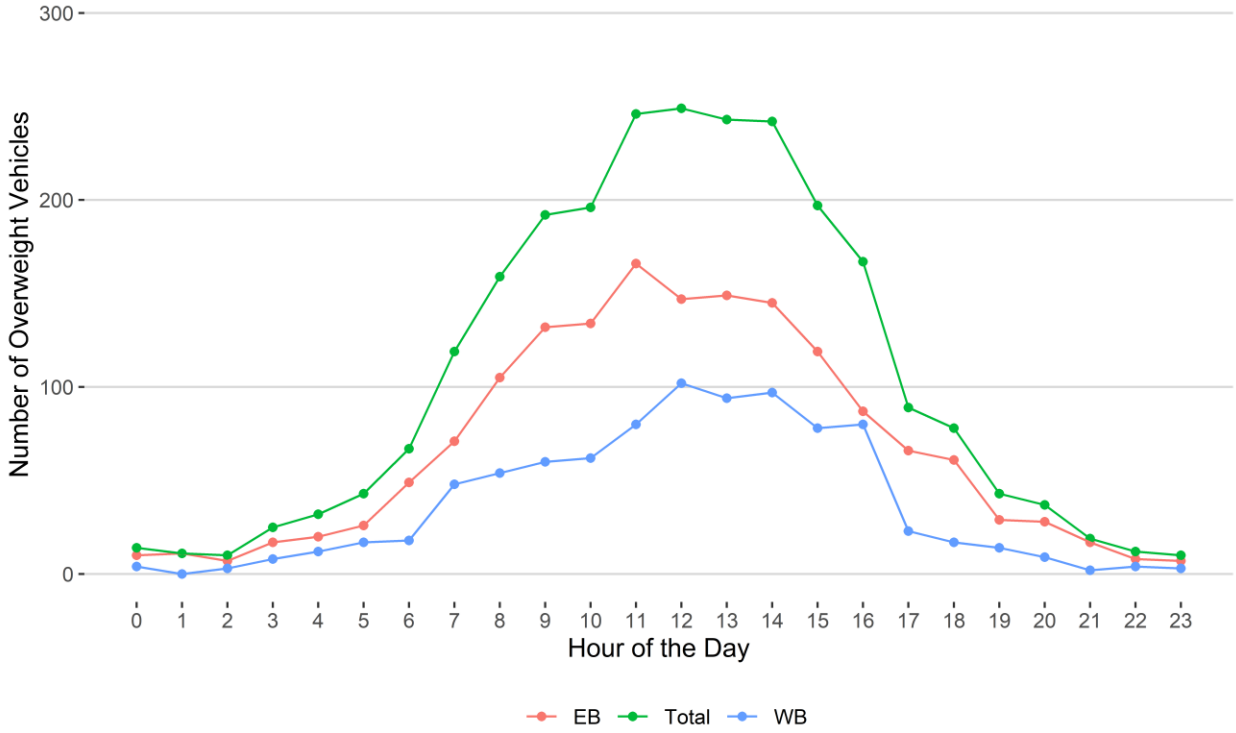
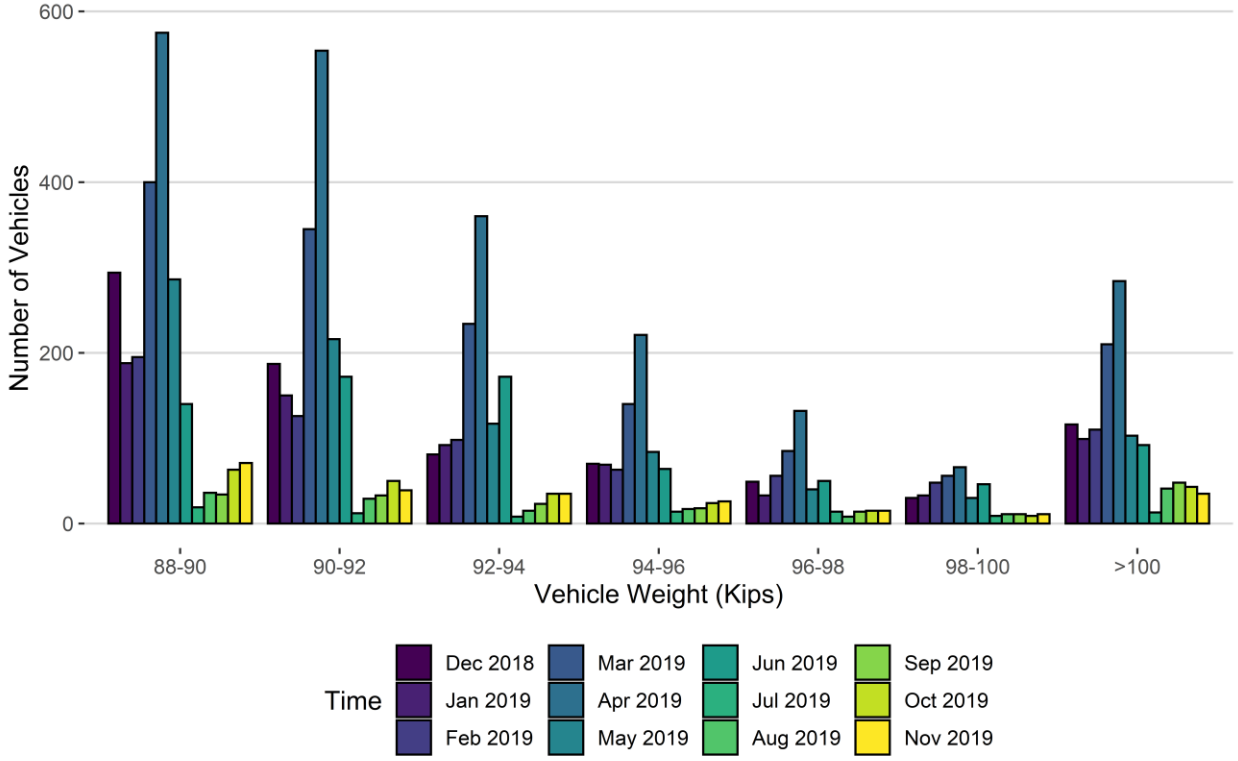
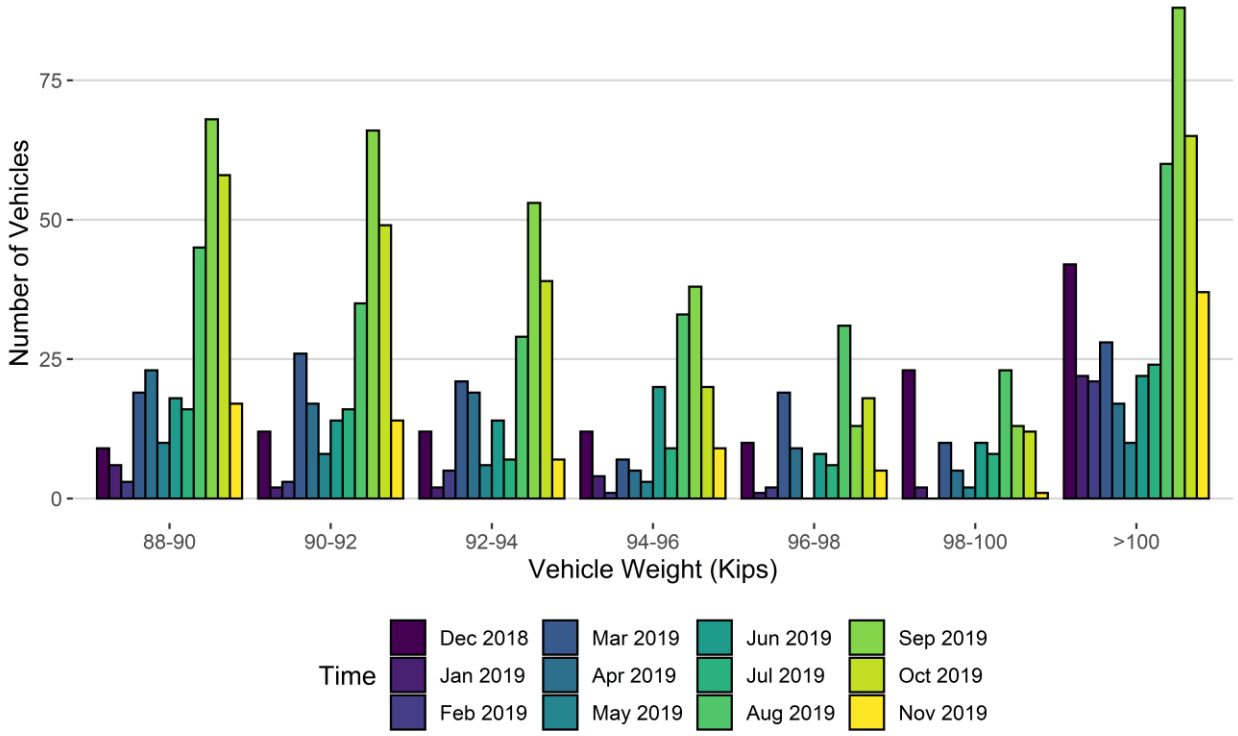


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*	*Apr 2019*	*May 2019*	*Jun 2019*	*Jul 2019*	*Aug 2019*	*Sep 2019*	*Oct 2019*	*Nov 2019*
88-90	294	188	195	400	575	286	140	19	36	34	63	71
90-92	187	150	126	345	554	216	172	12	29	33	50	39
92-94	81	92	98	234	360	117	172	8	15	23	35	35
94-96	70	69	63	140	221	84	64	14	17	18	24	26
96-98	49	33	56	85	132	40	50	14	8	14	15	15
98-100	30	33	48	56	66	30	46	9	11	11	9	11
>100	116	99	110	210	284	103	92	13	41	48	43	35
Total	827	664	696	1470	2192	876	736	89	157	181	239	232

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



Vehicle Weights (Kips)	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*	*Apr 2019*	*May 2019*	*Jun 2019*	*Jul 2019*	*Aug 2019*	*Sep 2019*	*Oct 2019*	*Nov 2019*
88-90	9	6	3	19	23	10	18	16	45	68	58	17
90-92	12	2	3	26	17	8	14	16	35	66	49	14
92-94	12	2	5	21	19	6	14	7	29	53	39	7
94-96	12	4	1	7	5	3	20	9	33	38	20	9
96-98	10	1	2	19	9	0	8	6	31	13	18	5
98-100	23	2	0	10	5	2	10	8	23	13	12	1
>100	42	22	21	28	17	10	22	24	60	88	65	37
Total	120	39	35	130	95	39	106	86	256	339	261	90

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

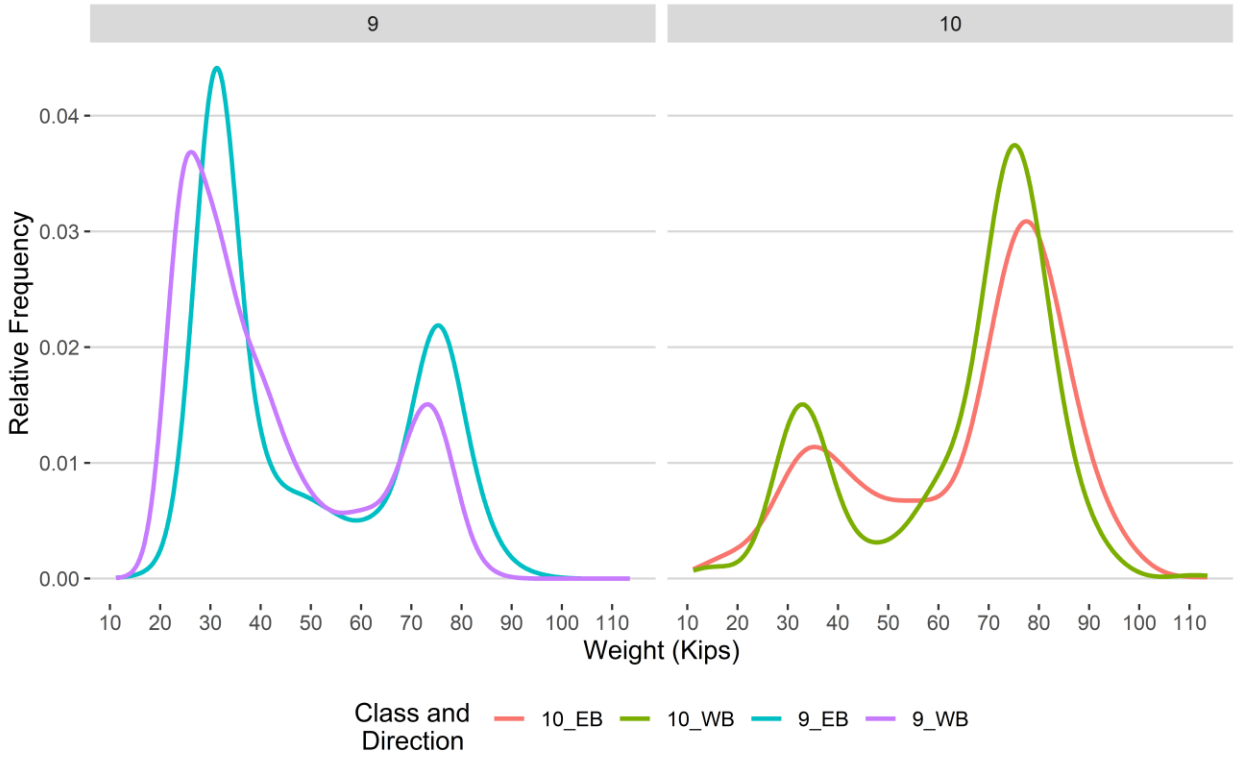


Figure 9 - Freight Percentage by Direction and Class

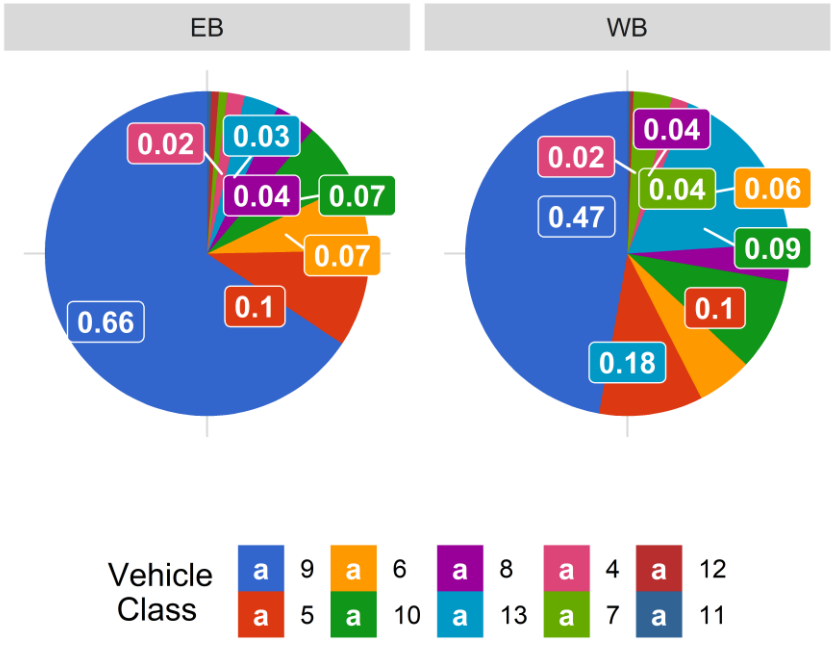


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

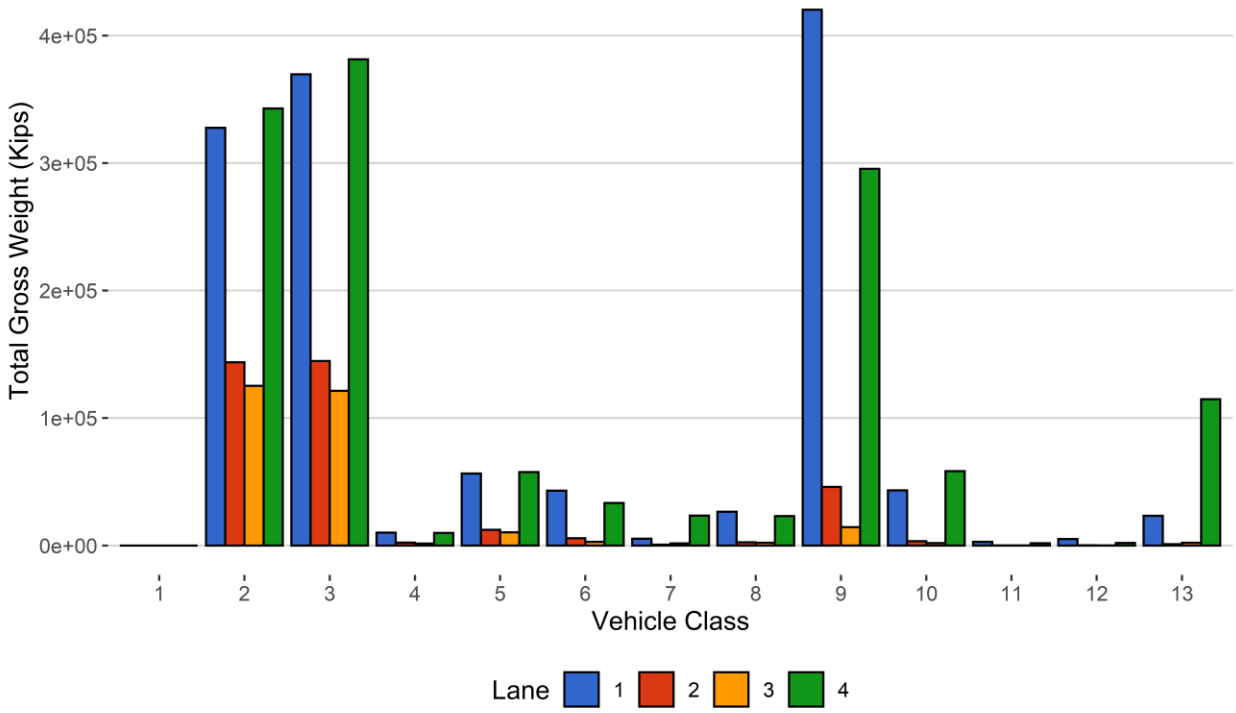
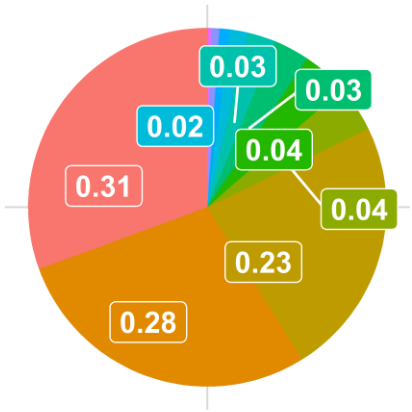


Figure 11 - Total Gross Vehicle Weight



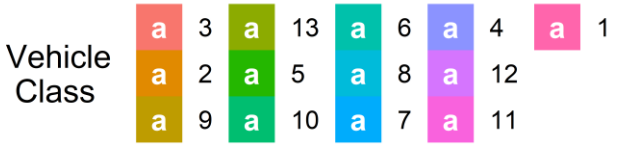


Figure 12 - Total ESALs by Class and Lane

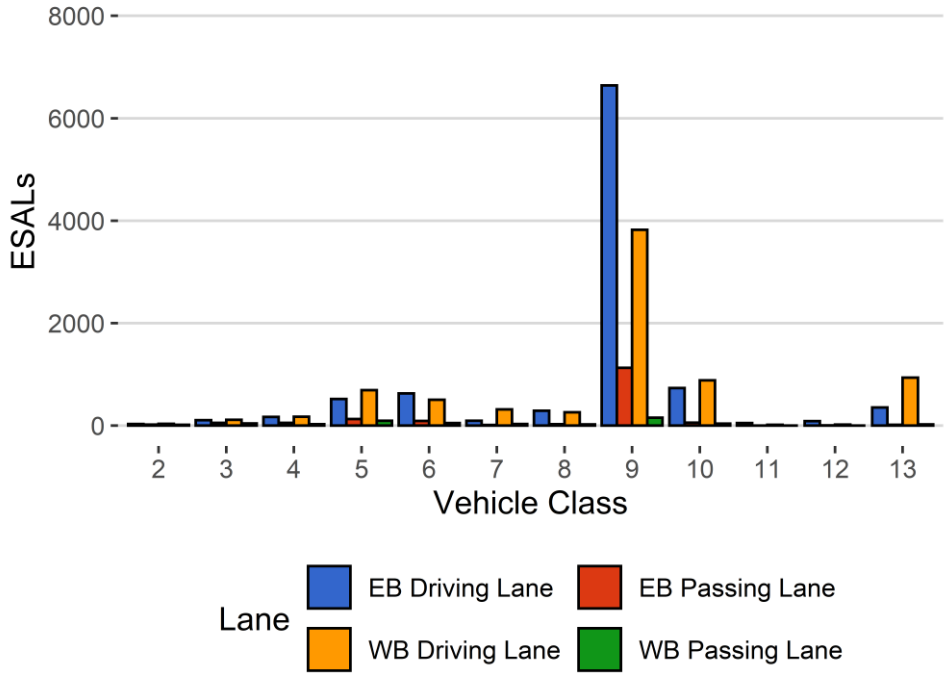


Figure 13 - ESALs by Class

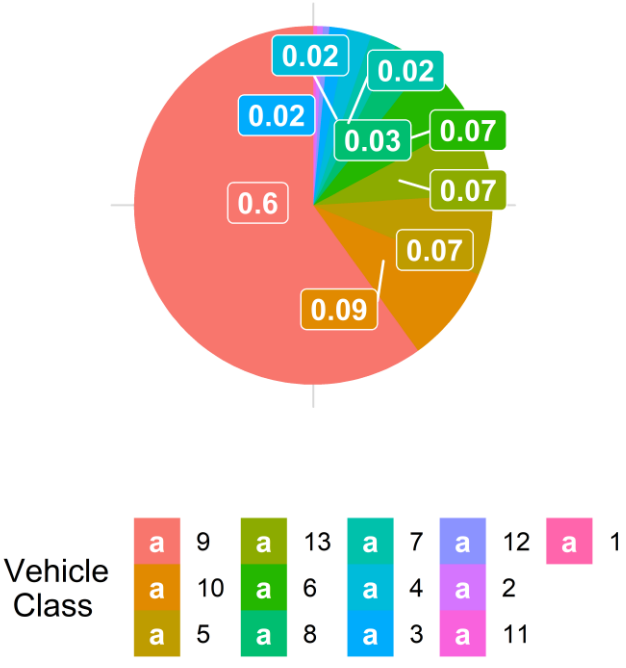


Table 1 Class 9 Front Axle Weight by Lane

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%*
March 2015	NA	NA	11.72	0.00	10.94	0.00	10.81	0.00
April 2015	NA	NA	11.63	-0.82	11.03	0.81	11.05	2.25
May 2015	NA	NA	11.70	-0.16	11.47	4.90	11.34	4.88
June 2015	NA	NA	11.68	-0.38	11.61	6.13	11.26	4.17
July 2015	NA	NA	11.81	0.79	11.55	5.63	11.22	3.77
August 2015	NA	NA	11.62	-0.86	11.56	5.72	11.18	3.38
September 2015	NA	NA	11.57	-1.32	11.55	5.56	11.16	3.26
October 2015	NA	NA	11.53	-1.66	11.16	2.04	11.07	2.39
November 2015	NA	NA	11.79	0.60	11.41	4.37	11.18	3.37
December 2015	NA	NA	11.98	2.22	11.18	2.18	10.99	1.62
January 2016	NA	NA	11.87	1.28	11.25	2.82	10.93	1.14
February 2016	NA	NA	11.81	0.72	11.37	3.95	11.02	1.94
March 2016	NA	NA	11.99	2.26	11.55	5.61	11.13	2.92
April 2016	NA	NA	11.62	-0.91	11.42	4.39	11.08	2.45
May 2016	NA	NA	11.65	-0.59	11.32	3.54	10.98	1.54
June 2016	NA	NA	11.57	-1.30	11.28	3.14	10.90	0.78
July 2016	NA	NA	11.57	-1.31	11.41	4.33	10.60	-1.98
August 2016	NA	NA	11.52	-1.72	11.38	4.01	10.96	1.35
September 2016	NA	NA	11.25	-4.02	11.18	2.26	10.97	1.46
October 2016	NA	NA	11.34	-3.30	11.07	1.24	10.93	1.10
November 2016	NA	NA	11.40	-2.79	11.15	1.94	10.96	1.41
December 2016	NA	NA	11.88	1.33	11.46	4.80	10.77	-0.36
January 2017	NA	NA	11.24	-4.09	11.32	3.53	10.59	-2.09
February 2017	NA	NA	11.07	-5.59	11.56	5.66	10.42	-3.61
March 2017	NA	NA	11.58	-1.19	11.86	8.40	11.05	2.24

April 2017	NA	NA	11.64	-0.73	11.30	3.31	11.08	2.46
May 2017	NA	NA	11.63	-0.76	11.15	1.94	10.79	-0.24
June 2017	NA	NA	11.86	1.19	11.23	2.71	10.84	0.23
July 2017	NA	NA	11.46	-2.21	11.26	2.99	10.92	0.97
August 2017	NA	NA	11.56	-1.35	11.27	3.08	10.92	0.96
September 2017	NA	NA	11.08	-5.44	11.29	3.21	10.92	0.99
October 2017	NA	NA	11.55	-1.45	11.02	0.78	10.74	-0.67
November 2017	NA	NA	11.80	0.69	11.45	4.70	10.84	0.27
December 2017	NA	NA	11.90	1.51	11.22	2.62	10.31	-4.67
January 2018	NA	NA	11.49	-1.99	11.26	2.98	10.40	-3.80
February 2018	NA	NA	11.39	-2.84	10.80	-1.28	10.06	-6.93
March 2018	NA	NA	11.49	-1.99	10.24	-6.39	9.66	-10.70
April 2018	NA	NA	11.20	-4.43	10.39	-5.03	9.29	-14.10
May 2018	NA	NA	11.49	-1.98	11.07	1.19	9.04	-16.43
June 2018	NA	NA	11.60	-1.05	11.16	2.08	8.86	-18.02
July 2018	NA	NA	11.45	-2.34	11.08	1.30	8.36	-22.67
August 2018	NA	NA	11.37	-2.98	11.17	2.11	10.67	-1.31
September 2018	NA	NA	11.59	-1.17	11.16	2.01	10.70	-1.03
October 2018	NA	NA	11.96	2.05	10.99	0.51	10.51	-2.80
November 2018	NA	NA	12.17	3.85	11.23	2.65	10.44	-3.47
December 2018	NA	NA	12.38	5.60	11.65	6.51	10.53	-2.64
January 2019	NA	NA	11.95	1.93	11.29	3.24	10.33	-4.42
February 2019	NA	NA	11.77	0.41	10.88	-0.51	10.01	-7.38
March 2019	NA	NA	12.06	2.86	10.75	-1.68	10.06	-6.92
April 2019	NA	NA	11.65	-0.62	10.34	-5.46	10.13	-6.28
May 2019	NA	NA	11.52	-1.77	10.89	-0.46	10.52	-2.71
June 2019	NA	NA	11.47	-2.16	11.29	3.25	10.54	-2.56
July 2019	11.18	0.00	11.83	0.89	11.26	2.96	10.70	-1.08
August 2019	11.01	-1.50	11.56	-1.42	11.39	4.10	10.70	-1.08

September 2019	11.03	-1.28	11.59	-1.09	11.41	4.36	10.63	-1.73
October 2019	11.02	-1.39	11.76	0.35	11.39	4.10	10.60	-1.96
November 2019	10.82	-3.17	12.50	6.61	11.16	2.06	10.39	-3.88

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	1	0	0	0
2	8271	248136	53.9	0	0
3	5826	174782	38	0	0
4	28	839	0.2	30	1.2
5	353	10587	2.3	91	3.7
6	98	2940	0.6	108	4.3
7	19	558	0.1	93	3.7
8	60	1813	0.4	37	1.5
9	567	16996	3.7	1439	57.9
10	55	1662	0.4	364	14.6
11	3	101	0	1	0
12	4	128	0	33	1.3
13	63	1893	0.4	291	11.7
TOTAL	**15348**	**460436**	**100**	**2487**	**100**

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

Date	*Day of Week*	*Time*	*Vehicle Class*	*Direction*	*Lane*	*GVW (lbs)*
2019-11-11	Monday	12:52:11	10	EB	1	113.55
2019-11-22	Friday	14:16:26	10	WB	4	112.21
2019-11-06	Wednesday	11:51:04	10	WB	4	110.96
2019-11-15	Friday	07:34:16	10	WB	4	110.14
2019-11-02	Saturday	11:39:23	10	EB	1	101.66
2019-11-19	Tuesday	12:17:36	9	EB	2	100
2019-11-25	Monday	13:17:43	10	EB	1	99.6
2019-11-30	Saturday	10:00:54	10	EB	2	99.6
2019-11-24	Sunday	20:41:38	10	EB	1	99.42
2019-11-03	Sunday	10:17:31	10	EB	1	99.18

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	436	118	27.1	10942	1447	3086
5	EB	8	5336	1107	20.7	60933	7853	13550
6	EB	19	1701	215	12.6	44956	3759	8361
7	EB	11.5	108	0	0	6099	0	2428
8	EB	31	959	546	56.9	15504	13435	1351
9	EB	33	9527	3361	35.3	367357	98912	81940
10	EB	33.5	712	74	10.4	44589	2035	11608
11	EB	36.5	57	6	10.5	2704	175	421
12	EB	36.5	86	5	5.8	5142	151	1093
13	EB	31.5	299	1	0.3	24317	30	7465
TOTAL	****	****	**19221**	**5433**	****	**582542**	****	**131303**
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	396	93	23.5	10217	1164	2836
5	WB	8	5167	1059	20.5	60412	7502	13774
6	WB	19	1216	220	18.1	32522	3720	6799
7	WB	11.5	446	0	0	25138	0	10004
8	WB	31	840	472	56.2	14107	11002	1349
9	WB	33	7334	3241	44.2	223448	86529	44189
10	WB	33.5	937	126	13.4	56579	3688	14705
11	WB	36.5	43	6	14	1674	185	162
12	WB	36.5	41	1	2.4	2102	34	321
13	WB	31.5	1579	2	0.1	116786	59	33555
TOTAL	****	****	**17999**	**5220**	****	**542985**	****	**127696**
GRAND TOTAL	****	****	**37220**	**10653**	**372**	**1125527**	**241679**	**258998**

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	0	2	0	0	2	0
2	327714	143802	125259	342876	939651	28.3
3	369730	144683	121337	381416	1017166	30.6
4	10098	2291	1555	9827	23770	0.7
5	56482	12303	10328	57585	136699	4.1
6	42975	5739	2887	33355	84957	2.6
7	5384	715	1655	23482	31236	0.9
8	26472	2467	2086	23023	54049	1.6
9	420330	45939	14439	295538	776246	23.4
10	43240	3384	1890	58377	106890	3.2
11	2831	48	44	1814	4738	0.1
12	5114	178	110	2026	7428	0.2
13	23265	1082	2114	114730	141191	4.2
TOTAL	**1333636**	**362634**	**283705**	**1344050**	**3324025**	**100**
GVW/LANE	**40.12**	**10.91**	**8.53**	**40.43**	**100**	**0**

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	0.5
2	32	20	16	34	101	0.52	8e-04
3	108	54	42	114	318	1.62	0.0037
4	170	54	27	175	426	2.17	1.03
5	520	129	97	693	1439	7.34	0.28
6	630	92	49	506	1277	6.52	0.88
7	97	15	30	317	458	2.34	1.65
8	291	28	23	262	604	3.08	0.67
9	6640	1128	157	3823	11748	59.94	1.4
10	732	58	39	884	1713	8.74	2.08
11	51	0	0	15	67	0.34	1.31
12	89	5	1	20	115	0.59	1.74
13	354	17	23	938	1332	6.79	1.42
TOTAL	**9714**	**1600**	**504**	**7781**	**19599**	**100**	**13**
ESALS/LANE	**49.6**	**8.2**	**2.6**	**39.7**	**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 %*
Dec 2018	433085	14436	902	405135	93.5	27950	6.5	89.7	10.3
Jan 2019	406644	13118	916	378257	93	28386.7	7	89.3	10.7
Feb 2019	369962	13213	920	344189	93	25772.6	7	88.3	11.7
Mar 2019	438978	14161	1022	407281	92.8	31697	7.2	89.5	10.5
Apr 2019	482019	16067	1245	444670	92.3	37348.8	7.7	90.3	9.7
May 2019	236187	7873	669	215440	91.2	20747.2	8.8	89.1	10.9
Jun 2019	158627	5470	585	141064	88.9	17562.6	11.1	90.6	9.4
Jul 2019	325723	19835	655	305421	93.8	20302.4	6.2	88.4	11.6
Aug 2019	545644	19757	1383	502772	92.1	42872.3	7.9	89.2	10.8
Sep 2019	549620	18422	1515	504182	91.7	45437.9	8.3	89	11
Oct 2019	523412	17095	1450	478454	91.4	44957.6	8.6	89.4	10.6
Nov 2019	460436	15625	1251	422919	91.9	37517.1	8.1	89.6	10.4
TOTAL	**4930337**	**–**	**–**	**4549784**	**–**	**380552**	**–**	**–**	**–**
AVERAGE	**410861**	**14589**	**1043**	**379149**	**92**	**31713**	**8**	**89**	**11**

###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*
Dec 2018	12116	983	430	5471	19000	93	7	29.2
Jan 2019	11889	941	448	5234	18512	92	8	26.3
Feb 2019	10649	1069	422	4110	16250	91	9	32.8
Mar 2019	15090	1062	361	5540	22053	94	6	44.2
Apr 2019	19732	967	307	7119	28125	95	5	49.7

May 2019	9540	682	235	4839	15296	94	6	38.2
Jun 2019	12544	1004	510	8942	23000	93	7	22.8
Jul 2019	5016	764	370	5206	11356	90	10	3.8
Aug 2019	10078	1286	729	11121	23214	91	9	2.8
Sep 2019	10882	1361	796	12683	25722	92	8	5.7
Oct 2019	10901	1343	646	11717	24607	92	8	5.1
Nov 2019	9776	1615	508	7854	19753	89	11	3.2
TOTAL	**138212**	**13078**	**5762**	**89837**	**246889**	**–**	**–**	**–**
AVERAGE	**11518**	**1090**	**480**	**7486**	**20574**	**92**	**8**	**22**

###Gross Vehicle Weight

Month	*GVW EB Passing Lane*	*GVW EB Driving Lane*	*GVW WB Passing Lane*	*GVW WB Driving Lane*	*Total GVW Kips*
Dec 18	1310112	327610	267904	1120597	3026224
Jan 19	1229340	286706	250586	1044234	2810866
Feb 19	1126534	266155	229583	907774	2530046
Mar 19	1408617	318406	250134	1119744	3096901
Apr 19	1646316	343358	277000	1276356	3543029
May 19	796985	176918	168702	754041	1896647
Jun 19	1154431	206749	265609	1228408	2855197
Jul 19	837616	248199	237830	953213	2276857
Aug 19	1516618	452124	344868	1657788	3971399
Sep 19	1540928	427263	361957	1726373	4056521
Oct 19	1532945	407688	339239	1620244	3900116
Nov 19	1335358	363119	283906	1345795	3328178
TOTAL	**15435799**	**3824295**	**3277320**	**14754566**	**37291980**
AVERAGE	**1286317**	**318691**	**273110**	**1229547**	**3107665**

###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*
Dec 2018	3237	0.7	11.4	947	211
Jan 2019	3050	0.8	10.8	703	156
Feb 2019	2654	0.7	10.3	733	180
Mar 2019	3701	0.8	11.7	1601	305
Apr 2019	4614	1	12.4	2287	372
May 2019	2538	1.1	12	915	145
Jun 2019	3218	1	8.8	842	170
Jul 2019	1491	0.4	7.1	175	54
Aug 2019	3167	0.6	7.4	414	135

Sep 2019	3462	0.6	7.6	532	160
Oct 2019	3210	0.6	7.2	503	130
Nov 2019	2500	0.5	6.7	322	84
TOTAL	**36842**	**–**	**–**	**9974**	**2102**
AVERAGE	**3070.2**	**0.7**	**9.4**	**831.2**	**175.2**

###Freight

Month	*EB Freight Tons*	*WB Freight Tons*	*Total Freight*	*EB Freight %*	*WB Freight %*
Dec 2018	123430	79692	203122	60.8	39.2
Jan 2019	122311	69881	192193	63.6	36.4
Feb 2019	110574	57944	168518	65.6	34.4
Mar 2019	147797	80463	228260	64.7	35.3
Apr 2019	184738	107111	291849	63.3	36.7
May 2019	92972	78551	171524	54.2	45.8
Jun 2019	134462	149183	283644	47.4	52.6
Jul 2019	63083	85875	148957	42.3	57.7
Aug 2019	121382	183925	305306	39.8	60.2
Sep 2019	133266	194835	328102	40.6	59.4
Oct 2019	140754	170389	311143	45.2	54.8
Nov 2019	131303	127696	258998	50.7	49.3
TOTAL	**1506072**	**1385544**	**2891616**	**–**	**–**
AVERAGE	**125506**	**115462**	**240968**	**53.2**	**46.8**