

JUNE 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 June 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 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: 1022960 | Passenger Vehicles: 944302 | Heavy Commercial Vehicles: 78658

Monthly Average Daily Traffic (MADT): 34099 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2622

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 Sundays, 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 78658 HCVs, 11125 of them were overweight ³. These overweight HCVs contributed to 1.1% of total monthly volume, and 14.6% of total monthly

HCV volume. NB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Saturdays. SB overweight vehicles tended to reach highest volumes on Tuesdays, with lowest volumes reported on Saturdays. See Figure 3 . The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 52.9% 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 May.

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 ,614 NB vehicles exceeded 88,000 pounds (448 vehicles were Class 9's; 77 vehicles were Class 10's). Of vehicles traveling SB,

319 NB vehicles exceeded 88,000 pounds (213 vehicles were Class 9's; 59 vehicles were Class 13's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from June 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in June 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 696924 tons of freight was recorded to have crossed the WIM. More freight was shipped SB (50.2%) than NB (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 1022960 vehicles with a combined GVW of 7632551 kips (1 kip = 1,000 pounds = 0.5 tons) in June 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 64796 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 50.8% of all ESALs were recorded SB while 49.2% was observed NB. In particular, 79% 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).

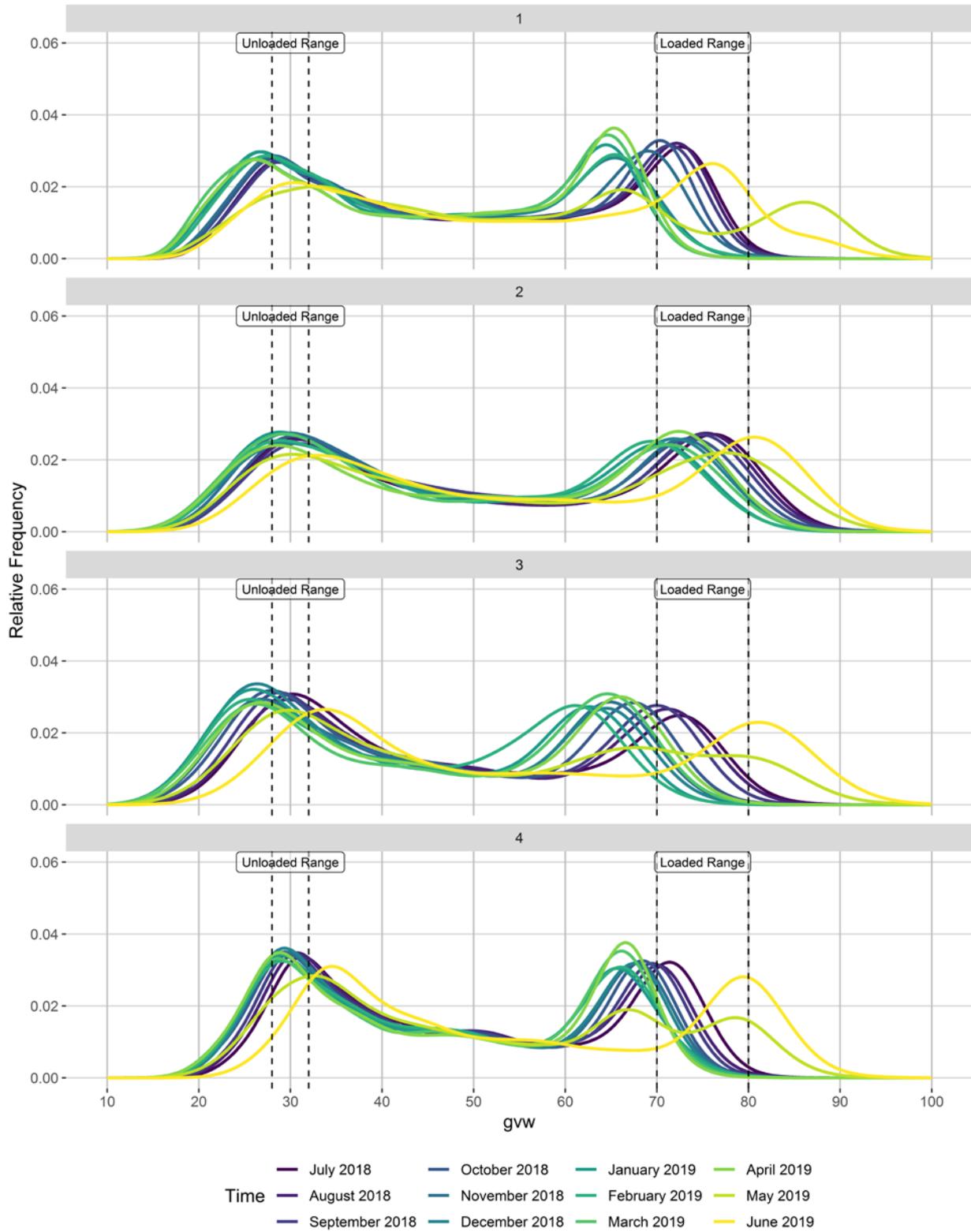
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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>

- 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.

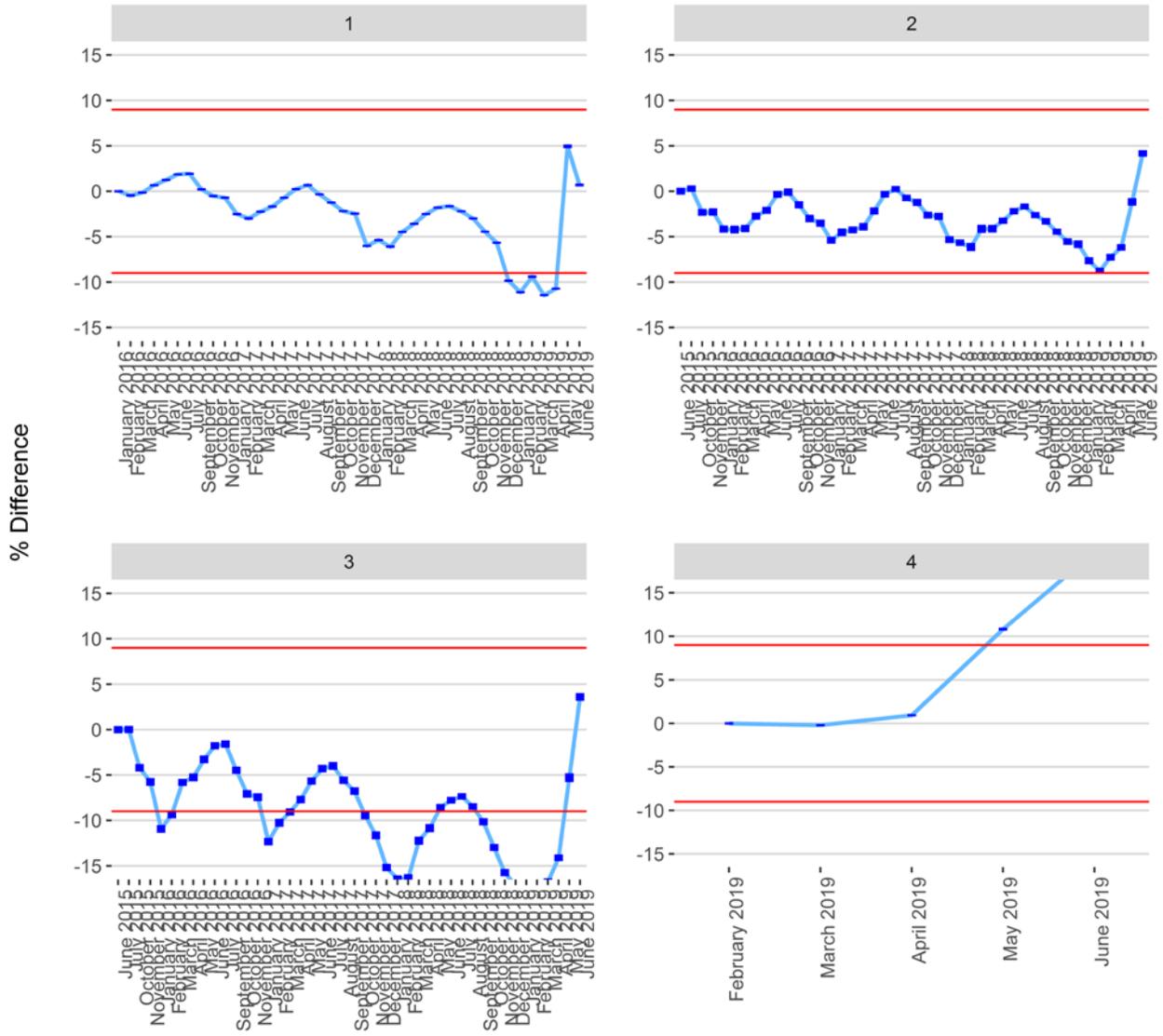
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

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

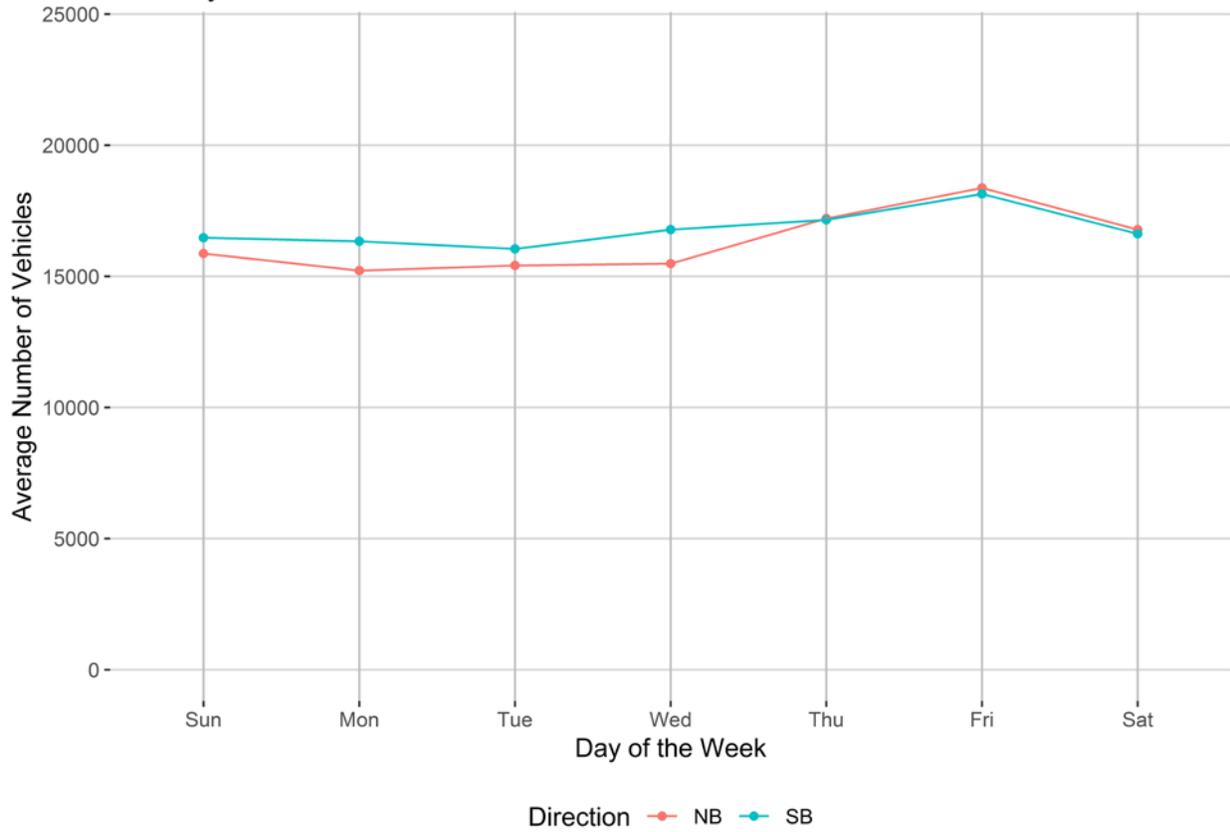


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

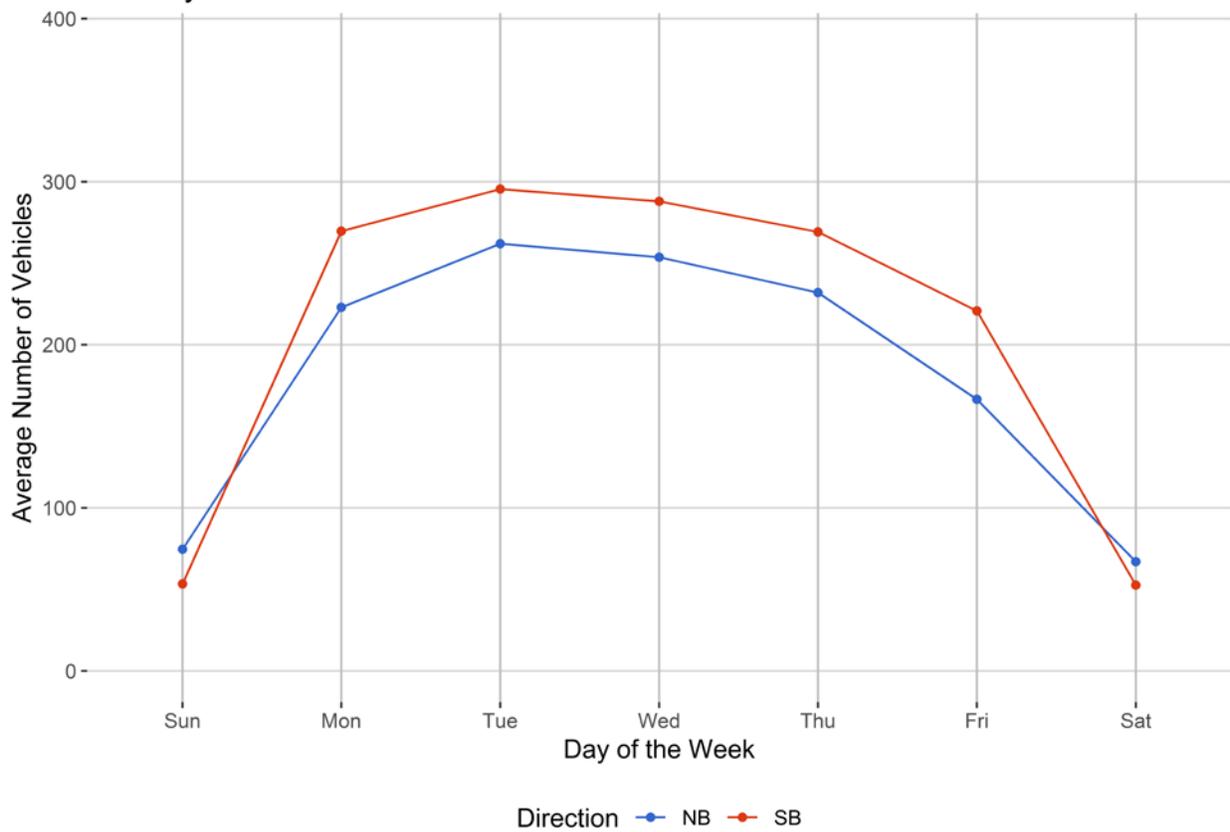


Figure 4 - Passenger Vehicles vs. Hour of the Day

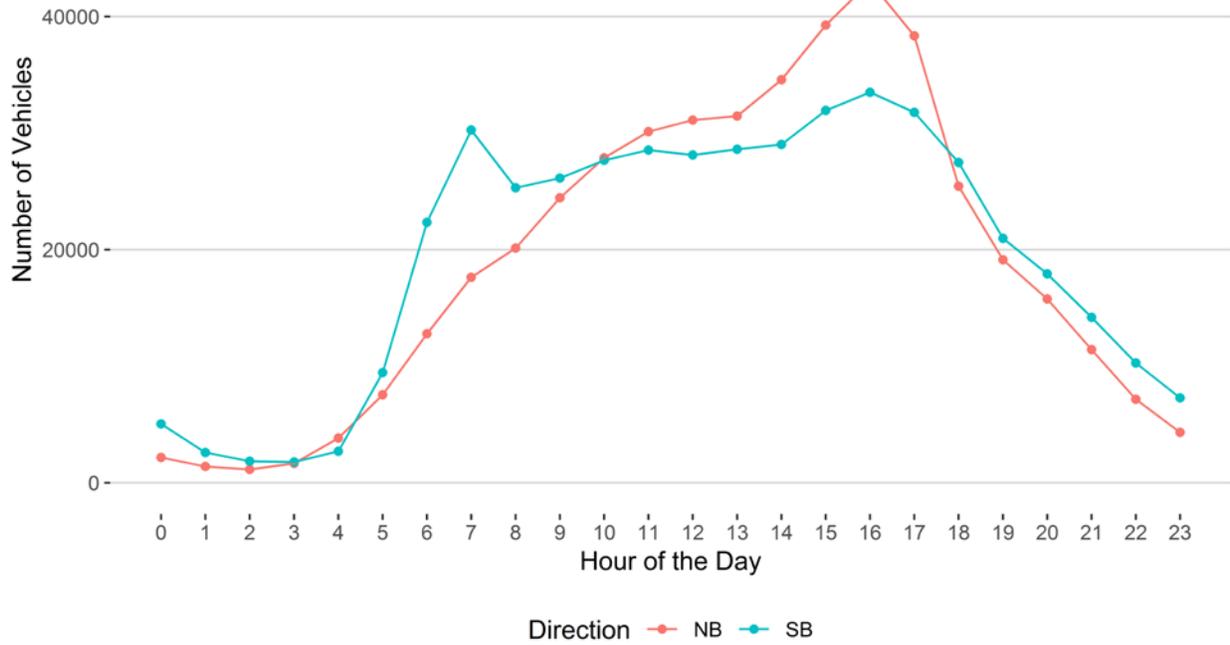


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

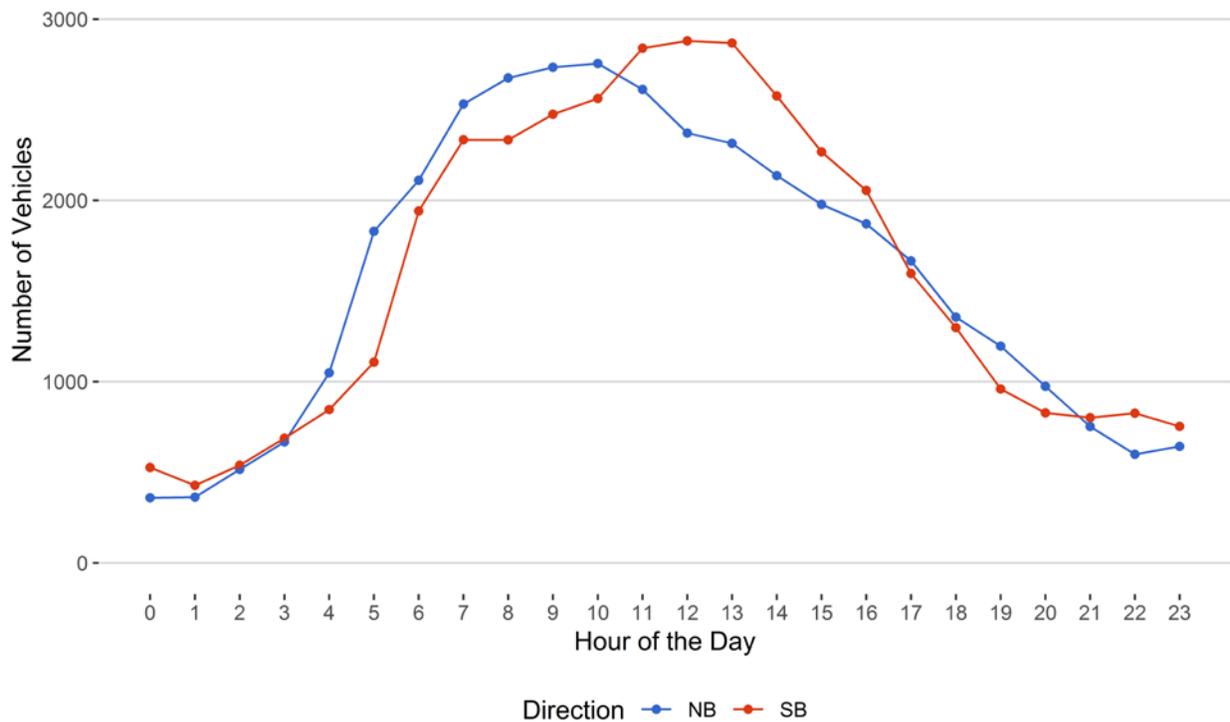


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

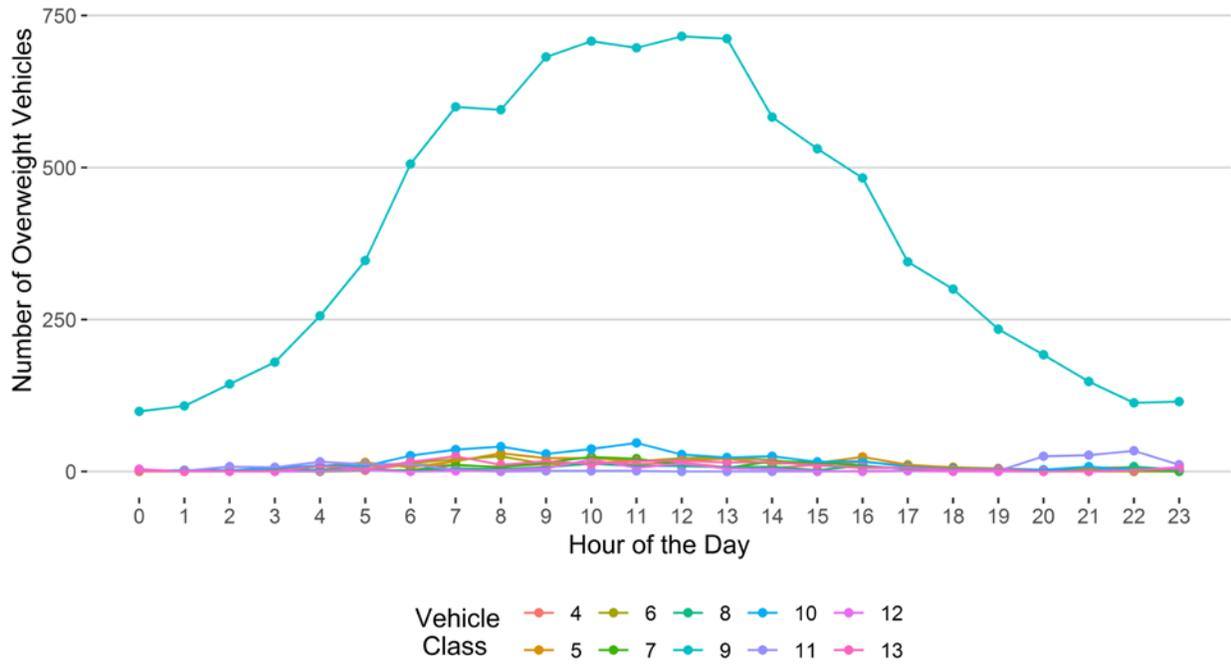


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

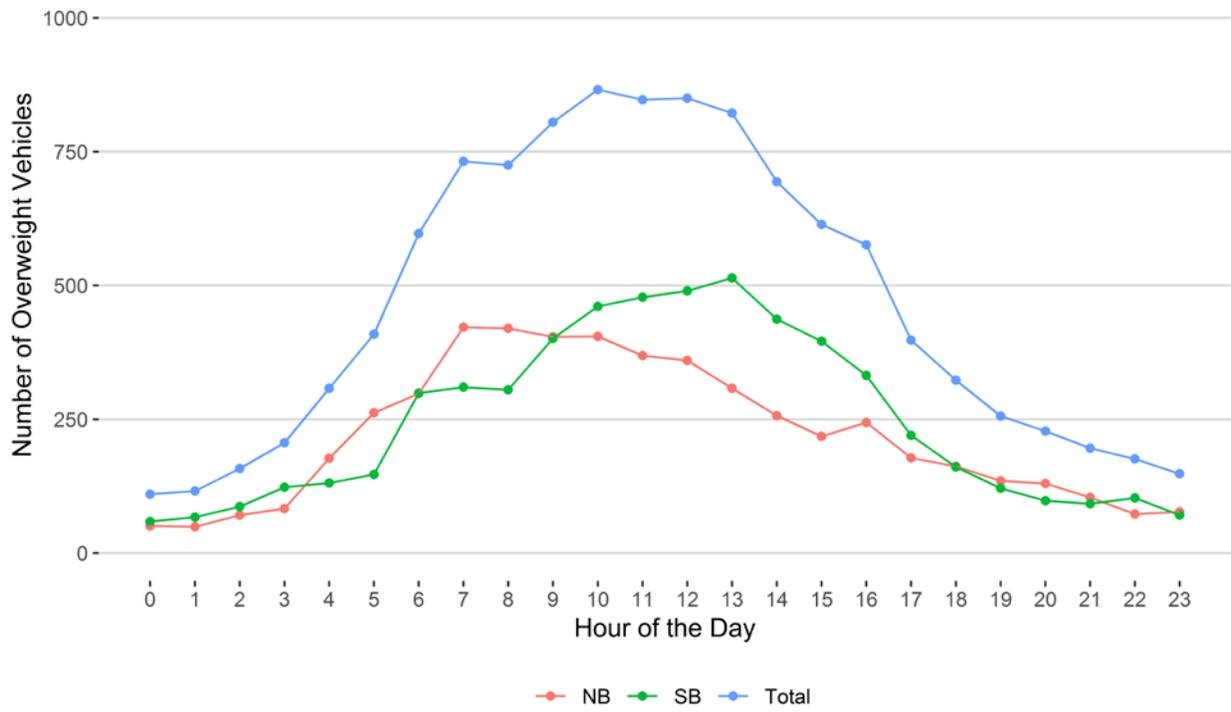
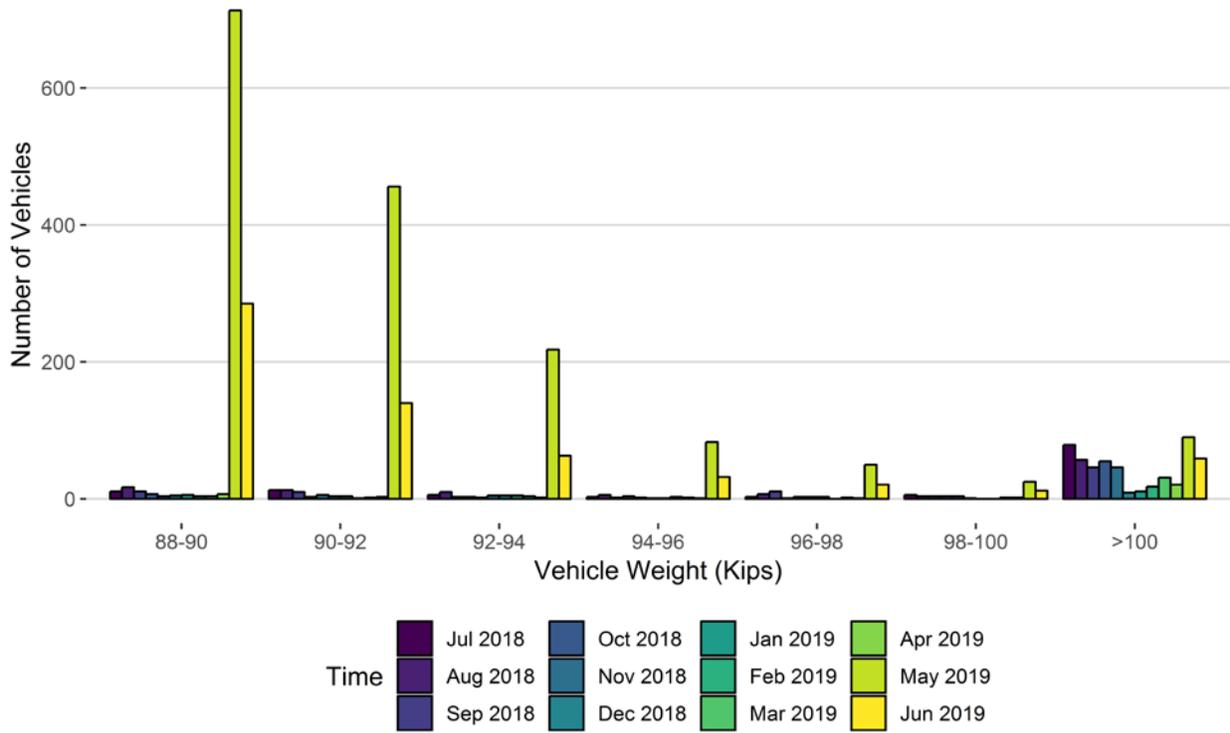
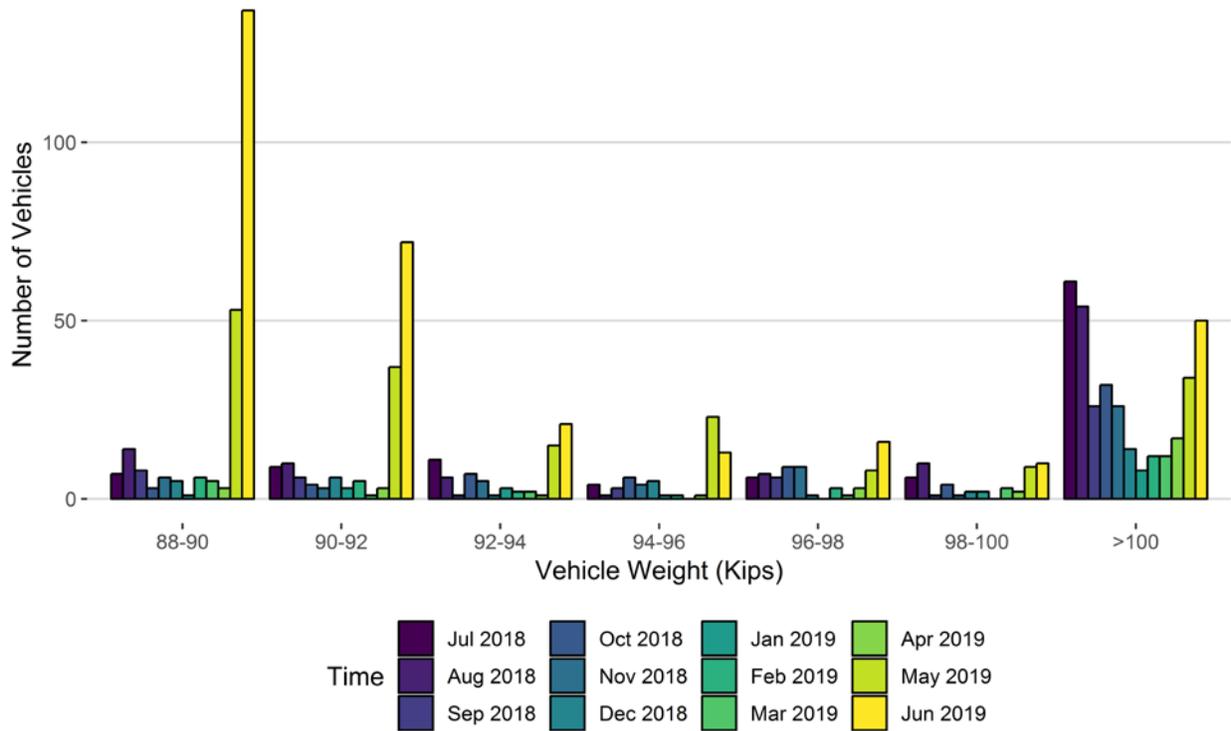


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019
88-90	11	17	11	7	4	5	6	4	4	7	713	285
90-92	13	13	10	3	6	4	4	1	2	3	456	140
92-94	6	10	3	3	2	5	5	5	4	2	218	63
94-96	3	6	2	4	2	1	1	3	2	1	83	32
96-98	3	7	11	1	3	3	3	0	2	1	50	21
98-100	6	4	4	4	4	1	0	0	2	2	25	12
>100	79	57	46	55	46	9	11	18	31	21	90	59
Total	121	114	87	77	67	28	30	31	47	37	1635	612

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



Vehicle Weights (Kips)	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019
88-90	7	14	8	3	6	5	1	6	5	3	53	137
90-92	9	10	6	4	3	6	3	5	1	3	37	72
92-94	11	6	1	7	5	1	3	2	2	1	15	21
94-96	4	1	3	6	4	5	1	1	0	1	23	13
96-98	6	7	6	9	9	1	0	3	1	3	8	16
98-100	6	10	1	4	1	2	2	0	3	2	9	10
>100	61	54	26	32	26	14	8	12	12	17	34	50
Total	104	102	51	65	54	34	18	29	24	30	179	319

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

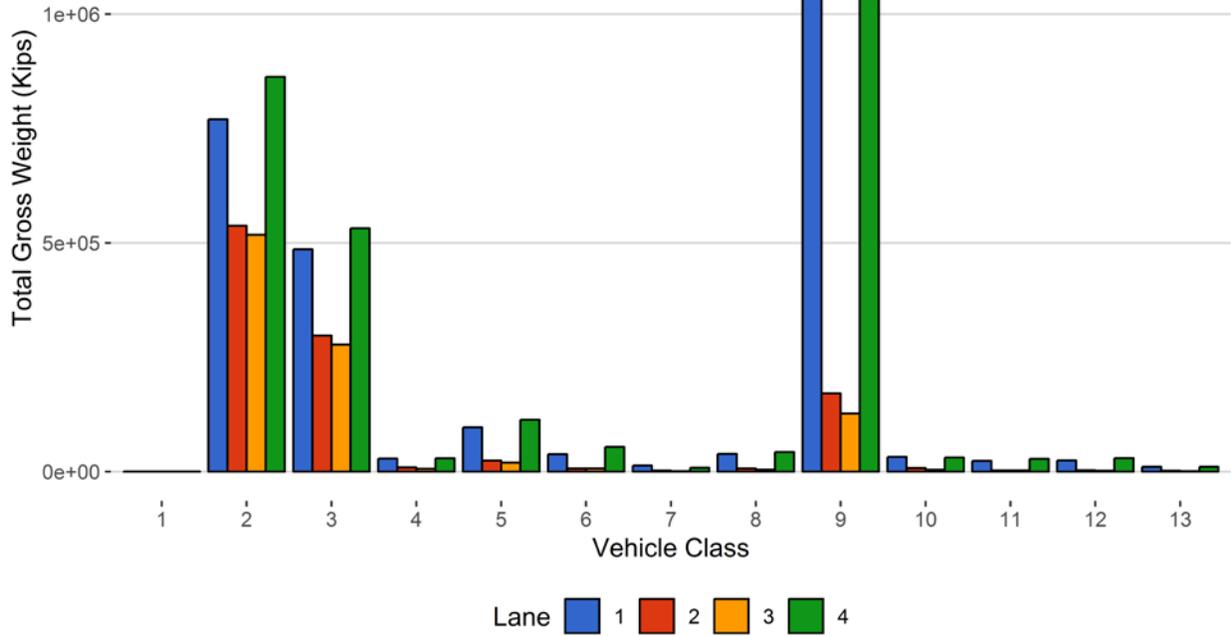


Figure 11 - Total Gross Vehicle Weight t

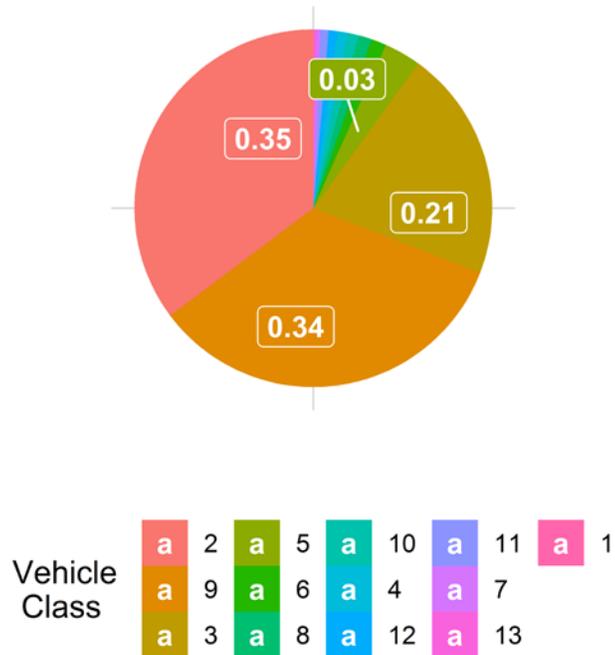


Figure 12 - Total ESALs by Class and Lane

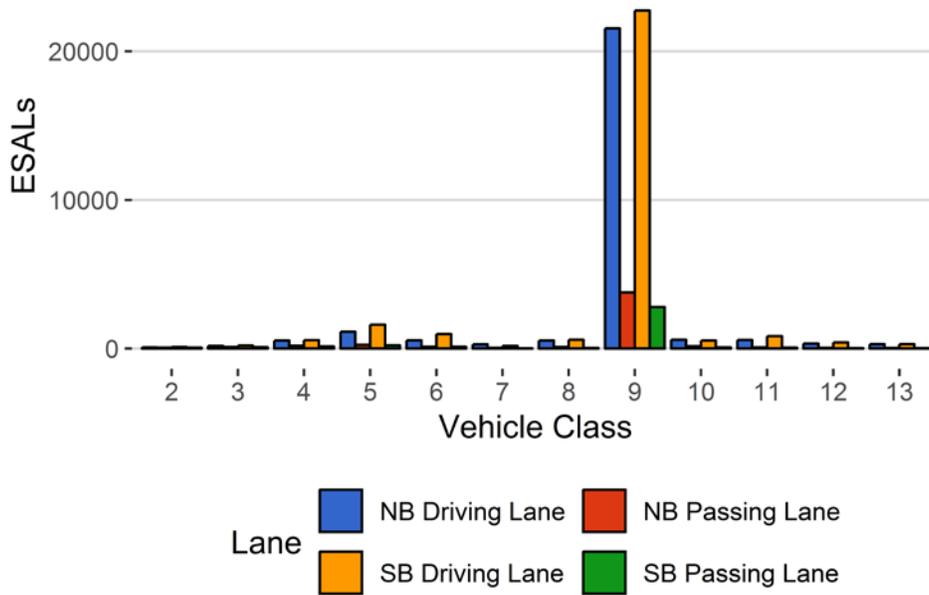


Figure 13 - ESALs by Class

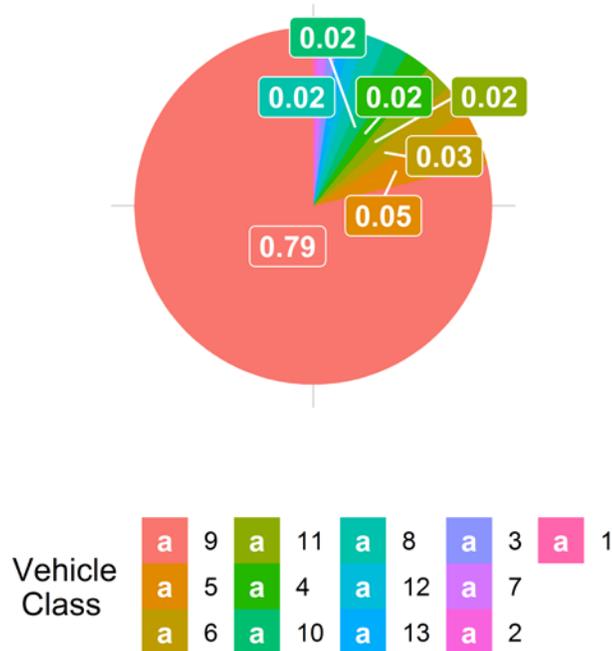


Table 1 Class 9 Front Axle Weight by Lane

<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	9.90	-6.10	10.51	-6.15	9.48	-16.39	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	-9.40	10.21	-8.76	8.95	-21.10	9.76	0.00
March 2019	9.34	-11.45	10.38	-7.26	9.44	-16.75	9.74	-0.21
April 2019	9.41	-10.72	10.50	-6.18	9.74	-14.11	9.85	0.93
May 2019	11.07	4.94	11.06	-1.17	10.74	-5.30	10.82	10.82
June 2019	10.62	0.68	11.66	4.16	11.75	3.59	11.68	19.68

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	378	0	0	0
2	22805	684139	66.9	0	0
3	8660	259785	25.4	0	0
4	79	2360	0.2	155	1.4
5	579	17374	1.7	278	2.5
6	119	3575	0.3	202	1.8
7	14	413	0	155	1.4
8	105	3144	0.3	113	1
9	1609	48271	4.7	9394	84.4
10	43	1289	0.1	389	3.5
11	33	981	0.1	164	1.5
12	33	997	0.1	76	0.7
13	9	255	0	199	1.8
TOTAL	34099	1022960	100	11125	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>
2019-06-04	Tuesday	02:56:00	9	NB	1	138.26
2019-06-21	Friday	14:44:59	10	SB	3	134.99
2019-06-11	Tuesday	03:33:20	9	NB	1	134.9
2019-06-14	Friday	02:48:24	9	NB	1	126.62
2019-06-19	Wednesday	19:30:10	10	SB	4	119.33
2019-06-11	Tuesday	16:50:19	9	NB	1	119.08
2019-06-14	Friday	22:05:25	10	NB	1	118.59
2019-06-04	Tuesday	08:01:35	10	NB	1	113.09
2019-06-10	Monday	13:30:41	9	SB	3	110.91
2019-06-06	Thursday	17:07:00	10	SB	4	109.66

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	1180	112	9.5	35842	1463	9911
5	NB	8	8335	799	9.6	114574	5754	27143
6	NB	19	1562	360	23	38492	6004	7827
7	NB	11.5	234	0	0	15120	0	6214
8	NB	31	1535	909	59.2	24747	20530	2670
9	NB	33	23512	4774	20.3	1157321	133893	269483
10	NB	33.5	661	154	23.3	35720	3974	9368
11	NB	36.5	459	24	5.2	25252	615	4687
12	NB	36.5	459	49	10.7	25672	1645	5353
13	NB	31.5	128	2	1.6	12373	41	4202
TOTAL	****	****	38065	7183	****	1485112	****	346860
<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	1112	110	9.9	33612	1444	9291
5	SB	8	8540	547	6.4	128923	3987	32489
6	SB	19	1910	175	9.2	57240	3086	12138
7	SB	11.5	167	0	0	9468	0	3774
8	SB	31	1519	714	47	30784	16154	2915
9	SB	33	23372	3026	12.9	1201347	91059	264965
10	SB	33.5	591	131	22.2	31576	3214	8083
11	SB	36.5	494	28	5.7	29362	858	6177
12	SB	36.5	509	7	1.4	31233	190	6455
13	SB	31.5	120	2	1.7	11276	39	3779
TOTAL	****	****	38334	4740	****	1564821	****	350065
GRAND TOTAL	****	****	76399	11923	279	3049933	293953	696924

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	152	88	88	152	481	0
2	770127	537244	517511	862875	2687758	35.2
3	486137	297327	277648	531867	1592979	20.9
4	28382	8923	6053	29003	72361	0.9
5	96465	23864	19637	113272	253238	3.3
6	37980	6516	6505	53821	104823	1.4
7	13029	2090	961	8507	24588	0.3
8	38500	6776	4275	42663	92215	1.2
9	1120280	170934	126777	1165629	2583620	33.9
10	32156	7539	3875	30915	74484	1
11	23300	2568	2454	27767	56088	0.7
12	24299	3018	1952	29471	58740	0.8
13	10518	1895	981	10334	23729	0.3
TOTAL	2681325	1068784	968718	2906277	7625104	100
GVW/LANE	35.16	14.02	12.7	38.11	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	0.0027
2	86	67	66	104	322	0.5	0.001
3	191	108	99	213	610	0.94	0.0049
4	548	197	143	574	1462	2.26	1.28
5	1145	246	220	1614	3225	4.99	0.38
6	557	124	118	988	1786	2.76	1.03
7	286	57	18	192	554	0.86	2.73
8	544	103	40	594	1280	1.98	0.84
9	21547	3775	2799	22748	50870	78.74	2.17
10	595	157	77	547	1376	2.13	2.19
11	580	88	76	841	1586	2.45	3.3
12	345	59	31	421	855	1.32	1.76
13	297	44	33	305	678	1.05	5.25
TOTAL	26720	5024	3721	29139	64604	100	21
ESALS/LANE	41.4	7.8	5.8	45.1	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>
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
Feb 2019	682508	24375	2061	624790	91.5	57718.5	8.5	81.3	18.7
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
TOTAL	11226009	-	-	10338904	-	887107	-	-	-
AVERAGE	935501	31114	2428	861575	92	73926	8	88	12

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>
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
Feb 2019	9025	2979	1709	11069	24782	81	19	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	26813	5043	3736	29204	64796	86	14	3.4
TOTAL	218575	37744	22759	205363	484441	-	-	-
AVERAGE	18215	3145	1897	17114	40370	87	13	3

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>
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
Feb 19	1485892	680827	578112	1786855	4531686
Mar 19	2086856	798781	620139	2233229	5739005
Apr 19	2203311	844134	673418	2294631	6015495
May 19	2887575	1038509	896554	2762671	7585308
Jun 19	2685175	1069410	969175	2908790	7632551
TOTAL	28503411	10766337	8904033	29190841	77364622
AVERAGE	2375284	897195	742003	2432570	6447052

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>
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
Feb 2019	840	0.1	1.5	60	30
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	11160	1.1	14.5	933	131
TOTAL	33943	-	-	3926	987
AVERAGE	2828.6	0.3	3.6	327.2	82.2

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>
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
Feb 2019	168236	186920	355156	47.4	52.6
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	346860	350065	696924	49.8	50.2
TOTAL	3295372	3057740	6353112	-	-
AVERAGE	274614.3	254811.7	529426	51.6	48.4