

2023

Vehicle Activated Signs (VAS) data: Monk Fryston



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Monk Fryston Parish Council

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BACKGROUND

The village of Monk Fryston currently benefits from two Vehicle Activated Signs (VAS). These are located at the West entrance to the village (on the A63 shortly after crossing the railway bridge) and at the East entrance to the village (on the A63 opposite The Meadows).

The VAS signs light up, alerting drivers if they are entering the village above the 30mph speed limit.

The VAS signs also record and store a large amount of traffic-related data, including traffic volumes and average speeds.

This report provides a snapshot of data recorded by both VAS signs between 1st January 2023 – 31st January 2023.

A previous report (available on the Parish Council website) was compiled in October 2021 (using data from September 2021).

WEST ENTRANCE VAS

Average speeds

- The average speed of drivers passing the VAS during January 2023 was 28.1mph. This is slightly lower than the October 2021 report (28.6mph)
- The highest average speeds recorded were during the early hours of the morning. The highest average speeds were on a Wednesday between 2-3am at 33.8mph. This is higher than the October 2021 report (32.4mph)

85th percentile speeds

- The 85th percentile¹ speed during January was 33.5mph. This is slightly lower than the October 2021 report (33.9mph)
- The highest 85th percentile speeds recorded were during the early hours of the morning. The highest 85th percentile speeds were on a Thursday between 1-2am at 39mph. This is the same as the October 2021 report.
- Between the weekday hours of 7am – 9pm, the 85th percentile speed remained below 36.3mph for the duration of January. This is higher than the October 2021 report (35mph)

¹ The '85th percentile' speed is a speed at which 85% of traffic will be travelling at, or below, along a street or road (under free flow conditions). It's typically associated with the setting of speed limits.

- 85th percentile speeds during school-run times (8am – 9am / 3pm – 4pm) were a maximum of 33.7pmh during January. This is slightly lower than the October 2021 report (34.2mph)
- 85th percentile speeds remained below 40mph at all times during January. This is the same as the October 2021 report.

Volume by speed

- Over 92% of drivers pass the VAS below 35mph. (90% in the October 2021 report)
- Over 68% of drivers pass the VAS below 30mph. (65% in the October 2021 report)

Maximum recorded speed

- A speed of 60mph+ was recorded on 4 occasions during January (an increase from 1 in the October 2021 report). The fastest speed occurred in the early hours of the morning (shortly after 2am).

Total traffic volumes

- During January, a total of 126,650 vehicles were recorded by the VAS
- This is an average of 4,085 vehicles per day

Day of the week	Average vehicle count per day
Monday	4120
Tuesday	4572
Wednesday	4671
Thursday	4594
Friday	4542
Saturday	3423
Sunday	2854

Day of the week	Average 7am-7pm vehicle count per day
Monday	3272
Tuesday	3608
Wednesday	3618
Thursday	3575
Friday	3614
Saturday	2645
Sunday	2183

- The busiest time of day is weekdays between 6pm-7pm, with an average of 551 cars during that hour (9.2 vehicles per minute). This is significantly higher than the October 2021 report (7.8 vehicles per minute).

EAST ENTRANCE VAS

Average speeds

- The average speed of drivers passing the VAS during January was 26.3mph. This is virtually equal to the October 2021 report (26.4mph)
- The highest average speeds recorded were during the early hours of the morning. The highest average speeds were on a weekday between 4am-5am at 31.3mph. This is lower than the October 2021 report (31.6mph)

85th percentile speeds

- The 85th percentile speed during January was 30.3mph. This is lower than the October 2021 report (30.6mph)
- The highest 85th percentile speeds recorded were during the early hours of the morning. The highest 85th percentile speeds were on a weekday between 2-3am at 38.2mph. This is lower than the October 2021 report (39mph)
- Between the hours of 7am – 9pm, the 85th percentile speed remained below 32mph for the duration of January. This is the same as the October 2021 report.
- 85th percentile speeds during school-run times (8am – 9am / 3pm – 4pm) were a maximum of 29.9pmh during January. This is lower than the October 2021 report (30.4mph)
- 85th percentile speeds remained equal to or below 40mph at all times during January. This is virtually equal to the October 2021 report.

Volume by speed

- Over 97% of drivers pass the VAS below 35mph. (96% in the October 2021 report)
- Over 84% of drivers pass the VAS below 30mph. (83% in the October 2021 report)

Maximum recorded speed

- A speed of 60mph+ was recorded on 11 occasions during January (an increase from 6 in the October 2021 report). The fastest speed (65mph) occurred in the early hours of the morning (shortly before 1am).

Total traffic volumes

- During January, a total of 155,958 vehicles were recorded by the VAS
- This is an average of 5,031 vehicles per day

Day of the week	Average vehicle count per day
Monday	5236
Tuesday	5441
Wednesday	5764

Thursday	5764
Friday	5754
Saturday	4256
Sunday	3496

Day of the week	Average 7am-7pm vehicle count per day
Monday	4340
Tuesday	4515
Wednesday	4534
Thursday	4751
Friday	4761
Saturday	3501
Sunday	2832

The busiest time of day is weekdays between 7am-8am, with an average of 568 cars during that hour (9.5 vehicles per minute). This is virtually equal to the October 2021 report.

CONTEXT TO DATA

Please note the following when considering the data in this report:

- There is only one entrance to Monk Fryston in the East of the village (via the A63). In the West of the village, there are two entrances to the village (via the A63 or Lumby Lane). This largely explains the significant differences in traffic volume passing each VAS.
- January 2023 contained 5 Mondays, 5 Tuesdays, 5 Sundays and 4 of every other day of the week. This is important information when understanding the calculations derived from the data in the appendix.
- The first Monday in January was a national bank holiday. This information is important when considering why Monday average traffic volumes are lower than other weekdays in this report. It is also important to keep this in mind if and when comparing the data in this report to the data in the previous (October 2021) report (which was based on data from September 2021 – with no bank holidays included).
- January is a cold, rainy, winter month, with dark mornings and dark evenings. This will affect driving behaviour and social behaviour. This information is important if and when comparing the data in this report to the data in the previous (October 2021) report (which was based on data from September 2021 – a lighter, drier, summer/autumn month)

BRIEF COMMENTARY

- Average vehicle speeds were below the 30mph speed limit for both the East and West VAS. This provides an indication that the majority of traffic observes the speed limit when travelling through Monk Fryston.
- 85th percentile speeds were below 34mph for both the East and West VAS. This provides an indication that the vast majority of traffic travels at less than 34mph when travelling through Monk Fryston. The 85th percentile is a standard metric used when considering traffic speeds at a location.
- Speeds of up to 60-65mph were recorded by both VAS during January 2023. This is double the speed limit. At least fifteen occurrences of 60+mph were recorded during the month, and these appear to have largely occurred in the early hours of the morning.
- In an attempt to demonstrate particular risks to pedestrians, this report has provided details of 85th percentile speeds between the hours of 7am-9pm (most likely pedestrian hours). The 85th percentile speed remained below 37mph at both VAS during these hours throughout January.
- In an attempt to demonstrate particular risks to young pedestrians, this report has provided details of 85th percentile speeds during school drop-off hours (8am-9am and 3pm-4pm). The 85th percentile speed remained below 33.7mph at both VAS during these hours throughout January.
- The busiest hour at the East VAS during January was 8am-9am on a weekday. The busiest hour at the West VAS during January was 6pm-7pm on a weekday. This most likely indicates that commuters generally travel through the village in the direction of Leeds on a morning, and return on an evening.
- There is no pedestrian crossing in Monk Fryston, and relatively short-length visibility for pedestrians wishing to cross the A63. During the busiest of times, an average of 9.5 vehicles per minute travels through Monk Fryston from East to West. When combined with traffic moving in the opposite direction, it can be deduced that crossing the A63 is extremely difficult to achieve safely for pedestrians during busy times.

QUESTIONS FOR ROAD SAFETY POLICY MAKERS

In the opinion of the Parish Council, the questions posed in the October 2021 report remain highly relevant and unanswered by the relevant authorities:

1. Should pedestrians be better supported in Monk Fryston?

With no pedestrian crossing, short-length visibility, and a constant flow of traffic (particularly at the busiest hours), there is no safe method by which pedestrians can cross the A63. Should this be addressed?

Public support for a pedestrian crossing in Monk Fryston is significant, as demonstrated by responses to the Parish Council's March 2023 petition and survey.

2. With no pedestrian crossing, are the 85th percentile speeds acceptable, or does the speed limit require greater scrutiny?

Overall, average 85th percentile speeds do not exceed 34mph (though notably higher in night-time hours). Average speeds do not appear to be excessive, and it is reassuring that the vast majority of traffic maintains a reasonable speed. However, in the context of there being no pedestrian crossing and a high volume of traffic, could these average speeds still be considered too high?

3. What possible innovative traffic calming and/or pedestrian-friendly features could be introduced in Monk Fryston?

In July 2021, Selby District Council published their [Monk Fryston Conservation Area Appraisal](#) (produced by Alan Baxter Associates in conjunction with Selby District Council). The Appraisal acknowledged that the A63 is a "substantial negative feature" of the village, and also noted that there are "no traffic calming measures or formalised crossing points across the A63".

The Appraisal goes on to conclude that traffic through Monk Fryston is "extremely heavy" and it is "challenging to cross the road". The Appraisal makes a very strong recommendation, stating that it is "essential... that the situation is ameliorated through traffic calming and formal pedestrian crossings".

Suggestions made in the Appraisal include the introduction of a 20mph speed limit and the installation of traffic calming measures, as well as stating "the traffic controls in Cawood are a possible model worth examining."

Hambleton (a village to the east of Monk Fryston, also situated on the A63) benefits from pedestrian islands, enabling safer road crossing:



APPENDICES

Appendix A: Vehicle Counts (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	126	182	123	174	161	250	283	153.2	266.5	35.9
1 - 2	82	82	74	58	67	160	197	72.6	178.5	36.9
2 - 3	26	47	24	22	38	61	115	31.4	88	37.1
3 - 4	26	43	32	42	27	49	73	34	61	37.2
4 - 5	26	33	45	25	28	25	57	31.4	41	37.5
5 - 6	102	101	97	68	85	68	57	90.6	62.5	36.6
6 - 7	240	258	218	228	184	103	89	225.6	96	36.9
7 - 8	530	609	530	492	489	214	164	530	189	36
8 - 9	1183	1355	1207	1080	1034	317	179	1171.8	248	33.4
9 - 10	1107	1353	1083	1186	1050	542	267	1155.8	404.5	33.2
10 - 11	1042	1126	1013	945	881	759	495	1001.4	627	33.1
11 - 12	989	1050	787	820	875	856	727	904.2	791.5	33.4
12 - 13	1056	1083	946	836	856	1066	1047	955.4	1056.5	33.2
13 - 14	1147	1146	1011	956	1096	1074	1401	1071.2	1237.5	33.3
14 - 15	1270	1346	981	952	1171	1153	1427	1144	1290	33.2
15 - 16	1331	1380	1169	1116	1423	1128	1241	1283.8	1184.5	33
16 - 17	1795	1904	1456	1461	1598	1147	1365	1642.8	1256	32.5
17 - 18	2397	2728	1989	2084	1989	1284	1491	2237.4	1387.5	31.8
18 - 19	2515	2960	2269	2373	1992	1041	1112	2421.8	1076.5	32.3
19 - 20	1556	1834	1474	1520	1314	799	814	1539.6	806.5	33.2
20 - 21	832	951	824	750	660	597	644	803.4	620.5	34.1
21 - 22	539	542	496	528	431	390	482	507.2	436	34.7
22 - 23	373	458	388	368	394	303	316	396.2	309.5	35
23 - 24	310	287	449	293	325	305	228	332.8	266.5	35.6
Totals	20600	22858	18685	18377	18168	13691	14271			
% of Total	16.3%	18%	14.8%	14.5%	14.3%	10.8%	11.3%			

Appendix B: Average Speeds (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	30.3	30.4	30.1	30	29.4	30.2	29.7	30	30	35.9
1 - 2	29.4	30.6	30.7	31.2	30.1	30.6	29.1	30.4	29.8	36.9
2 - 3	30.3	28.7	33.8	30.6	31.9	29.6	29.8	30.8	29.7	37.1
3 - 4	31.1	30.7	28.6	30.8	31.6	30.1	30	30.5	30	37.2
4 - 5	31.3	30.7	30.9	30	29.2	29.3	29.8	30.5	29.7	37.5
5 - 6	31	29.4	29.8	30.3	30.1	30.2	29.2	30.1	29.7	36.6
6 - 7	31.2	30.3	30.5	30.2	30.7	30.9	30.4	30.6	30.7	36.9
7 - 8	29.9	29.8	29.6	30	30.1	30	29.9	29.9	30	36
8 - 9	27.9	28.3	27.7	27.9	28.1	28.7	29.2	28	28.9	33.4
9 - 10	28.3	27.9	27.6	27.9	28	28.8	29.4	27.9	29	33.2
10 - 11	27.7	28	27.8	27.6	27.9	28.2	29.2	27.8	28.5	33.1
11 - 12	28.1	27.9	28.1	28.2	27.8	28.4	28.7	28	28.6	33.4
12 - 13	28.3	27.6	27.8	27.7	28.1	28	28.5	27.9	28.3	33.2
13 - 14	28.2	27.8	27.6	28.2	28.3	28.5	28.2	28	28.3	33.3
14 - 15	27.9	27.8	28	28	28.1	28.3	28.2	27.9	28.2	33.2
15 - 16	28.1	27.6	27.7	27.4	27.7	28	28.1	27.7	28.1	33
16 - 17	27.4	27	27.2	27.6	27.5	28.2	27.8	27.4	28	32.5
17 - 18	27	26.4	26.9	27.1	27	27.5	28	26.8	27.8	31.8
18 - 19	27.3	27	26.9	26.9	27.2	27.7	28.4	27.1	28.1	32.3
19 - 20	27.7	27.8	27.6	27.8	27.9	28.5	29.1	27.8	28.8	33.2
20 - 21	28.2	28.1	28.6	29.1	29.2	28.1	28.1	28.6	28.1	34.1
21 - 22	29.1	29.3	29	29.3	29	29	29.5	29.1	29.3	34.7
22 - 23	29.5	29.4	29.5	29.3	29.5	29.1	29.6	29.4	29.4	35
23 - 24	30	29.7	29.9	30.1	29.8	29.2	30.6	29.9	29.8	35.6
Totals	695.2	688.2	691.9	693.2	694.2	695.1	698.5			
% of Total	14.3%	14.2%	14.2%	14.3%	14.3%	14.3%	14.4%			

Appendix C: 85th Percentile Speeds (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	37	36.3	35.9	35.8	34.6	36.2	35.3	35.9	35.8	35.9
1 - 2	36.4	34.7	38.2	39	36.1	36.4	34.6	36.9	35.5	36.9
2 - 3	38	35	38.5	35	38.9	36.4	35	37.1	35.7	37.1
3 - 4	37.5	38.5	35	38	37.1	38	37	37.2	37.5	37.2
4 - 5	37.5	38.3	37.9	37.5	36.2	35	36.4	37.5	35.7	37.5
5 - 6	38.2	35	35.7	37.5	36.5	35.9	36	36.6	36	36.6
6 - 7	37.6	37.1	36.9	35.9	36.8	38.2	36.5	36.9	37.4	36.9
7 - 8	36.2	35.6	35.7	36.2	36.3	37.1	36.8	36	37	36
8 - 9	33.6	33.7	33	33.3	33.6	34.8	35.4	33.4	35.1	33.4
9 - 10	33.6	33.2	33.1	33.1	33.2	34.2	34.8	33.2	34.5	33.2
10 - 11	33	33.3	33	33	33.3	33.6	34.6	33.1	34.1	33.1
11 - 12	33.4	33.1	33.6	33.7	33.2	33.8	34.1	33.4	34	33.4
12 - 13	33.6	32.8	33.2	32.9	33.5	33.3	33.7	33.2	33.5	33.2
13 - 14	33.5	33	33.2	33.5	33.5	33.6	33.7	33.3	33.7	33.3
14 - 15	33.1	33.1	33.4	33.3	33.3	33.6	33.4	33.2	33.5	33.2
15 - 16	33.2	32.9	32.9	32.9	32.9	33.4	33.4	33	33.4	33
16 - 17	32.6	32	32.2	32.9	32.8	33.4	33	32.5	33.2	32.5
17 - 18	31.7	31.3	31.6	32.3	32	32.7	33.4	31.8	33.1	31.8
18 - 19	32.7	32.2	32	32.1	32.5	32.8	34	32.3	33.4	32.3
19 - 20	33.2	33.3	33.1	33.1	33.4	33.9	34.7	33.2	34.3	33.2
20 - 21	33.7	33.7	34.1	34.6	34.5	33.6	34	34.1	33.8	34.1
21 - 22	34.8	34.7	34.6	34.8	34.8	34.3	35.3	34.7	34.8	34.7
22 - 23	35.4	34.8	35	34.9	34.8	34.5	34.8	35	34.7	35
23 - 24	35.6	35.5	35.8	36.1	34.9	34.9	37	35.6	36	35.6
Totals	835.1	823.1	827.6	831.4	828.7	833.6	836.9			
% of Total	14.4%	14.2%	14.2%	14.3%	14.2%	14.3%	14.4%			

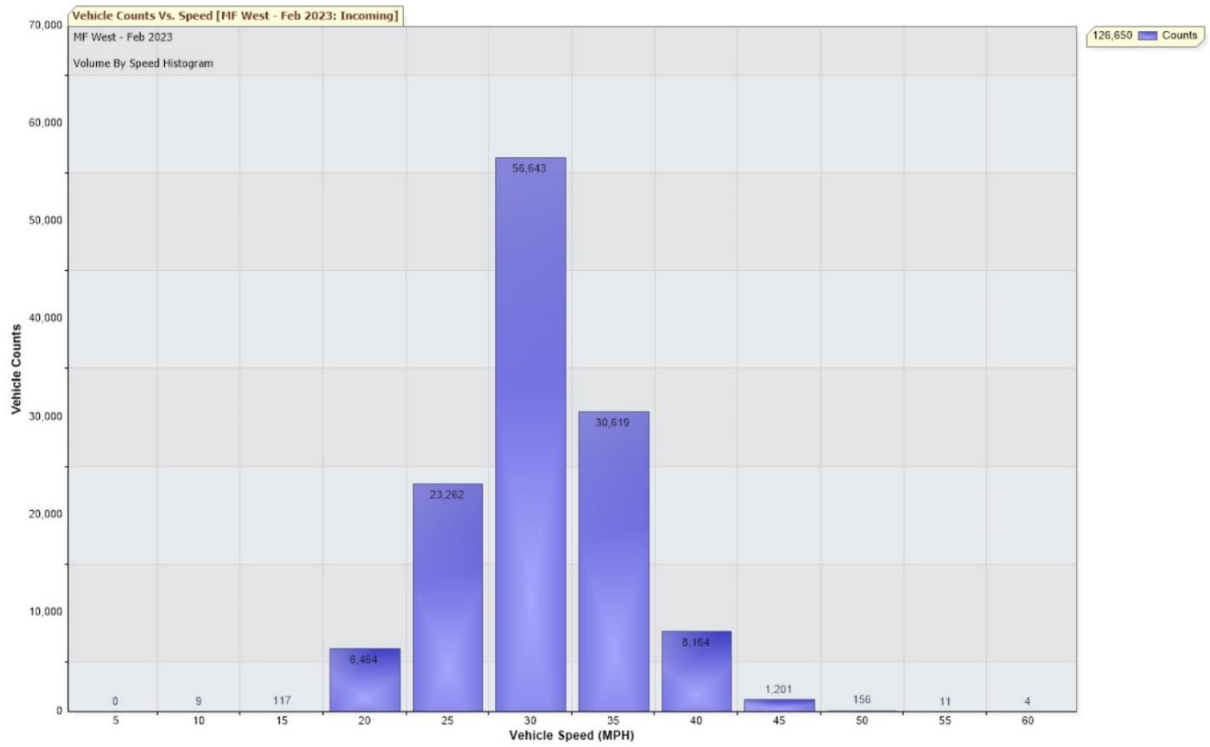
Appendix D: Speeder Counts (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	30	35	24	29	22	49	48	28	48.5	35.9
1 - 2	16	13	22	14	13	32	27	15.6	29.5	36.9
2 - 3	8	8	12	4	13	12	17	9	14.5	37.1
3 - 4	8	14	6	12	7	11	17	9.4	14	37.2
4 - 5	6	11	11	6	5	4	12	7.8	8	37.5
5 - 6	27	16	18	15	17	13	12	18.6	12.5	36.6
6 - 7	61	59	50	40	44	26	17	50.8	21.5	36.9
7 - 8	111	109	96	93	93	51	33	100.4	42	36
8 - 9	112	119	83	84	85	46	31	96.6	38.5	33.4
9 - 10	94	90	71	71	68	60	39	78.8	49.5	33.2
10 - 11	67	80	62	58	67	65	66	66.8	65.5	33.1
11 - 12	69	64	62	71	59	78	76	65	77	33.4
12 - 13	88	43	62	46	70	70	92	61.8	81	33.2
13 - 14	89	80	81	69	89	81	124	81.6	102.5	33.3
14 - 15	79	81	82	78	78	101	95	79.6	98	33.2
15 - 16	89	90	59	64	78	82	96	76	89	33
16 - 17	73	67	66	85	95	74	82	77.2	78	32.5
17 - 18	75	79	57	93	71	73	107	75	90	31.8
18 - 19	131	107	83	103	104	50	115	105.6	82.5	32.3
19 - 20	113	132	95	89	107	76	120	107.2	98	33.2
20 - 21	80	90	96	99	78	57	64	88.6	60.5	34.1
21 - 22	82	79	67	76	62	46	79	73.2	62.5	34.7
22 - 23	63	72	59	53	62	37	50	61.8	43.5	35
23 - 24	50	46	86	51	49	45	45	56.4	45	35.6
Totals	1621	1584	1410	1403	1436	1239	1464			
% of Total	16%	15.6%	13.9%	13.8%	14.1%	12.2%	14.4%			

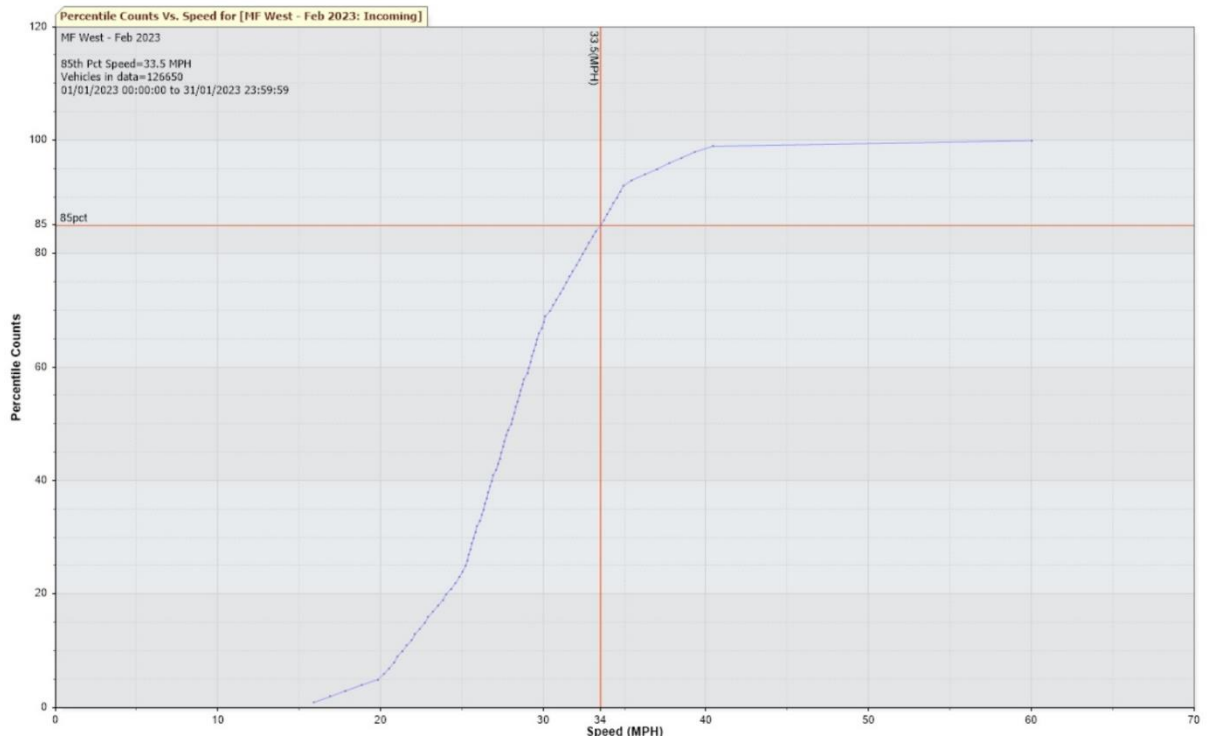
Appendix E: Average Speeder (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	39.5	39.1	38.8	39.1	38.9	38	39.2	39.1	38.6	35.9
1 - 2	39.1	42.1	38.9	40.7	39	39.2	38.6	39.8	38.9	36.9
2 - 3	38.8	39.4	38.3	41.3	39.4	39.2	39	39.2	39.1	37.1
3 - 4	37.5	38.6	40	39.6	37.5	40.2	39	38.7	39.5	37.2
4 - 5	39.2	38.4	40.2	40	38.5	38.8	39.6	39.3	39.4	37.5
5 - 6	39.5	39.4	38.6	39.5	39	37.9	38.8	39.2	38.3	36.6
6 - 7	39.5	39.2	38.7	39.4	38.9	39.6	39	39.1	39.4	36.9
7 - 8	38.3	38.8	38.8	39.1	38.8	38.7	39.3	38.7	38.9	36
8 - 9	38	38	38.1	38.2	37.7	38.6	38.6	38	38.6	33.4
9 - 10	38	38.2	38	37.9	38.5	38	38	38.1	38	33.2
10 - 11	38.1	38.1	38	37.9	38.2	38	38.4	38.1	38.2	33.1
11 - 12	38.3	38	37.8	38	38.1	38.1	38.3	38	38.2	33.4
12 - 13	38.2	38	38.2	38.5	38.1	38.1	38	38.2	38.1	33.2
13 - 14	38.2	37.9	38.1	38.2	38.2	38.1	38.2	38.1	38.2	33.3
14 - 15	38.1	38.2	38.1	37.9	37.9	38.2	38.1	38	38.2	33.2
15 - 16	38.1	38.1	37.9	38.6	38	38.2	38	38.1	38.1	33
16 - 17	38	37.8	38.1	38.6	37.9	37.8	38	38.1	37.9	32.5
17 - 18	37.9	38.1	38	37.9	37.8	38	38	37.9	38	31.8
18 - 19	38.1	37.9	37.8	37.8	37.8	37.6	38.6	37.9	38.3	32.3
19 - 20	38.2	38	38.8	37.9	38.2	38.3	38.4	38.2	38.4	33.2
20 - 21	38.5	37.7	38.6	38.5	38.3	38.4	38.2	38.3	38.3	34.1
21 - 22	38.4	38.4	38.7	38.6	38.6	38.8	38.7	38.5	38.7	34.7
22 - 23	38.3	38.9	38.3	39.1	38.2	38.4	39.1	38.6	38.8	35
23 - 24	40	38.9	38.5	39	38.5	39.1	39.2	38.9	39.1	35.6
Totals	923.8	925.2	923.3	931.2	920	923.3	926.3			
% of Total	14.3%	14.3%	14.3%	14.4%	14.2%	14.3%	14.3%			

Appendix F: Volume By Speed (West VAS)



Appendix G: Chart Percentile Speed (West VAS)



Appendix H: Key Stats (West VAS)

85th Percentile Speed = 33.5 MPH

85th Percentile Vehicles = 107,652 counts

Max Speed = 60.0 MPH on 05/01/2023 03:15:00

Total Vehicles =126,650 counts

50th Percentile Speed: 28.0 MPH

Average Speed: 28.1 MPH

Appendix I: Vehicle Counts (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	97	94	84	91	135	159	277	100.2	218	36.9
1 - 2	53	56	58	76	69	104	215	62.4	159.5	34.8
2 - 3	42	44	31	46	38	49	109	40.2	79	38.2
3 - 4	48	37	34	40	41	33	72	40	52.5	36.3
4 - 5	79	72	61	68	63	65	72	68.6	68.5	37.5
5 - 6	308	253	228	218	204	101	91	242.2	96	35.3
6 - 7	737	865	636	678	646	267	233	712.4	250	34
7 - 8	1651	1961	1501	1548	1353	422	265	1602.8	343.5	30.7
8 - 9	2485	3116	2189	2411	2281	653	369	2496.4	511	29
9 - 10	2316	2568	1981	2221	2009	979	572	2219	775.5	29.2
10 - 11	1720	1610	1436	1478	1430	1277	1013	1534.8	1145	29.7
11 - 12	1655	1720	1378	1412	1408	1425	1553	1514.6	1489	29.8
12 - 13	1689	1572	1374	1309	1440	1586	1748	1476.8	1667	29.8
13 - 14	1711	1606	1269	1384	1481	1442	1778	1490.2	1610	29.7
14 - 15	1662	1559	1259	1367	1498	1426	1648	1469	1537	29.8
15 - 16	1697	1662	1380	1525	1531	1328	1411	1559	1369.5	29.7
16 - 17	1807	1784	1453	1441	1662	1213	1351	1629.4	1282	29.7
17 - 18	1711	1759	1500	1537	1556	1250	1386	1612.6	1318	29.6
18 - 19	1594	1659	1414	1371	1395	1002	1066	1486.6	1034	29.6
19 - 20	1255	1199	1115	1055	1068	742	840	1138.4	791	30.1
20 - 21	826	885	654	708	678	538	599	750.2	568.5	31.9
21 - 22	494	531	440	484	433	391	404	476.4	397.5	32.9
22 - 23	352	371	293	341	307	297	257	332.8	277	33.5
23 - 24	193	220	232	246	288	276	150	235.8	213	34.5
Totals	26182	27203	22000	23055	23014	17025	17479			
% of Total	16.8%	17.4%	14.1%	14.8%	14.8%	10.9%	11.2%			

Appendix J: Average Speeds (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	31.2	31.8	30.7	30.6	28	29.4	28.8	30.2	29	36.9
1 - 2	30.5	29.2	29.3	29.1	26.8	31.5	30.2	28.9	30.6	34.8
2 - 3	31.9	31.1	32.1	31	30.4	29.8	30.7	31.2	30.4	38.2
3 - 4	30.1	31.8	30.5	28.9	29.5	29.7	30.5	30.1	30.2	36.3
4 - 5	31.9	31	31.6	30.6	31.2	30.3	30.1	31.3	30.2	37.5
5 - 6	29.3	30.1	29.5	29.3	30	30.2	30.6	29.7	30.4	35.3
6 - 7	29.1	28.7	28.5	28.5	28.9	29.8	30.2	28.8	30	34
7 - 8	26.7	26.4	26.5	26.7	26.8	29.5	29.7	26.6	29.5	30.7
8 - 9	24.7	24.7	23.9	24.6	24.9	27.8	29.4	24.6	28.4	29
9 - 10	25.4	25.4	23.7	24.6	25.3	27.2	28	24.9	27.5	29.2
10 - 11	26.2	25.6	25.5	25.3	25.7	26.6	27.4	25.7	26.9	29.7
11 - 12	26.4	26.1	25.6	25.7	26	26.6	26.3	26	26.4	29.8
12 - 13	26.3	26.2	25	25.7	26.1	25.3	26.2	25.9	25.7	29.8
13 - 14	26.3	26	25.4	25.5	25.9	26.2	26.5	25.8	26.3	29.7
14 - 15	26.4	26	25.9	24.9	25.9	26.4	26.8	25.9	26.6	29.8
15 - 16	26	26	25.7	25.3	26.1	26.8	27.1	25.8	27	29.7
16 - 17	26.2	25.7	25.6	25.8	25.7	26.5	26.7	25.8	26.6	29.7
17 - 18	25.8	25.6	25.5	25.2	25.8	26.2	26.7	25.6	26.5	29.6
18 - 19	25.6	25.7	25.9	24.8	25.8	26.5	26.8	25.6	26.6	29.6
19 - 20	26.7	26.2	26.4	26.3	26.3	26.8	27.5	26.4	27.2	30.1
20 - 21	27.4	26.8	27.1	27	27.3	27.8	27.7	27.1	27.7	31.9
21 - 22	28	27.8	27.6	27.9	28.3	27.8	28.4	27.9	28.1	32.9
22 - 23	28.9	28	28.1	28.5	28.4	28.2	29.3	28.4	28.7	33.5
23 - 24	29.1	29.4	28.8	28.7	29.5	28.6	30.3	29.1	29.2	34.5
Totals	666.1	661.3	654.4	650.5	654.6	671.5	681.9			
% of Total	14.4%	14.3%	14.1%	14%	14.1%	14.5%	14.7%			

Appendix K: 85th Percentile Speeds (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	37.9	38.8	37.9	36.3	33.8	34.5	33.7	36.9	34.1	36.9
1 - 2	37.2	34.3	34.4	35.4	32.8	37.7	34.9	34.8	36.3	34.8
2 - 3	39.5	37	38.6	39	36.7	35.8	36.7	38.2	36.3	38.2
3 - 4	34.4	37.9	40	35	34.1	35	36.2	36.3	35.6	36.3
4 - 5	38.3	36.9	37.5	37.5	37.5	35.6	36.2	37.5	35.9	37.5
5 - 6	34.5	35.9	35.5	34.9	35.8	35.9	37.3	35.3	36.6	35.3
6 - 7	34.3	33.9	33.8	33.7	34.1	34.8	36.7	34	35.8	34
7 - 8	30.8	30.4	30.3	31	30.9	34.5	34.6	30.7	34.6	30.7
8 - 9	29	29	28.7	29	29.1	32.6	34.4	29	33.5	29
9 - 10	29.5	29.3	28.8	29.1	29.4	31.6	33.2	29.2	32.4	29.2
10 - 11	30	29.7	29.6	29.4	29.6	30.8	32	29.7	31.4	29.7
11 - 12	30.1	29.8	29.7	29.6	29.8	30.4	30.1	29.8	30.3	29.8
12 - 13	30.2	29.9	29.3	29.7	29.8	29.5	30	29.8	29.8	29.8
13 - 14	29.9	29.7	29.5	29.6	29.7	30	30.1	29.7	30.1	29.7
14 - 15	30	29.9	29.8	29.3	29.8	30.5	30.8	29.8	30.7	29.8
15 - 16	29.9	29.8	29.6	29.5	29.9	31.1	31.7	29.7	31.4	29.7
16 - 17	29.9	29.6	29.6	29.8	29.8	30.5	31.1	29.7	30.8	29.7
17 - 18	29.8	29.6	29.4	29.4	29.7	30.2	30.9	29.6	30.6	29.6
18 - 19	29.6	29.7	29.6	29.4	29.7	30.1	31.1	29.6	30.6	29.6
19 - 20	30.7	29.9	30	30	30	31.1	32.4	30.1	31.8	30.1
20 - 21	32.2	31.1	31.8	32.3	32.2	32.7	32.5	31.9	32.6	31.9
21 - 22	33	32.6	32.8	33.1	33.1	32.5	33.1	32.9	32.8	32.9
22 - 23	34.1	32.6	33.4	33.8	33.7	33.3	34.4	33.5	33.9	33.5
23 - 24	34.1	35.2	33.9	34.7	34.4	33.7	36.4	34.5	35.1	34.5
Totals	778.9	772.5	773.5	770.5	765.4	784.4	800.5			
% of Total	14.3%	14.2%	14.2%	14.1%	14.1%	14.4%	14.7%			

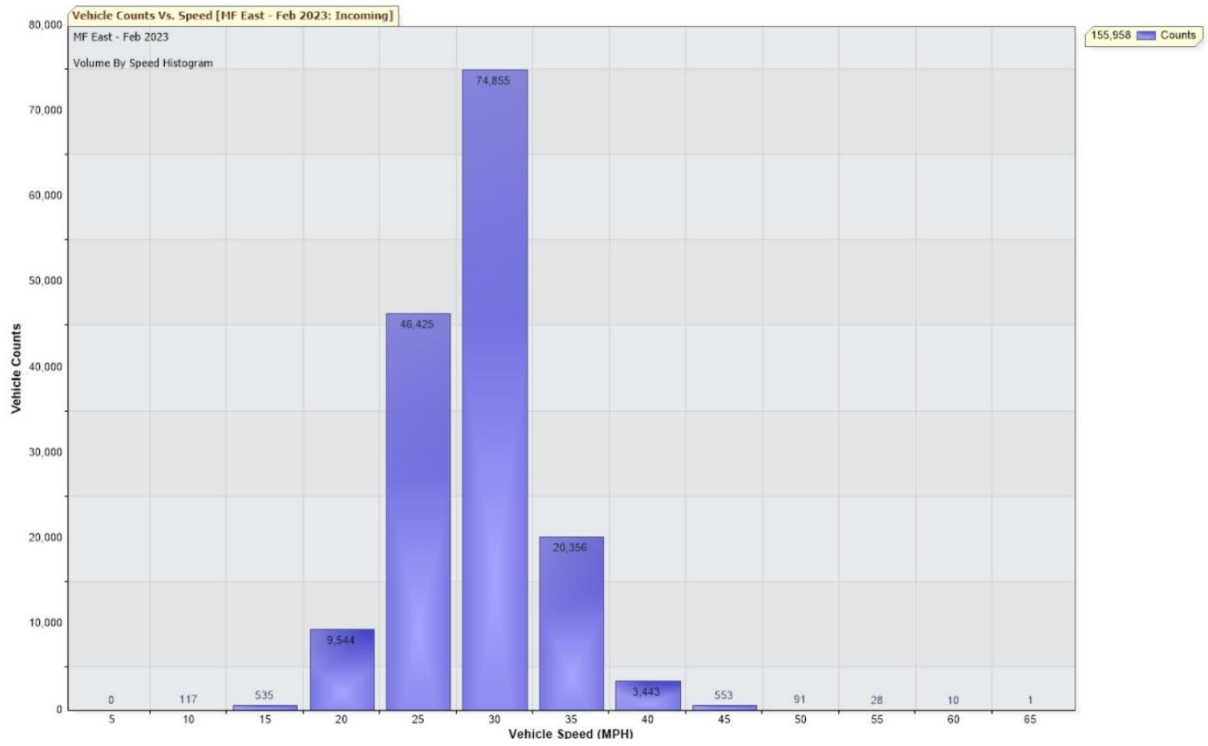
Appendix L: Speeder Counts (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	28	32	22	21	12	20	24	23	22	36.9
1 - 2	13	8	8	12	3	29	34	8.8	31.5	34.8
2 - 3	17	9	10	12	7	8	22	11	15	38.2
3 - 4	8	13	8	7	6	7	16	8.4	11.5	36.3
4 - 5	23	17	15	17	14	11	15	17.2	13	37.5
5 - 6	37	48	38	32	35	18	20	38	19	35.3
6 - 7	85	84	64	59	67	39	47	71.8	43	34
7 - 8	39	50	42	47	27	51	39	41	45	30.7
8 - 9	23	14	8	8	12	40	47	13	43.5	29
9 - 10	26	21	10	11	17	30	44	17	37	29.2
10 - 11	32	25	11	19	16	35	36	20.6	35.5	29.7
11 - 12	25	21	19	11	18	23	34	18.8	28.5	29.8
12 - 13	31	29	8	21	17	20	36	21.2	28	29.8
13 - 14	26	19	13	15	20	30	42	18.6	36	29.7
14 - 15	28	35	13	23	29	26	56	25.6	41	29.8
15 - 16	28	34	20	15	34	32	43	26.2	37.5	29.7
16 - 17	32	19	11	19	16	35	25	19.4	30	29.7
17 - 18	27	24	7	20	21	29	36	19.8	32.5	29.6
18 - 19	14	19	17	12	20	20	24	16.4	22	29.6
19 - 20	36	28	22	26	21	23	43	26.6	33	30.1
20 - 21	39	25	29	38	39	31	36	34	33.5	31.9
21 - 22	34	33	23	35	34	20	27	31.8	23.5	32.9
22 - 23	39	24	26	33	32	22	31	30.8	26.5	33.5
23 - 24	23	33	19	36	34	25	25	29	25	34.5
Totals	713	664	463	549	551	624	802			
% of Total	16.3%	15.2%	10.6%	12.6%	12.6%	14.3%	18.4%			

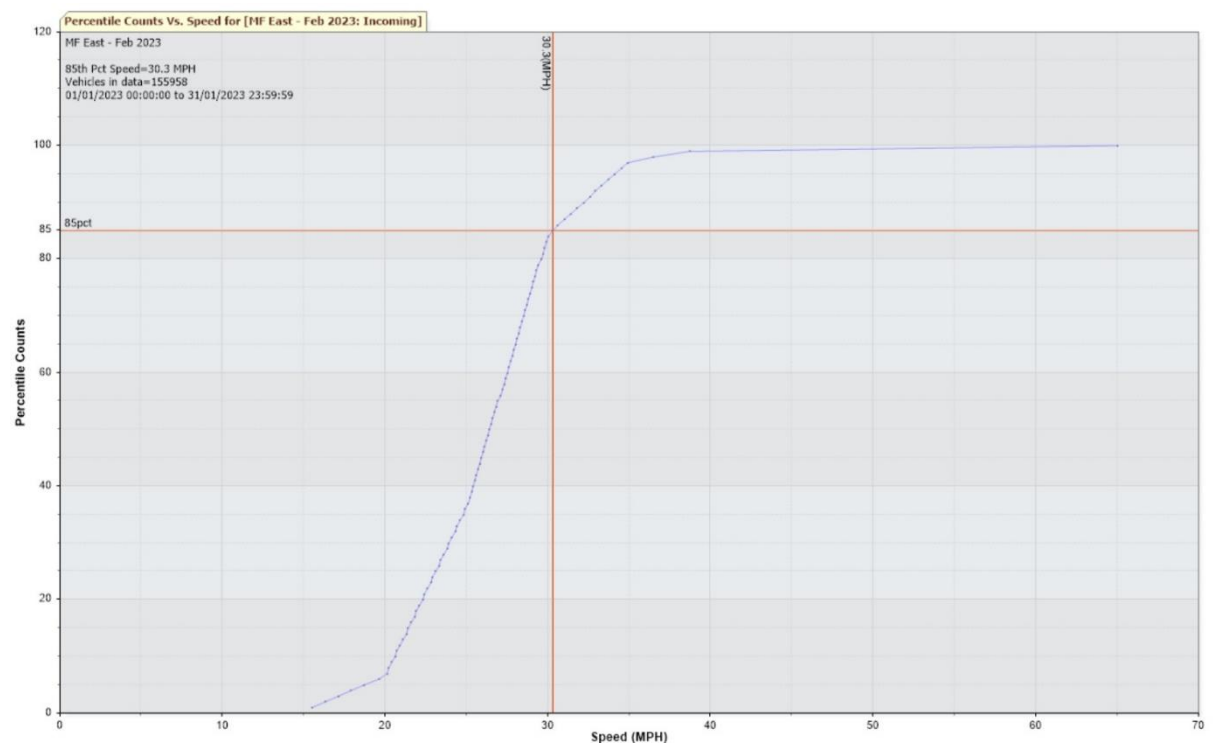
Appendix M: Average Speeder (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	39.5	39.1	39.3	39.4	39.2	40.8	39.6	39.3	40.1	36.9
1 - 2	39	39.4	39.4	37.5	37.5	38.7	39.7	38.6	39.2	34.8
2 - 3	40.1	39.7	39	40	41.8	38.8	39.8	40	39.5	38.2
3 - 4	41.3	40.6	40.6	38.9	41.7	38.9	40.3	40.6	39.9	36.3
4 - 5	40.1	38.4	38.5	38.4	38.9	38.9	39.5	39	39.2	37.5
5 - 6	38.3	38.4	38.2	38	38.8	38.1	40.3	38.3	39.2	35.3
6 - 7	39.1	38.5	38.4	38.7	38.5	39.4	39.3	38.7	39.4	34
7 - 8	38.3	38.9	38.2	37.8	38.4	38.7	38.8	38.3	38.7	30.7
8 - 9	37.9	37.5	38.1	38.8	37.9	38.4	39.3	38	38.9	29
9 - 10	38.1	38.2	37.5	38.4	37.8	38	38.3	38	38.2	29.2
10 - 11	37.5	37.7	37.5	39.3	37.5	37.9	37.9	37.9	37.9	29.7
11 - 12	37.5	37.7	37.8	38	38.1	37.7	38.4	37.8	38.1	29.8
12 - 13	38.1	38	38.8	38	38.4	37.5	37.8	38.2	37.7	29.8
13 - 14	38.5	39.1	37.9	37.5	38.5	38.2	38.3	38.4	38.3	29.7
14 - 15	37.7	38.1	38.3	38.2	38	38.7	39	38	38.9	29.8
15 - 16	38.2	37.9	38	37.5	37.9	38.4	38	38	38.2	29.7
16 - 17	38.3	38.3	38.4	37.8	38.4	37.8	37.9	38.2	37.8	29.7
17 - 18	38.4	39	38.2	38	38.2	38	37.9	38.4	38	29.6
18 - 19	37.5	38.3	37.5	37.9	38.3	38.3	38.1	37.9	38.2	29.6
19 - 20	38.1	37.7	38.2	38.1	37.7	37.9	38.5	38	38.3	30.1
20 - 21	37.9	37.9	37.7	37.8	38.8	38.1	38.8	38	38.5	31.9
21 - 22	38.8	38.3	38.2	38.9	39.9	39.3	39.5	38.9	39.4	32.9
22 - 23	38.9	39	38.5	38.3	38.6	39.3	39.6	38.6	39.5	33.5
23 - 24	40.1	39.3	39.3	39.3	40.4	38.9	40.3	39.7	39.6	34.5
Totals	927.1	925	921.5	920.5	929.1	924.5	934.8			
% of Total	14.3%	14.3%	14.2%	14.2%	14.3%	14.3%	14.4%			

Appendix N: Volume By Speed (East VAS)



Appendix O: Chart Percentile Speed (East VAS)



Appendix P: Key Stats (East VAS)

Key stats

85th Percentile Speed = 30.3 MPH
85th Percentile Vehicles = 132,564 counts
Max Speed = 65.0 MPH on 08/01/2023 00:55:00
Total Vehicles =155,958 counts
50th Percentile Speed: 26.4 MPH
Average Speed: 26.3 MPH