

JULY 2019



**WIM #32  
US 52, MP 66.0  
ORONOCO, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #32 is located on US 52 near Oronoco in Olmsted county.

## System Operation

WIM #32 was operational for the entire month of July 2019. Volume was computed using all monthly data.

## System Calibration

WIM #32 was most recently calibrated on 2019-01-04. 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: 1058475 | Passenger Vehicles: 974717 | Heavy Commercial Vehicles: 83758

Monthly Average Daily Traffic (MADT): 34221 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2702

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Mondays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Tuesdays (see Figure 3 and 4).

### Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), NB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, SB PVs peaked in volume between 03 PM and 05 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 03 PM and 05 PM, while volume going SB 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 83758 HCVs, 11218 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 1.1% of total monthly volume, and 13.7% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Mondays, 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 60.6% of all overweight vehicles traveling SB 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 <sup>4</sup>.

Using normal load limits ,203 NB vehicles exceeded 88,000 pounds (75 vehicles were Class 13's; 67 vehicles were Class 9's). Of vehicles traveling SB,

442 NB vehicles exceeded 88,000 pounds (294 vehicles were Class 9's; 72 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from July 2019.

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

**Freight Totals.** A total of 728724 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (52.5%) than NB (47.5%). See Table 4 and Figure 11 for more freight information.

**####Infrastructure Considerations Bridge.** Bridge No. 55X13 (a box culvert) is approximately 1/3 of a mile north of WIM #32, and Bridge No. 8960 (a box culvert) is approximately 1 ¾ miles south of WIM #32. WIM #32 recorded a total of 1058475 vehicles with a combined GVW of 7971633 kips (1 kip = 1,000 pounds = 0.5 tons) in July 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 66394 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 54.7% of all ESALs were recorded SB while 45.3% was observed NB. In particular, 77% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 34% 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:

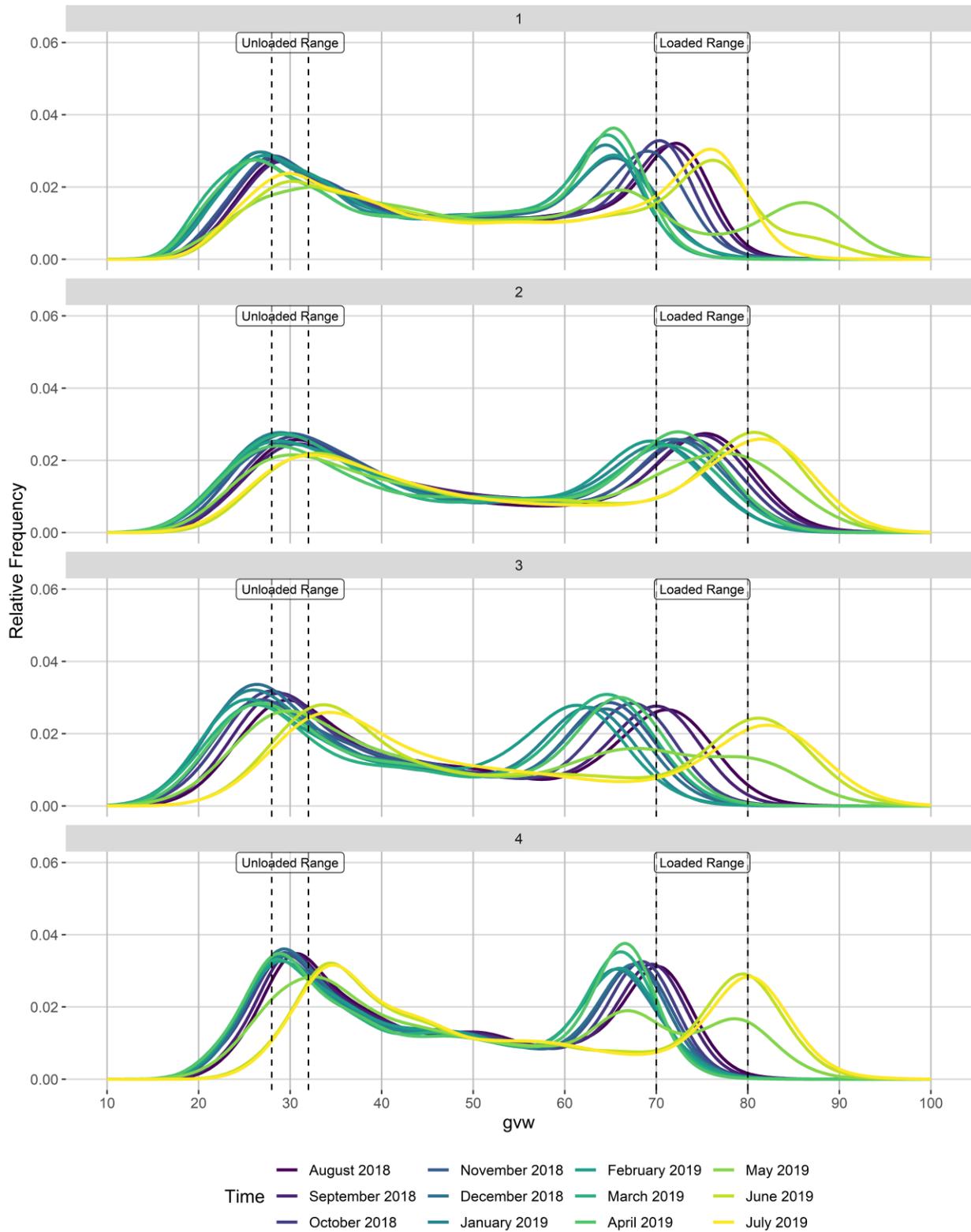
<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle

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)

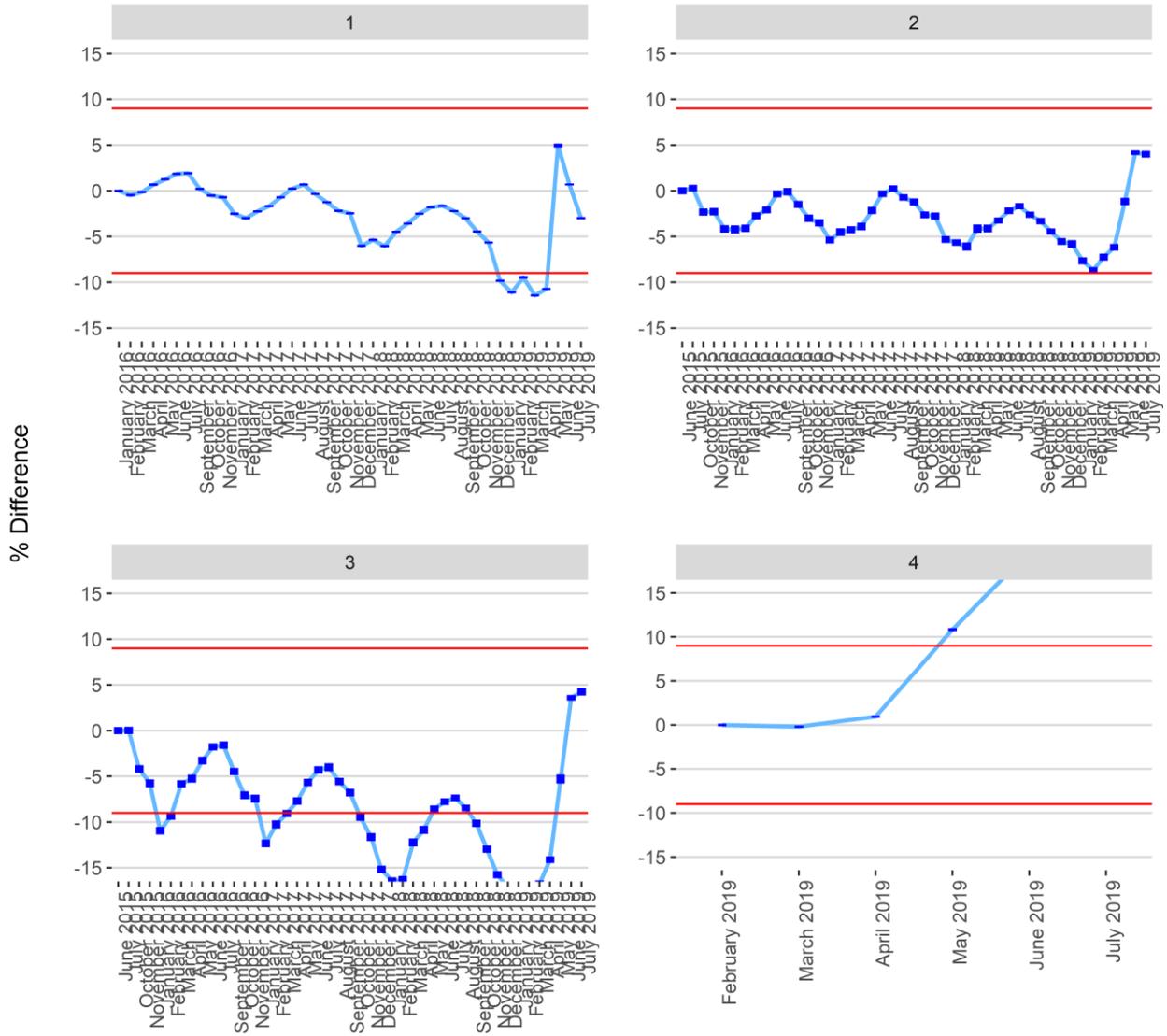


Figure 2 - Average Vehicle Volume vs. Day of the Week

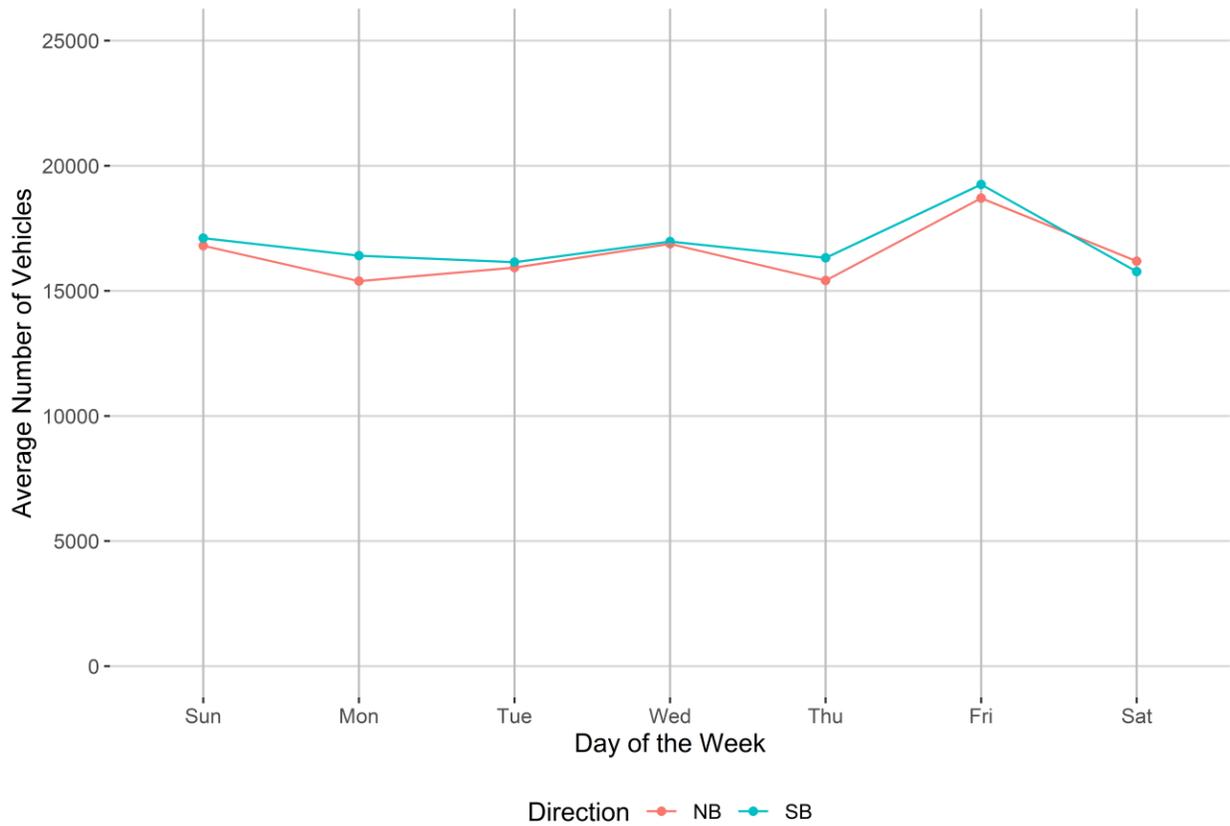


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

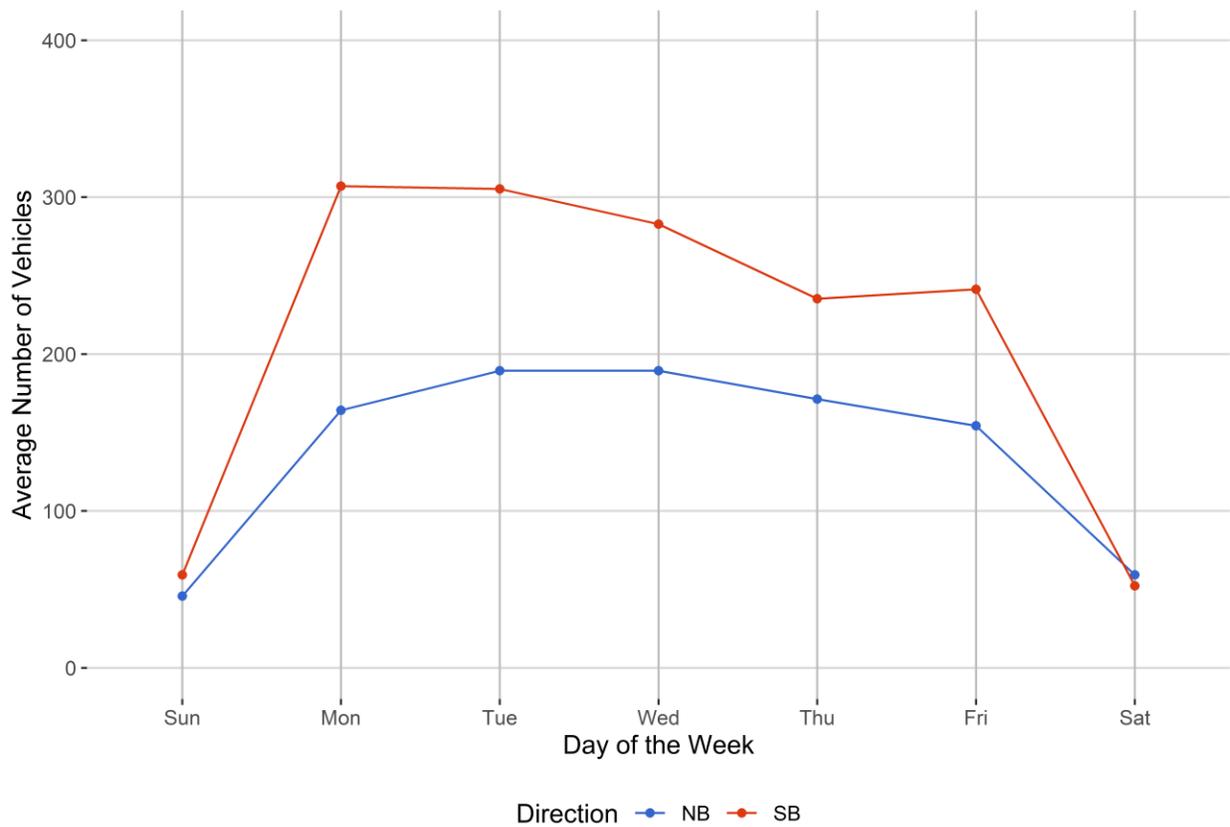


Figure 4 - Passenger Vehicles vs. Hour of the Day

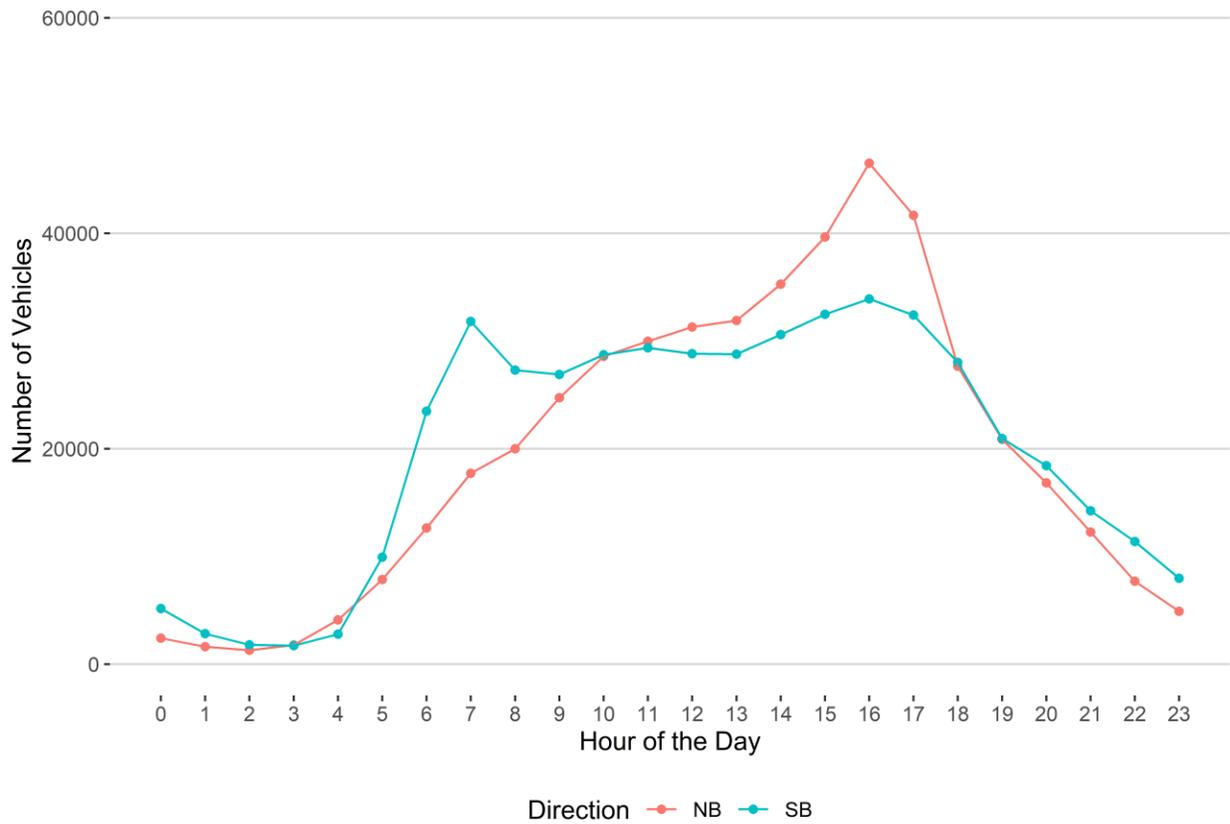


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

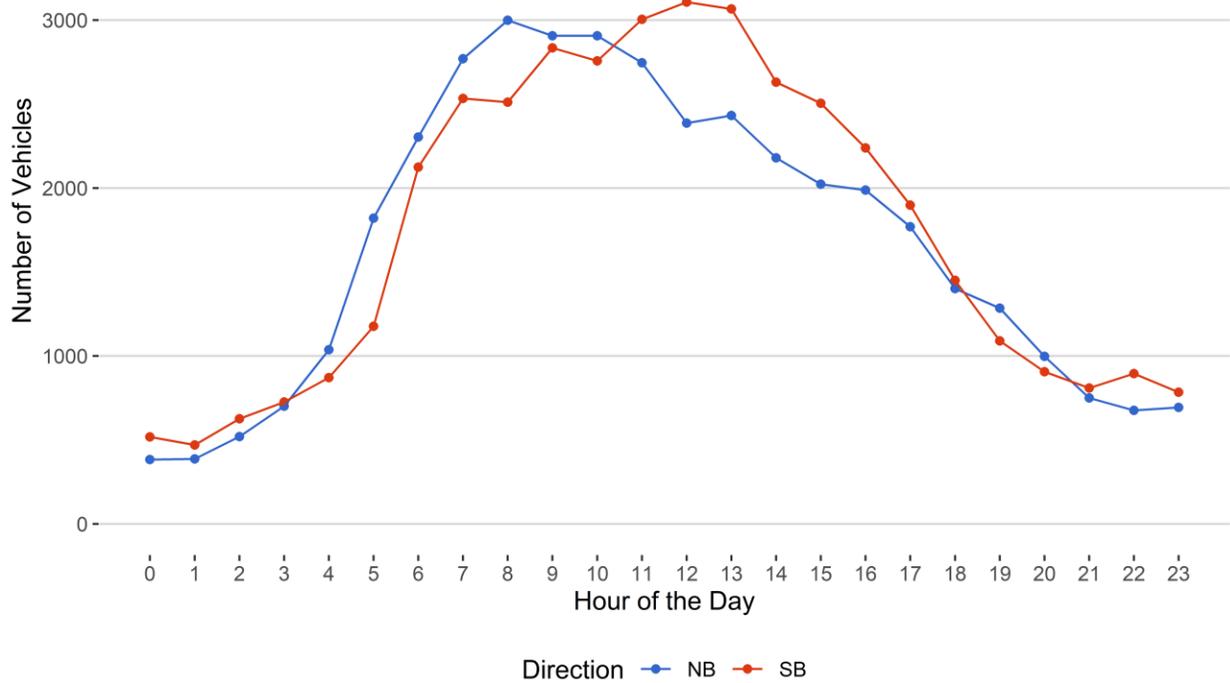


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

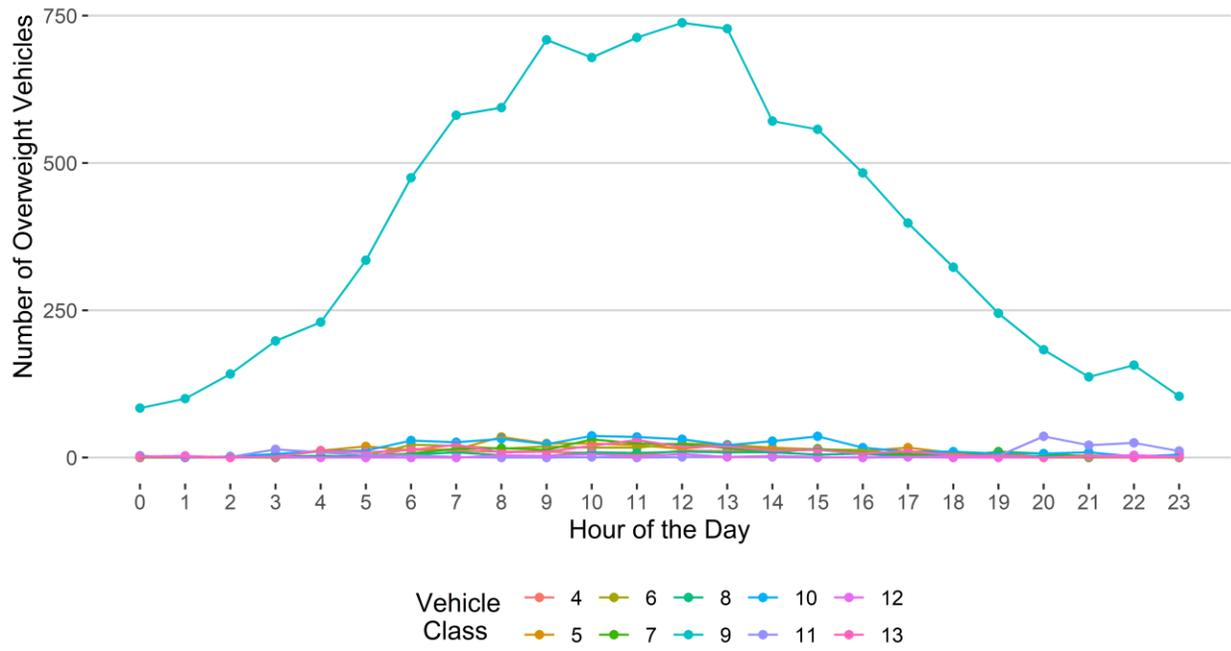


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

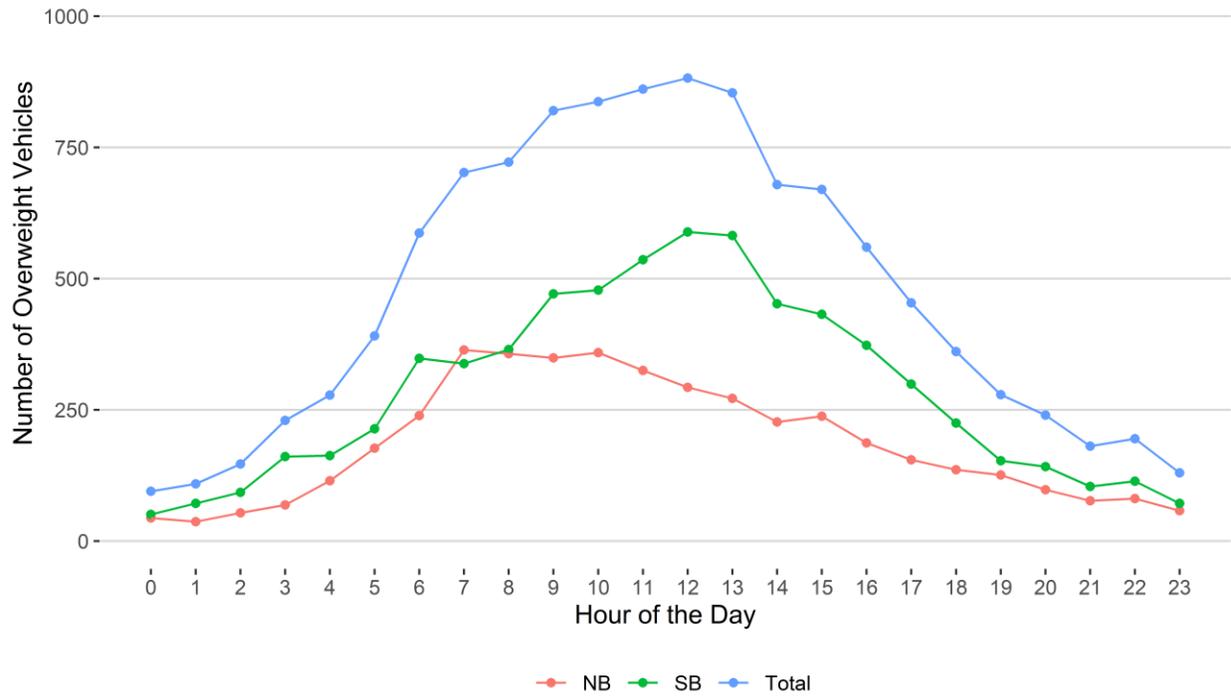
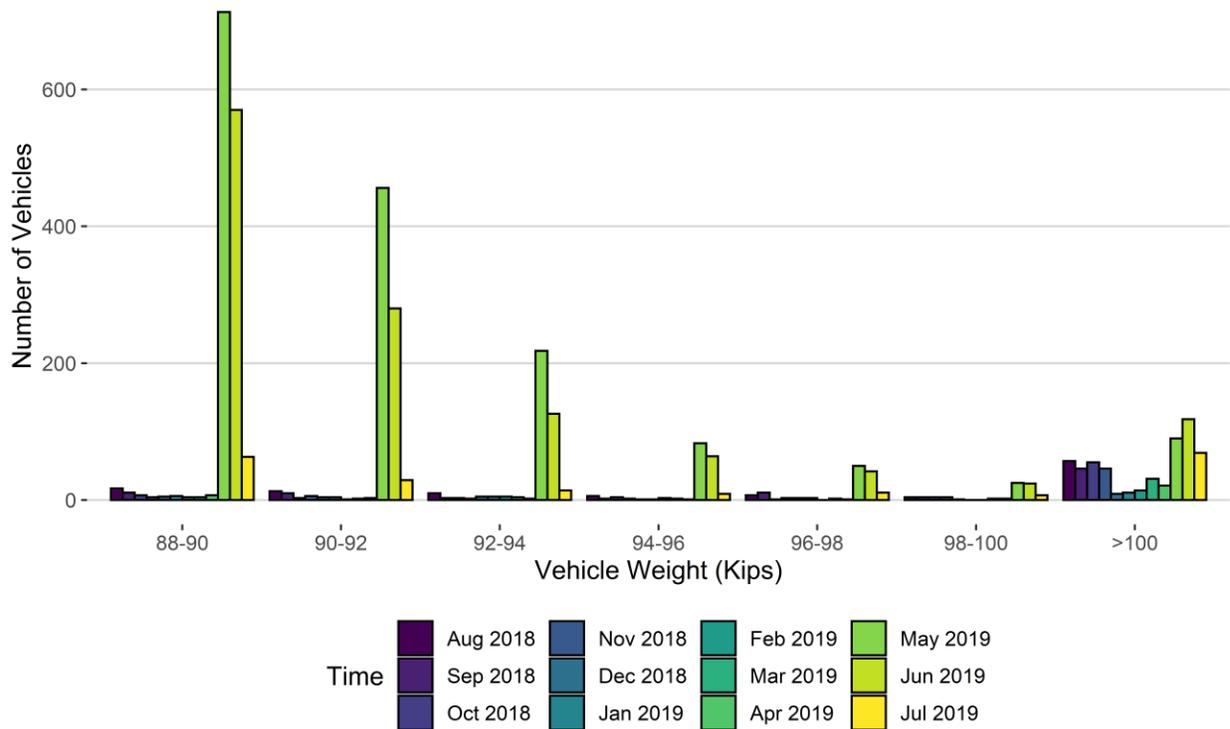
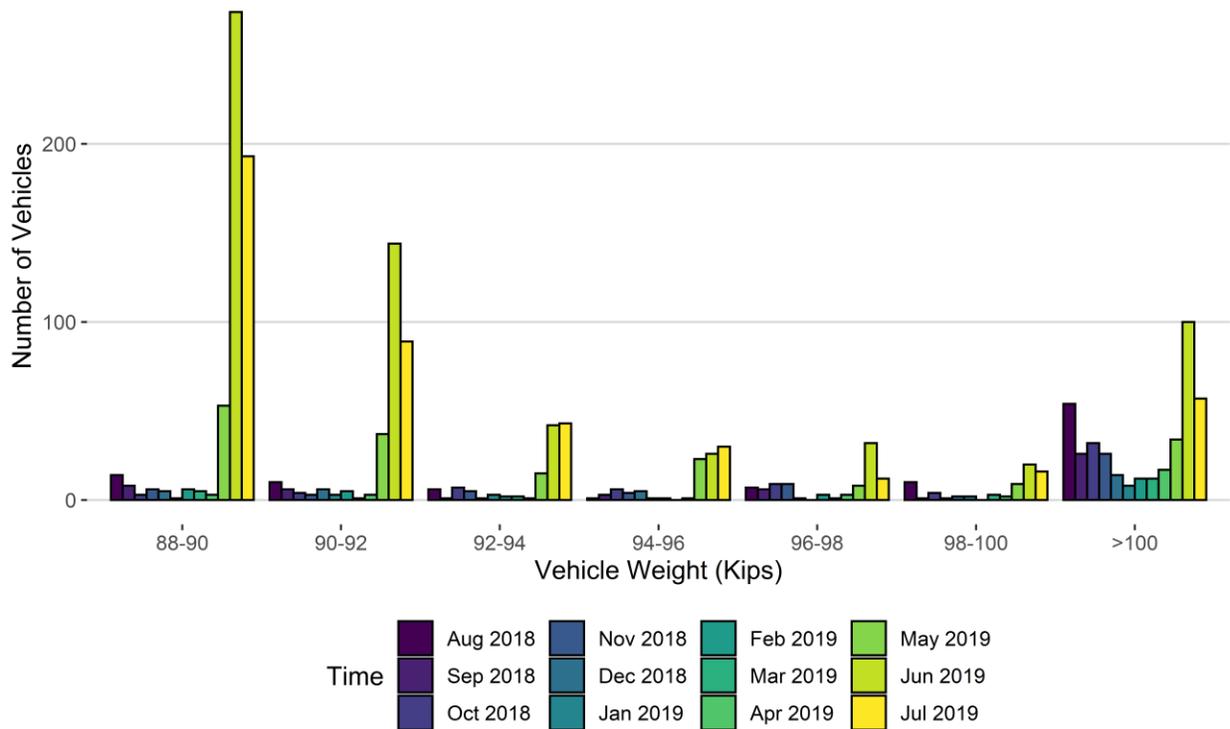


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019
88-90	17	11	7	4	5	6	4	4	7	713	570	63
90-92	13	10	3	6	4	4	1	2	3	456	280	29
92-94	10	3	3	2	5	5	5	4	2	218	126	14
94-96	6	2	4	2	1	1	3	2	1	83	64	9
96-98	7	11	1	3	3	3	0	2	1	50	42	11
98-100	4	4	4	4	1	0	0	2	2	25	24	7
>100	57	46	55	46	9	11	14	31	21	90	118	69
Total	114	87	77	67	28	30	27	47	37	1635	1224	202

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



Vehicle Weights (Kips)	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019
88-90	14	8	3	6	5	1	6	5	3	53	274	193
90-92	10	6	4	3	6	3	5	1	3	37	144	89
92-94	6	1	7	5	1	3	2	2	1	15	42	43
94-96	1	3	6	4	5	1	1	0	1	23	26	30
96-98	7	6	9	9	1	0	3	1	3	8	32	12
98-100	10	1	4	1	2	2	0	3	2	9	20	16
>100	54	26	32	26	14	8	12	12	17	34	100	57
Total	102	51	65	54	34	18	29	24	30	179	638	440

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

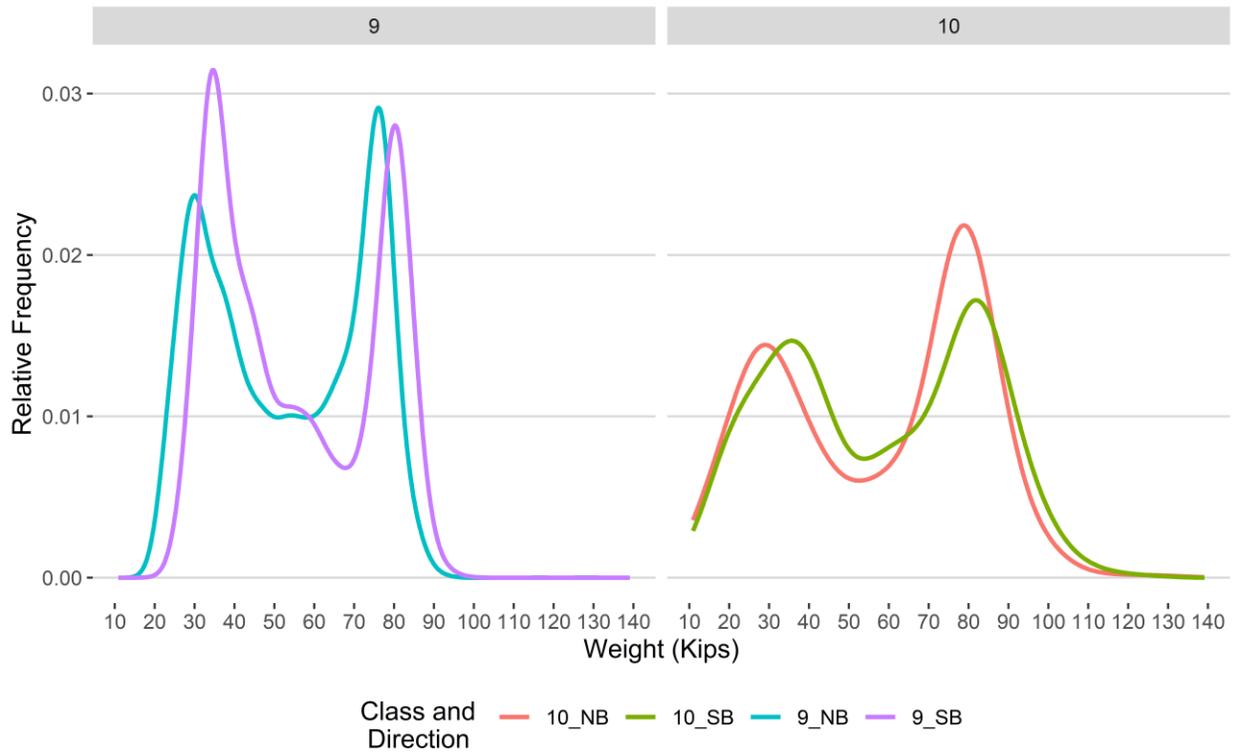


Figure 9 - Freight Percentage by Direction and Class

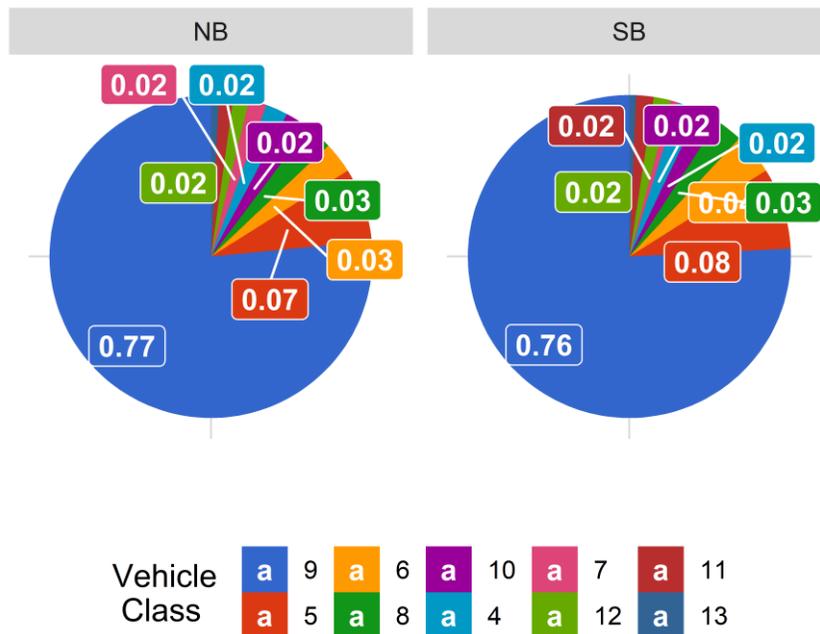


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

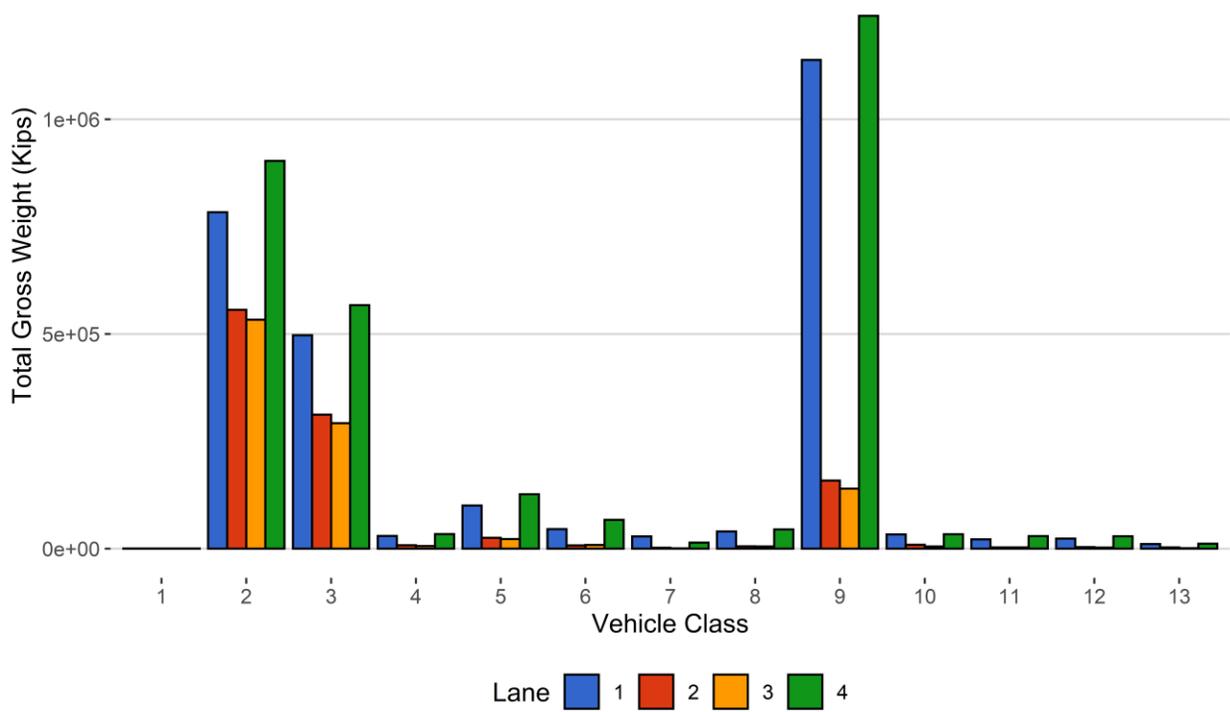


Figure 11 - Total Gross Vehicle Weight t

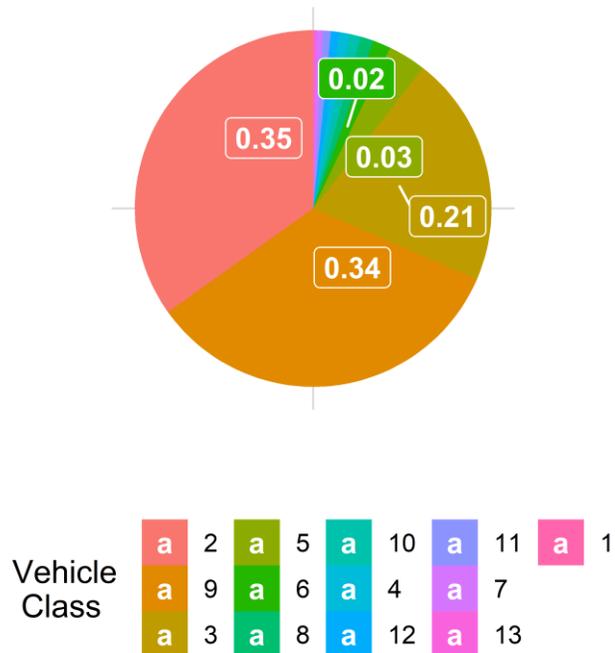


Figure 12 - Total ESALs by Class and Lane

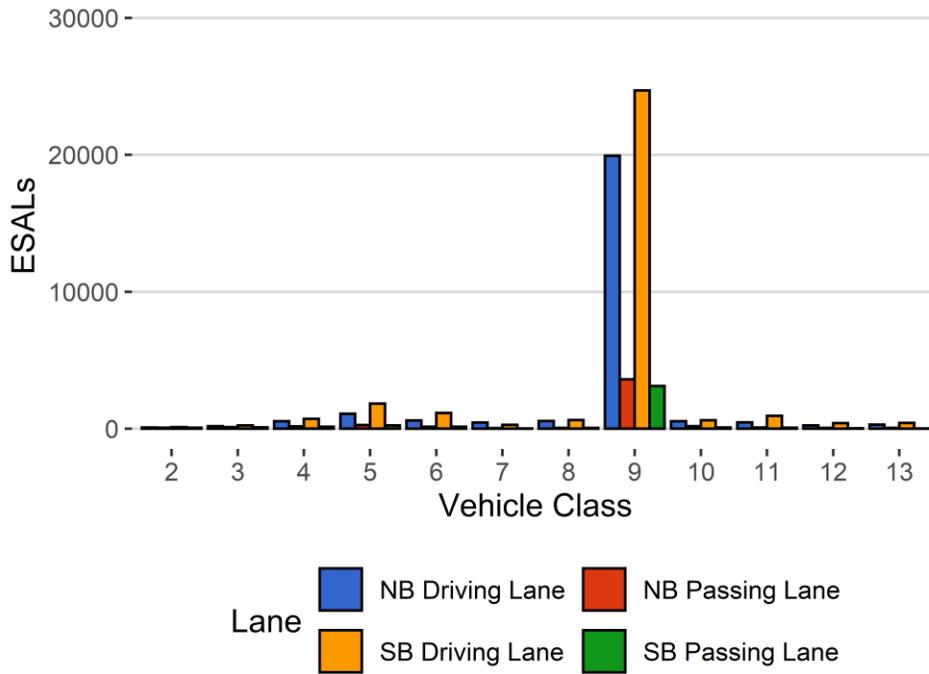
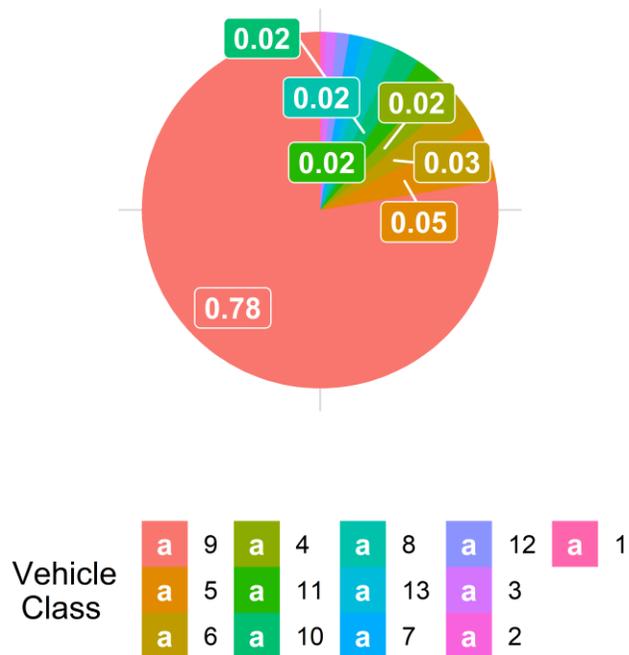


Figure 13 - ESALs by Class



**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>
June 2015	NA	NA	11.20	0.00	11.34	0.00	NA	NA
July 2015	NA	NA	11.23	0.30	11.35	0.02	NA	NA
October 2015	NA	NA	10.93	-2.33	10.87	-4.19	NA	NA
November 2015	NA	NA	10.94	-2.29	10.69	-5.77	NA	NA
January 2016	10.55	0.00	10.73	-4.17	10.10	-10.94	NA	NA
February 2016	10.50	-0.47	10.72	-4.22	10.29	-9.33	NA	NA
March 2016	10.53	-0.14	10.74	-4.11	10.68	-5.82	NA	NA
April 2016	10.62	0.67	10.89	-2.75	10.75	-5.26	NA	NA
May 2016	10.68	1.24	10.96	-2.10	10.97	-3.27	NA	NA
June 2016	10.74	1.86	11.16	-0.34	11.14	-1.78	NA	NA
July 2016	10.75	1.92	11.18	-0.10	11.16	-1.59	NA	NA
September 2016	10.57	0.21	11.03	-1.49	10.84	-4.47	NA	NA
October 2016	10.49	-0.52	10.86	-3.01	10.54	-7.07	NA	NA
November 2016	10.47	-0.71	10.80	-3.51	10.50	-7.44	NA	NA
January 2017	10.28	-2.51	10.59	-5.39	9.94	-12.34	NA	NA
February 2017	10.23	-2.99	10.69	-4.53	10.18	-10.26	NA	NA
March 2017	10.31	-2.25	10.72	-4.26	10.32	-9.07	NA	NA
April 2017	10.37	-1.68	10.76	-3.92	10.47	-7.71	NA	NA
May 2017	10.47	-0.72	10.95	-2.16	10.70	-5.67	NA	NA
June 2017	10.57	0.24	11.16	-0.34	10.86	-4.30	NA	NA
July 2017	10.62	0.68	11.22	0.24	10.89	-4.00	NA	NA
August 2017	10.51	-0.35	11.11	-0.73	10.71	-5.58	NA	NA
September 2017	10.41	-1.25	11.06	-1.23	10.58	-6.78	NA	NA
October 2017	10.31	-2.19	10.90	-2.63	10.27	-9.46	NA	NA
November 2017	10.29	-2.46	10.89	-2.77	10.02	-11.64	NA	NA
December 2017	9.91	-6.02	10.60	-5.33	9.62	-15.19	NA	NA

January 2018	9.98	-5.37	10.56	-5.67	9.48	-16.42	NA	NA
February 2018	9.91	-6.06	10.51	-6.11	9.49	-16.37	NA	NA
March 2018	10.07	-4.48	10.73	-4.14	9.96	-12.23	NA	NA
April 2018	10.17	-3.58	10.73	-4.13	10.11	-10.86	NA	NA
May 2018	10.28	-2.51	10.83	-3.25	10.37	-8.56	NA	NA
June 2018	10.36	-1.80	10.95	-2.19	10.46	-7.78	NA	NA
July 2018	10.37	-1.65	11.01	-1.69	10.51	-7.36	NA	NA
August 2018	10.31	-2.21	10.90	-2.63	10.38	-8.46	NA	NA
September 2018	10.23	-3.00	10.82	-3.32	10.19	-10.15	NA	NA
October 2018	10.08	-4.46	10.70	-4.45	9.87	-12.98	NA	NA
November 2018	9.95	-5.67	10.57	-5.55	9.56	-15.75	NA	NA
December 2018	9.51	-9.84	10.54	-5.83	9.40	-17.17	NA	NA
January 2019	9.37	-11.12	10.34	-7.66	9.18	-19.12	NA	NA
February 2019	9.55	-9.46	10.22	-8.69	8.99	-20.71	9.76	0.00
March 2019	9.34	-11.45	10.38	-7.26	9.44	-16.75	9.74	-0.19
April 2019	9.41	-10.72	10.50	-6.18	9.74	-14.11	9.85	0.95
May 2019	11.07	4.94	11.06	-1.17	10.74	-5.30	10.82	10.85
June 2019	10.62	0.68	11.66	4.16	11.75	3.59	11.68	19.70
July 2019	10.23	-2.99	11.64	3.99	11.83	4.27	11.75	20.38

**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	13	417	0	0	0
2	22701	703731	66.5	0	0
3	8728	270570	25.6	0	0
4	80	2465	0.2	147	1.3
5	608	18852	1.8	287	2.6
6	143	4420	0.4	205	1.8
7	24	757	0.1	211	1.9
8	103	3188	0.3	105	0.9
9	1627	50429	4.8	9464	84.4
10	46	1426	0.1	399	3.6
11	31	970	0.1	140	1.2
12	32	990	0.1	42	0.4
13	8	260	0	218	1.9
<b>TOTAL</b>	<b>34144</b>	<b>1058475</b>	<b>100</b>	<b>11218</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>
2019-07-19	Friday	03:33:09	9	NB	1	139.11
2019-07-20	Saturday	05:57:12	10	NB	1	130.46
2019-07-31	Wednesday	05:42:56	9	NB	1	129.52
2019-07-23	Tuesday	02:49:15	9	NB	1	127.88
2019-07-26	Friday	03:06:06	9	NB	1	127.11
2019-07-19	Friday	11:00:18	10	SB	3	125.86
2019-07-22	Monday	11:09:38	10	SB	4	124.96
2019-07-17	Wednesday	07:40:27	10	NB	2	121.65
2019-07-12	Friday	02:05:34	9	NB	1	117.33
2019-07-26	Friday	20:50:09	10	SB	4	116.11

**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	NB	15	1179	116	9.8	36026	1460	10041
5	NB	8	8896	977	11	118444	7114	27546
6	NB	19	1874	425	22.7	45972	6952	9221
7	NB	11.5	486	0	0	30311	0	12361
8	NB	31	1555	963	61.9	23160	22088	2404
9	NB	33	24296	5544	22.8	1141924	155267	261554
10	NB	33.5	726	195	26.9	37147	4806	9679
11	NB	36.5	446	28	6.3	23474	801	4109
12	NB	36.5	471	51	10.8	24945	1745	4808
13	NB	31.5	135	1	0.7	13433	21	4606
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>40064</b>	<b>8300</b>	<b>****</b>	<b>1494838</b>	<b>****</b>	<b>346328</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	SB	15	1223	99	8.1	38731	1277	10936
5	SB	8	9471	518	5.5	144826	3772	36601
6	SB	19	2432	208	8.6	71708	3669	14726
7	SB	11.5	252	0	0	14522	0	5812
8	SB	31	1551	674	43.5	33922	15332	3367
9	SB	33	24835	2958	11.9	1291231	89605	284645
10	SB	33.5	663	141	21.3	35051	3428	8782
11	SB	36.5	499	21	4.2	31073	646	6813
12	SB	36.5	494	3	0.6	30805	95	6442
13	SB	31.5	118	2	1.7	12198	40	4272
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>41538</b>	<b>4624</b>	<b>****</b>	<b>1704068</b>	<b>****</b>	<b>382396</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>81602</b>	<b>12924</b>	<b>278</b>	<b>3198905</b>	<b>318120</b>	<b>728724</b>

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

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	169	120	105	134	529	0
2	783638	556242	533111	903373	2776364	34.9
3	497005	312205	292097	567162	1668470	21
4	29596	7891	6110	33898	77495	1
5	100393	25165	22067	126532	274157	3.4
6	45382	7542	8481	66896	128302	1.6
7	28258	2053	423	14099	44834	0.6
8	39962	5286	4773	44481	94502	1.2
9	1138542	158648	139715	1241121	2678026	33.6
10	33226	8727	4971	33508	80433	1
11	21652	2624	2561	29158	55995	0.7
12	23310	3380	2332	28569	57591	0.7
13	10768	2686	762	11476	25692	0.3
<b>TOTAL</b>	<b>2751902</b>	<b>1092571</b>	<b>1017509</b>	<b>3100407</b>	<b>7962388</b>	<b>100</b>
<b>GVW/LANE</b>	<b>34.56</b>	<b>13.72</b>	<b>12.78</b>	<b>38.94</b>	<b>100</b>	<b>0</b>

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

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0025
2	83	69	70	111	334	0.5	0.001
3	183	114	110	243	648	0.98	0.0049
4	552	168	138	718	1576	2.38	1.31
5	1095	268	239	1840	3441	5.2	0.38
6	611	148	151	1150	2061	3.12	0.96
7	456	51	13	281	802	1.21	2.16
8	564	67	56	636	1323	2	0.85
9	19933	3617	3118	24700	51367	77.65	2.09
10	551	189	90	625	1456	2.2	2.09
11	464	90	80	938	1572	2.38	3.3
12	248	62	36	408	753	1.14	1.55
13	305	66	24	423	818	1.24	6.21
<b>TOTAL</b>	<b>25045</b>	<b>4907</b>	<b>4126</b>	<b>32072</b>	<b>66150</b>	<b>100</b>	<b>21</b>
<b>ESALS/LANE</b>	<b>37.9</b>	<b>7.4</b>	<b>6.2</b>	<b>48.5</b>	<b>100</b>	<b>-</b>	<b>-</b>

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

Month	Total Volume	Monthly ADT	Monthly HCAD T	Passenger Vehicles	Passenger Vehicles %	Heavy Commercial Vehicles	Heavy Commercial Vehicles %	Heavy Commercial Vehicles in Driving Lane %	Heavy Commercial Vehicles in Passing Lane %
Aug 2018	1096236	35362	2766	1010488	92.2	85748.4	7.8	87.8	12.2
Sep 2018	975288	32510	2516	899811	92.3	75477.3	7.7	88.6	11.4
Oct 2018	1005115	32423	2741	920135	91.5	84980	8.5	89	11
Nov 2018	807078	31042	2150	742577	92	64501	8	88.3	11.7
Dec 2018	864651	28822	2035	801570	92.7	63081.4	7.3	89.2	10.8
Jan 2019	786295	25364	2059	722455	91.9	63839.9	8.1	88.7	11.3
Feb 2019	682508	24375	2079	624284	91.5	58224	8.5	82.2	17.8
Mar 2019	904406	29174	2268	834104	92.2	70302.3	7.8	88.7	11.3
Apr 2019	922175	30739	2481	847749	91.9	74425.7	8.1	88.3	11.7
May 2019	1039153	33329	2670	956381	92	82771.9	8	87.5	12.5
Jun 2019	1022960	34099	2622	944302	92.3	78658.4	7.7	86.8	13.2
Jul 2019	1058475	34221	2702	974717	92.1	83757.7	7.9	87.2	12.8
<b>TOTAL</b>	<b>11164340</b>	<b>-</b>	<b>-</b>	<b>10278573</b>	<b>-</b>	<b>885768</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>930362</b>	<b>30955</b>	<b>2424</b>	<b>856548</b>	<b>92</b>	<b>73814</b>	<b>8</b>	<b>88</b>	<b>12</b>

###ESALS

Month	ESALS NB Passing Lane	ESALS NB Driving Lane	ESALS SB Driving Lane	ESALS SB Passing Lane	Total ESALS	Driving Lane ESALS %	Passing Lane ESALS %	Pavement Life Decrease Months
Aug 2018	22748	3715	2300	19232	47995	87	13	1.7
Sep 2018	19416	3002	1725	16380	40523	88	12	1.2
Oct 2018	20621	3073	1569	17666	42930	89	11	1.1
Nov 2018	16547	2620	1352	14453	34973	89	11	1.2
Dec 2018	12208	2206	1054	12749	28217	88	12	0.2

Jan 2019	10858	2006	1055	11960	25880	88	12	0.3
Feb 2019	8685	2828	1545	10833	23891	82	18	0.3
Mar 2019	12211	2429	1320	13607	29567	87	13	0.1
Apr 2019	13454	2771	1525	14186	31936	87	13	0
May 2019	32259	4042	3006	23513	62819	89	11	21.3
Jun 2019	53625	10086	7472	58409	129592	86	14	3.4
Jul 2019	25138	4916	4146	32194	66394	86	14	4.4
<b>TOTAL</b>	<b>247771</b>	<b>43693</b>	<b>28069</b>	<b>245182</b>	<b>564716</b>	-	-	-
<b>AVERAGE</b>	<b>20648</b>	<b>3641</b>	<b>2339</b>	<b>20432</b>	<b>47060</b>	<b>87</b>	<b>13</b>	<b>3</b>

### ###Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Aug 18	2838230	1095512	906826	2780943	7621510
Sep 18	2508245	912624	761584	2459287	6641740
Oct 18	2663414	939774	748845	2610840	6962873
Nov 18	2335826	846388	669420	2308649	6160283
Dec 18	2086264	770010	604432	2166104	5626811
Jan 19	1876590	646522	520347	1994371	5037829
Feb 19	1423377	652606	530116	1737913	4344012
Mar 19	2086856	798781	620139	2233229	5739005
Apr 19	2203311	844134	673418	2294631	6015495
May 19	2887575	1038509	896554	2762671	7585308
Jun 19	5370351	2138820	1938350	5817580	15265101
Jul 19	2756663	1092970	1018131	3103868	7971633
<b>TOTAL</b>	<b>31036703</b>	<b>11776649</b>	<b>9888162</b>	<b>32270086</b>	<b>84971600</b>
<b>AVERAGE</b>	<b>2586392</b>	<b>981387</b>	<b>824014</b>	<b>2689174</b>	<b>7080967</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>
Aug 2018	2383	0.2	2.8	216	125
Sep 2018	1785	0.2	2.4	138	77
Oct 2018	1564	0.2	1.9	142	95
Nov 2018	1176	0.1	1.6	125	77
Dec 2018	728	0.1	1.1	66	27
Jan 2019	575	0.1	0.9	48	21
Feb 2019	794	0.1	1.4	56	26
Mar 2019	591	0.1	0.9	71	48
Apr 2019	563	0.1	0.8	70	42

May 2019	9712	1	11.9	1831	162
Jun 2019	22320	1.1	14.5	1866	262
Jul 2019	11264	1.1	13.7	645	150
<b>TOTAL</b>	<b>53455</b>	<b>-</b>	<b>-</b>	<b>5274</b>	<b>1112</b>
<b>AVERAGE</b>	<b>4454.6</b>	<b>0.4</b>	<b>4.5</b>	<b>439.5</b>	<b>92.7</b>

### ###Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Aug 2018	338350	290850	629200	53.8	46.2
Sep 2018	289856	250391	540246	53.7	46.3
Oct 2018	321475	280646	602121	53.4	46.6
Nov 2018	261150	229123	490273	53.3	46.7
Dec 2018	207108	197689	404797	51.2	48.8
Jan 2019	191437	189886	381323	50.2	49.8
Feb 2019	161646	180700	342346	47.2	52.8
Mar 2019	217306	218688	435994	49.8	50.2
Apr 2019	239111	230147	469258	51	49
May 2019	377156	315573	692729	54.4	45.6
Jun 2019	693719	700129	1393849	49.8	50.2
Jul 2019	346328	382396	728724	47.5	52.5
<b>TOTAL</b>	<b>3644642</b>	<b>3466218</b>	<b>7110860</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>303720.2</b>	<b>288851.5</b>	<b>592571.7</b>	<b>51.3</b>	<b>48.7</b>