

DECEMBER 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 December 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 <sup>1</sup>. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 441468 | Passenger Vehicles: 411084 | Heavy Commercial Vehicles: 30384

Monthly Average Daily Traffic (MADT): 15194 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 980

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 07 AM and 04 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB peaked between 07 AM and 04 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

### Overweight HCVs

**Volume trends.** Of a total of 30384 HCVs, 1370 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.3% of total monthly volume, and 4.6% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Tuesdays, with lowest volumes reported on Saturdays. See Figure 3.

The top two overweight violators by class were the class 9 and class 13 vehicles. Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 56.5% 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 <sup>4</sup>.

Using normal load limits, 88 EB vehicles exceeded 88,000 pounds (38 vehicles were Class 13's; 30 vehicles were Class 10's). Of vehicles traveling WB,

218 EB vehicles exceeded 88,000 pounds (184 vehicles were Class 13's; 28 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from December 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in December 2019. Data suggests that there were greater numbers of empty Class 9's than fully loaded Class 9's traveling EB, while there were more empty Class 9's than fully loaded traveling WB. Data also suggests that there were more fully loaded Class 10's than empty traveling in the EB direction. In the WB direction, there were more fully loaded class 10 vehicles.

**Freight Totals.** A total of 168947 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (55.1%) than WB (44.9%). 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 441468 vehicles with a combined GVW of 2882950 kips (1 kip = 1,000 pounds = 0.5 tons) in December 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 13575 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 58.4% of all ESALs were recorded EB while 41.6% was observed WB. In particular, 62% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 22% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

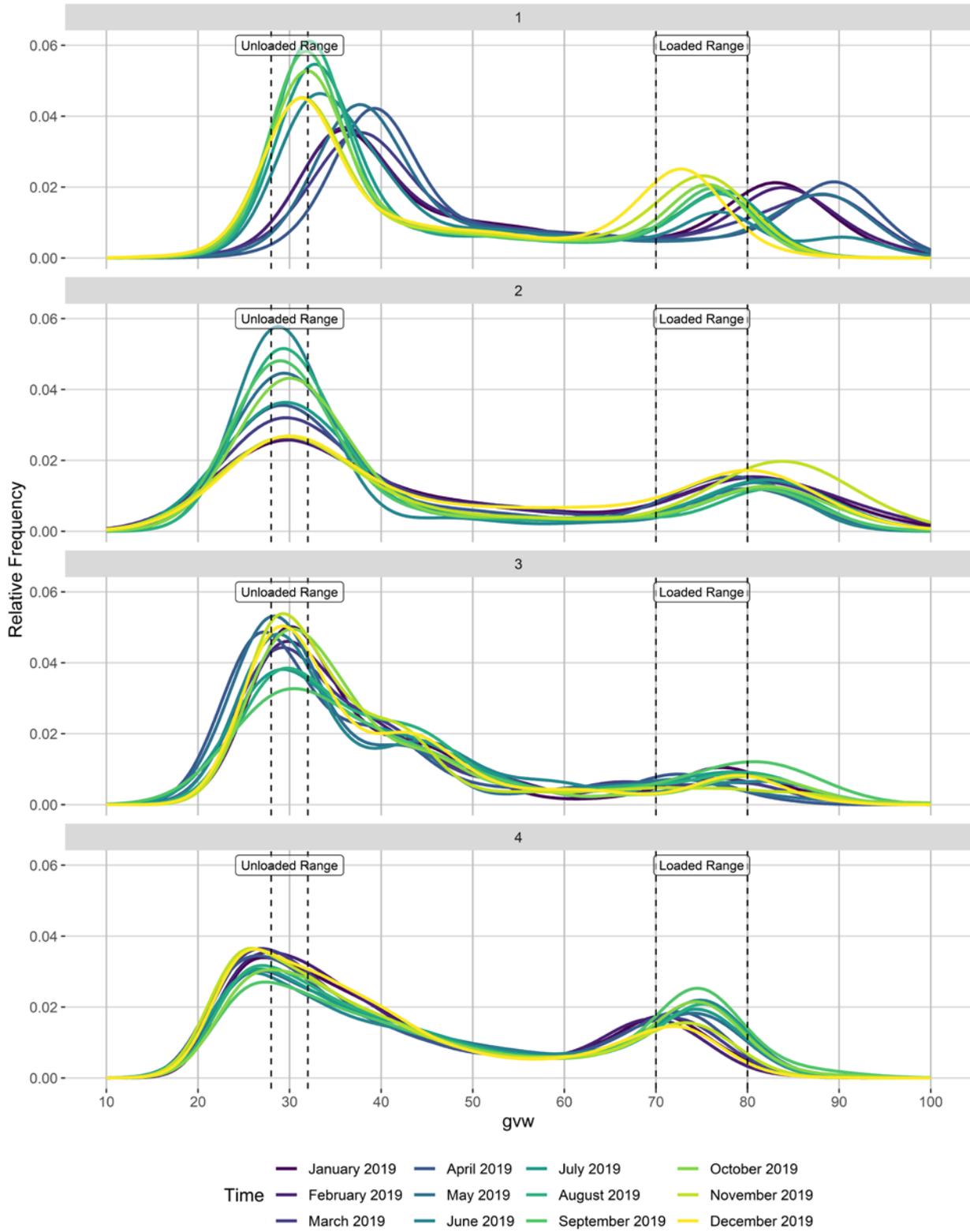
#####WIM monthly reports can be found at:

<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at: <http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes: [http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

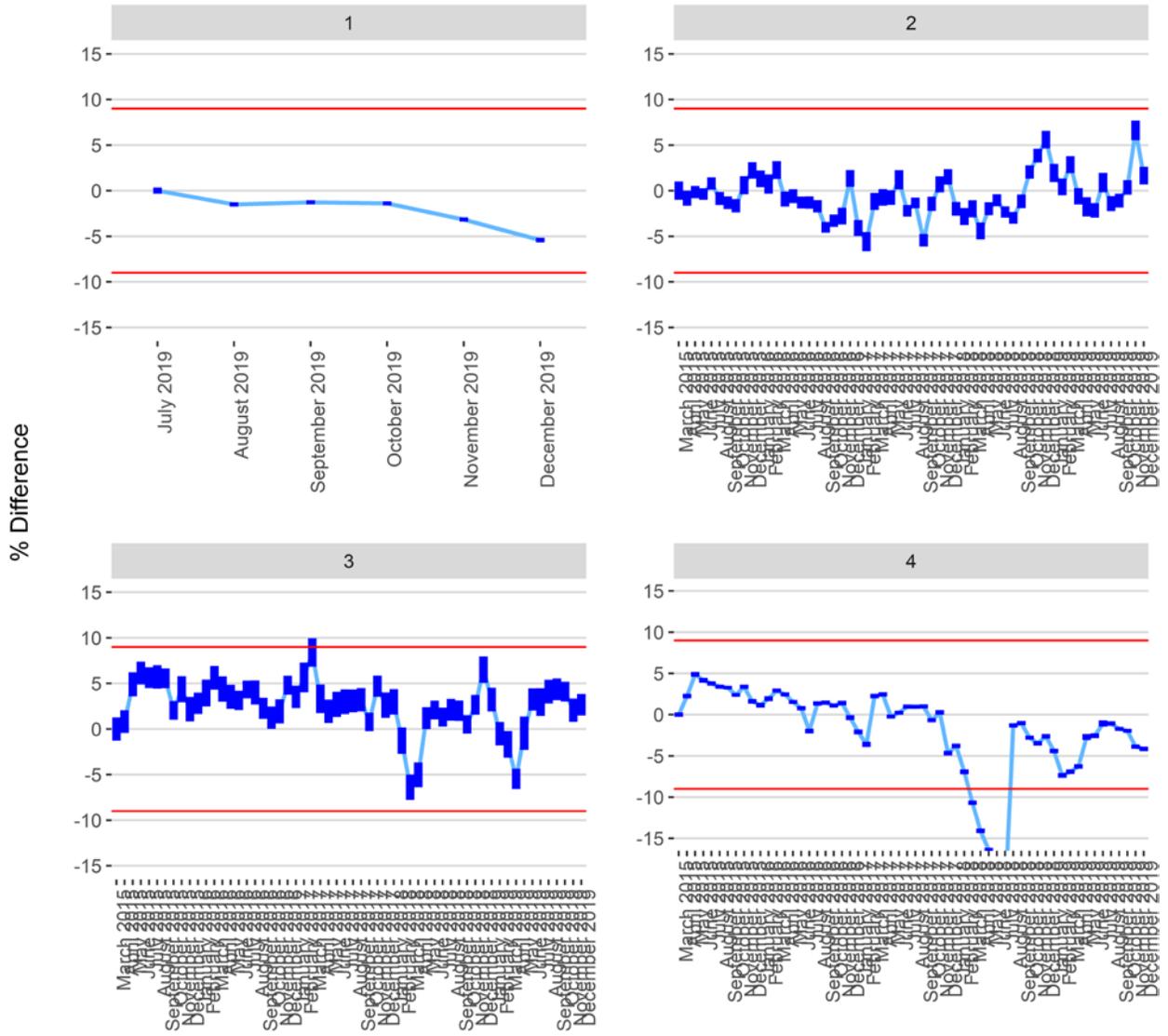
**To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to [ADArequest.dot@state.mn.us](mailto:ADArequest.dot@state.mn.us). Please request at least one week in advance.**

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

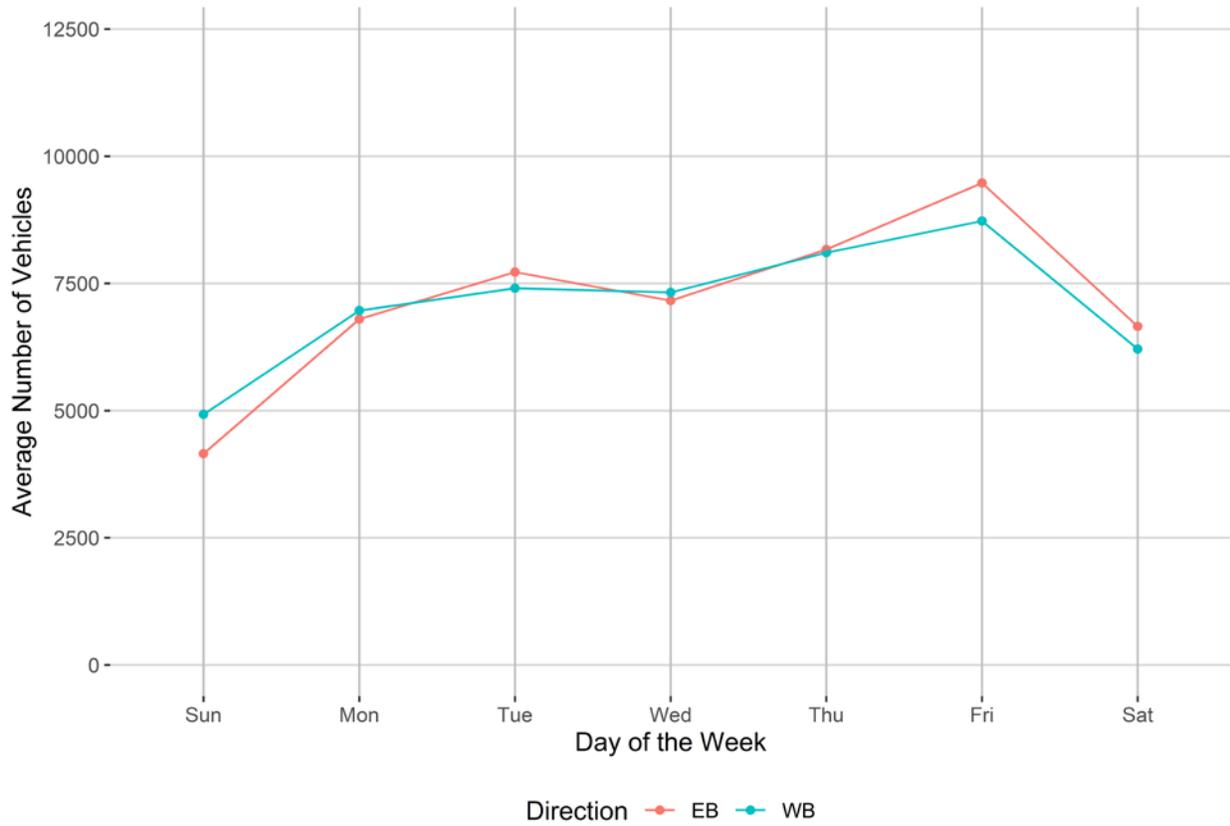


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

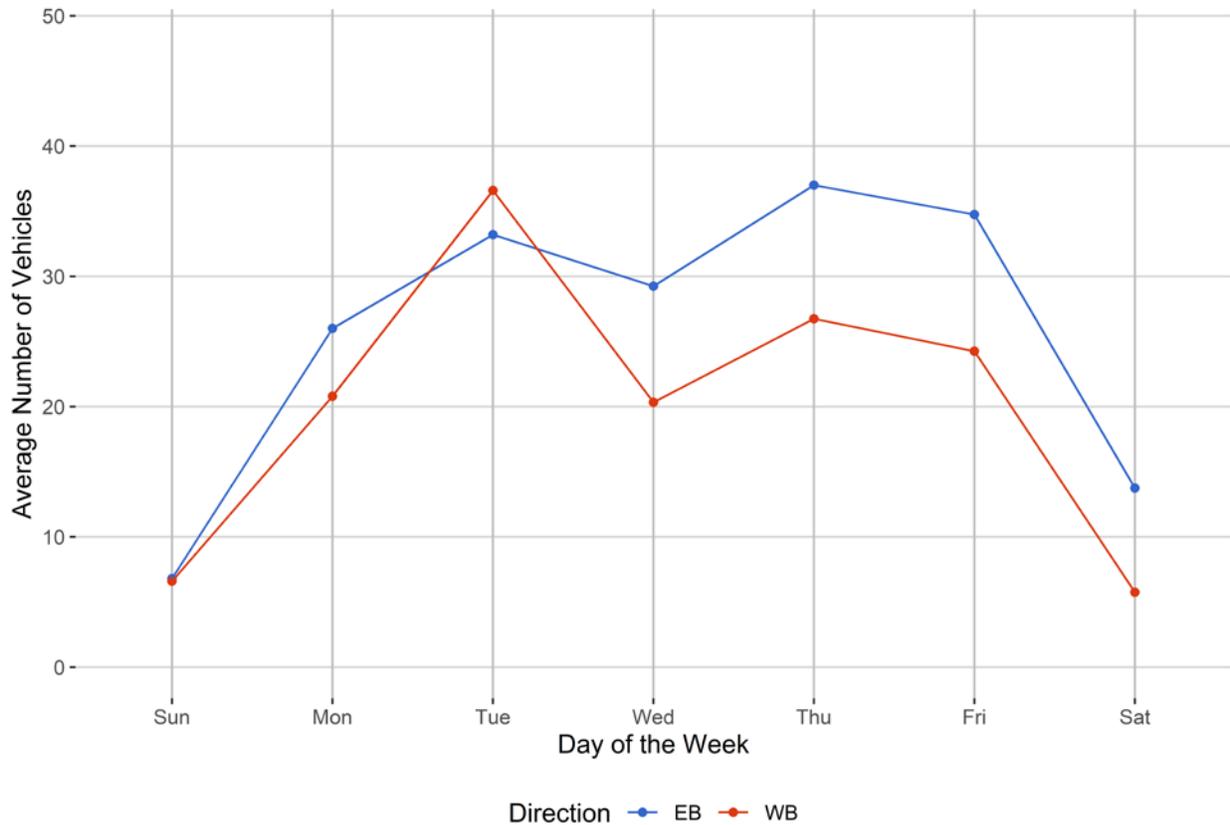


Figure 4 - Passenger Vehicles vs. Hour of the Day

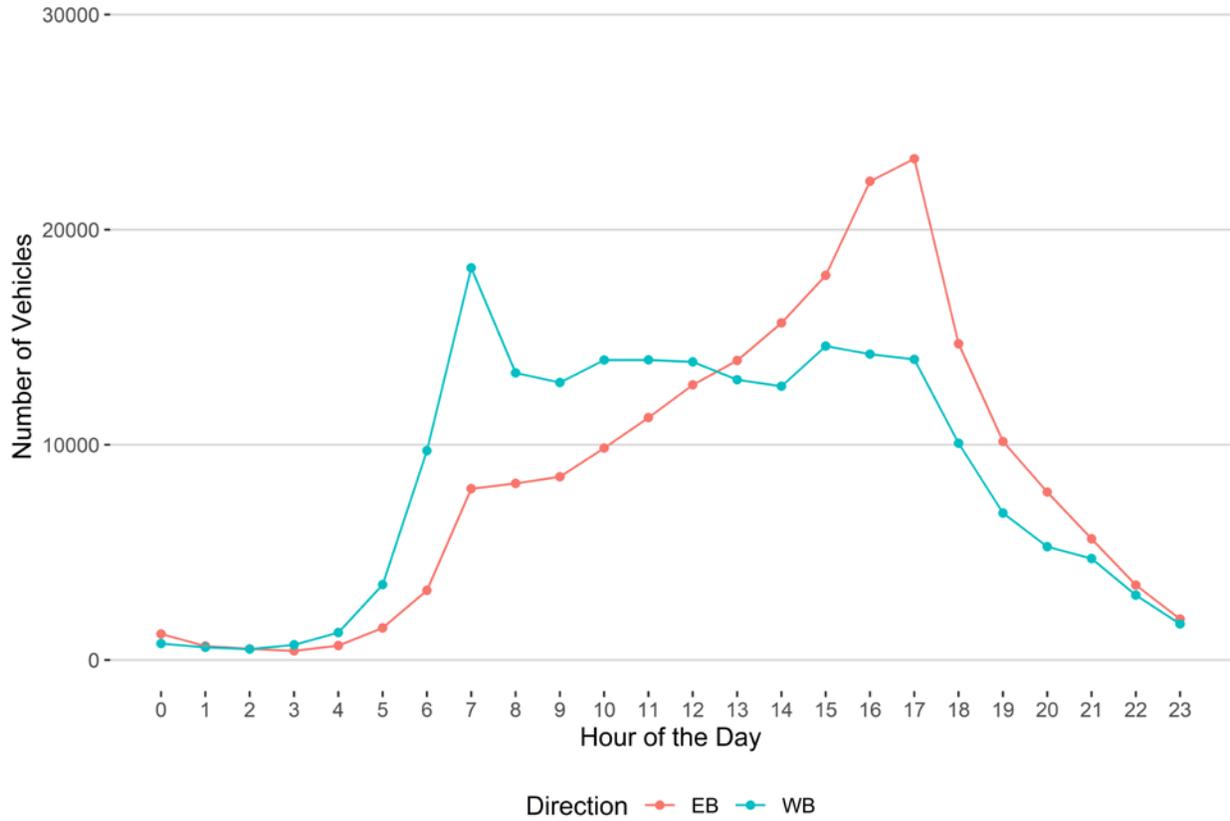


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

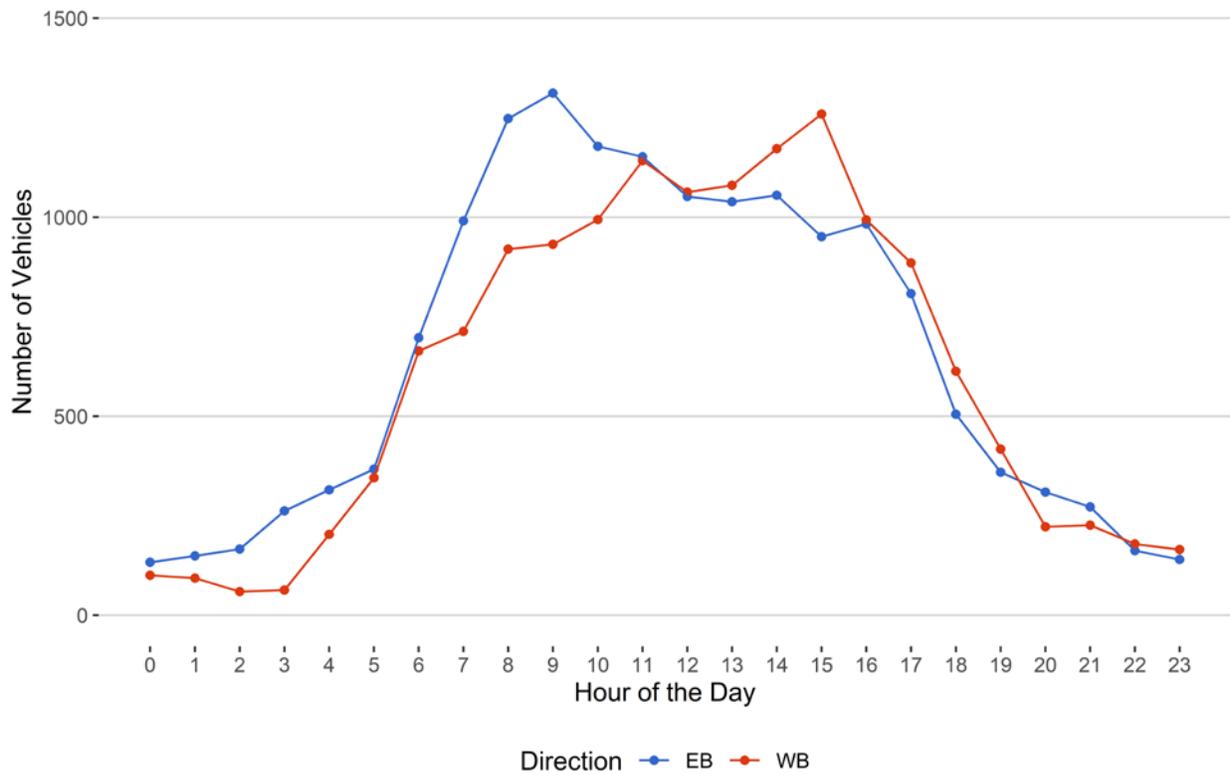




Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

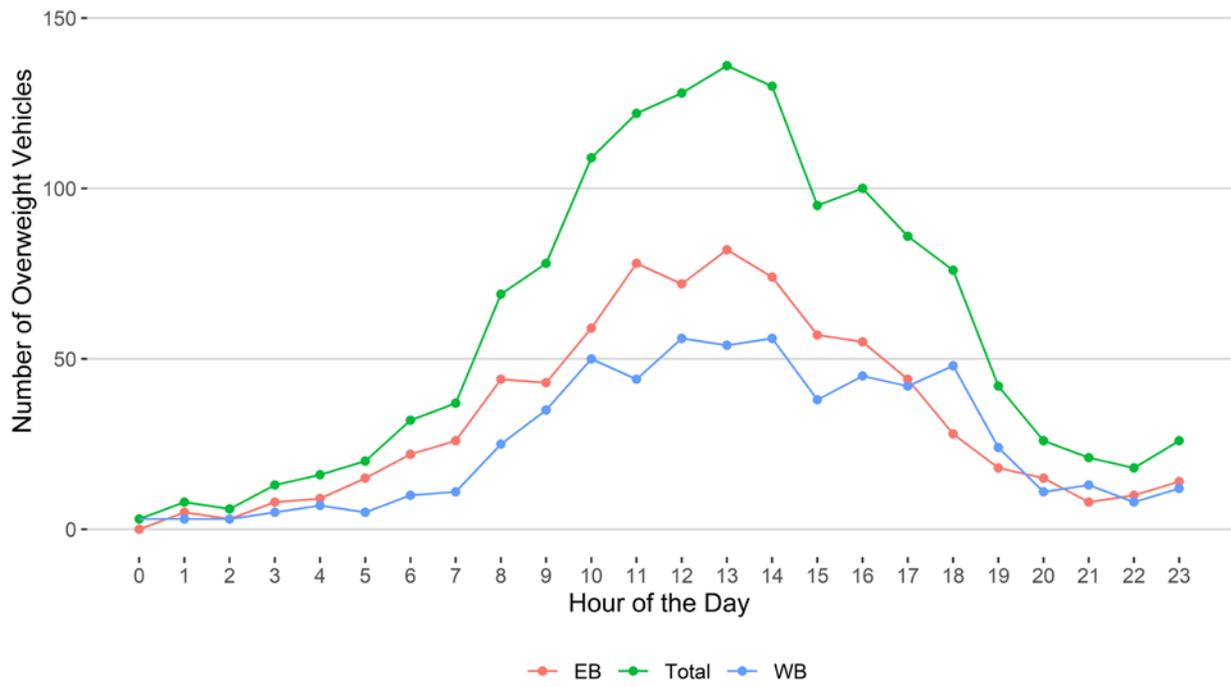
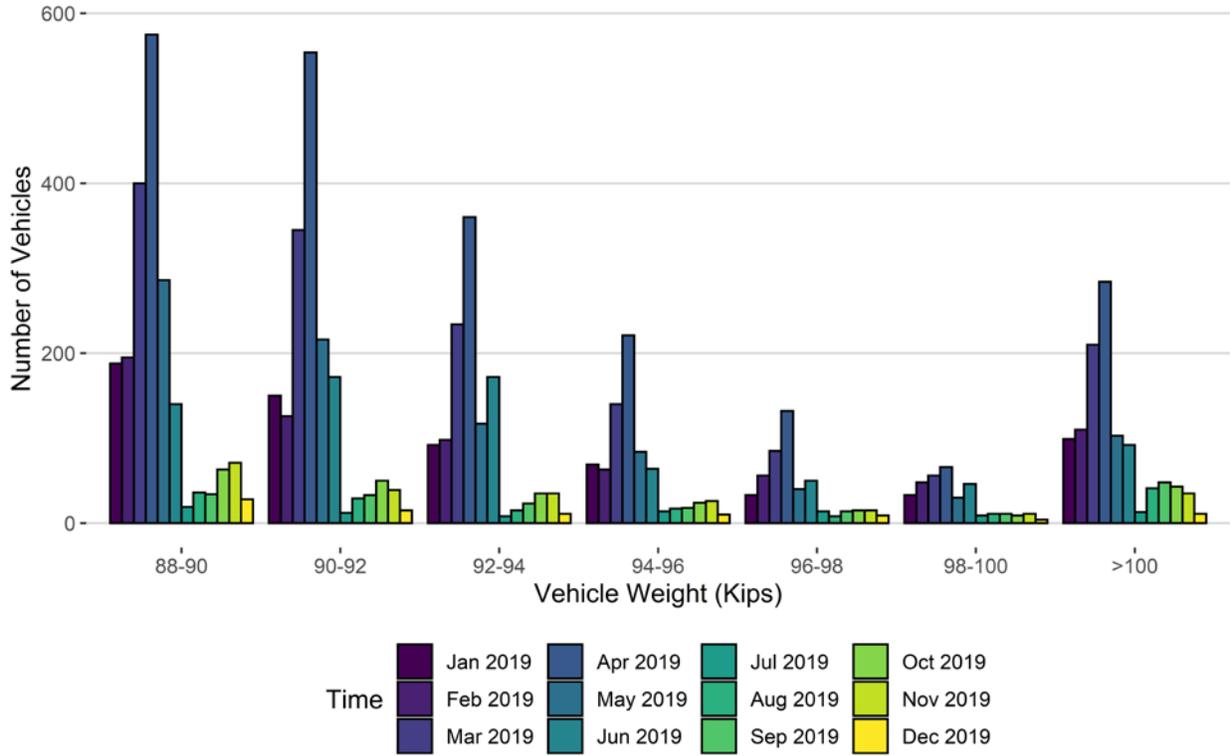
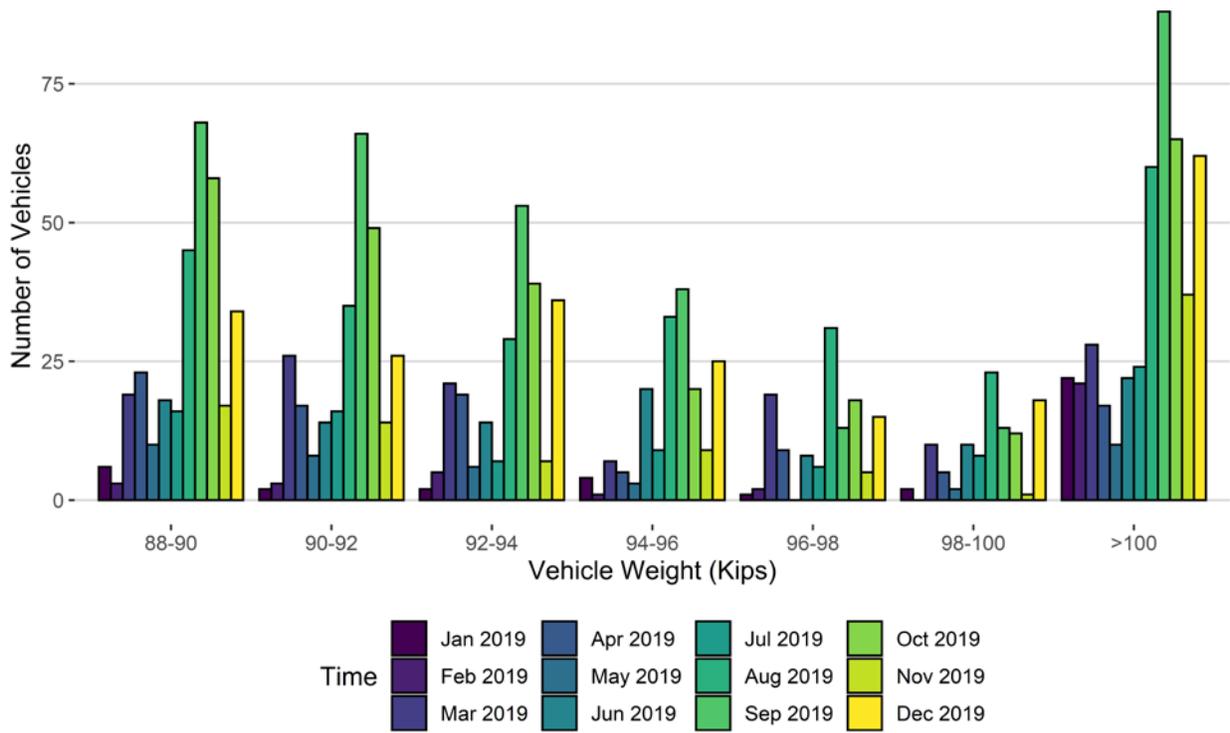


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
88-90	188	195	400	575	286	140	19	36	34	63	71	28
90-92	150	126	345	554	216	172	12	29	33	50	39	15
92-94	92	98	234	360	117	172	8	15	23	35	35	11
94-96	69	63	140	221	84	64	14	17	18	24	26	10
96-98	33	56	85	132	40	50	14	8	14	15	15	9
98-100	33	48	56	66	30	46	9	11	11	9	11	4
>100	99	110	210	284	103	92	13	41	48	43	35	11
Total	664	696	1470	2192	876	736	89	157	181	239	232	88

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



Vehicle Weights (Kips)	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
88-90	6	3	19	23	10	18	16	45	68	58	17	34
90-92	2	3	26	17	8	14	16	35	66	49	14	26
92-94	2	5	21	19	6	14	7	29	53	39	7	36
94-96	4	1	7	5	3	20	9	33	38	20	9	25
96-98	1	2	19	9	0	8	6	31	13	18	5	15
98-100	2	0	10	5	2	10	8	23	13	12	1	18
>100	22	21	28	17	10	22	24	60	88	65	37	62
Total	39	35	130	95	39	106	86	256	339	261	90	216

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

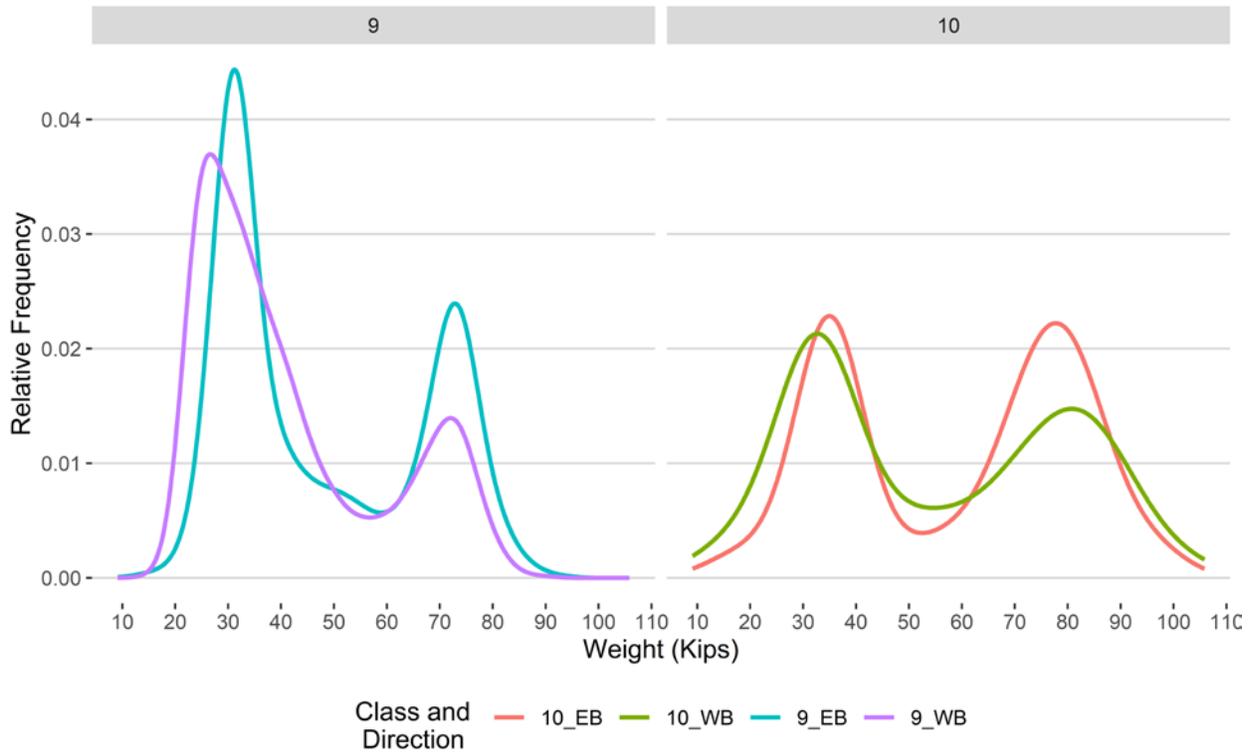


Figure 9 - Freight Percentage by Direction and Class

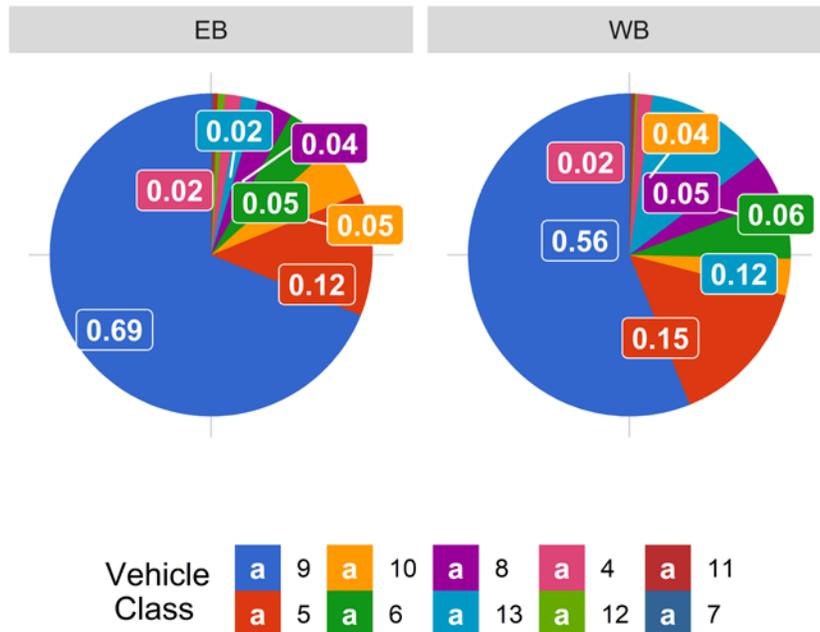


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

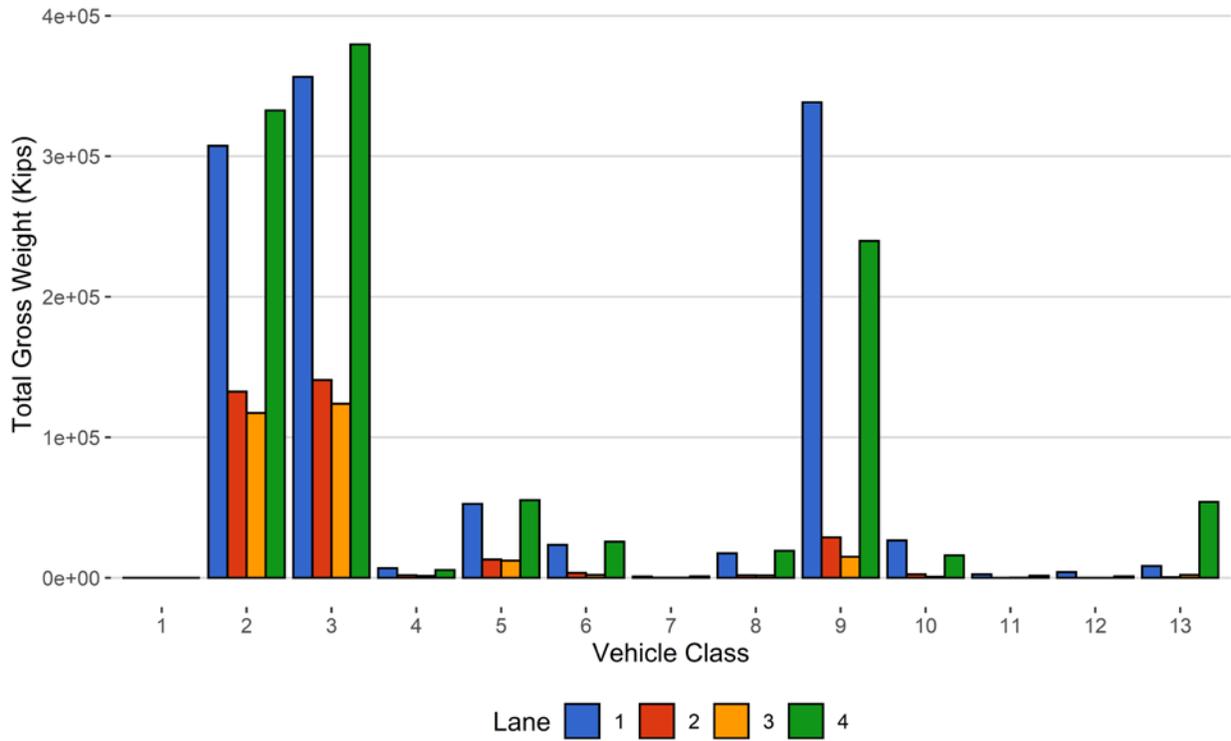


Figure 11 - Total Gross Vehicle Weight t

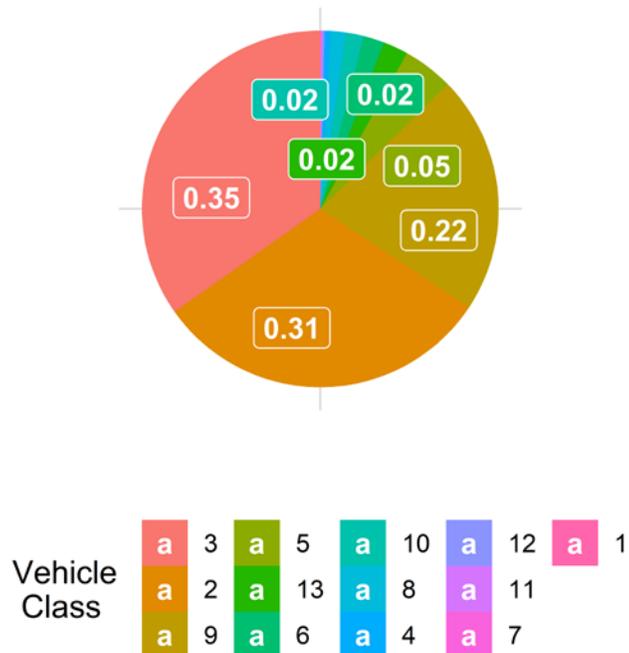


Figure 12 - Total ESALs by Class and Lane

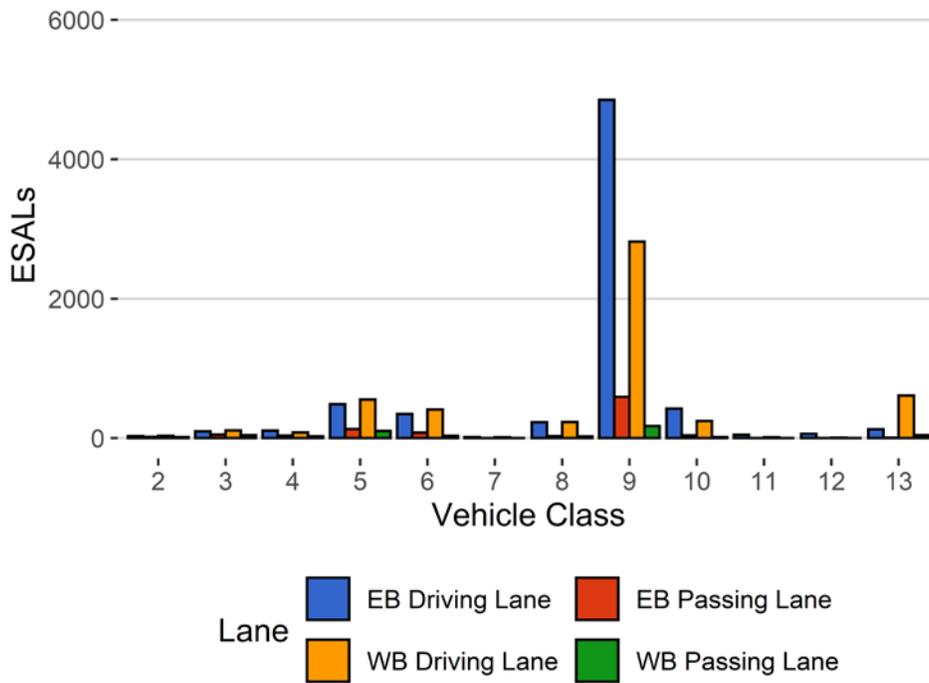
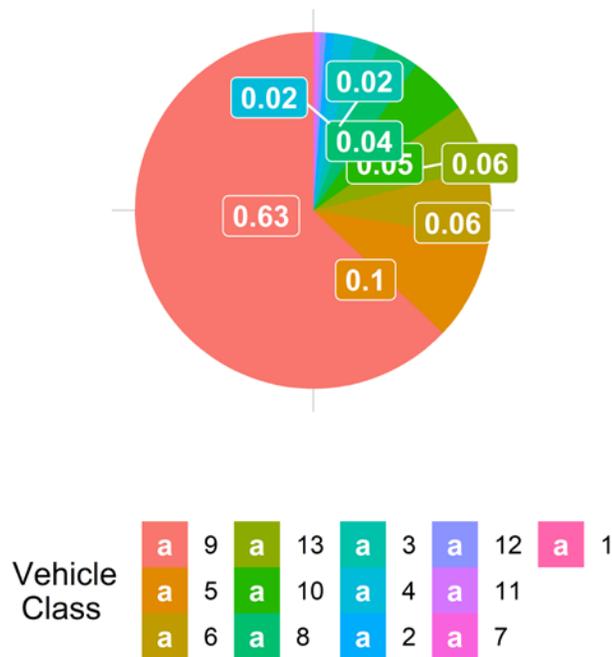


Figure 13 - ESALs by Class



**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>
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
December 2019	10.57	-5.41	11.92	1.65	11.23	2.67	10.36	-4.15

**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	2	0	0	0
2	7620	236217	53.5	0	0
3	5641	174865	39.6	0	0
4	19	576	0.1	14	1
5	350	10838	2.5	99	7.2
6	60	1875	0.4	73	5.3
7	1	42	0	1	0.1
8	43	1335	0.3	39	2.8
9	448	13893	3.1	626	45.7
10	26	806	0.2	191	13.9
11	3	87	0	0	0
12	3	94	0	22	1.6
13	27	838	0.2	305	22.3
<b>TOTAL</b>	<b>14241</b>	<b>441468</b>	<b>100</b>	<b>1370</b>	<b>100</b>

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

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-12-15	Sunday	23:10:58	10	WB	4	105.85
2019-12-18	Wednesday	10:06:04	10	WB	3	104.35
2019-12-28	Saturday	14:45:12	10	WB	4	102.36
2019-12-31	Tuesday	13:13:10	10	EB	1	101.74
2019-12-05	Thursday	16:46:19	10	WB	4	101.15
2019-12-15	Sunday	18:22:17	10	WB	4	99.67
2019-12-26	Thursday	16:54:28	10	EB	1	99.42
2019-12-02	Monday	22:04:58	10	EB	1	98.57
2019-12-13	Friday	13:56:21	10	EB	1	98.5
2019-12-28	Saturday	11:38:21	10	WB	4	98.32

**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	311	79	25.4	7700	965	2110
5	EB	8	5338	1304	24.4	56334	9221	12031
6	EB	19	933	226	24.2	23039	3854	4803
7	EB	11.5	20	0	0	996	0	383
8	EB	31	625	309	49.4	12316	6882	1260
9	EB	33	7659	2708	35.4	287646	79623	62132
10	EB	33.5	495	72	14.5	27080	2058	6455
11	EB	36.5	49	5	10.2	2332	168	363
12	EB	36.5	69	9	13	3757	276	783
13	EB	31.5	106	0	0	8815	0	2738
<b>TOTAL</b>	****	****	<b>15605</b>	<b>4712</b>	****	<b>430014</b>	****	<b>93057</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	WB	15	260	57	21.9	6120	730	1538
5	WB	8	5401	1211	22.4	58772	8645	12626
6	WB	19	925	217	23.5	24030	3636	5289
7	WB	11.5	22	0	0	1063	0	405
8	WB	31	698	374	53.6	12386	8580	1171
9	WB	33	6107	2621	42.9	184067	70621	34514
10	WB	33.5	304	88	28.9	14229	2458	3497
11	WB	36.5	37	10	27	1211	321	113
12	WB	36.5	24	1	4.2	1063	35	112
13	WB	31.5	724	1	0.1	56024	27	16625
<b>TOTAL</b>	****	****	<b>14502</b>	<b>4580</b>	****	<b>358966</b>	****	<b>75889</b>
<b>GRAND TOTAL</b>	****	****	<b>30107</b>	<b>9292</b>	<b>421</b>	<b>788981</b>	<b>198100</b>	<b>168947</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	0	2	0	0	2	0
2	307515	132431	117293	332691	889930	30.9
3	356531	140822	123836	379635	1000824	34.8
4	6829	1836	1382	5468	15515	0.5
5	52532	13023	12213	55204	132972	4.6
6	23388	3506	1996	25670	54560	1.9
7	919	77	33	1030	2059	0.1
8	17364	1834	1749	19217	40164	1.4
9	338435	28835	14968	239719	621957	21.6
10	26631	2507	694	15993	45825	1.6
11	2499	0	41	1491	4031	0.1
12	4033	0	0	1098	5131	0.2
13	8386	430	2008	54043	64867	2.3
<b>TOTAL</b>	<b>1145062</b>	<b>325302</b>	<b>276213</b>	<b>1131260</b>	<b>2877837</b>	<b>100</b>
<b>GVW/LANE</b>	<b>39.79</b>	<b>11.3</b>	<b>9.6</b>	<b>39.31</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.3333
2	29	18	15	34	95	0.71	8e-04
3	97	50	41	112	300	2.24	0.0035
4	107	36	26	81	251	1.87	0.88
5	488	131	102	553	1273	9.5	0.24
6	346	78	35	409	868	6.48	0.94
7	14	0	0	13	28	0.21	1.28
8	229	30	22	232	513	3.83	0.78
9	4852	591	174	2818	8435	62.94	1.23
10	424	39	16	245	724	5.4	1.81
11	47	0	0	11	58	0.43	1.31
12	61	0	0	7	67	0.5	1.4
13	127	7	43	612	789	5.88	1.89
<b>TOTAL</b>	<b>6821</b>	<b>980</b>	<b>474</b>	<b>5127</b>	<b>13402</b>	<b>100</b>	<b>12</b>
<b>ESALS/LANE</b>	<b>50.9</b>	<b>7.3</b>	<b>3.5</b>	<b>38.3</b>	<b>100</b>	<b>-</b>	<b>-</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
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
Dec 2019	441468	15194	980	411084	93.1	30383.8	6.9	88	12
<b>TOTAL</b>	<b>4938720</b>	<b>-</b>	<b>-</b>	<b>4555733</b>	<b>-</b>	<b>382986</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>411560</b>	<b>14652</b>	<b>1049</b>	<b>379644</b>	<b>92</b>	<b>31915</b>	<b>8</b>	<b>89</b>	<b>11</b>

###ESALS

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
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
Dec 2019	6892	1038	476	5169	13575	89	11	2.7
<b>TOTAL</b>	<b>132988</b>	<b>13132</b>	<b>5808</b>	<b>89535</b>	<b>241463</b>	-	-	-
<b>AVERAGE</b>	<b>11082</b>	<b>1094</b>	<b>484</b>	<b>7461</b>	<b>20122</b>	<b>92</b>	<b>8</b>	<b>20</b>

### ###Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
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
Dec 19	1147430	326325	276287	1132908	2882950
<b>TOTAL</b>	<b>15273117</b>	<b>3823010</b>	<b>3285702</b>	<b>14766877</b>	<b>37148706</b>
<b>AVERAGE</b>	<b>1272760</b>	<b>318584</b>	<b>273808</b>	<b>1230573</b>	<b>3095726</b>

### ###Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
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
Dec 2019	1397	0.3	4.6	306	95
<b>TOTAL</b>	<b>35002</b>	<b>-</b>	<b>-</b>	<b>9333</b>	<b>1986</b>
<b>AVERAGE</b>	<b>2916.8</b>	<b>0.7</b>	<b>8.9</b>	<b>777.8</b>	<b>165.5</b>

### ###Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
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
Dec 2019	93057	75889	168947	55.1	44.9
<b>TOTAL</b>	<b>1475699</b>	<b>1381742</b>	<b>2857441</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>122974.9</b>	<b>115145.1</b>	<b>238120.1</b>	<b>52.7</b>	<b>47.3</b>