

JANUARY 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 January 2019. Volume was computed using all monthly data.

System Calibration

WIM #32 was most recently calibrated on 2017-05-05. Table 1 summarizes the front axle weights of class 9s by lane ¹. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation ². Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

Summary of Volume Statistics

Total Monthly Volume: 786295 | Passenger Vehicles: 722455 | Heavy Commercial Vehicles: 63840

Monthly Average Daily Traffic (MADT): 25364 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2059

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 Tuesdays. 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 07 AM and 04 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 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 63840 HCVs, 574 of them were overweight ³. These overweight HCVs contributed to 0.1% of total monthly volume, and 0.9% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Saturdays. 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 5 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 56.9% 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 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 ⁴.

Using normal load limits ,30 NB vehicles exceeded 88,000 pounds (16 vehicles were Class 13's; 8 vehicles were Class 10's). Of vehicles traveling SB,

18 NB vehicles exceeded 88,000 pounds (15 vehicles were Class 13's; 1 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from January 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in January 2019. Data suggests that there were greater numbers of empty Class 9's than fully_loaded Class 9's traveling NB, while there were more empty Class 9's than fully_loaded 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 381323 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (50.2%) than SB (49.8%). 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 786295 vehicles with a combined GVW of 5037829 kips (1 kip = 1,000 pounds = 0.5 tons) in January 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 25880 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.3% of all ESALs were recorded SB while 49.7% was observed NB. In particular, 78% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 37% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

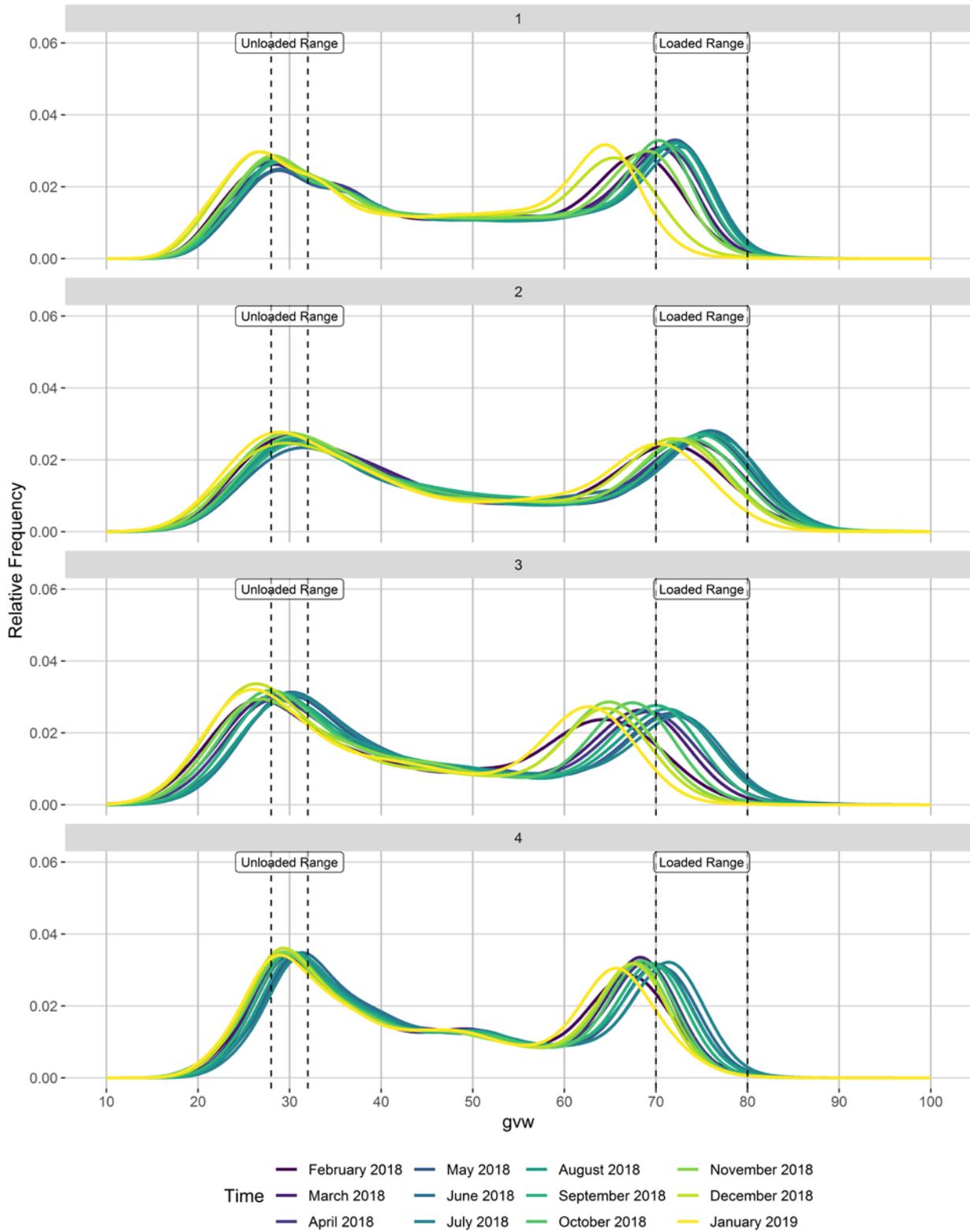
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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

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

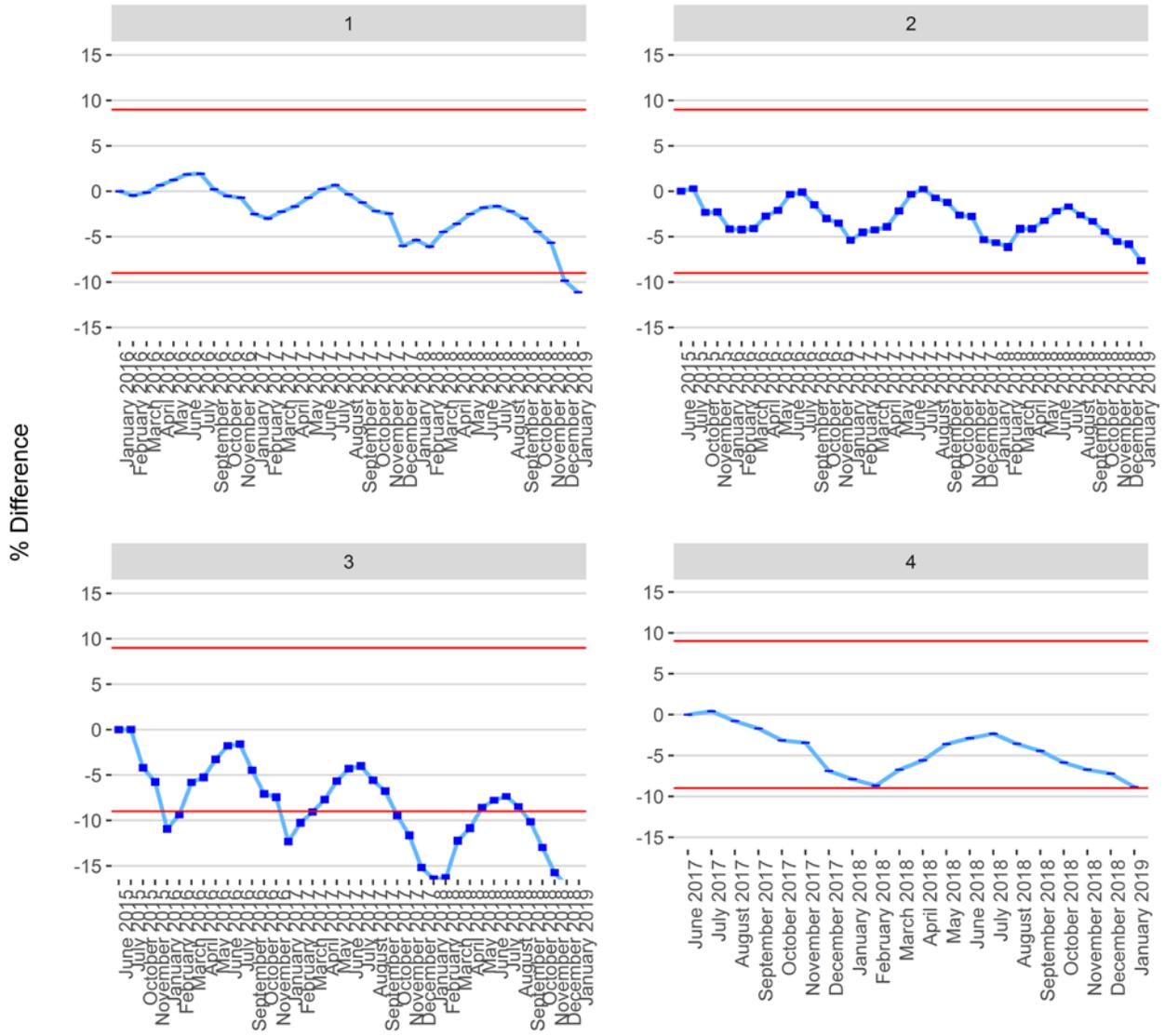
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

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

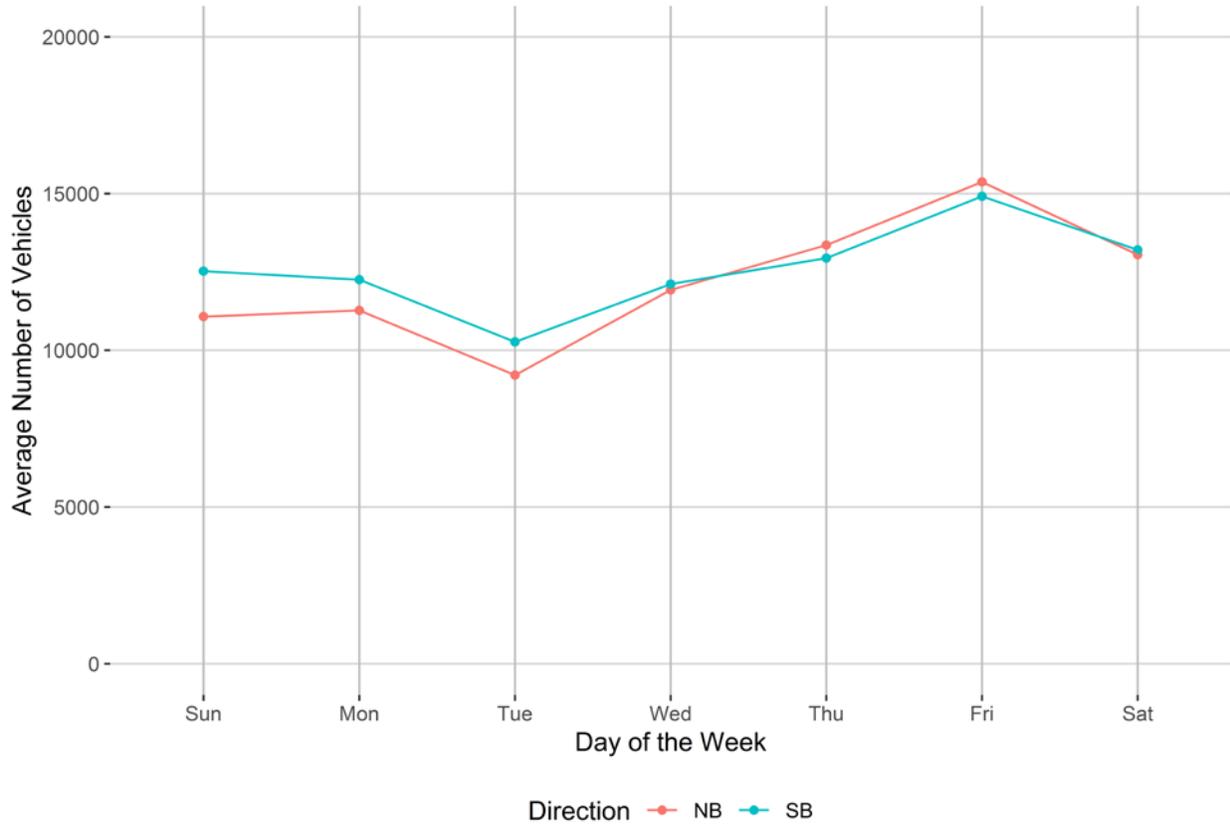


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

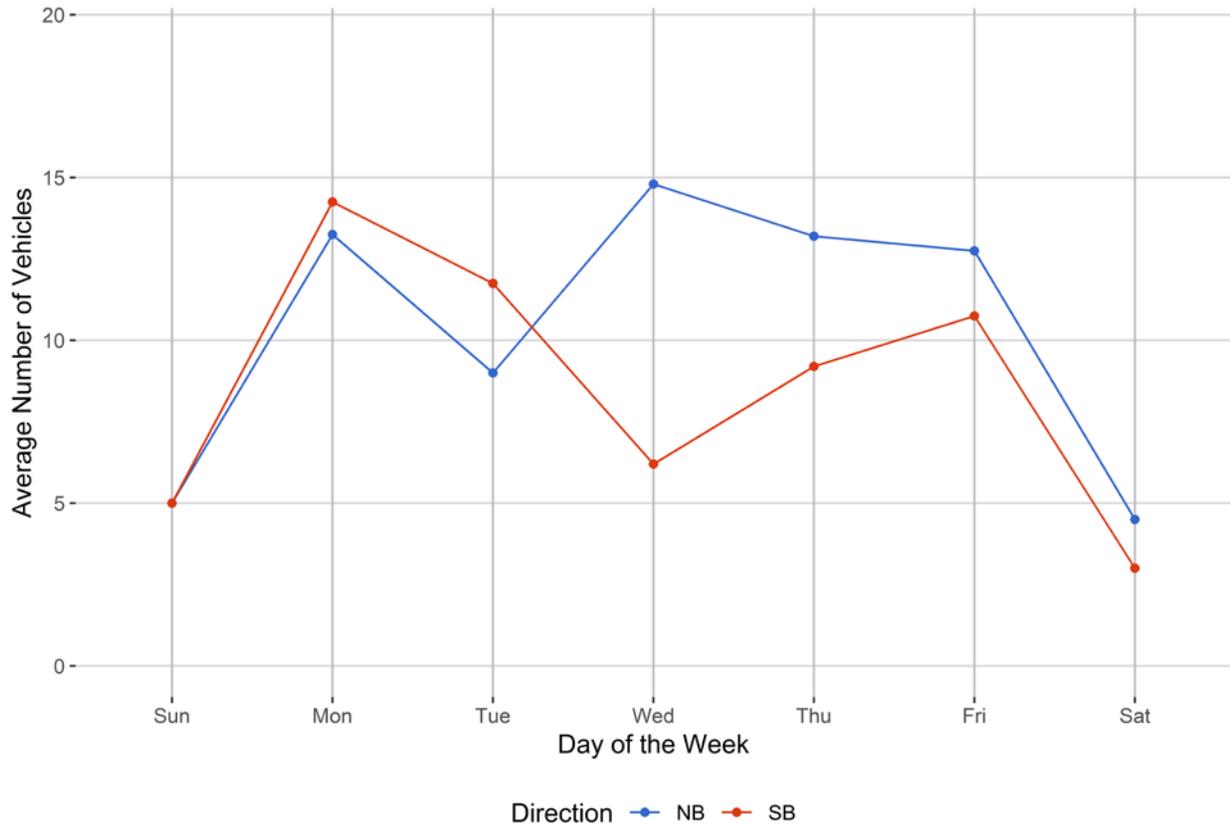


Figure 4 - Passenger Vehicles vs. Hour of the Day

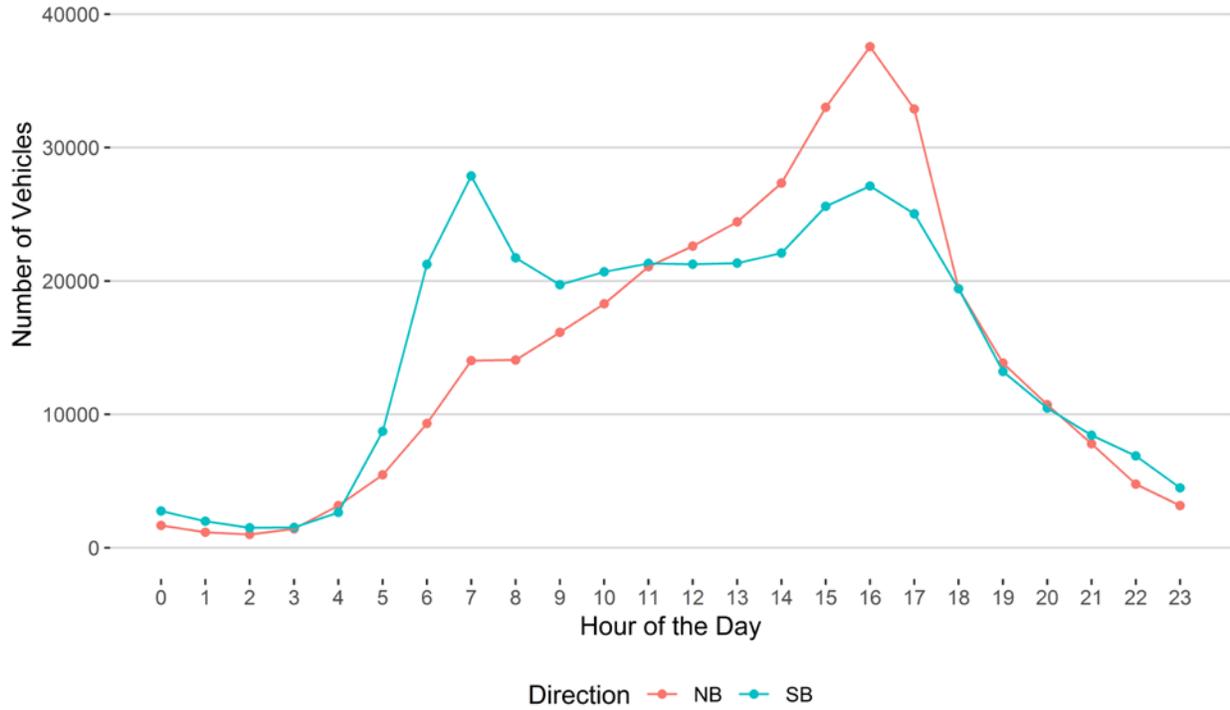


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

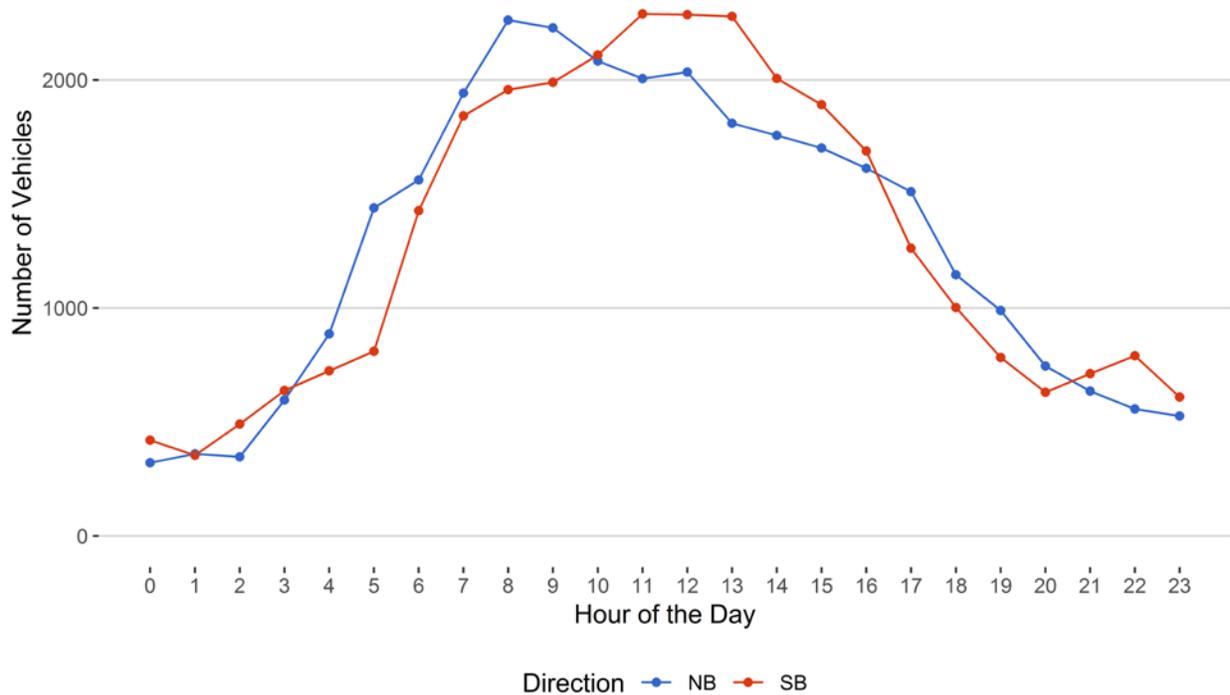


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

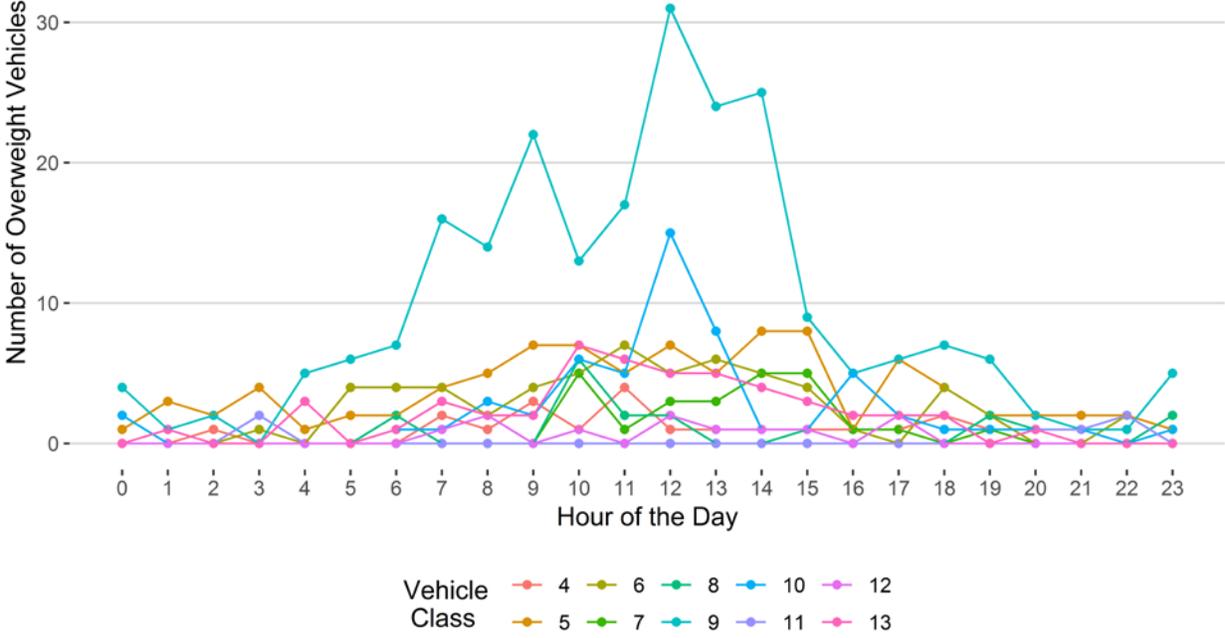


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

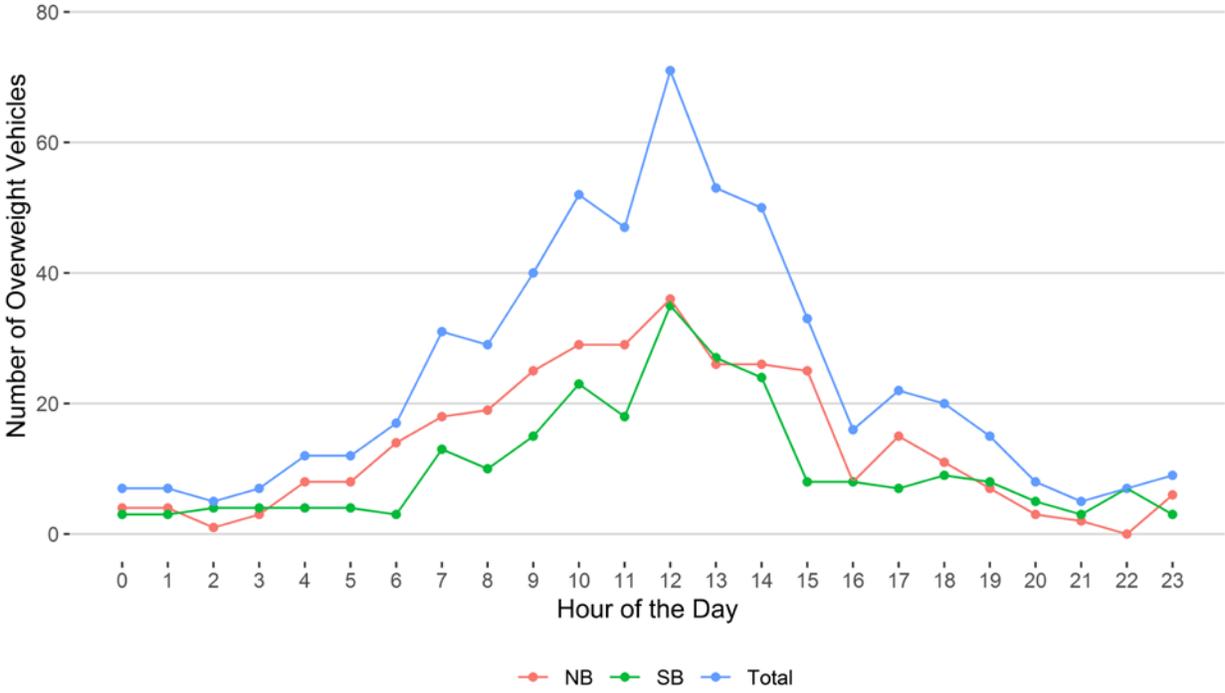
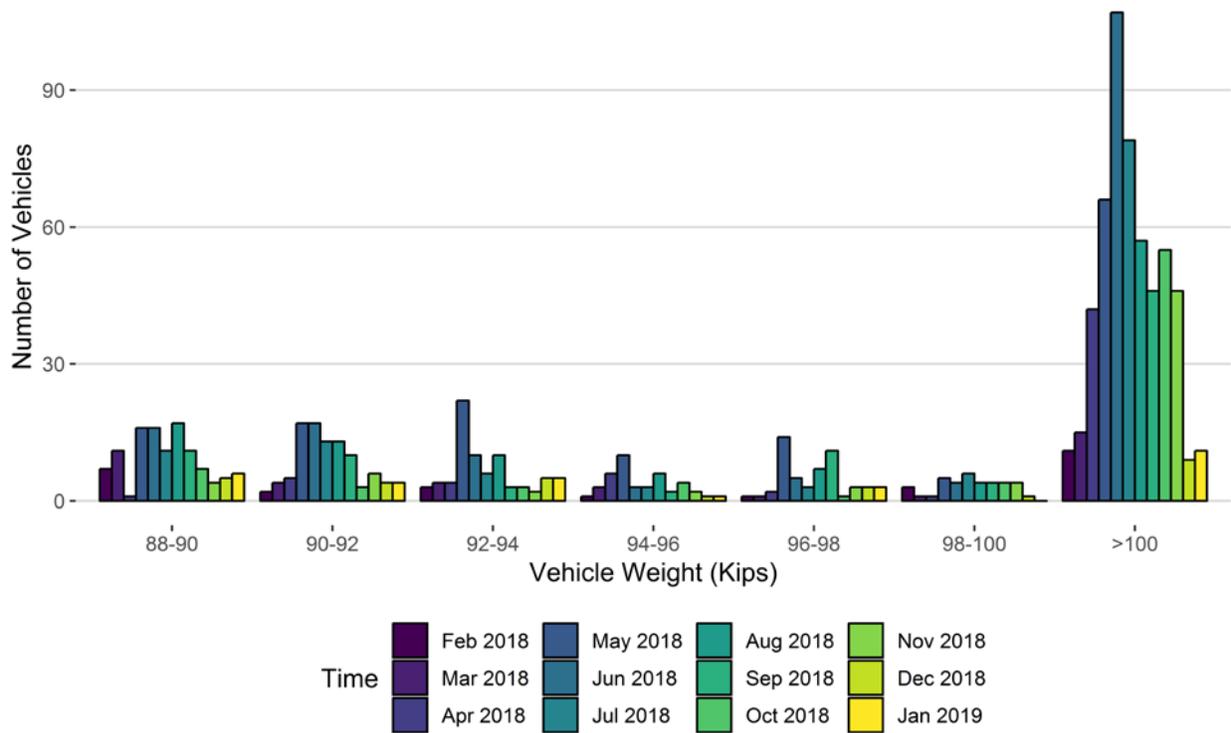
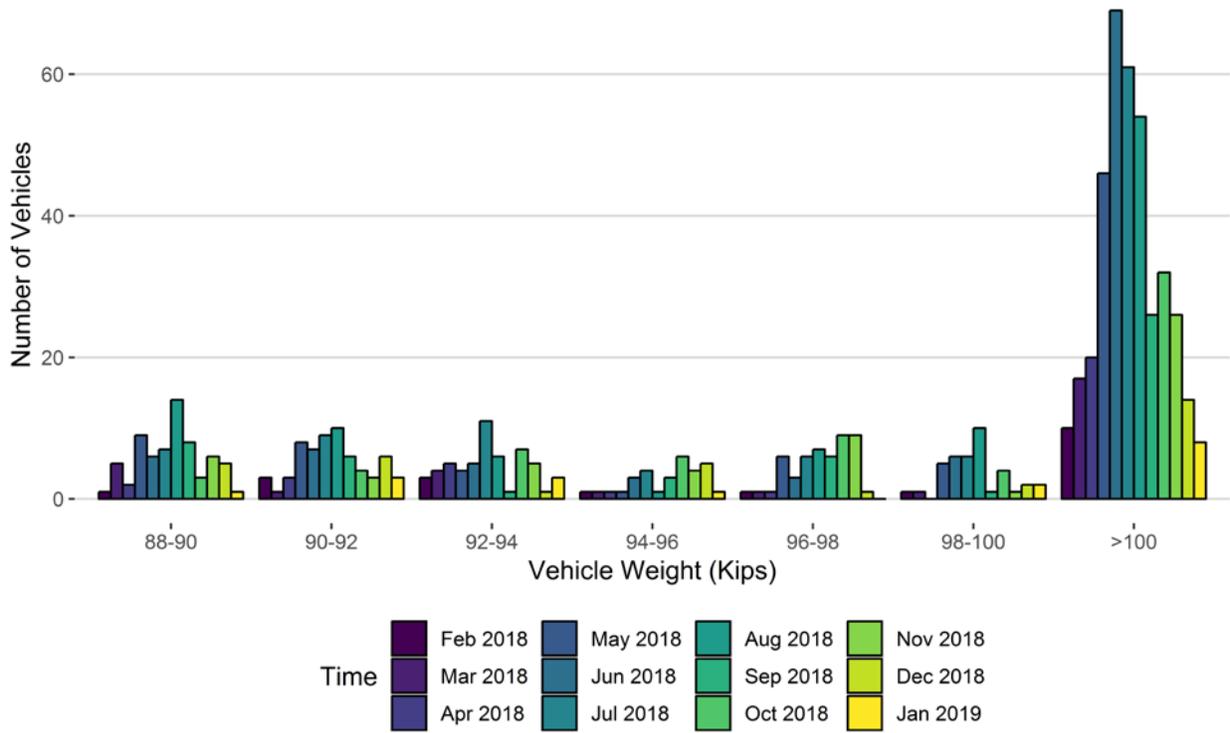


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019
88-90	7	11	1	16	16	11	17	11	7	4	5	6
90-92	2	4	5	17	17	13	13	10	3	6	4	4
92-94	3	4	4	22	10	6	10	3	3	2	5	5
94-96	1	3	6	10	3	3	6	2	4	2	1	1
96-98	1	1	2	14	5	3	7	11	1	3	3	3
98-100	3	1	1	5	4	6	4	4	4	4	1	0
>100	11	15	42	66	107	79	57	46	55	46	9	11
Total	28	39	61	150	162	121	114	87	77	67	28	30

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



Vehicle Weights (Kips)	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019
88-90	1	5	2	9	6	7	14	8	3	6	5	1
90-92	3	1	3	8	7	9	10	6	4	3	6	3
92-94	3	4	5	4	5	11	6	1	7	5	1	3
94-96	1	1	1	1	3	4	1	3	6	4	5	1
96-98	1	1	1	6	3	6	7	6	9	9	1	0
98-100	1	1	0	5	6	6	10	1	4	1	2	2
>100	10	17	20	46	69	61	54	26	32	26	14	8
Total	20	30	32	79	99	104	102	51	65	54	34	18

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

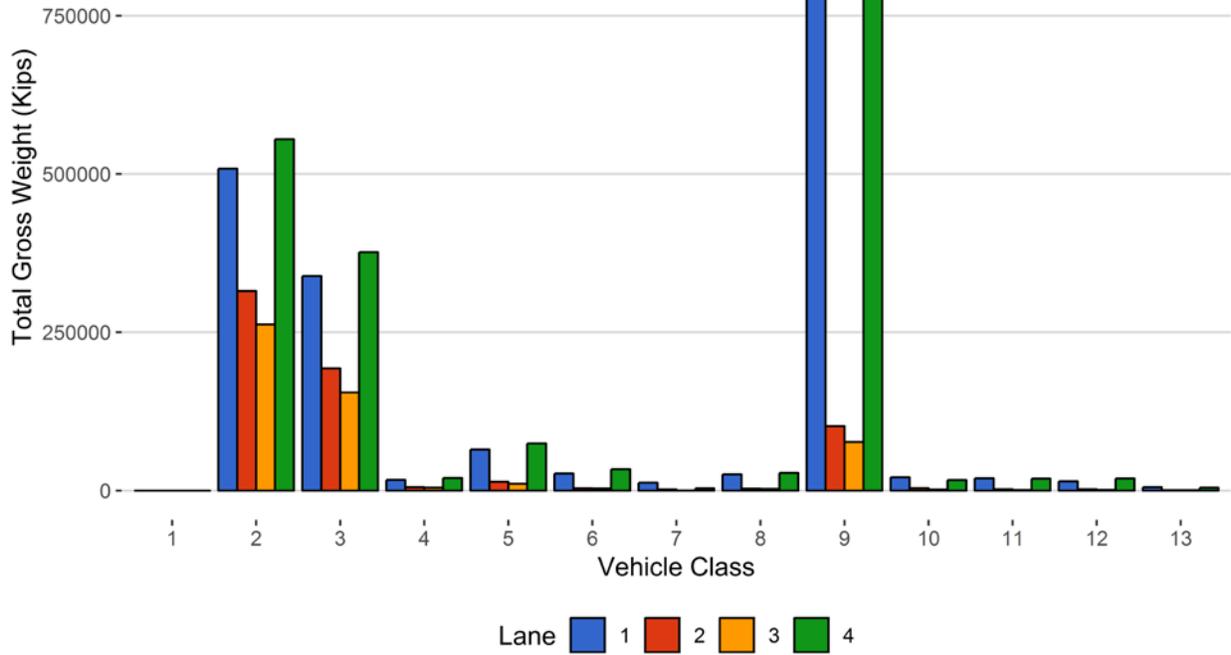


Figure 11 - Total Gross Vehicle Weight t

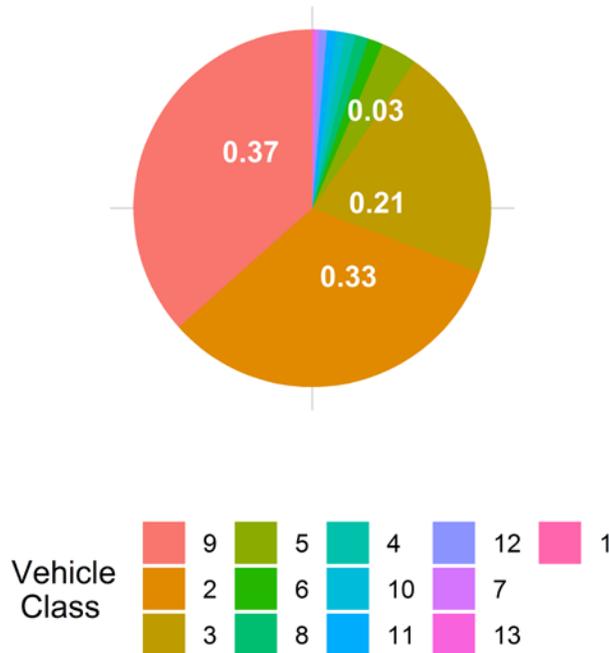


Figure 12 - Total ESALs by Class and Lane

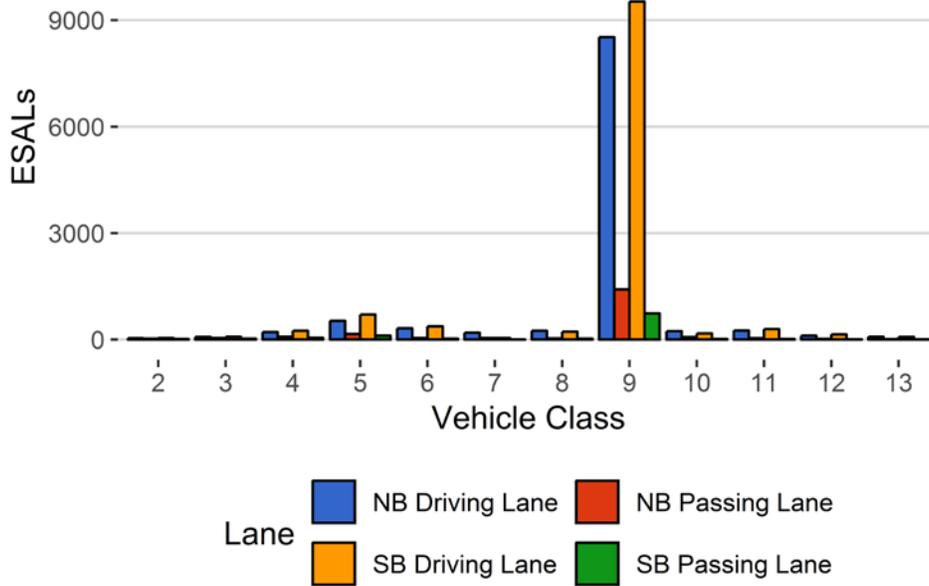


Figure 13 - ESALs by Class

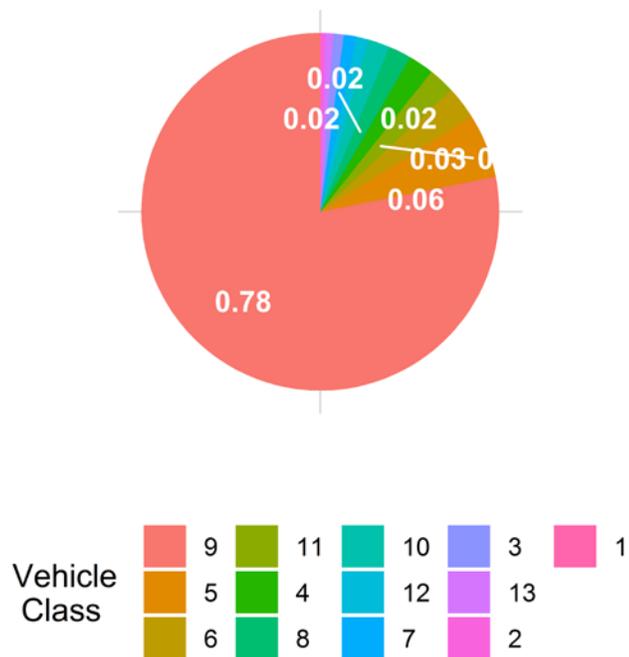


Table 1 Class 9 Front Axle Weight by Lane

<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	10.78	0.00
July 2017	10.62	0.68	11.22	0.24	10.89	-4.00	10.82	0.42
August 2017	10.51	-0.35	11.11	-0.73	10.71	-5.58	10.69	-0.78
September 2017	10.41	-1.25	11.06	-1.23	10.58	-6.78	10.60	-1.70
October 2017	10.31	-2.19	10.90	-2.63	10.27	-9.46	10.44	-3.15
November 2017	10.29	-2.46	10.89	-2.77	10.02	-11.64	10.41	-3.43
December 2017	9.91	-6.02	10.60	-5.33	9.62	-15.19	10.04	-6.89

January 2018	9.98	-5.37	10.56	-5.67	9.48	-16.42	9.93	-7.89
February 2018	9.90	-6.10	10.51	-6.15	9.48	-16.39	9.84	-8.68
March 2018	10.07	-4.48	10.73	-4.14	9.96	-12.23	10.05	-6.73
April 2018	10.17	-3.58	10.73	-4.13	10.11	-10.86	10.18	-5.59
May 2018	10.28	-2.51	10.83	-3.25	10.37	-8.56	10.39	-3.60
June 2018	10.36	-1.80	10.95	-2.19	10.46	-7.78	10.47	-2.88
July 2018	10.37	-1.65	11.01	-1.69	10.51	-7.36	10.53	-2.34
August 2018	10.31	-2.21	10.90	-2.63	10.38	-8.46	10.39	-3.56
September 2018	10.23	-3.00	10.82	-3.32	10.19	-10.15	10.30	-4.43
October 2018	10.08	-4.46	10.70	-4.45	9.87	-12.98	10.15	-5.86
November 2018	9.95	-5.67	10.57	-5.55	9.56	-15.75	10.05	-6.73
December 2018	9.51	-9.84	10.54	-5.83	9.40	-17.17	10.00	-7.20
January 2019	9.37	-11.12	10.34	-7.66	9.18	-19.12	9.82	-8.85

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	1	0	0	0
2	16318	505872	64.3	0	0
3	6987	216582	27.5	0	0
4	53	1647	0.2	21	3.7
5	411	12754	1.6	91	15.9
6	88	2727	0.3	61	10.6
7	11	328	0	25	4.4
8	72	2228	0.3	21	3.7
9	1340	41538	5.3	229	39.9
10	27	851	0.1	60	10.5
11	28	862	0.1	6	1
12	24	758	0.1	11	1.9
13	5	146	0	49	8.5
TOTAL	25364	786295	100	574	100

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>
2019-01-08	Tuesday	04:32:14	9	NB	1	108.91
2019-01-24	Thursday	07:18:50	9	NB	1	103.5
2019-01-25	Friday	05:20:22	9	NB	2	102.93
2019-01-03	Thursday	14:31:56	9	SB	4	99.63
2019-01-18	Friday	04:24:10	9	NB	1	98.78
2019-01-21	Monday	07:47:45	9	NB	1	97.91
2019-01-22	Tuesday	08:58:12	9	NB	1	96.76
2019-01-24	Thursday	06:15:31	9	NB	1	96.47
2019-01-29	Tuesday	04:52:00	9	NB	1	95.41
2019-01-22	Tuesday	14:59:23	9	SB	4	94.21

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	743	86	11.6	21106	1092	5626
5	NB	8	6075	1231	20.3	70437	8507	15842
6	NB	19	1219	407	33.4	24326	6136	4449
7	NB	11.5	235	0	0	14288	0	5793
8	NB	31	1053	763	72.5	10912	17773	961
9	NB	33	20411	6961	34.1	737294	184438	146722
10	NB	33.5	453	110	24.3	22209	2573	5359
11	NB	36.5	448	68	15.2	19087	2229	2609
12	NB	36.5	347	60	17.3	15024	1867	2274
13	NB	31.5	76	0	0	6000	0	1803
TOTAL	****	****	31060	9686	****	940682	****	191437
<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	858	121	14.1	22878	1480	5911
5	SB	8	6323	1385	21.9	75924	9416	18210
6	SB	19	1432	373	26	31202	5849	5541
7	SB	11.5	84	0	0	3837	0	1435
8	SB	31	1113	817	73.4	10839	19617	832
9	SB	33	19966	6430	32.2	740519	178440	146916
10	SB	33.5	374	135	36.1	15179	3082	3586
11	SB	36.5	390	36	9.2	18513	1155	2796
12	SB	36.5	390	35	9	18976	1174	3009
13	SB	31.5	66	0	0	5379	0	1650
TOTAL	****	****	30996	9332	****	943246	****	189886
GRAND TOTAL	****	****	62056	19018	451	1883928	444827	381323

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	0	0	0	1	1	0
2	508442	315091	262317	555026	1640876	32.6
3	338872	192880	154925	376379	1063056	21.1
4	16888	5310	4636	19721	46555	0.9
5	65008	13936	10756	74584	164283	3.3
6	26941	3521	3361	33690	67513	1.3
7	12363	1925	243	3594	18125	0.4
8	25672	3013	2713	27744	59141	1.2
9	819990	101741	76647	842312	1840691	36.6
10	20900	3881	1618	16643	43043	0.9
11	19232	2084	968	18700	40984	0.8
12	14686	2205	1011	19139	37041	0.7
13	5395	605	722	4657	11379	0.2
TOTAL	1874389	646193	519916	1992190	5032688	100
GVW/LANE	37.24	12.84	10.33	39.59	100	0

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	0.5
2	40	28	18	44	130	0.5	5e-04
3	78	48	27	86	239	0.92	0.0023
4	214	81	51	248	594	2.3	0.74
5	530	158	110	708	1505	5.82	0.24
6	321	48	28	372	769	2.97	0.58
7	198	44	2	46	290	1.12	1.8
8	251	35	28	222	536	2.07	0.5
9	8519	1413	743	9524	20199	78.14	1
10	242	74	17	174	506	1.96	1.22
11	258	41	17	300	615	2.38	1.47
12	111	22	7	150	290	1.12	0.79
13	83	10	7	75	176	0.68	2.36
TOTAL	10844	2003	1055	11947	25849	100	11
ESALS/LANE	42	7.7	4.1	46.2	100	-	-

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>
Feb 2018	732422	26158	2181	671341	91.7	61080.7	8.3	89.1	10.9
Mar 2018	899645	29021	2200	831445	92.4	68199.7	7.6	90.2	9.8
Apr 2018	850664	28356	2215	784220	92.2	66444	7.8	89.5	10.5
May 2018	1039431	33530	2662	956910	92.1	82521.5	7.9	87.5	12.5
Jun 2018	1097500	36583	2770	1014403	92.4	83097.5	7.6	87.6	12.4
Jul 2018	1120144	36134	2761	1034542	92.4	85602.1	7.6	87.3	12.7
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
TOTAL	11274469	-	-	10389897	-	884573	-	-	-
AVERA GE	939539	31275	2421	865825	92	73714	8	89	11

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>
Feb 2018	14098	2042	1177	12253	29570	89	11	0.5
Mar 2018	17718	2055	1307	14249	35330	90	10	1.1
Apr 2018	17911	2401	1428	13971	35711	89	11	1.5
May 2018	22396	3529	2349	18747	47020	88	12	2
Jun 2018	23012	3694	2374	19307	48387	87	13	2.4
Jul 2018	22415	3858	2407	21343	50024	87	13	1.7
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
TOTAL	219949	34200	20098	192311	466558	-	-	-
AVERAGE	18329	2850	1675	16026	38880	88	12	1

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>
Feb 18	1903489	608683	470517	1846133	4828823
Mar 18	2337771	771441	616757	2244953	5970921
Apr 18	2259387	759393	600722	2164611	5784113
May 18	2707830	1023785	857182	2663473	7252270
Jun 18	2805374	1107547	932861	2734606	7580388
Jul 18	2846033	1123846	955181	2884472	7809531
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
TOTAL	29168453	10605525	8644674	28858441	77277093
AVERAGE	2430704	883794	720389	2404870	6439758

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>
Feb 2018	1019	0.1	1.7	49	26
Mar 2018	1066	0.1	1.6	70	34
Apr 2018	1338	0.2	2	93	63
May 2018	2314	0.2	2.8	232	122
Jun 2018	2666	0.2	3.2	261	186
Jul 2018	2866	0.3	3.4	226	152
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
TOTAL	19480	-	-	1666	1005
AVERAGE	1623.3	0.2	2.1	138.8	83.8

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>
Feb 2018	214845	184994	399839	53.7	46.3
Mar 2018	259219	219426	478646	54.2	45.8
Apr 2018	262841	213385	476226	55.2	44.8
May 2018	329620	285332	614952	53.6	46.4
Jun 2018	339294	288144	627438	54.1	45.9
Jul 2018	337328	317763	655090	51.5	48.5
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
TOTAL	3352522	2947629	6300152	-	-
AVERAGE	279376.8	245635.8	525012.6	53.1	46.9