

DECEMBER 2019



**WIM #38  
I-535, MP 1.1  
DULUTH, MN**

**MONTHLY  
REPORT**



*Your Destination... Our Priority*



## WIM Site Location

WIM #38 is located on I-535 near Duluth in St Louis county.

## System Operation

WIM #38 was operational for the entire month of December 2019. Volume was computed using all monthly data.

## System Calibration

WIM #38 was most recently calibrated on 2015-08-10. 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: 875724 | Passenger Vehicles: 825520 | Heavy Commercial Vehicles: 50204

Monthly Average Daily Traffic (MADT): 29010 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1619

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 Sundays. SB 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), NB PVs generally reached peak volume levels between 02 PM and 04 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 02 PM and 04 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 50204 HCVs, 2971 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 0.4% of total monthly volume, and 6.1% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Fridays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Thursdays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 6 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 59.8% of all overweight vehicles traveling NB 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 July.

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 ,38 NB vehicles exceeded 88,000 pounds (18 vehicles were Class 10's; 9 vehicles were Class 9's). Of vehicles traveling SB,

77 NB vehicles exceeded 88,000 pounds (50 vehicles were Class 10's; 15 vehicles were Class 13'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 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 empty class 10 vehicles.

**Freight Totals.** A total of 339996 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (50.1%) than NB (49.9%). See Table 4 and Figure 11 for more freight information.

**####Infrastructure Considerations Bridge.** Bridge No. 9030 (Blatnik Bridge) is approximately 1.1 miles south of WIM #38, and Bridge No. 69808 is 0.45 miles south of WIM #38. A pair of bridges also exists 0.4 miles north of WIM #38 (Bridge No. 69801C on the NB side and Bridge No. 69801N on the SB side). WIM #38 recorded a total of 875724 vehicles with a combined GVW of 5468044 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 30610 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.9% of all ESALs were recorded NB while 49.1% was observed SB. In particular, 58% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 18% 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).

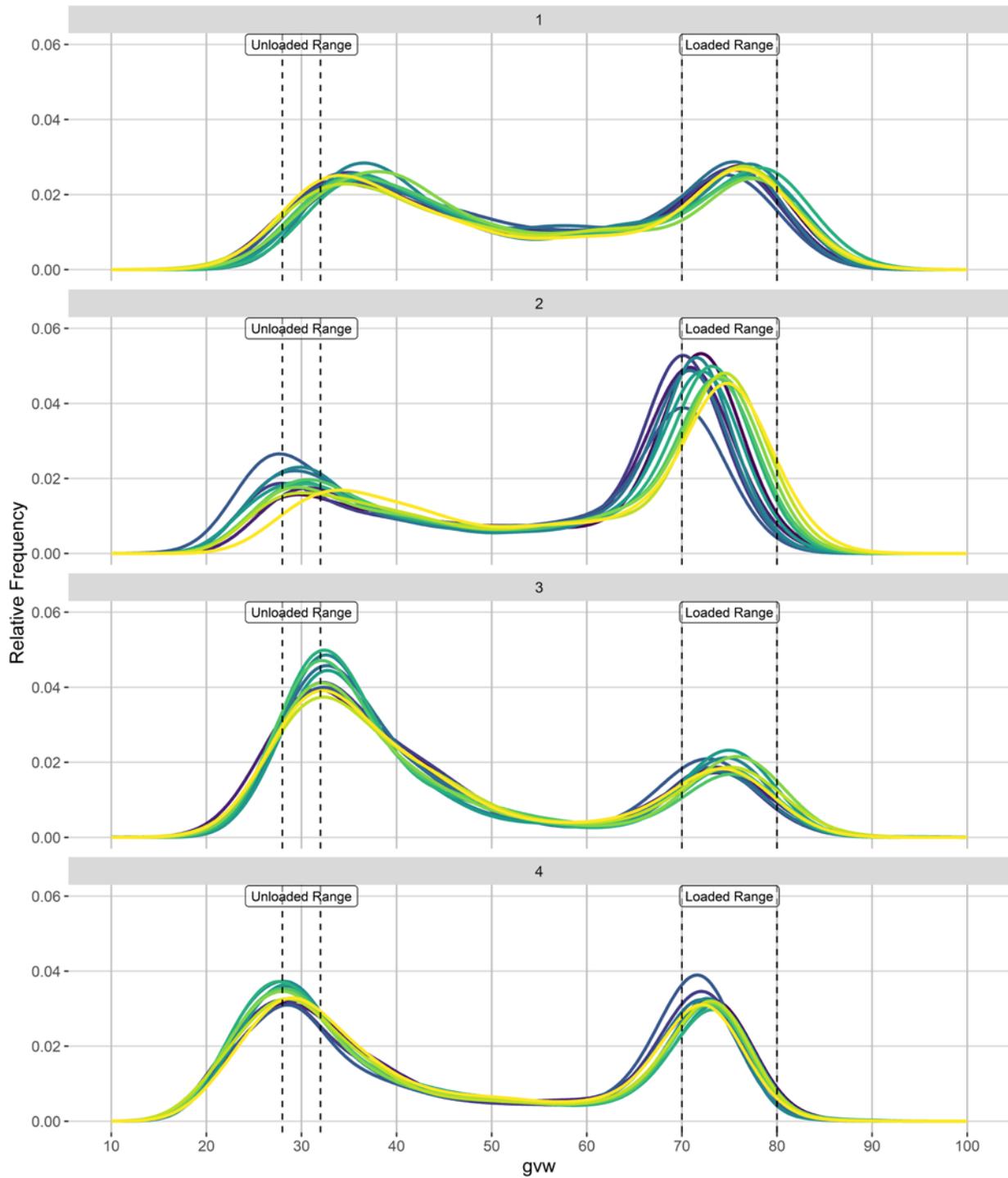
#####WIM monthly reports can be found at:

<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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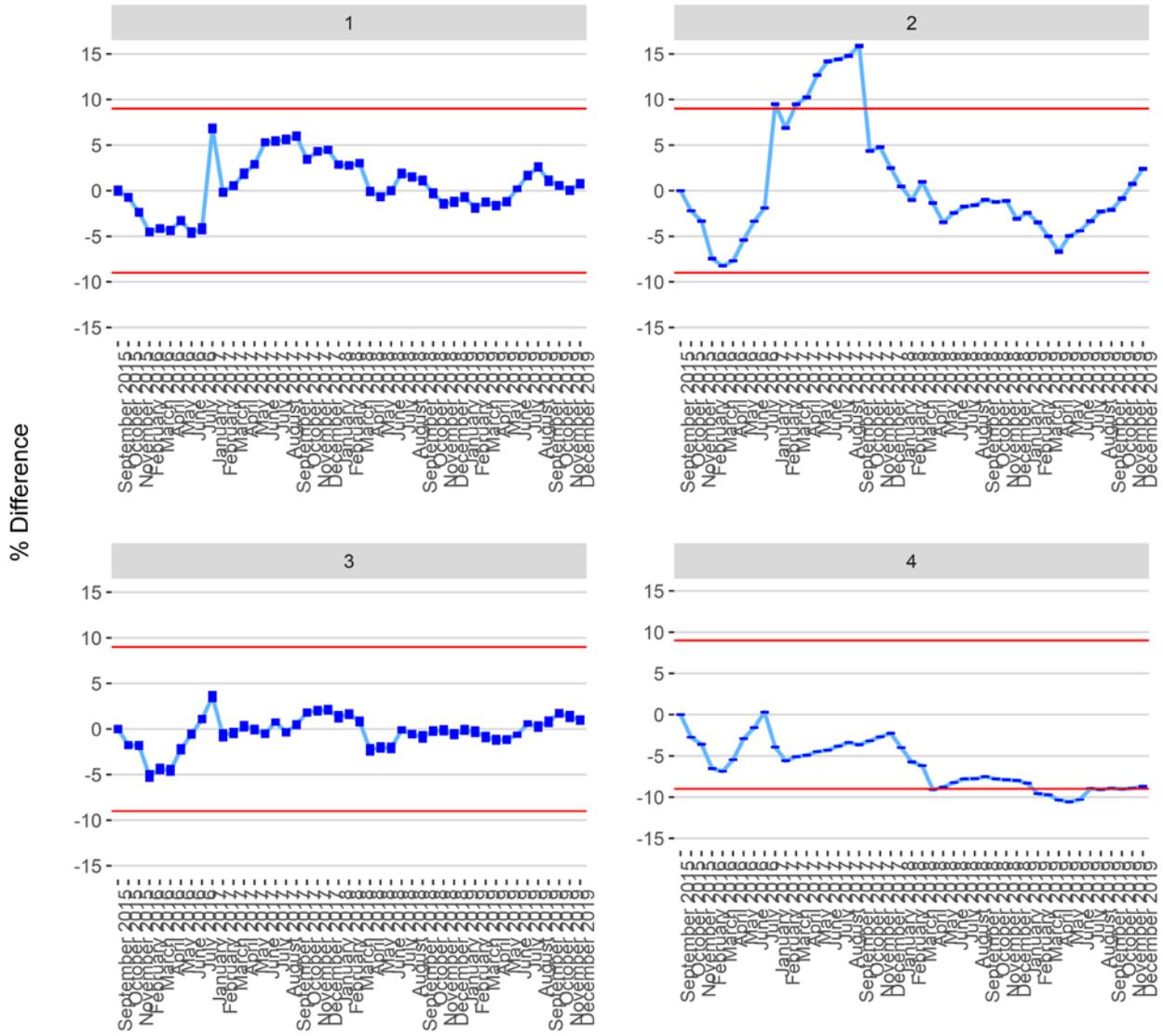
Figure 1 - Monthly Class 9 GVW Histogram



Time	January 2019	April 2019	July 2019	October 2019
	February 2019	May 2019	August 2019	November 2019
	March 2019	June 2019	September 2019	December 2019

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

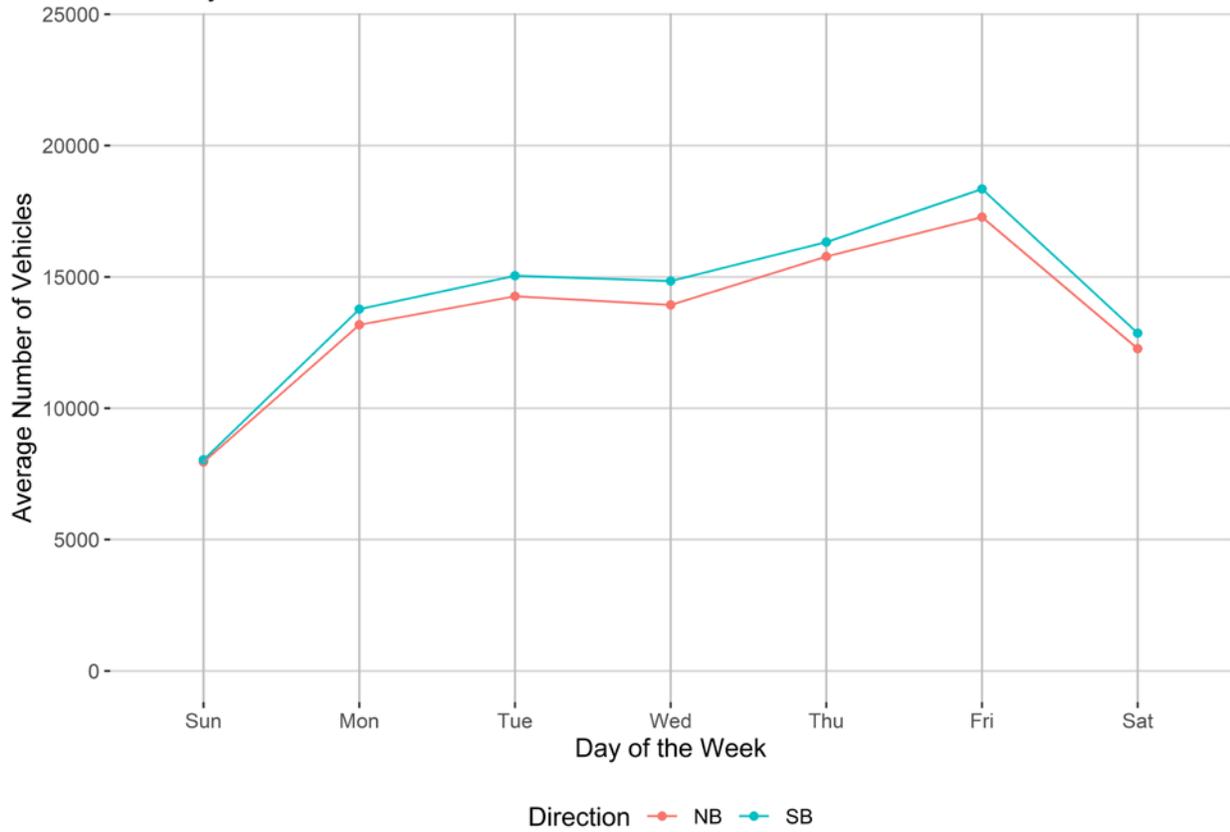


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

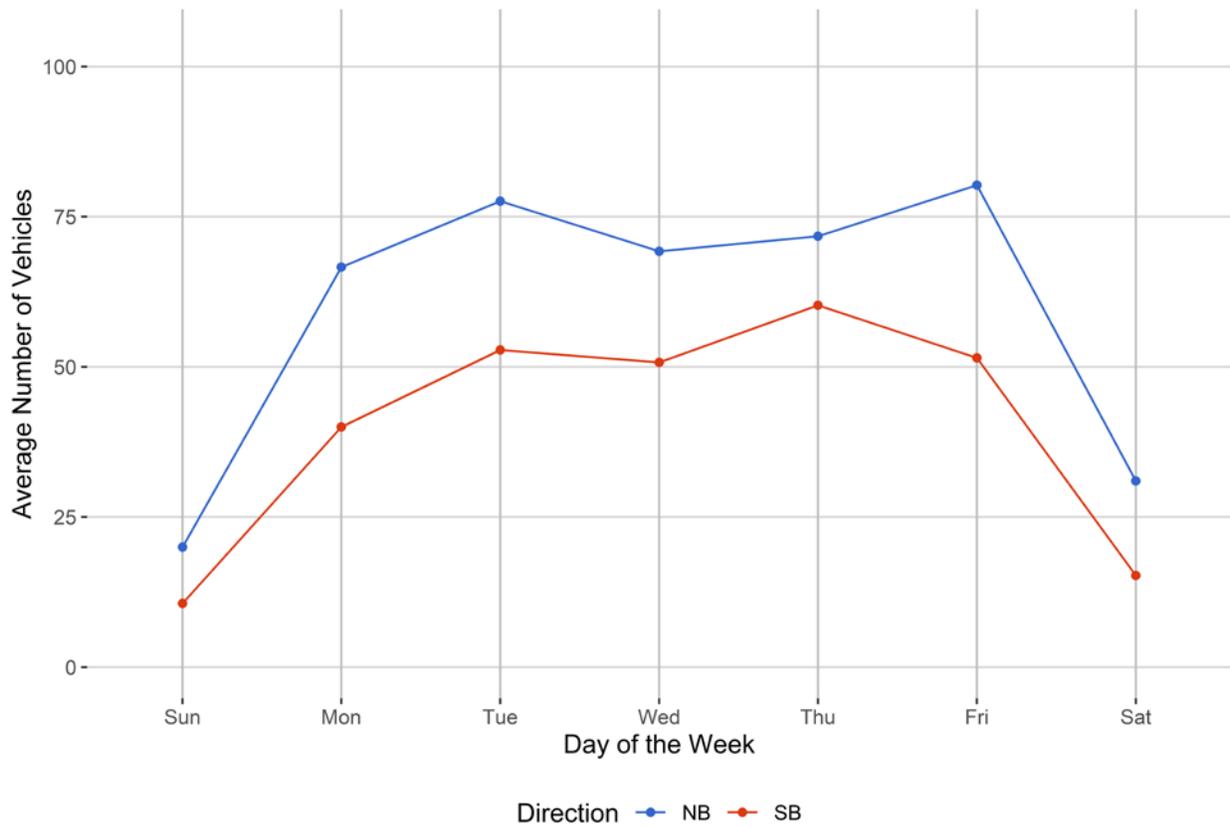


Figure 4 - Passenger Vehicles vs. Hour of the Day

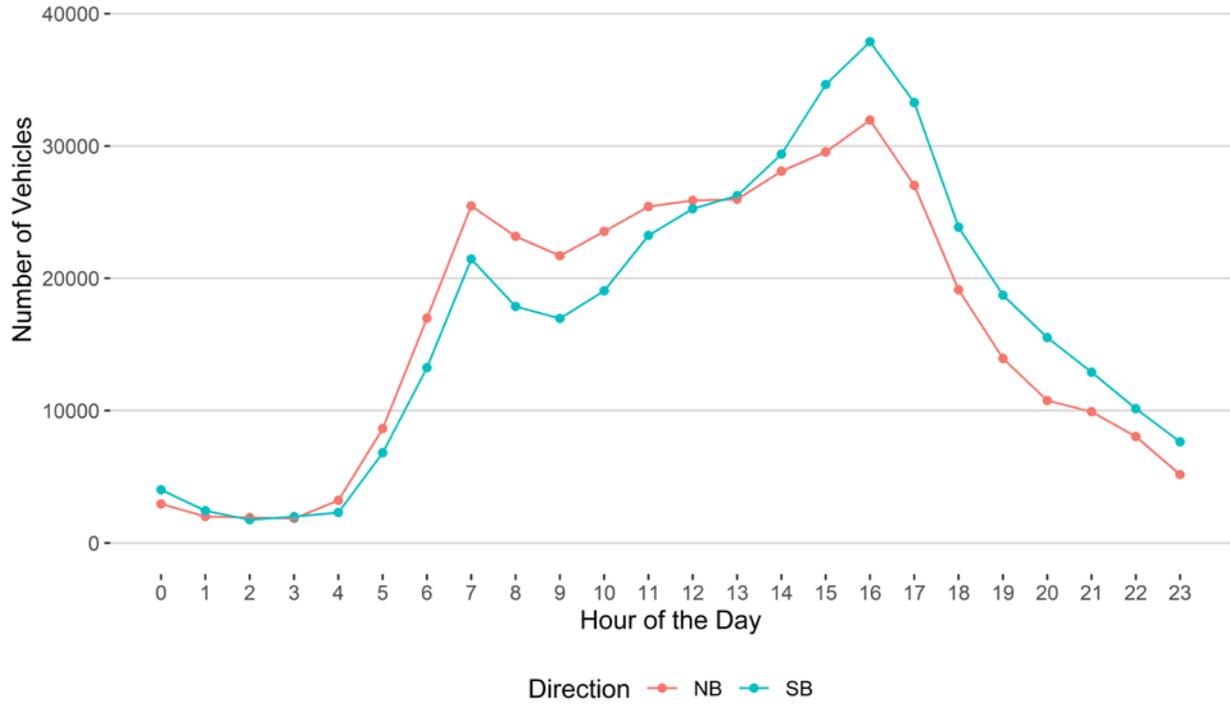


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

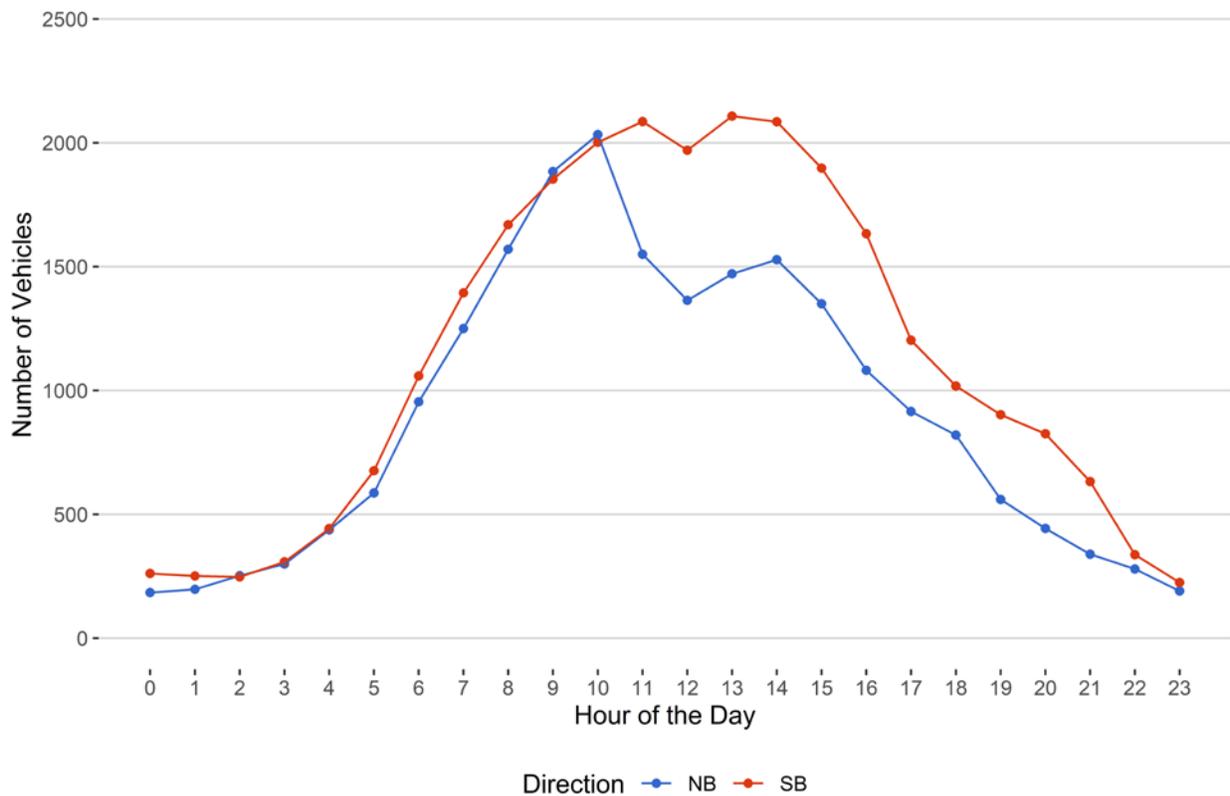


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

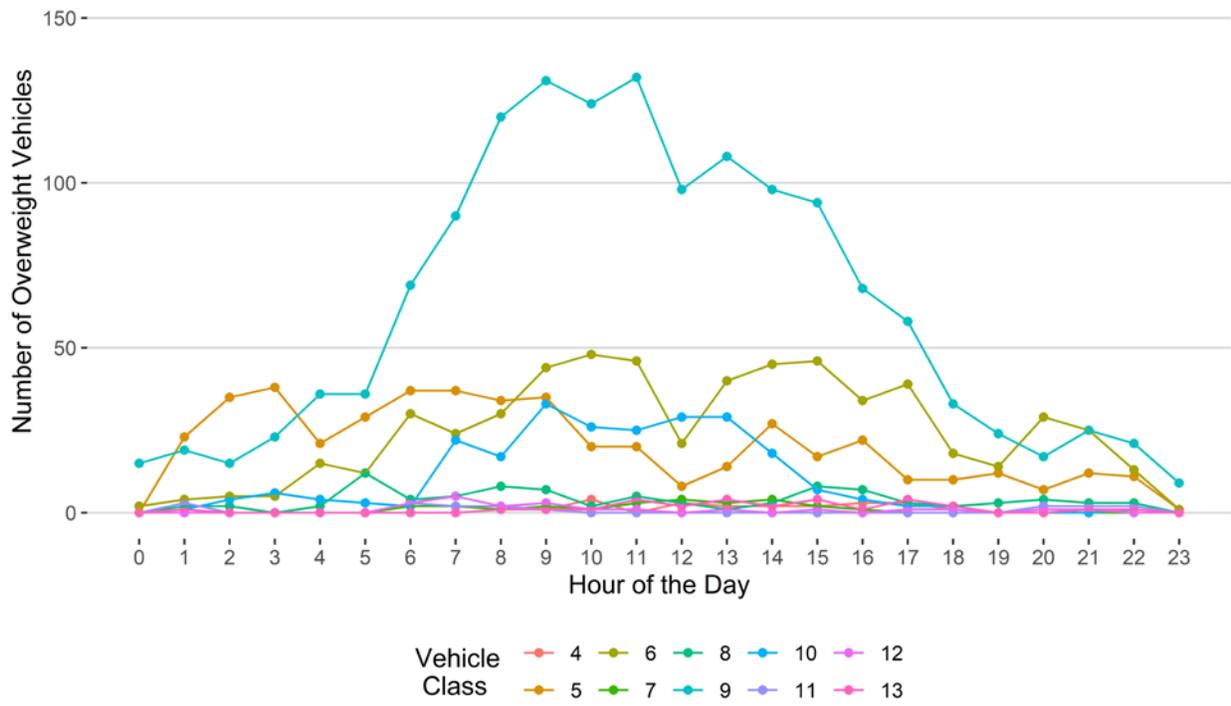


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

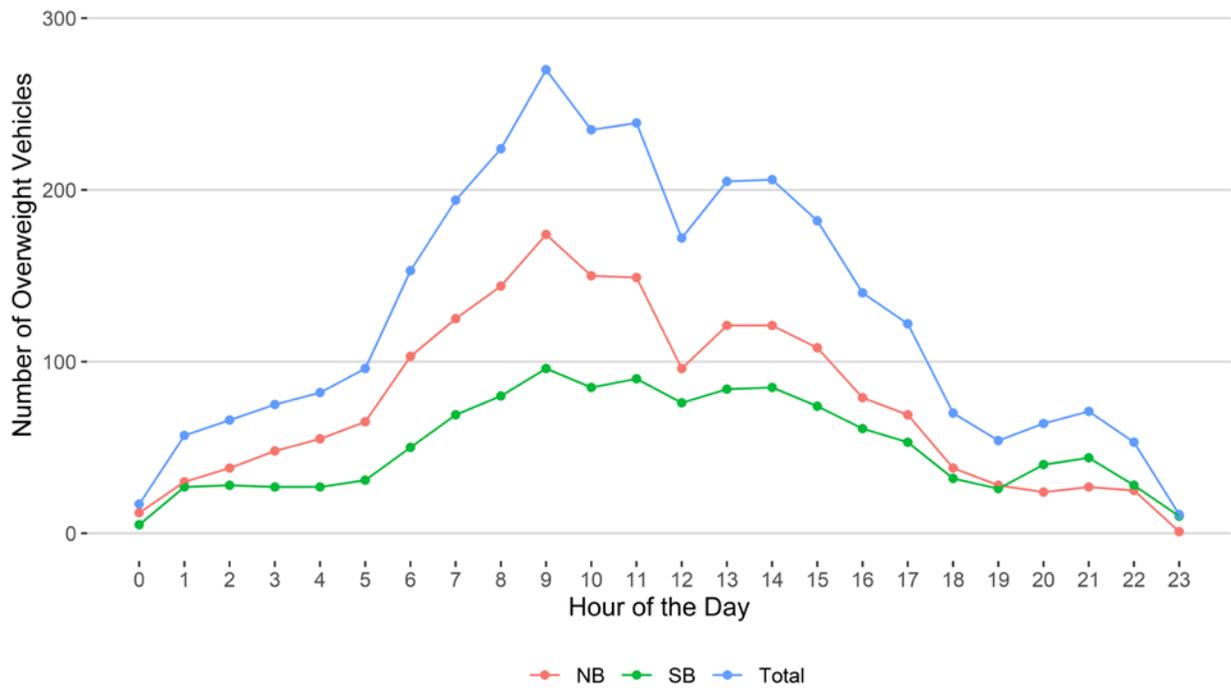
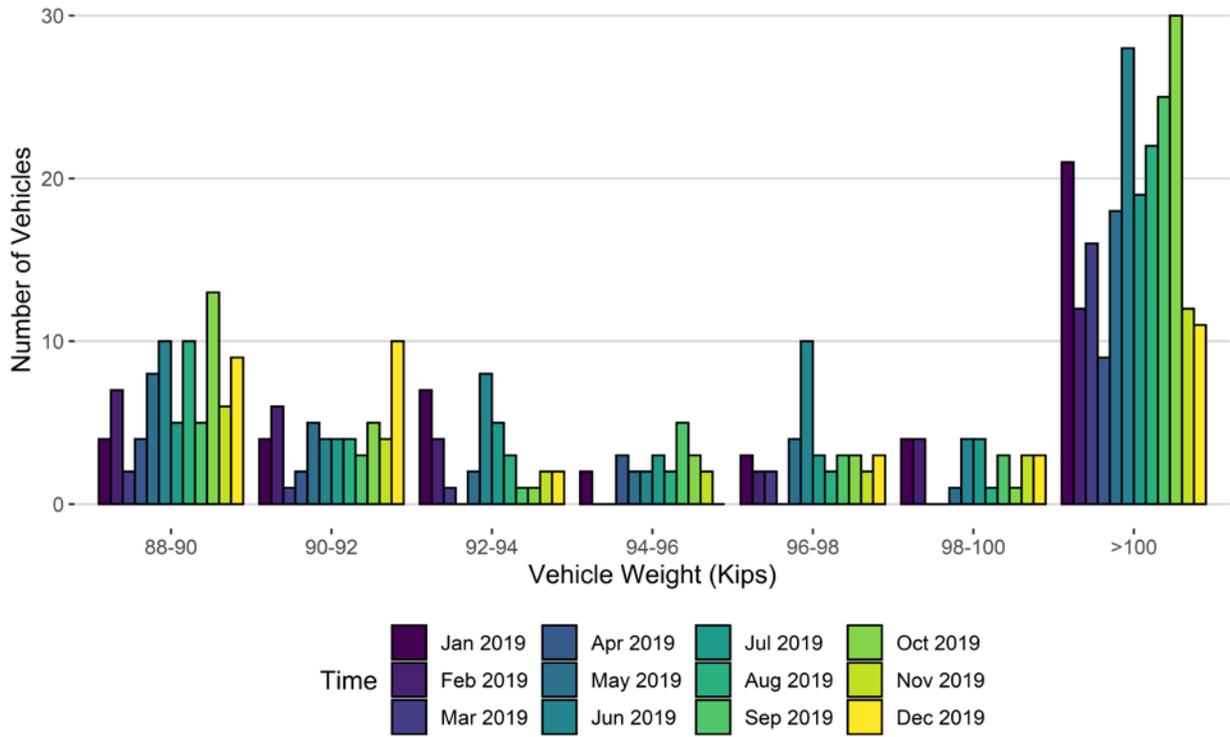
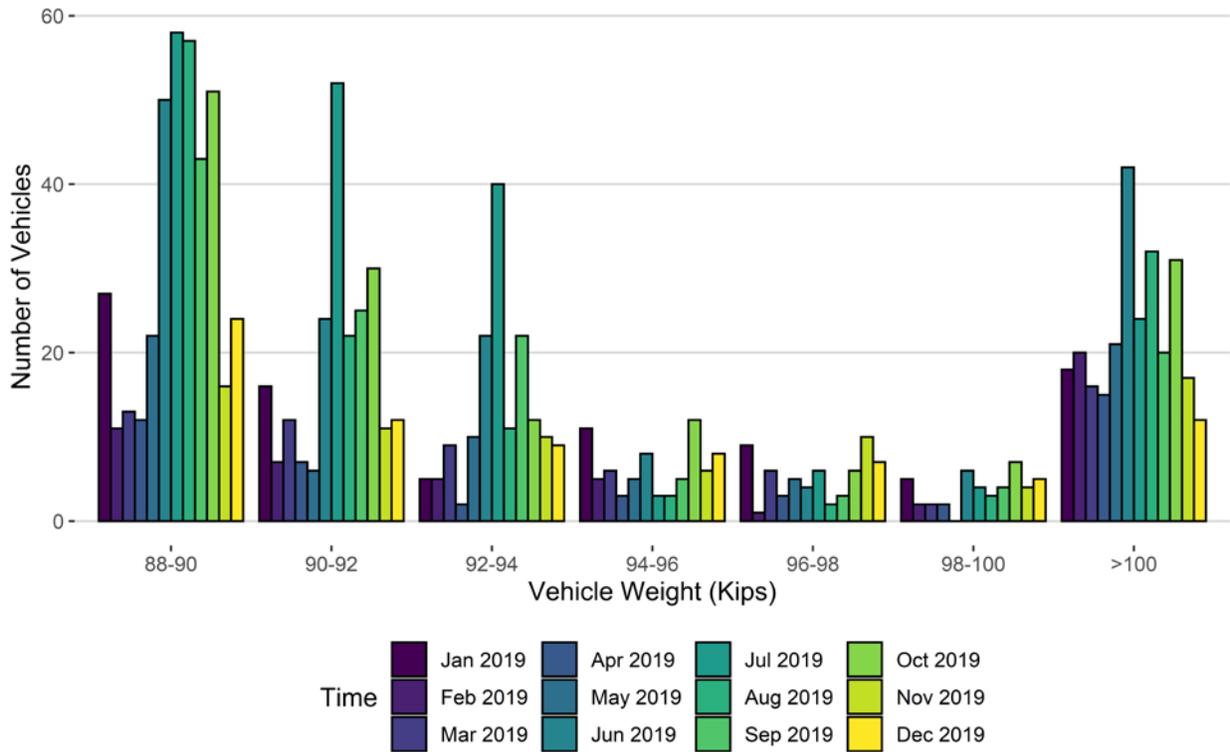


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



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	4	7	2	4	8	10	5	10	5	13	6	9
90-92	4	6	1	2	5	4	4	4	3	5	4	10
92-94	7	4	1	0	2	8	5	3	1	1	2	2
94-96	2	0	0	3	2	2	3	2	5	3	2	0
96-98	3	2	2	0	4	10	3	2	3	3	2	3
98-100	4	4	0	0	1	4	4	1	3	1	3	3
>100	21	12	16	9	18	28	19	22	25	30	12	11
Total	45	35	22	18	40	66	43	44	45	56	31	38

Figure 8 - Histogram of SB 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	27	11	13	12	22	50	58	57	43	51	16	24
90-92	16	7	12	7	6	24	52	22	25	30	11	12
92-94	5	5	9	2	10	22	40	11	22	12	10	9
94-96	11	5	6	3	5	8	3	3	5	12	6	8
96-98	9	1	6	3	5	4	6	2	3	6	10	7
98-100	5	2	2	2	0	6	4	3	4	7	4	5
>100	18	20	16	15	21	42	24	32	20	31	17	12
Total	91	51	64	44	69	156	187	130	122	149	74	77

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

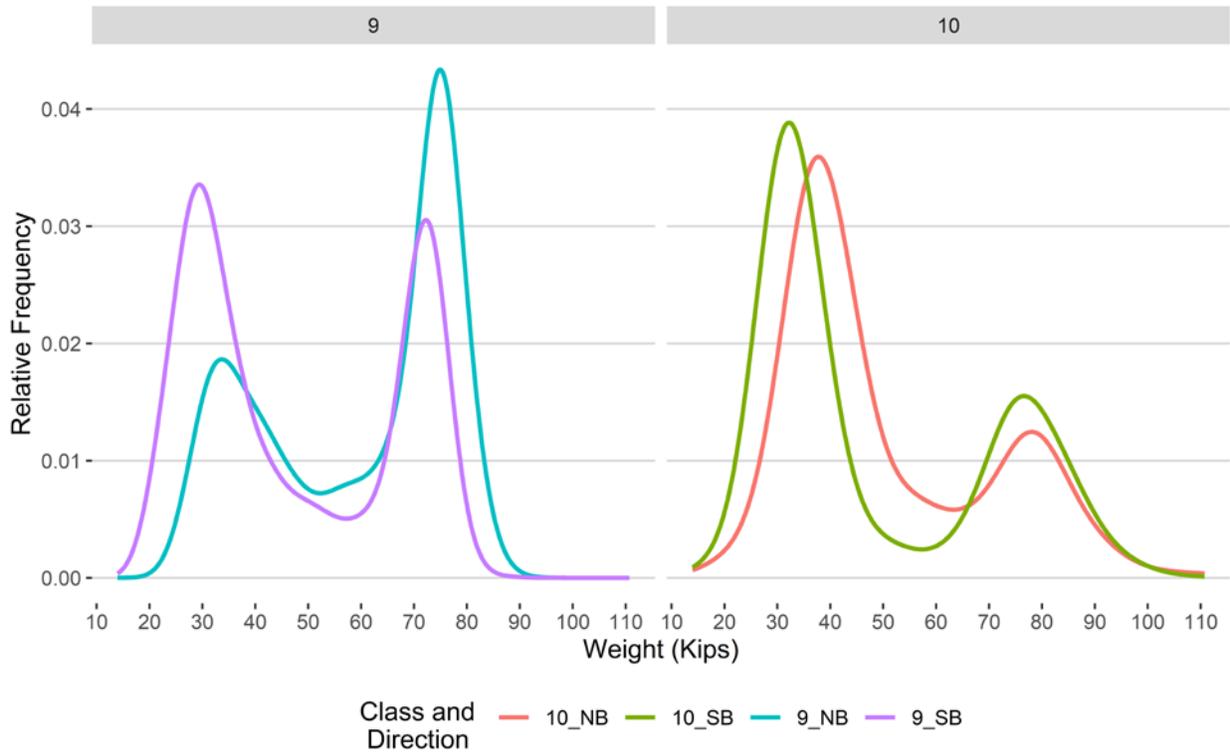


Figure 9 - Freight Percentage by Direction and Class

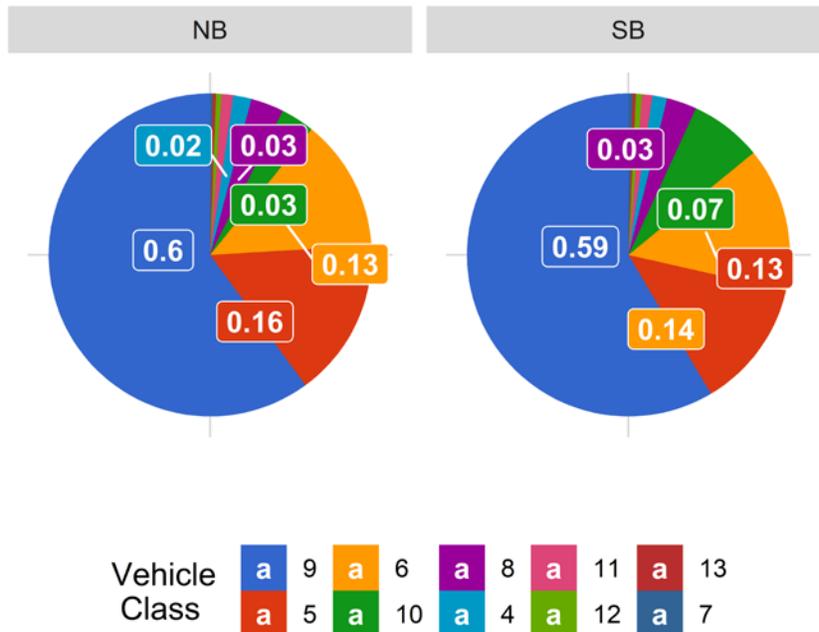


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

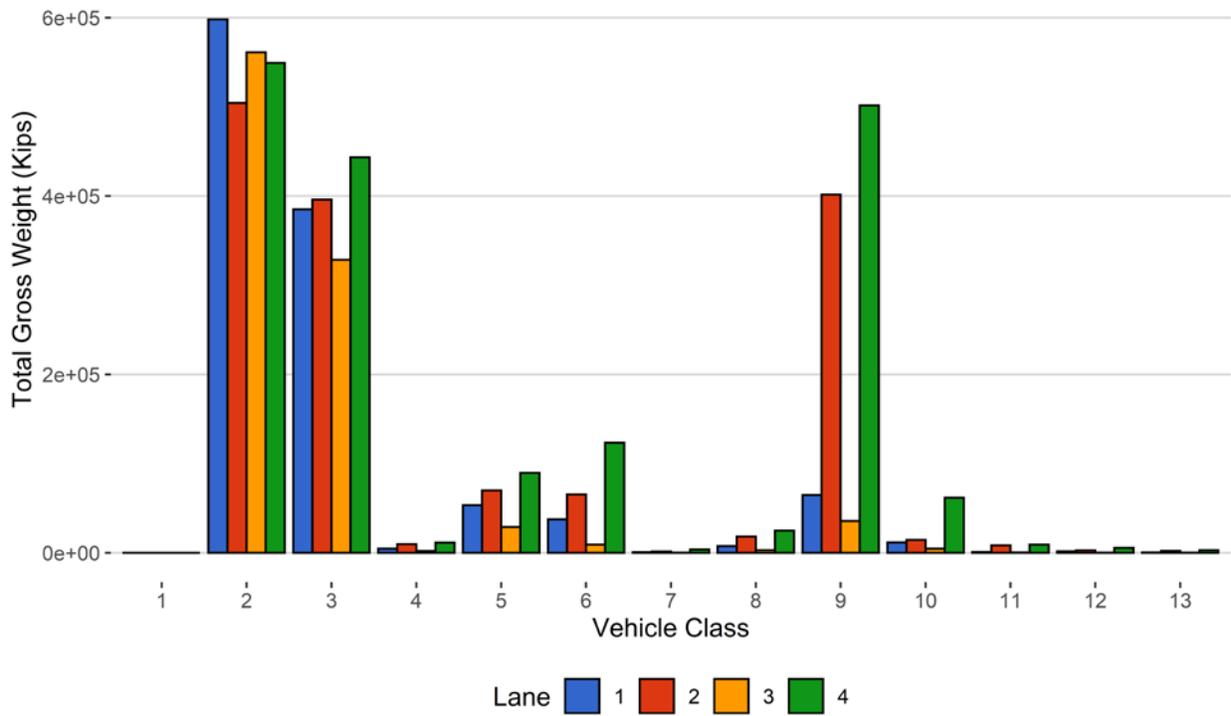


Figure 11 - Total Gross Vehicle Weight t

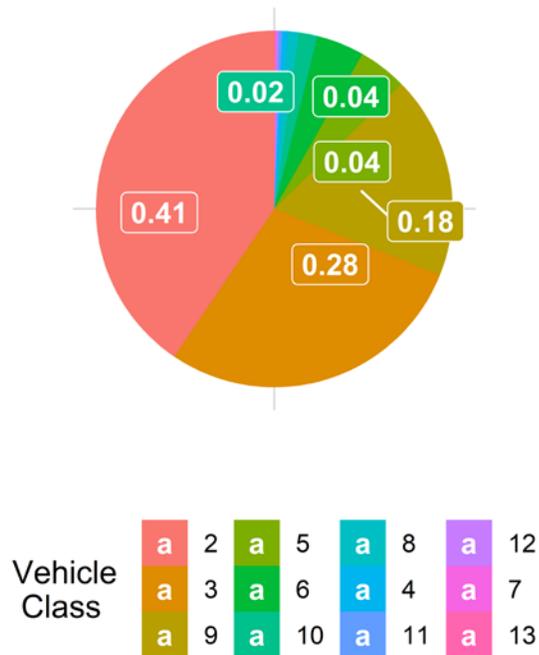


Figure 12 - Total ESALs by Class and Lane

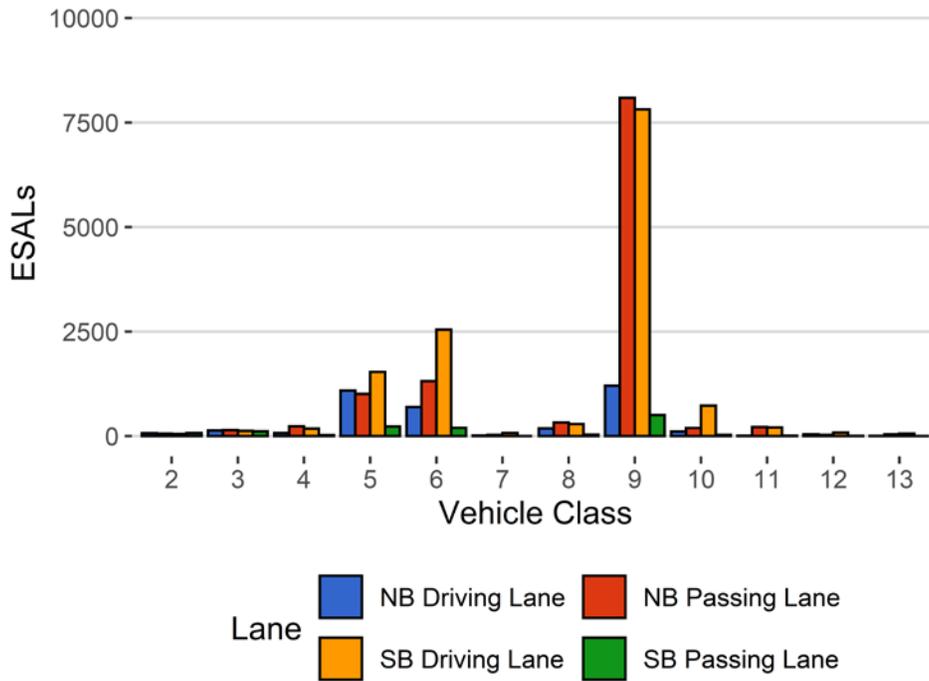
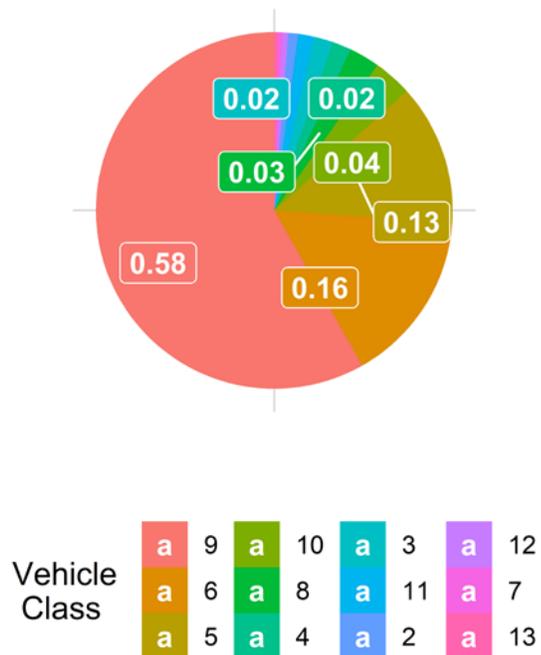


Figure 13 - ESALs by Class



**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>
September 2015	11.60	0.00	10.96	0.00	11.15	0.00	11.07	0.00
October 2015	11.52	-0.73	10.72	-2.21	10.95	-1.77	10.76	-2.75
November 2015	11.33	-2.37	10.59	-3.34	10.95	-1.80	10.67	-3.59
February 2016	11.08	-4.53	10.14	-7.45	10.57	-5.14	10.35	-6.53
March 2016	11.12	-4.15	10.05	-8.26	10.66	-4.38	10.31	-6.87
April 2016	11.09	-4.37	10.11	-7.69	10.64	-4.54	10.46	-5.47
May 2016	11.22	-3.29	10.36	-5.42	10.90	-2.22	10.75	-2.92
June 2016	11.07	-4.60	10.59	-3.35	11.08	-0.55	10.89	-1.57
July 2016	11.12	-4.18	10.75	-1.90	11.27	1.09	11.10	0.29
January 2017	12.39	6.82	12.00	9.49	11.54	3.55	10.63	-3.94
February 2017	11.58	-0.18	11.71	6.87	11.07	-0.69	10.45	-5.60
March 2017	11.67	0.55	12.00	9.47	11.10	-0.44	10.50	-5.09
April 2017	11.82	1.87	12.08	10.24	11.18	0.30	10.52	-4.93
May 2017	11.94	2.90	12.35	12.67	11.14	-0.06	10.57	-4.48
June 2017	12.22	5.31	12.51	14.18	11.09	-0.52	10.59	-4.31
July 2017	12.23	5.44	12.54	14.40	11.23	0.76	10.64	-3.83
August 2017	12.25	5.62	12.58	14.79	11.11	-0.35	10.69	-3.38
September 2017	12.29	5.98	12.70	15.87	11.20	0.48	10.66	-3.65
October 2017	12.00	3.44	11.43	4.35	11.35	1.81	10.72	-3.17
November 2017	12.10	4.31	11.48	4.78	11.37	2.02	10.77	-2.69
December 2017	12.12	4.48	11.23	2.48	11.38	2.11	10.82	-2.25
January 2018	11.93	2.86	11.01	0.47	11.30	1.35	10.63	-4.00
February 2018	11.92	2.76	10.85	-1.03	11.33	1.62	10.43	-5.73
March 2018	11.95	3.01	11.06	0.97	11.24	0.83	10.38	-6.19
April 2018	11.59	-0.09	10.81	-1.36	10.89	-2.27	10.06	-9.08
May 2018	11.52	-0.67	10.58	-3.47	10.92	-2.03	10.09	-8.80

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June 2018	11.60	-0.01	10.69	-2.44	10.91	-2.08	10.16	-8.24
July 2018	11.82	1.89	10.77	-1.75	11.13	-0.10	10.21	-7.79
August 2018	11.78	1.50	10.78	-1.59	11.08	-0.56	10.21	-7.77
September 2018	11.73	1.11	10.85	-1.00	11.05	-0.87	10.24	-7.52
October 2018	11.57	-0.30	10.82	-1.25	11.12	-0.23	10.20	-7.80
November 2018	11.43	-1.44	10.84	-1.11	11.13	-0.15	10.19	-7.89
December 2018	11.46	-1.22	10.62	-3.10	11.08	-0.57	10.18	-7.99
January 2019	11.52	-0.70	10.69	-2.42	11.14	-0.09	10.15	-8.31
February 2019	11.38	-1.88	10.58	-3.48	11.11	-0.30	10.01	-9.58
March 2019	11.46	-1.25	10.41	-5.01	11.05	-0.88	9.99	-9.72
April 2019	11.41	-1.65	10.22	-6.68	11.02	-1.17	9.92	-10.36
May 2019	11.46	-1.21	10.41	-4.96	11.02	-1.16	9.90	-10.59
June 2019	11.62	0.21	10.48	-4.40	11.08	-0.63	9.93	-10.30
July 2019	11.79	1.66	10.59	-3.34	11.21	0.60	10.08	-8.96
August 2019	11.90	2.61	10.71	-2.29	11.18	0.26	10.06	-9.07
September 2019	11.73	1.08	10.73	-2.10	11.24	0.80	10.08	-8.93
October 2019	11.67	0.57	10.86	-0.87	11.34	1.73	10.07	-9.02
November 2019	11.61	0.04	11.04	0.74	11.30	1.38	10.08	-8.94
December 2019	11.69	0.76	11.22	2.39	11.26	0.98	10.11	-8.70

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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	0	0	0	0	0
2	18089	560772	64	0	0
3	8540	264748	30.2	0	0
4	28	868	0.1	22	0.7
5	583	18068	2.1	480	16.2
6	233	7222	0.8	590	19.9
7	4	114	0	25	0.8
8	56	1721	0.2	89	3
9	635	19689	2.2	1463	49.2
10	63	1948	0.2	235	7.9
11	11	336	0	17	0.6
12	5	169	0	21	0.7
13	2	68	0	29	1
<b>TOTAL</b>	<b>28249</b>	<b>875724</b>	<b>100</b>	<b>2971</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>
2019-12-31	Tuesday	08:14:18	10	NB	2	130.74
2019-12-30	Monday	16:18:25	9	NB	2	111.74
2019-12-15	Sunday	05:07:52	10	NB	1	110.73
2019-12-03	Tuesday	12:26:01	10	NB	2	109.64
2019-12-07	Saturday	10:56:17	10	SB	4	108.81
2019-12-30	Monday	11:31:29	9	NB	2	107.66
2019-12-31	Tuesday	08:25:32	9	NB	2	107.21
2019-12-10	Tuesday	08:30:09	10	SB	4	106.68
2019-12-19	Thursday	16:32:38	10	NB	2	103.3
2019-12-16	Monday	10:34:29	10	SB	4	101.45

**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	407	46	11.3	13608	604	4097
5	NB	8	8575	705	8.2	118159	5205	27600
6	NB	19	3185	238	7.5	98766	4133	21386
7	NB	11.5	39	0	0	2061	0	806
8	NB	31	754	283	37.5	18991	6716	2195
9	NB	33	7806	879	11.3	440205	26158	105807
10	NB	33.5	518	63	12.2	24233	1863	4495
11	NB	36.5	150	1	0.7	9014	36	1788
12	NB	36.5	71	2	2.8	4188	34	835
13	NB	31.5	31	0	0	2513	0	768
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>21536</b>	<b>2217</b>	<b>****</b>	<b>731737</b>	<b>****</b>	<b>169776</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	434	66	15.2	12535	857	3507
5	SB	8	8923	1472	16.5	108166	10330	24279
6	SB	19	3809	484	12.7	124718	7839	30771
7	SB	11.5	71	0	0	3816	0	1500
8	SB	31	913	515	56.4	15023	12700	1342
9	SB	33	11262	4066	36.1	425308	111893	93920
10	SB	33.5	1369	527	38.5	50707	15620	11250
11	SB	36.5	175	14	8	9050	476	1587
12	SB	36.5	93	4	4.3	5527	137	1139
13	SB	31.5	35	0	0	2950	0	924
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>27084</b>	<b>7148</b>	<b>****</b>	<b>757799</b>	<b>****</b>	<b>170219</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>48620</b>	<b>9365</b>	<b>279</b>	<b>1489536</b>	<b>204601</b>	<b>339996</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>
2	598000	504335	561146	549262	2212743	40.5
3	385044	396113	328499	443455	1553111	28.4
4	4561	9650	1958	11434	27604	0.5
5	53400	69964	28899	89597	241859	4.4
6	37446	65453	9231	123326	235455	4.3
7	632	1429	45	3771	5877	0.1
8	7422	18285	2948	24775	53430	1
9	64677	401686	35610	501591	1003564	18.4
10	11651	14445	4632	61695	92422	1.7
11	704	8346	316	9210	18577	0.3
12	1598	2624	155	5509	9886	0.2
13	302	2210	81	2868	5462	0.1
<b>TOTAL</b>	<b>1165438</b>	<b>1494541</b>	<b>973521</b>	<b>1826492</b>	<b>5459991</b>	<b>100</b>
<b>GVW/LANE</b>	<b>21.35</b>	<b>27.37</b>	<b>17.83</b>	<b>33.45</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>
2	72	63	77	53	266	0.88	0.001
3	133	143	116	127	519	1.71	0.0041
4	74	237	27	182	519	1.72	1.24
5	1092	1008	230	1533	3863	12.76	0.44
6	696	1314	198	2548	4756	15.71	1.36
7	14	28	0	73	115	0.38	2.04
8	185	329	35	289	838	2.77	1.01
9	1207	8091	507	7816	17622	58.21	1.85
10	110	193	30	728	1060	3.5	1.12
11	10	217	12	207	445	1.47	2.69
12	41	27	5	82	155	0.51	1.84
13	8	42	2	60	112	0.37	2.99
<b>TOTAL</b>	<b>3641</b>	<b>11693</b>	<b>1238</b>	<b>13699</b>	<b>30271</b>	<b>100</b>	<b>17</b>
<b>ESALS/LANE</b>	<b>12</b>	<b>38.6</b>	<b>4.1</b>	<b>45.3</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	881451	28434	1620	831226	94.3	50225.1	5.7	61.3	38.7
Feb 2019	786575	28092	1649	740410	94.1	46164.9	5.9	62.3	37.7
Mar 2019	958807	30929	1610	908902	94.8	49905.2	5.2	62.1	37.9
Apr 2019	962362	32079	1594	914550	95	47811.7	5	65	35
May 2019	1046270	33745	1867	988387	94.5	57883	5.5	59.9	40.1
Jun 2019	1065465	35516	1951	1006926	94.5	58538.7	5.5	62.4	37.6
Jul 2019	1170433	37756	2082	1105891	94.5	64541.8	5.5	59.2	40.8
Aug 2019	1132052	37639	2070	1067883	94.3	64169	5.7	63.3	36.7
Sep 2019	1047827	35284	1891	991094	94.6	56732.6	5.4	63.9	36.1
Oct 2019	1076632	34475	1975	1015421	94.3	61210.7	5.7	63	37
Nov 2019	917714	30891	1619	869157	94.7	48557.1	5.3	63.4	36.6
Dec 2019	875724	29010	1619	825520	94.3	50204.3	5.7	62.2	37.8
<b>TOTAL</b>	<b>11921312</b>	<b>-</b>	<b>-</b>	<b>11265367</b>	<b>-</b>	<b>655944</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>993443</b>	<b>32821</b>	<b>1796</b>	<b>938781</b>	<b>94</b>	<b>54662</b>	<b>6</b>	<b>62</b>	<b>38</b>

###ESALS

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB 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	3323	12230	1296	15044	31893	58	42	2.1
Feb 2019	3621	10379	1146	13258	28405	59	41	1.6
Mar 2019	2986	10599	1079	13982	28646	59	41	1.7
Apr 2019	2688	7038	1141	14222	25089	67	33	0.5
May 2019	3613	11993	1449	14268	31323	57	43	1.2

Jun 2019	9436	21061	3719	28974	63190	61	39	1
Jul 2019	6609	11837	3842	15524	37811	59	41	2.7
Aug 2019	6353	14353	1557	16585	38848	59	41	2.4
Sep 2019	4324	21260	1441	15143	42167	46	54	0.6
Oct 2019	5137	15593	1960	16647	39337	55	45	2.2
Nov 2019	3593	18296	1176	14062	37126	48	52	0.8
Dec 2019	3844	11748	1248	13770	30610	58	42	1.8
<b>TOTAL</b>	<b>55526</b>	<b>166388</b>	<b>21053</b>	<b>191478</b>	<b>434445</b>	-	-	-
<b>AVERAGE</b>	<b>4627</b>	<b>13866</b>	<b>1754</b>	<b>15956</b>	<b>36204</b>	<b>57</b>	<b>43</b>	<b>2</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>
Jan 19	1125027	1469786	949823	1852076	5396712
Feb 19	1024314	1306617	842483	1640893	4814307
Mar 19	1213935	1489460	1027517	1902639	5633552
Apr 19	1195607	1332212	1026882	1915963	5470663
May 19	1318970	1723874	1131963	2073887	6248694
Jun 19	2796503	3349865	2422840	4302709	12871916
Jul 19	1609593	1811100	1549550	2183375	7153618
Aug 19	1561467	1851786	1248051	2369043	7030347
Sep 19	1391468	1611457	1164568	2124653	6292146
Oct 19	1461199	1738795	1250004	2206354	6656352
Nov 19	1206512	1472922	1016527	1862359	5558320
Dec 19	1169949	1496430	973642	1828023	5468044
<b>TOTAL</b>	<b>17074542</b>	<b>20654304</b>	<b>14603850</b>	<b>26261974</b>	<b>78594670</b>
<b>AVERAGE</b>	<b>1422879</b>	<b>1721192</b>	<b>1216988</b>	<b>2188498</b>	<b>6549556</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	2941	0.3	6	137	49
Feb 2019	2522	0.3	5.6	87	39
Mar 2019	1828	0.2	3.8	86	34
Apr 2019	1493	0.2	3.2	62	26
May 2019	2111	0.2	3.7	110	40
Jun 2019	5152	0.3	4.5	224	82
Jul 2019	3542	0.3	5.6	230	51
Aug 2019	3703	0.3	5.9	175	59
Sep 2019	3025	0.3	5.5	178	58

Oct 2019	3883	0.4	6.6	206	70
Nov 2019	2861	0.3	6.1	111	41
Dec 2019	3058	0.4	6.3	115	31
<b>TOTAL</b>	<b>36119</b>	<b>-</b>	<b>-</b>	<b>1721</b>	<b>580</b>
<b>AVERAGE</b>	<b>3009.9</b>	<b>0.3</b>	<b>5.2</b>	<b>143.4</b>	<b>48.3</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>
Jan 2019	175183	176870	352053	49.8	50.2
Feb 2019	156505	160401	316907	49.4	50.6
Mar 2019	162605	173632	336237	48.4	51.6
Apr 2019	117790	188701	306491	38.4	61.6
May 2019	187128	197189	384317	48.7	51.3
Jun 2019	353894	404240	758134	46.7	53.3
Jul 2019	206750	232123	438873	47.1	52.9
Aug 2019	221471	222957	444428	49.8	50.2
Sep 2019	176422	203961	380383	46.4	53.6
Oct 2019	210483	230292	440775	47.8	52.2
Nov 2019	166089	176852	342941	48.4	51.6
Dec 2019	169776	170219	339996	49.9	50.1
<b>TOTAL</b>	<b>2304097</b>	<b>2537439</b>	<b>4841535</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>192008.1</b>	<b>211453.2</b>	<b>403461.3</b>	<b>47.6</b>	<b>52.4</b>