

OCTOBER 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 October 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: 523412 | Passenger Vehicles: 478454 | Heavy Commercial Vehicles: 44958

Monthly Average Daily Traffic (MADT): 17095 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1450

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 Wednesdays, 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 44958 HCVs, 3184 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.6% of total monthly volume, and 7.1% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Wednesdays, 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 52.1% 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 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 ,239 EB vehicles exceeded 88,000 pounds (122 vehicles were Class 13's; 60 vehicles were Class 10's). Of vehicles traveling WB,

264 EB vehicles exceeded 88,000 pounds (124 vehicles were Class 13's; 88 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from October 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in October 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 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 311143 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (54.8%) than EB (45.2%). 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 523412 vehicles with a combined GVW of 3900116 kips (1 kip = 1,000 pounds = 0.5 tons) in October 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 24607 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.2% of all ESALs were recorded WB while 49.8% was observed EB. In particular, 56% 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).

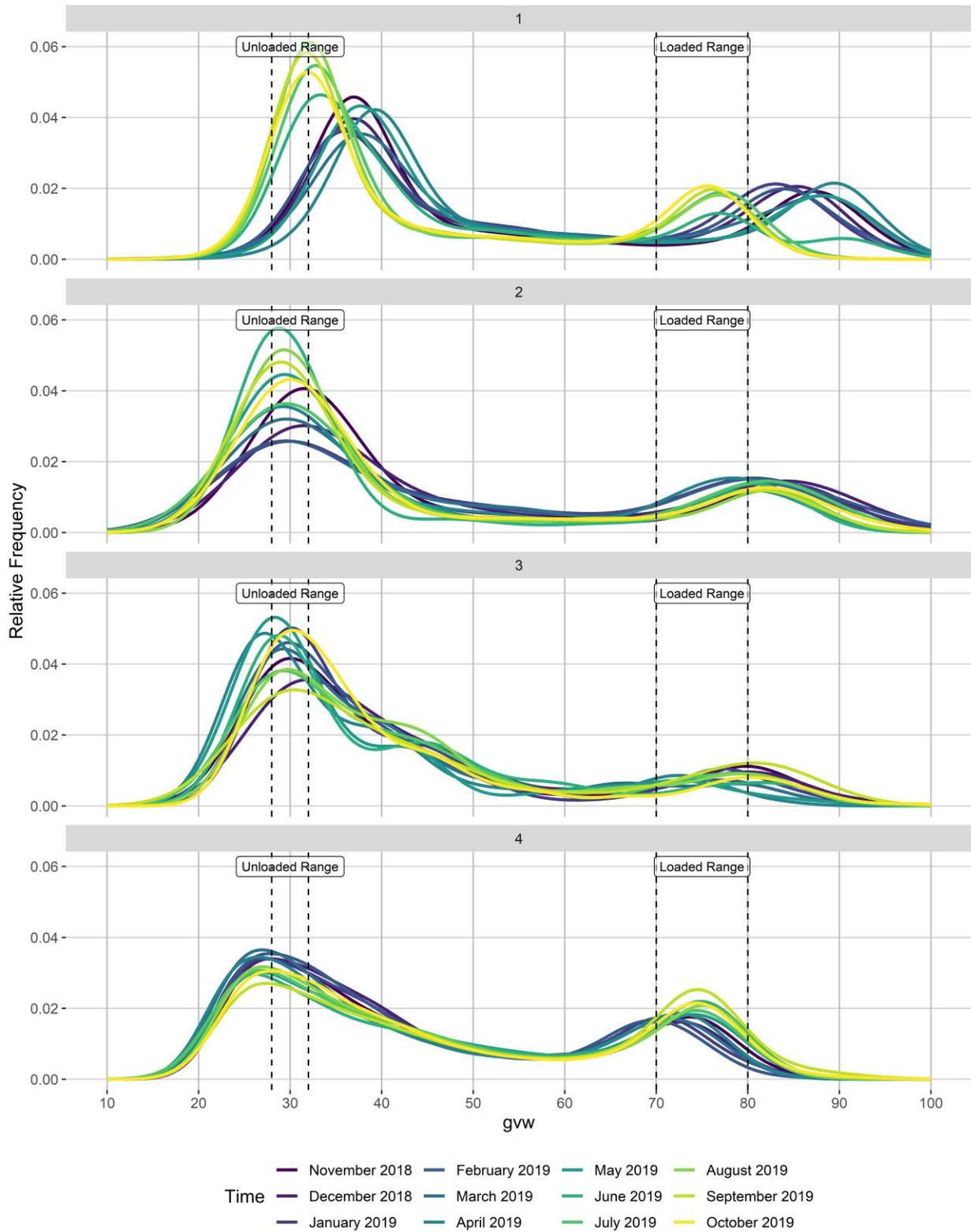
#####WIM monthly reports can be found at:

<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>

- <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.

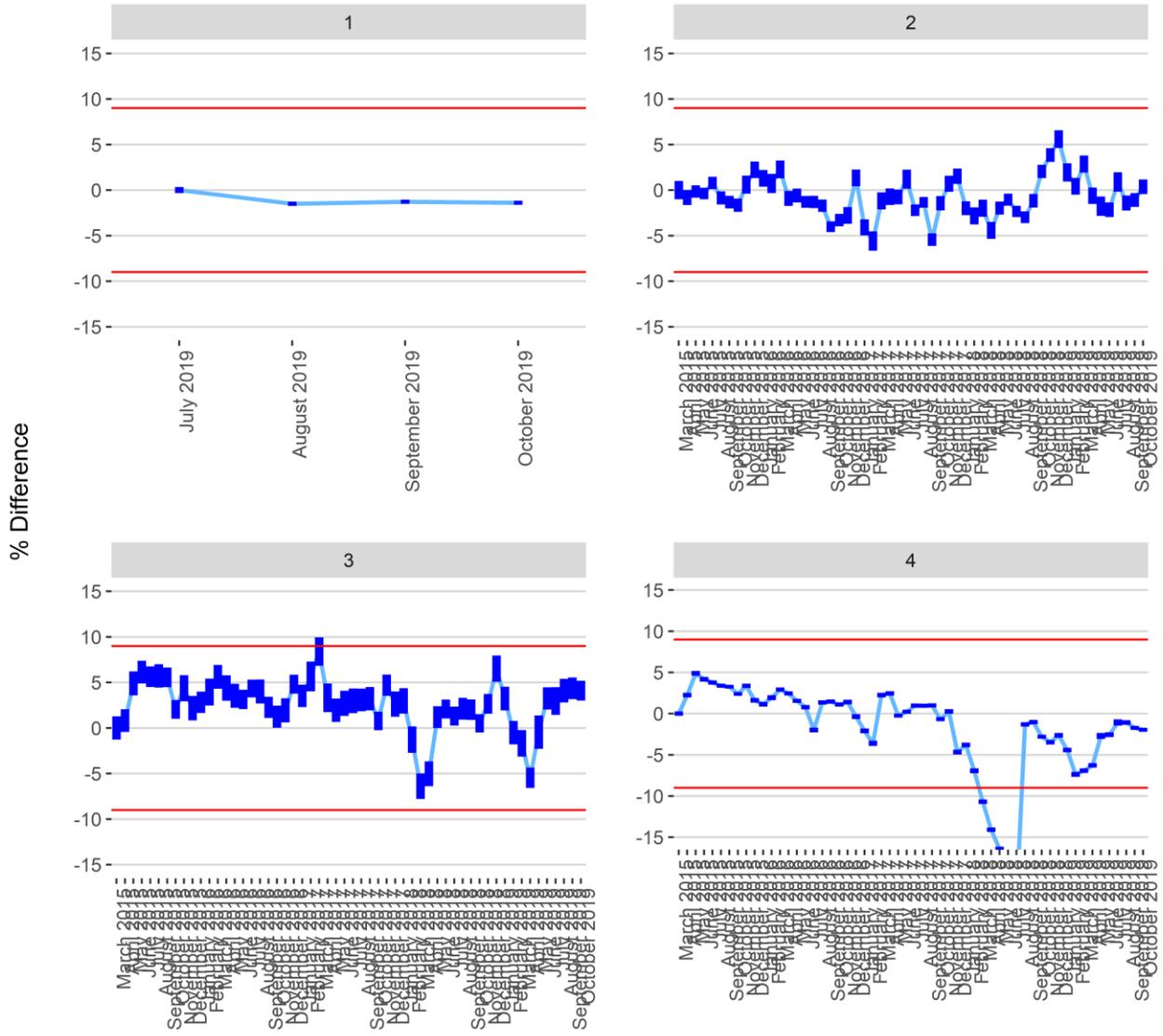
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Figure 1 - Monthly Class 9 GVW Histogram



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

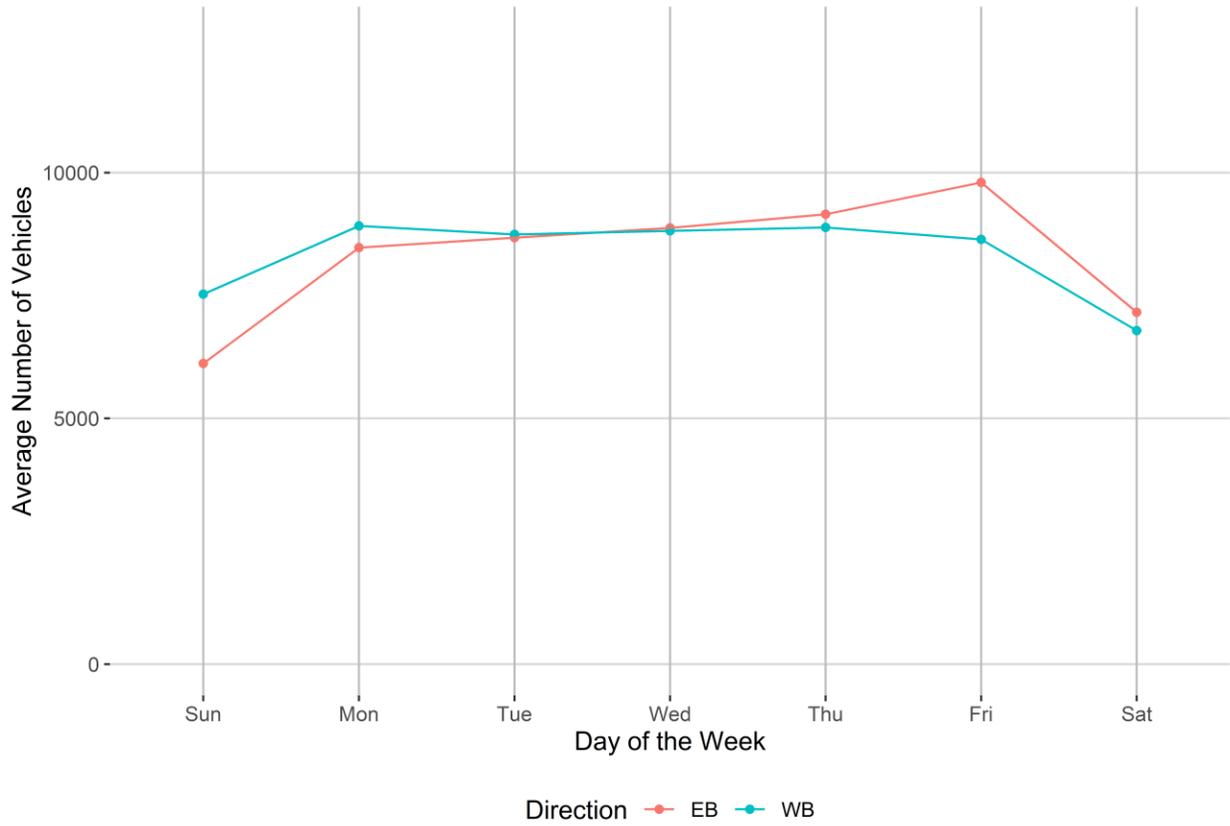


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

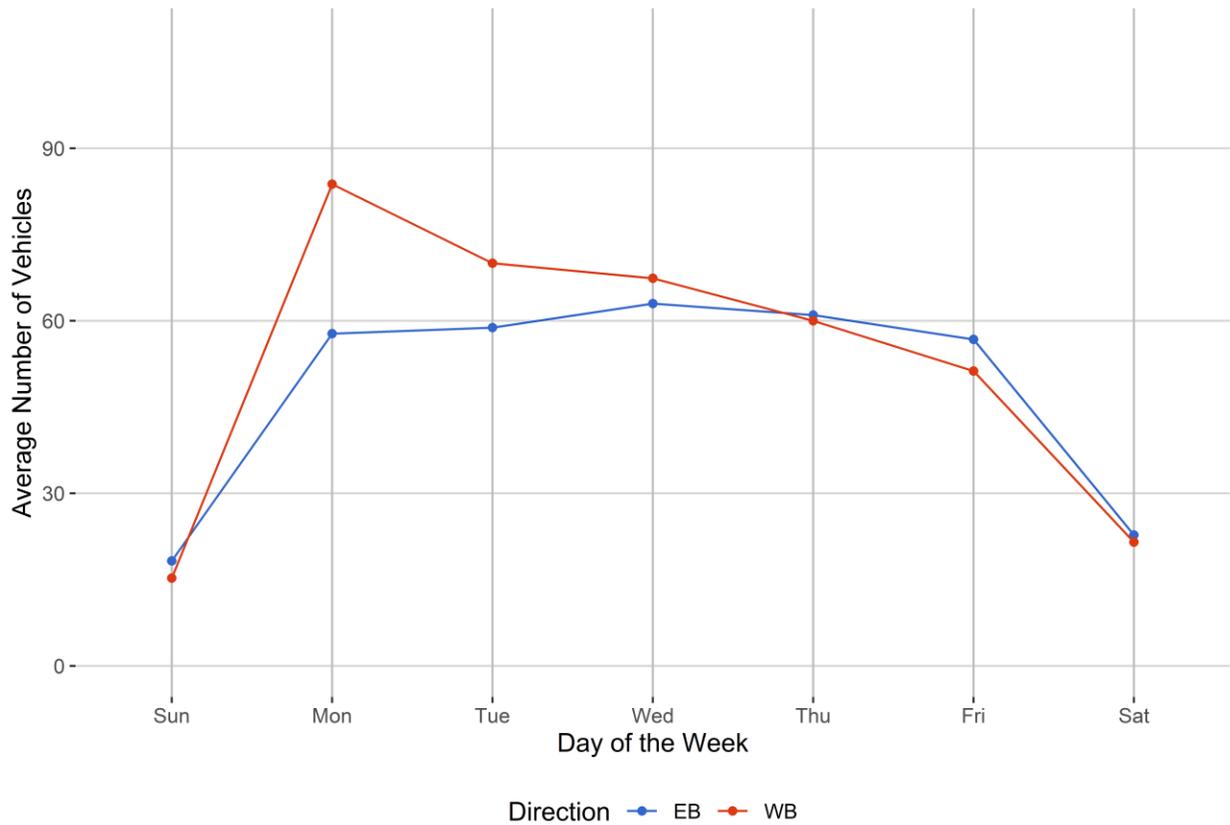


Figure 4 - Passenger Vehicles vs. Hour of the Day

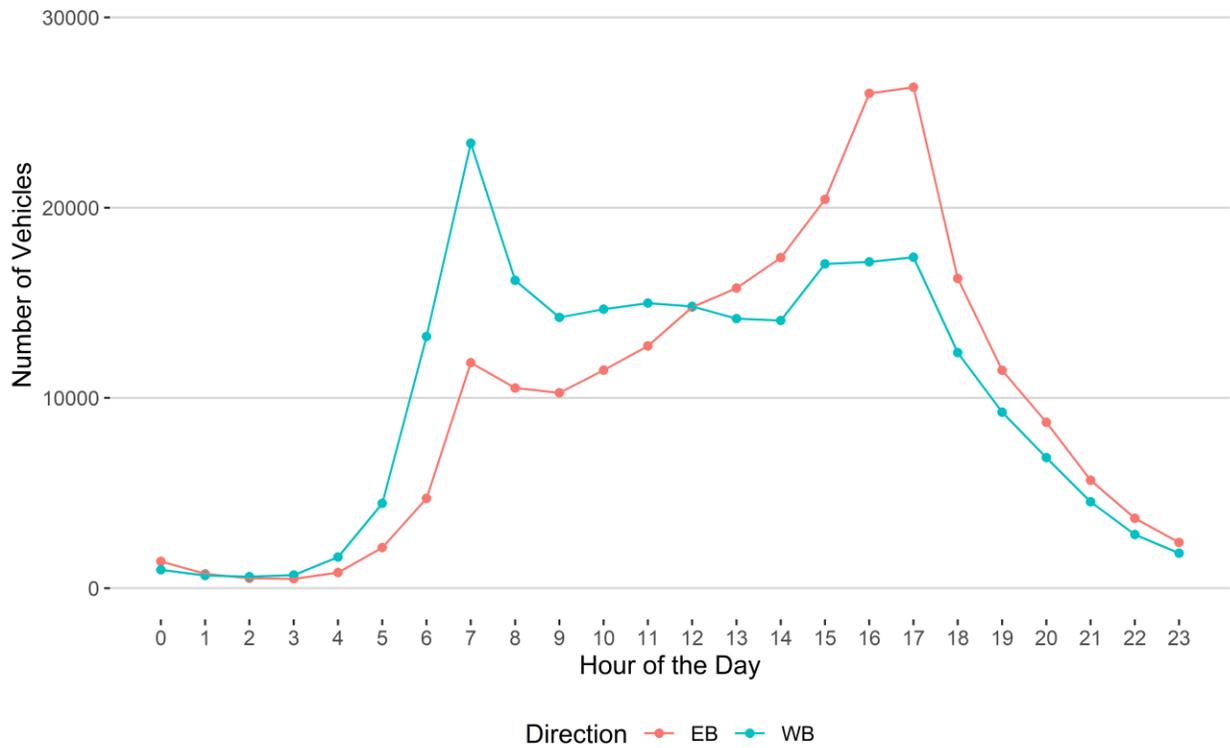


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

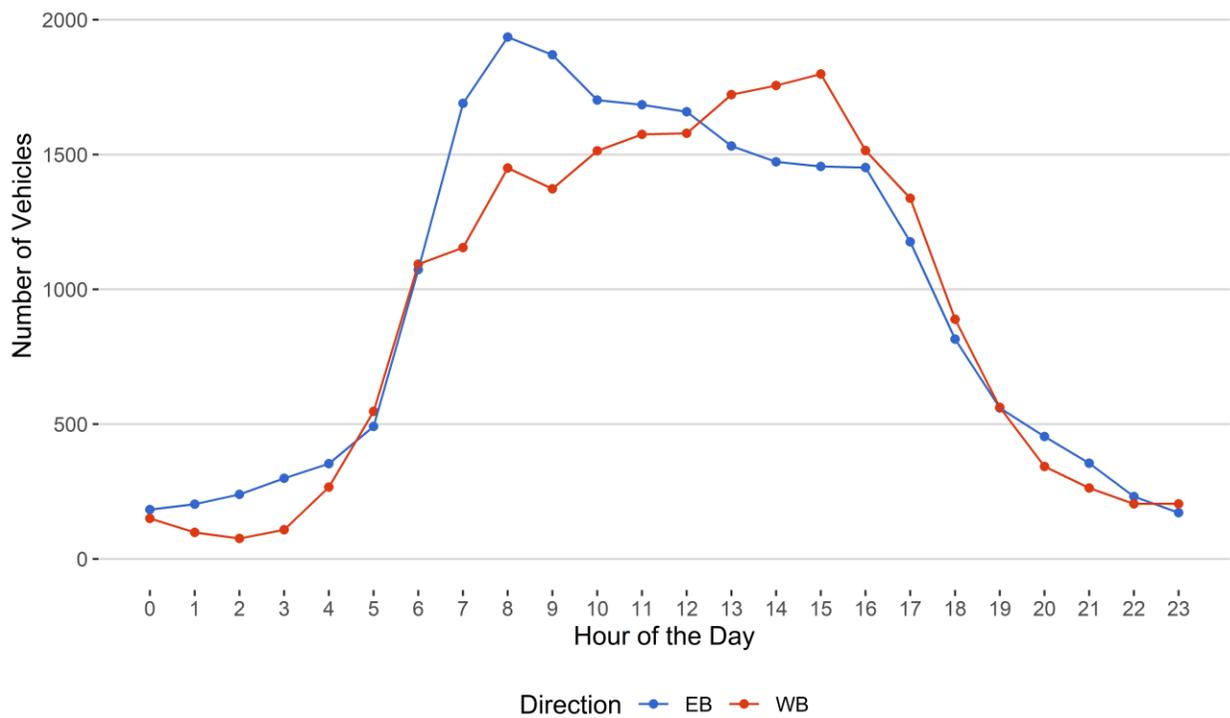


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

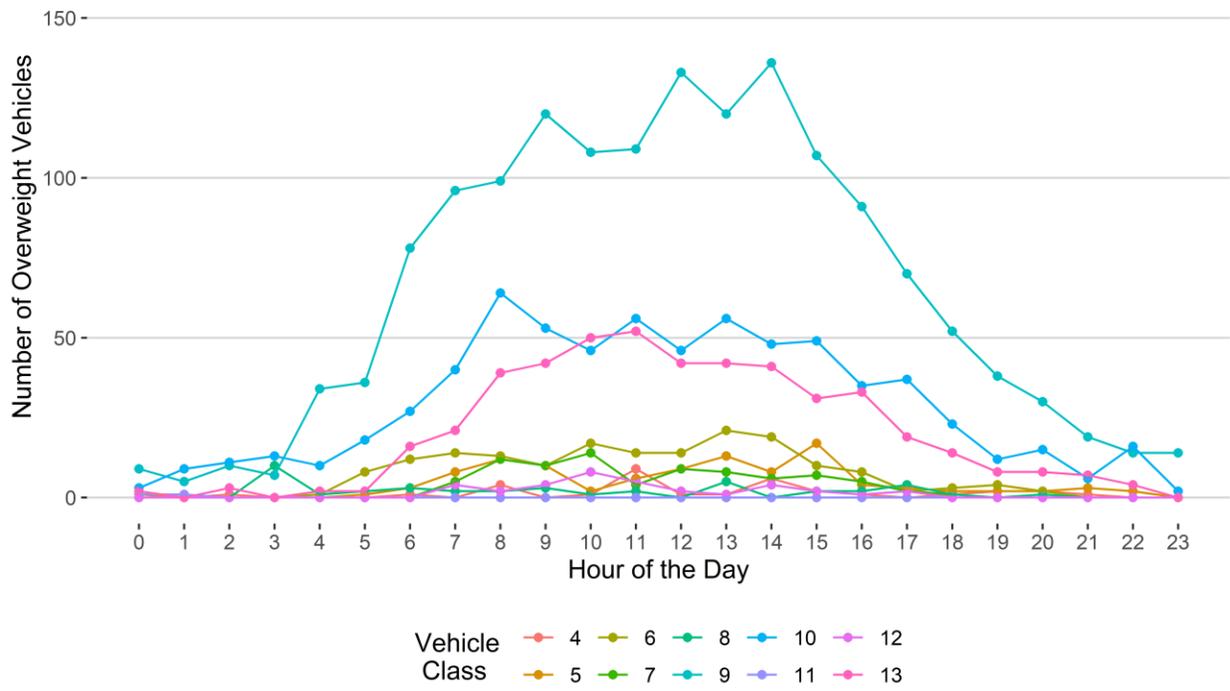


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

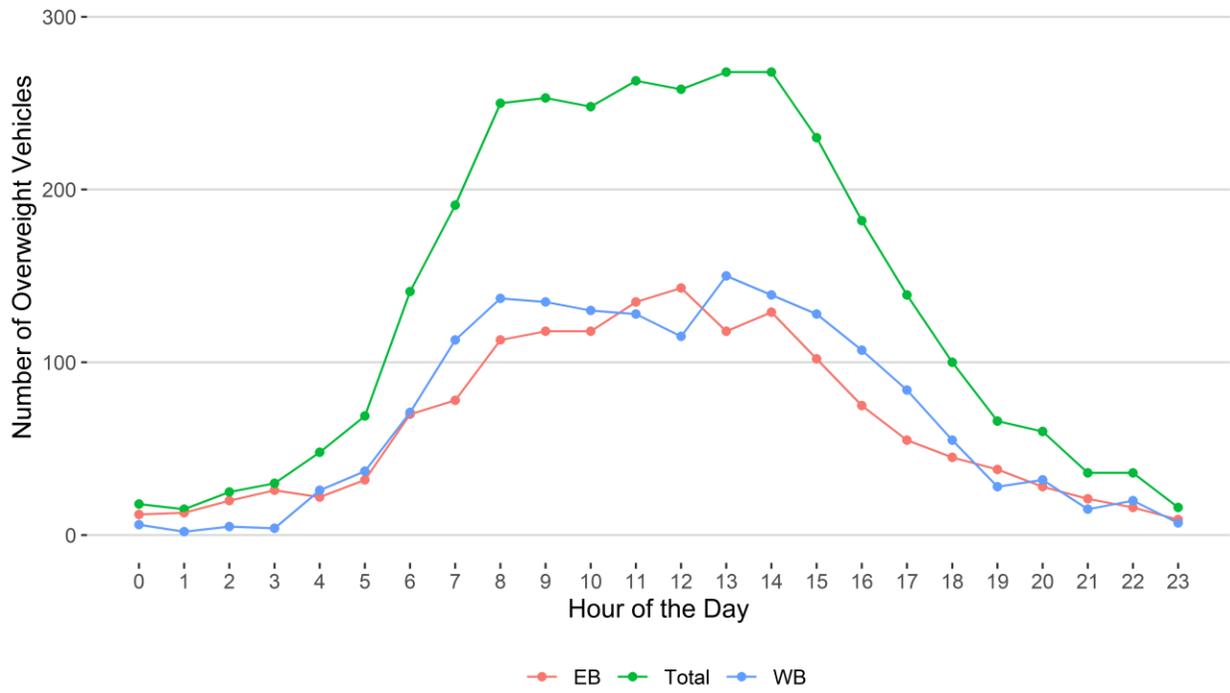
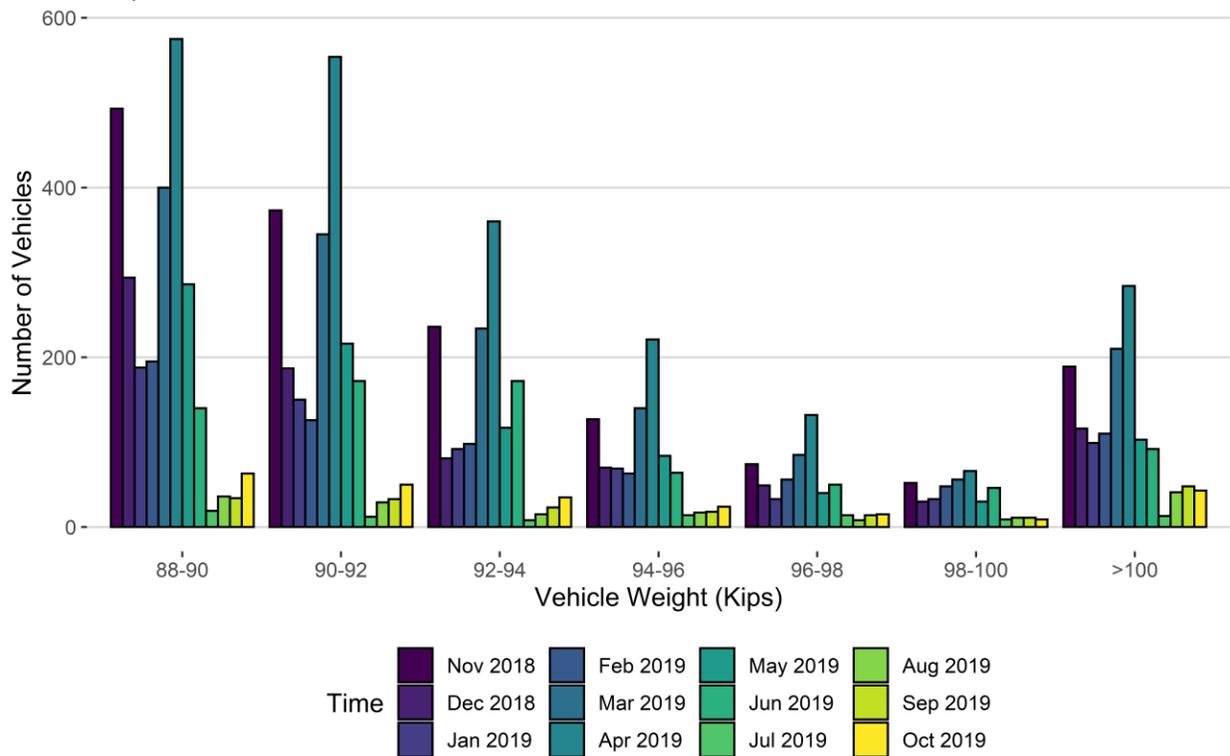
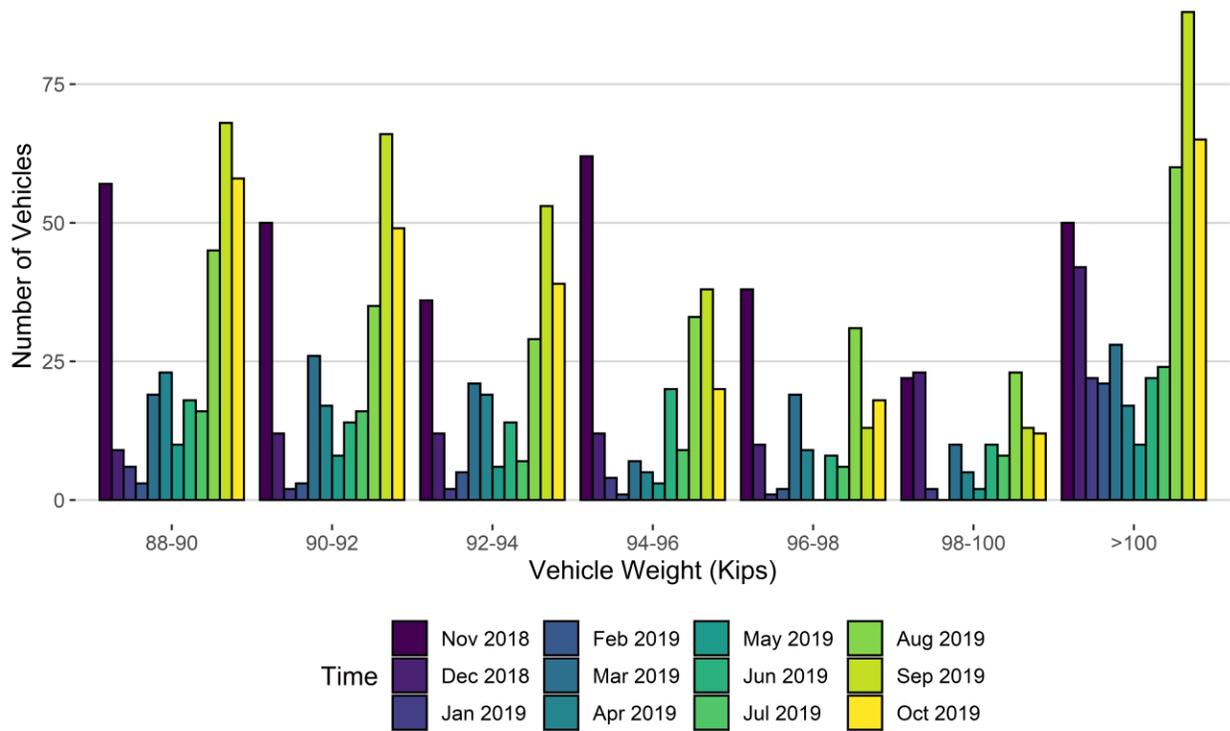


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019
88-90	493	294	188	195	400	575	286	140	19	36	34	63
90-92	373	187	150	126	345	554	216	172	12	29	33	50
92-94	236	81	92	98	234	360	117	172	8	15	23	35
94-96	127	70	69	63	140	221	84	64	14	17	18	24
96-98	74	49	33	56	85	132	40	50	14	8	14	15
98-100	52	30	33	48	56	66	30	46	9	11	11	9
>100	189	116	99	110	210	284	103	92	13	41	48	43
Total	1544	827	664	696	1470	2192	876	736	89	157	181	239

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



Vehicle Weights (Kips)	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019
88-90	57	9	6	3	19	23	10	18	16	45	68	58
90-92	50	12	2	3	26	17	8	14	16	35	66	49
92-94	36	12	2	5	21	19	6	14	7	29	53	39
94-96	62	12	4	1	7	5	3	20	9	33	38	20
96-98	38	10	1	2	19	9	0	8	6	31	13	18
98-100	22	23	2	0	10	5	2	10	8	23	13	12
>100	50	42	22	21	28	17	10	22	24	60	88	65
Total	315	120	39	35	130	95	39	106	86	256	339	261

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

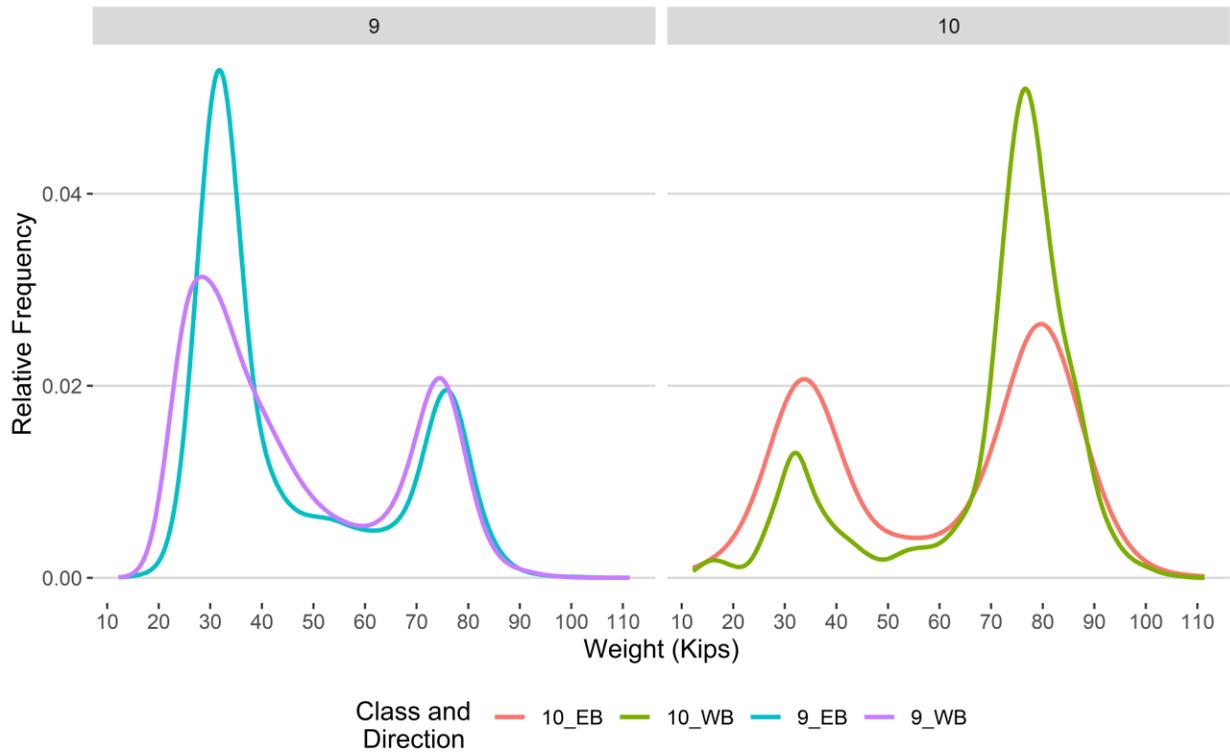


Figure 9 - Freight Percentage by Direction and Class

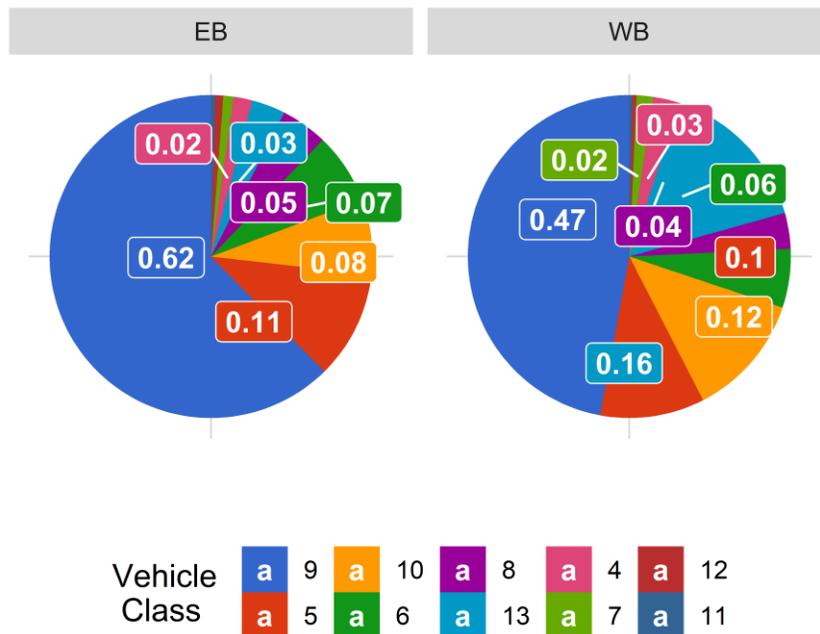


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

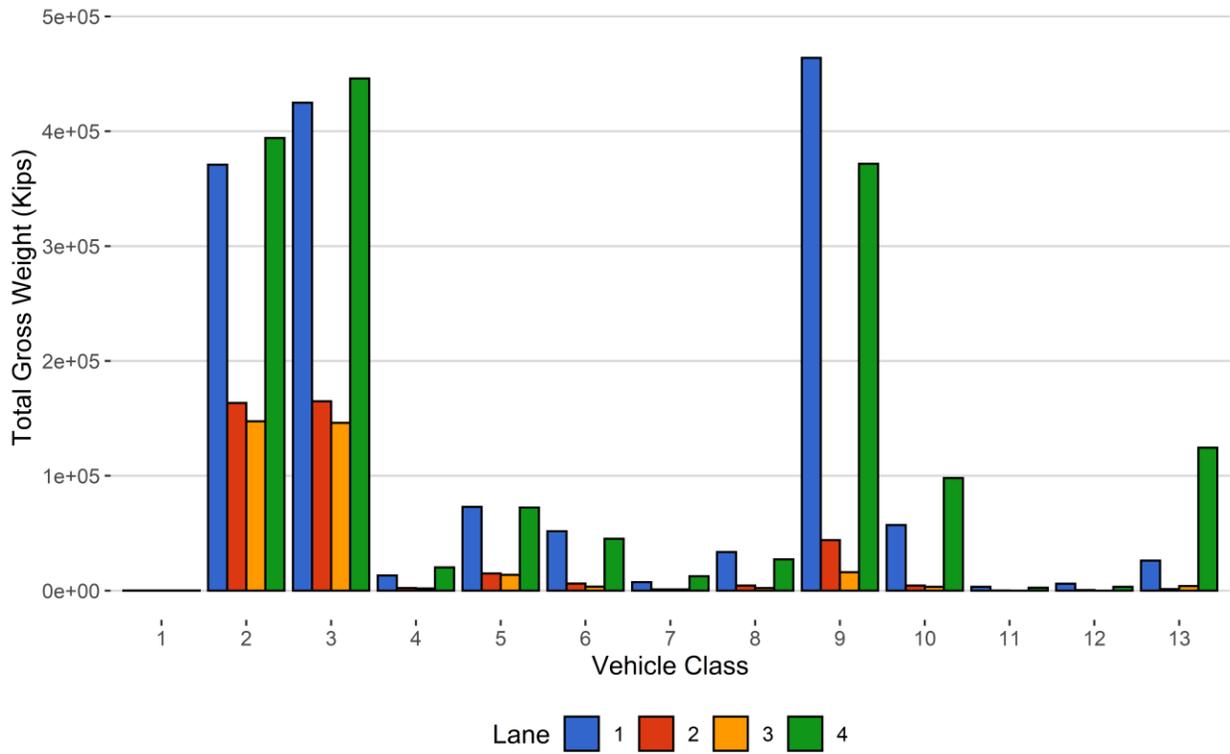


Figure 11 - Total Gross Vehicle Weight t

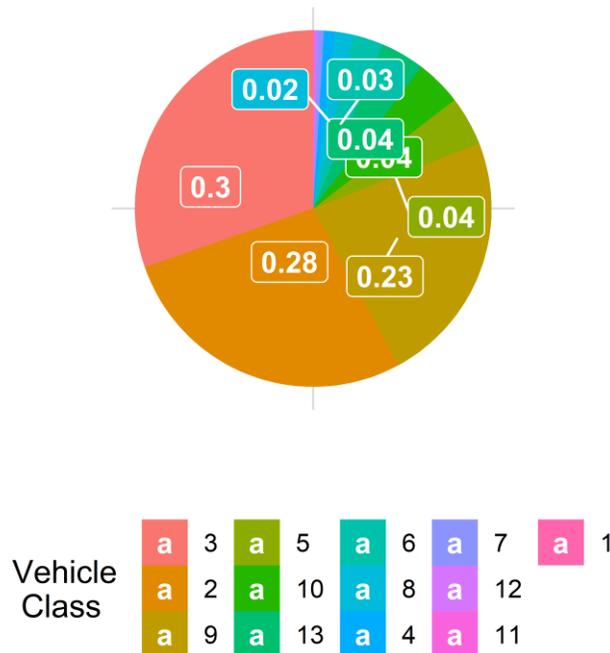


Figure 12 - Total ESALs by Class and Lane

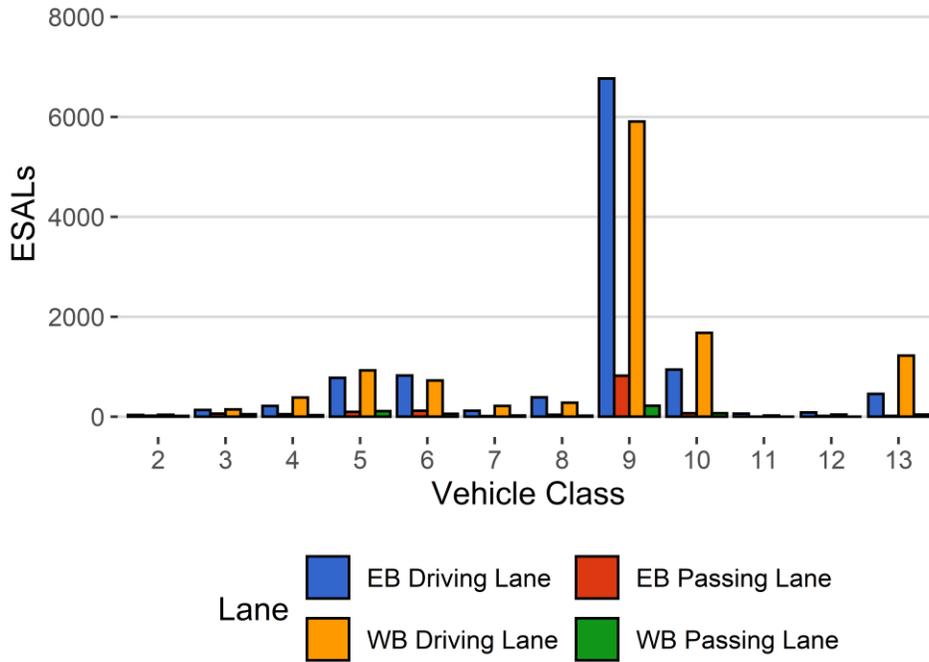
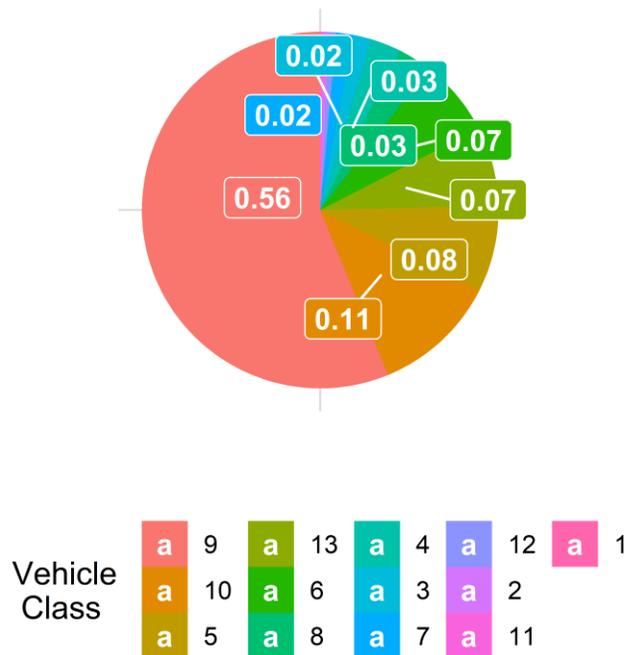


Figure 13 - ESALs by Class



**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

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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

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**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	2	58	0	0	0
2	9064	280978	53.7	0	0
3	6368	197418	37.7	0	0
4	40	1239	0.2	35	1.1
5	428	13255	2.5	108	3.4
6	114	3547	0.7	172	5.4
7	13	393	0.1	83	2.6
8	73	2260	0.4	41	1.3
9	628	19453	3.7	1535	48.2
10	81	2503	0.5	695	21.8
11	4	129	0	2	0.1
12	6	171	0	35	1.1
13	65	2008	0.4	478	15
<b>TOTAL</b>	<b>16884</b>	<b>523412</b>	<b>100</b>	<b>3184</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>
2019-10-12	Saturday	20:47:33	10	EB	1	111.36
2019-10-16	Wednesday	09:11:40	9	WB	4	108.65
2019-10-22	Tuesday	13:38:36	10	WB	4	105.8
2019-10-06	Sunday	15:12:24	10	EB	1	104.01
2019-10-18	Friday	13:52:37	10	WB	4	103.48
2019-10-11	Friday	13:38:49	9	EB	1	102.18
2019-10-25	Friday	01:03:02	9	EB	2	101.93
2019-10-26	Saturday	14:40:32	10	EB	1	101.93
2019-10-25	Friday	22:42:34	10	EB	1	101.92
2019-10-26	Saturday	18:48:33	9	EB	2	101.32

**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	563	129	22.9	13656	1644	3573
5	EB	8	6636	1115	16.8	79876	7942	17854
6	EB	19	1922	170	8.8	54918	2976	10815
7	EB	11.5	157	0	0	8341	0	3268
8	EB	31	1230	622	50.6	22808	15136	1980
9	EB	33	11020	4104	37.2	385974	121871	78873
10	EB	33.5	1022	193	18.9	55893	5509	14061
11	EB	36.5	67	12	17.9	3058	298	525
12	EB	36.5	112	6	5.4	6399	175	1265
13	EB	31.5	329	2	0.6	27383	59	8541
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>23058</b>	<b>6353</b>	<b>****</b>	<b>658304</b>	<b>****</b>	<b>140754</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	667	97	14.5	20809	1207	6130
5	WB	8	6524	1187	18.2	77561	8457	17433
6	WB	19	1600	216	13.5	44937	3682	9321
7	WB	11.5	233	0	0	13591	0	5456
8	WB	31	1014	607	59.9	15330	14118	1356
9	WB	33	8294	2958	35.7	306599	81110	65256
10	WB	33.5	1463	157	10.7	96875	4447	26562
11	WB	36.5	61	14	23	2189	370	237
12	WB	36.5	58	4	6.9	3230	88	630
13	WB	31.5	1665	1	0.1	128437	26	38010
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>21579</b>	<b>5241</b>	<b>****</b>	<b>709558</b>	<b>****</b>	<b>170389</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>44637</b>	<b>11594</b>	<b>362</b>	<b>1367862</b>	<b>269116</b>	<b>311143</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	26	10	12	17	65	0
2	370828	163449	147511	394055	1075842	27.6
3	424909	164897	146088	445912	1181805	30.3
4	13120	2180	1826	20191	37316	1
5	72829	14988	13733	72285	173835	4.5
6	51708	6186	3461	45158	106513	2.7
7	7339	1002	1051	12540	21932	0.6
8	33533	4410	2249	27198	67391	1.7
9	463931	43914	15972	371737	895554	23
10	57048	4354	3338	97984	162723	4.2
11	3305	51	0	2559	5915	0.2
12	6056	519	0	3318	9893	0.3
13	26106	1336	3977	124486	155906	4
<b>TOTAL</b>	<b>1530737</b>	<b>407296</b>	<b>339218</b>	<b>1617439</b>	<b>3894690</b>	<b>100</b>
<b>GVW/LANE</b>	<b>39.3</b>	<b>10.46</b>	<b>8.71</b>	<b>41.53</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	0.0169
2	36	22	18	40	117	0.48	9e-04
3	134	64	52	146	396	1.62	0.0041
4	216	51	33	386	685	2.81	1.12
5	780	98	112	930	1919	7.87	0.29
6	826	121	57	724	1727	7.08	0.98
7	119	12	24	217	372	1.52	1.89
8	387	41	19	280	726	2.98	0.65
9	6767	823	219	5906	13715	56.22	1.42
10	942	70	70	1679	2761	11.32	2.22
11	64	1	0	24	89	0.36	1.36
12	87	15	0	44	146	0.6	1.67
13	459	18	43	1221	1741	7.14	1.74
<b>TOTAL</b>	<b>10817</b>	<b>1334</b>	<b>646</b>	<b>11597</b>	<b>24394</b>	<b>100</b>	<b>13</b>
<b>ESALS/LANE</b>	<b>44.3</b>	<b>5.5</b>	<b>2.6</b>	<b>47.5</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>
Nov 2018	430849	15388	1183	395350	91.8	35498.8	8.2	89	11
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
<b>TOTAL</b>	<b>4900750</b>	<b>-</b>	<b>-</b>	<b>4522215</b>	<b>-</b>	<b>378534</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>408396</b>	<b>14570</b>	<b>1037</b>	<b>376851</b>	<b>92</b>	<b>31544</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>
Nov 2018	16981	1449	650	8651	27730	92	8	38.1
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
<b>TOTAL</b>	<b>145417</b>	<b>12911</b>	<b>5904</b>	<b>90634</b>	<b>254866</b>	-	-	-
<b>AVERAGE</b>	<b>12118</b>	<b>1076</b>	<b>492</b>	<b>7553</b>	<b>21239</b>	<b>92</b>	<b>8</b>	<b>25</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>
Nov 18	1535083	394342	304696	1360820	3594942
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
<b>TOTAL</b>	<b>15635525</b>	<b>3855519</b>	<b>3298110</b>	<b>14769591</b>	<b>37558744</b>
<b>AVERAGE</b>	<b>1302960</b>	<b>321293</b>	<b>274842</b>	<b>1230799</b>	<b>3129895</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>
Nov 2018	5096	1.1	13.3	1860	313
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
<b>TOTAL</b>	<b>39438</b>	<b>-</b>	<b>-</b>	<b>11512</b>	<b>2331</b>
<b>AVERAGE</b>	<b>3286.5</b>	<b>0.8</b>	<b>10</b>	<b>959.3</b>	<b>194.2</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>
Nov 2018	168189	136273	304462	55.2	44.8
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
<b>TOTAL</b>	<b>1542958</b>	<b>1394122</b>	<b>2937080</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>128579.8</b>	<b>116176.8</b>	<b>244756.6</b>	<b>53.6</b>	<b>46.4</b>