

Traffic Analysis Tools

Traffic Meeting – Aug 10, 2021

StreetLight Data

&

Speed Sign Data Analysis

StreetLight Data – explains use of 84th WB

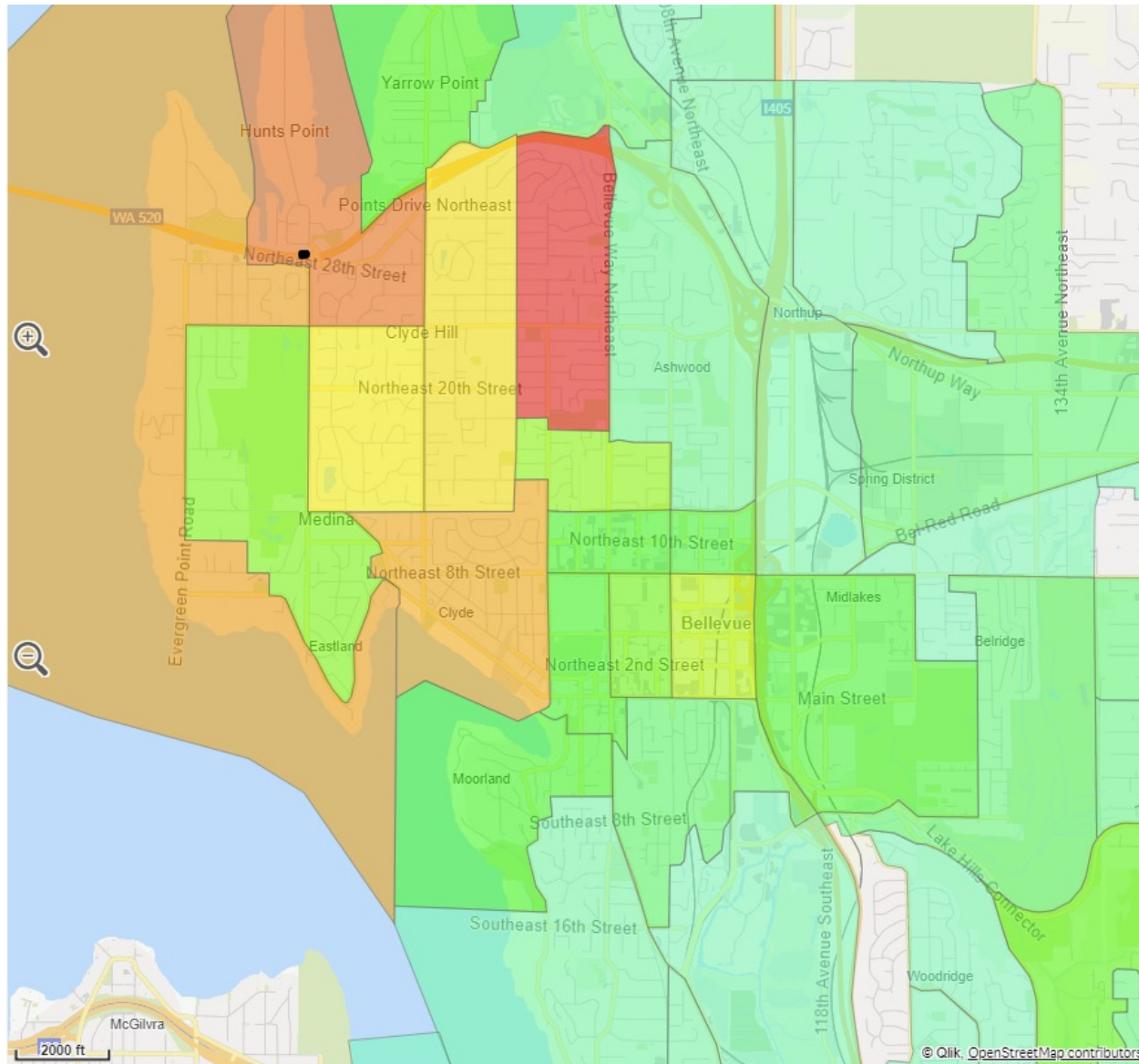
- Utilizes anonymous cellphone location data
- Can compute origin-destination analyses
- Allows for analyzing trends based on day of week, time of day, month, and year

Heat Map of Origins to the 84th to WB 520 On-Ramp (Weekday, AM)

More trips



Fewer trips

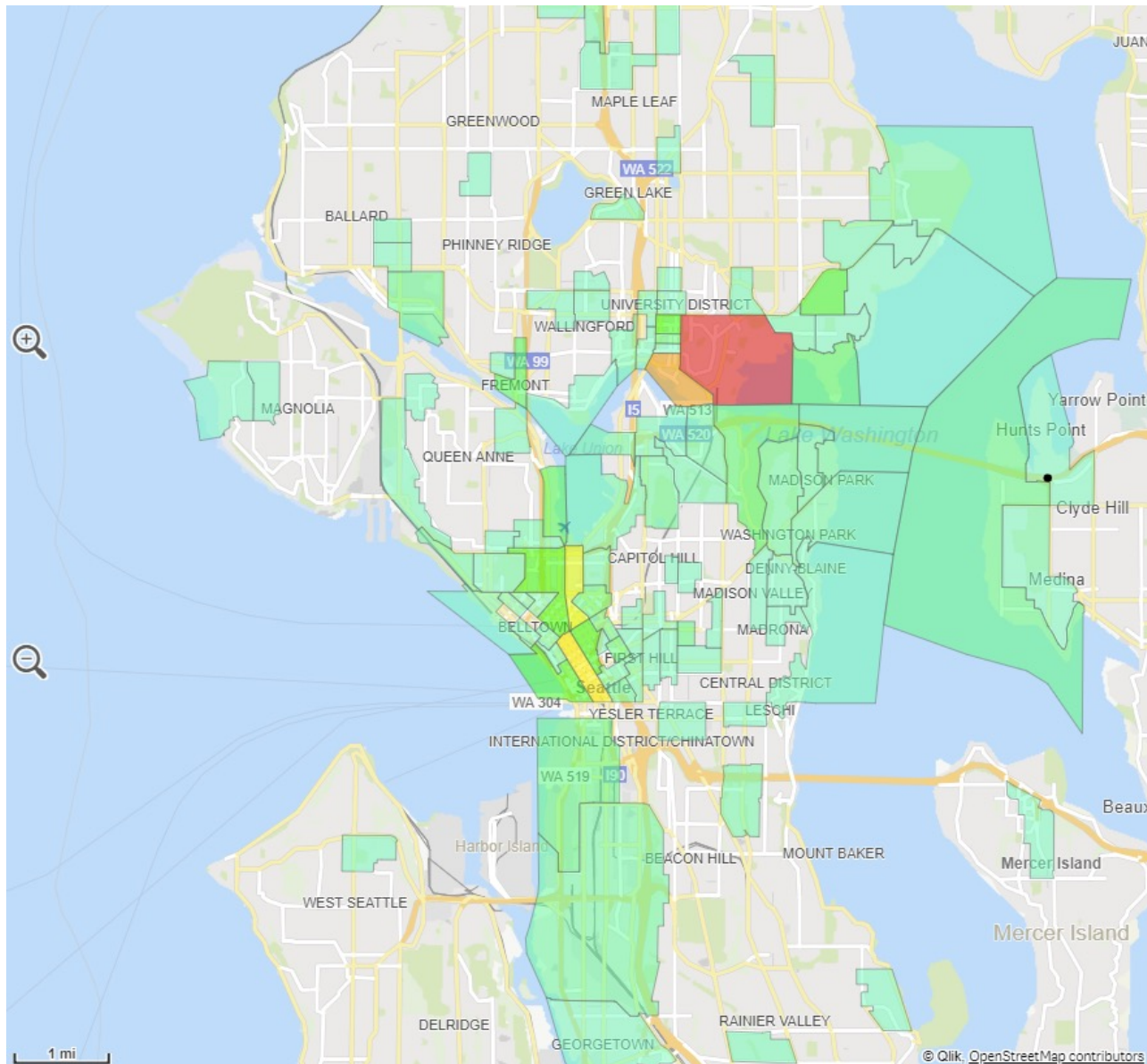


Heat Map of Destinations from the 84th to WB 520 On-Ramp (Weekday, AM)

More trips



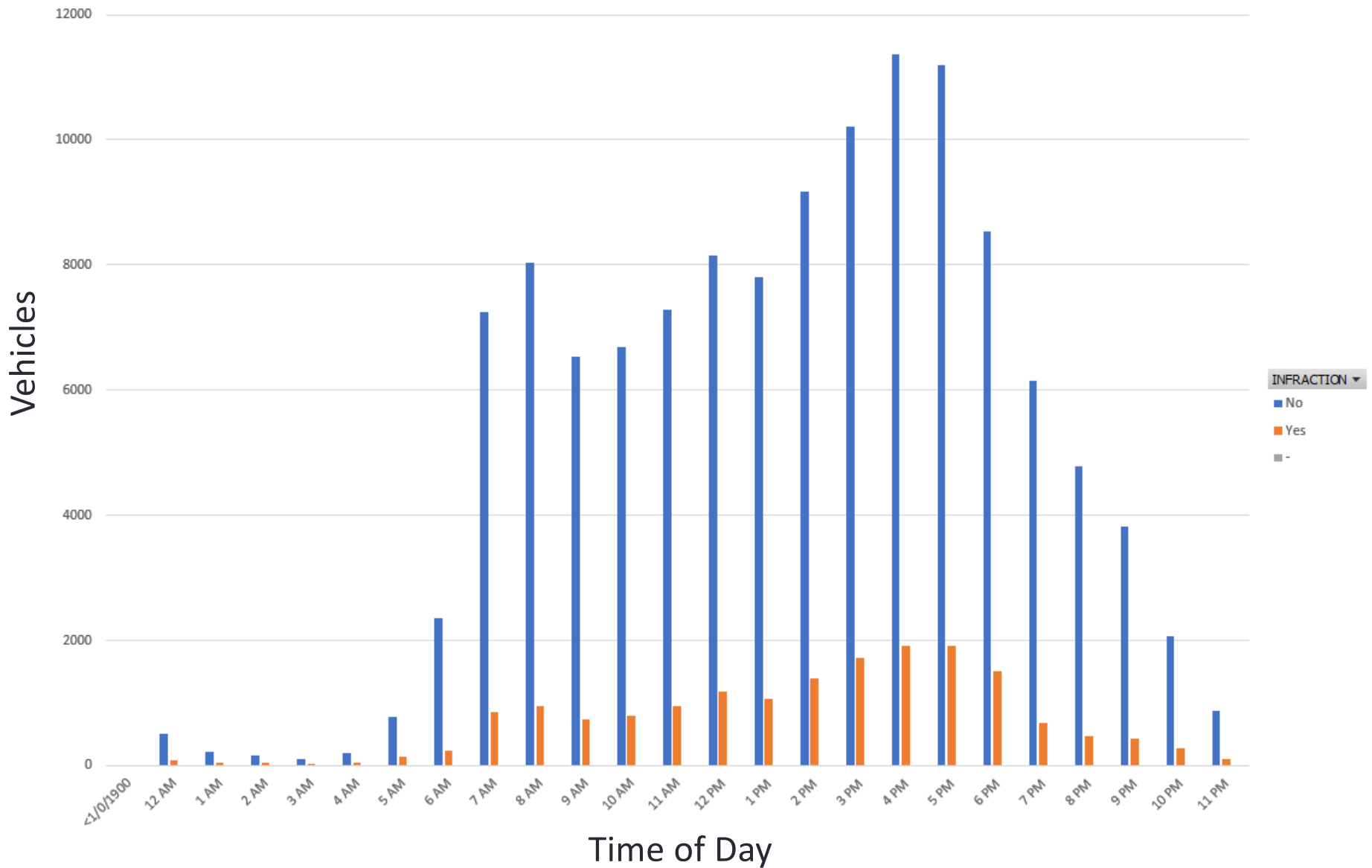
Fewer trips



Speed Sign Data Analysis

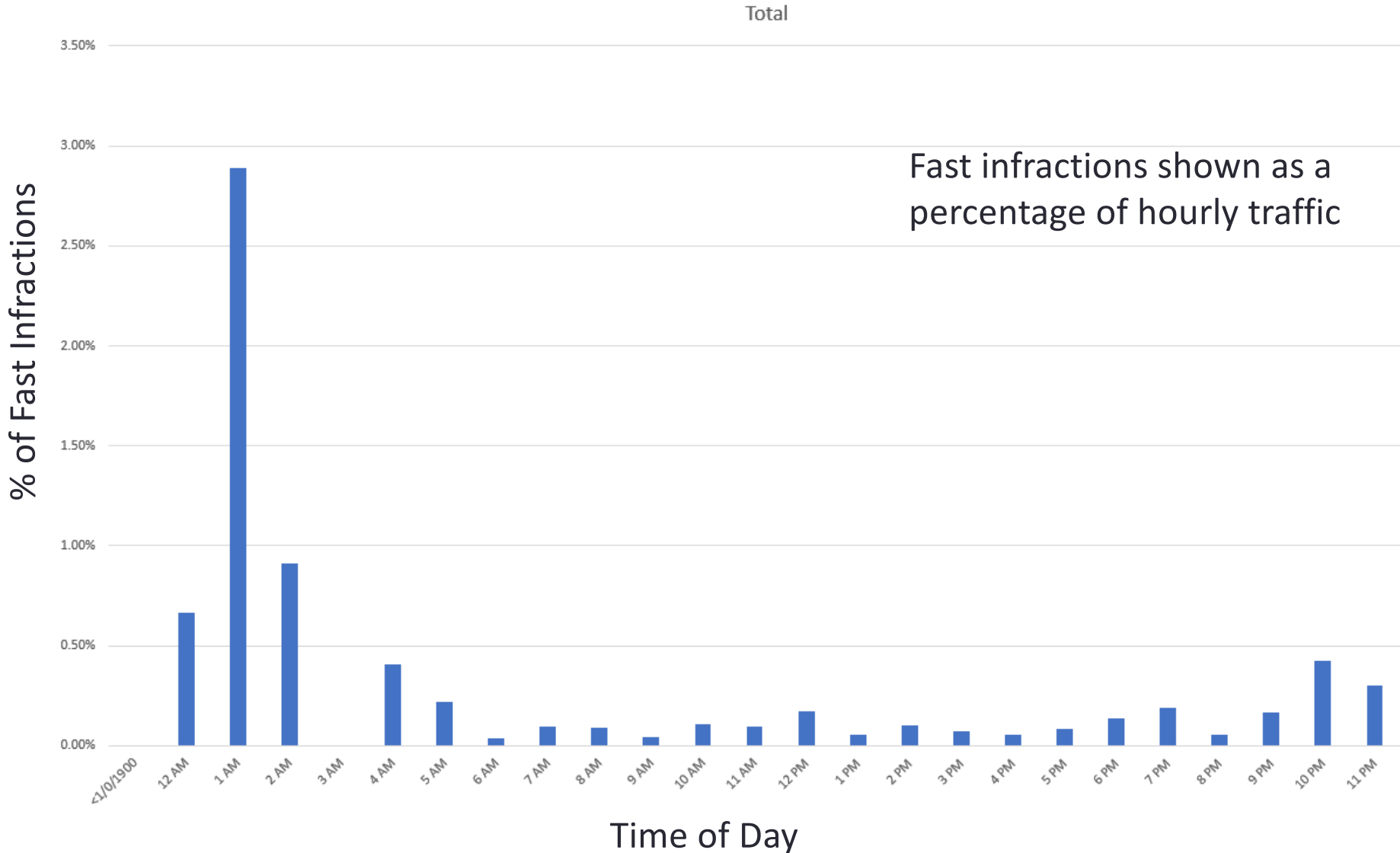
- Excel-based tool created by DKS for Clyde Hill
- Utilizes stationary speed sign data to create various visualizations
- Tool allows for many month's worth of data to be input
- Useful for determining when speeding occurs

Infraction = Speed exceeds posted limit



Fast Infraction = Speed exceeds posted limit by at least 10mph

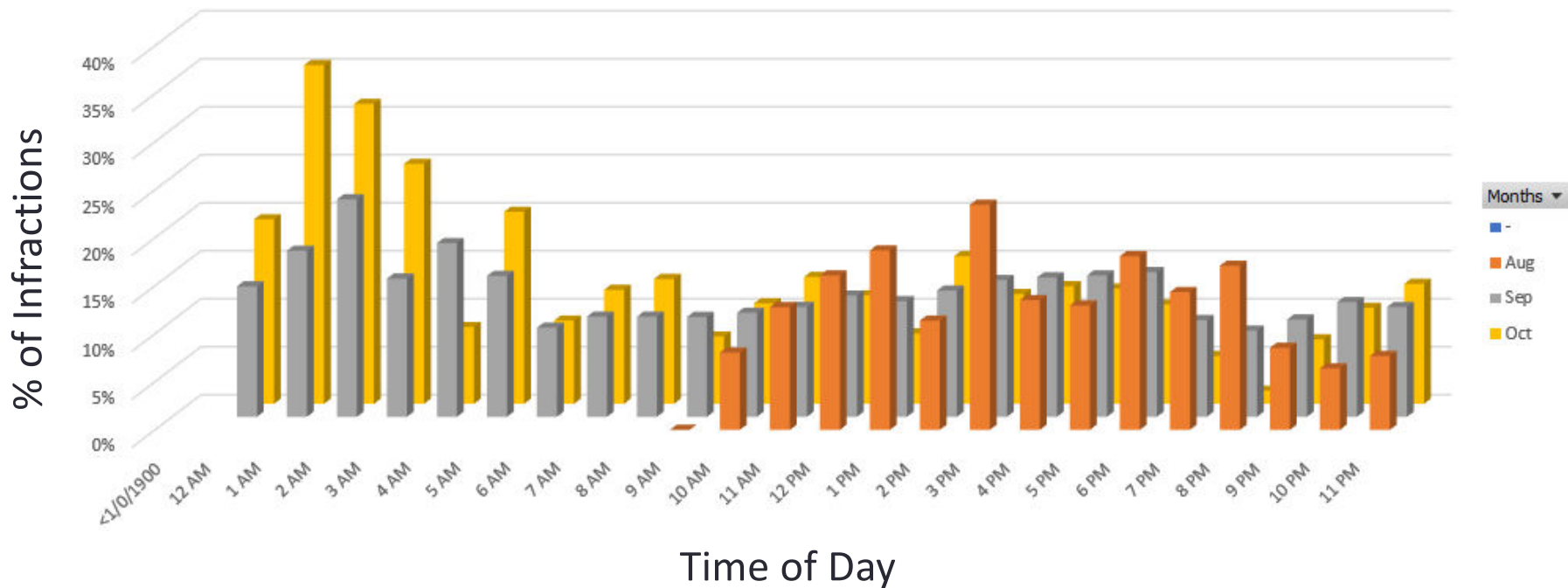
Average of FAST INFRACTION



Average of Infraction = Percentage of speeds exceeding posted limit

Average of INFRACTION

Infractions shown as a percentage of hourly traffic for different months



84th Ave NE

	2018	84th (NB)
Average	29.98118	33.98847
Mean	33	35
Count	49993	26199
>30	27505	3954
>35	6615	22245
>40	592	8700
>45	65	950
>50	14	141
>55	10	32
>60	4	11
>65	2	7
>70	2	4
>80	1	3

2021 update

- Increase in Avg Speeds (+4 mph)
- Slight increase in Mean speed
- Posted Limit: 35 mph
- Increased frequency of speeding

2021 Speeds along 92nd Ave NE

		92nd (NB)	92nd (SB)	92nd (NB)	92nd (SB)	92nd (NB)	92nd (SB)	92nd (NB)	92nd (SB)
		1350	1350	1900	1900	2150	2150	3000	3000
2021	Average	28.2	29.8	27.6	27.9	28.9	28.0	29.3	28.6
	Mean	27	29	27	28	28	27	28	27
	Count	10743	11299	27973	30614	10721	10921	18045	26993
	<30	8160	6713	22574	23279	7476	8651	12165	19833
	>30	2583	4586	5399	7335	3245	2270	5880	7160
	>35	364	959	726	1585	787	334	1445	1482
	>40	58	158	111	305	125	38	202	196
	>45	10	30	21	72	16	7	33	31
	>50	3	8	8	18	2	1	12	11
	>55	2	2	5	11	0	1	2	3
	>60	1	1	2	5	0	0	1	1
	>65	0	1	0	3	0	0	1	1
	>70	0	1	0	0	0	0	0	0
	>80	0	1	0	0	0	0	0	0

92nd Ave NE (1300)

The following pages depict three charts from each of 2018's quarters: 1) Hourly Volume (Non-Infraction & Infraction); 2) Infraction Rate By Hour & Day of Week; and 3) Fast Infraction Rate By Hour (defined as > 10 MPH over the speed limit). The averages of these charts are summarized as follows:

TRAFFIC COUNTER

	MAR	JUL	AUG	OCT	DEC	
Average Speed	28.4	29.2	28.6	28.5	28.4	28.6
85th Percentile Speed	32.0	33	32.0	32.0	32.0	32.2
AADT	1325.1	1277.7	1426.7	1385.7	1432.3	1369.5

The information contained herein indicates the following:

- Volume is moderate at this location and is fairly consistent over seasons;
- Day-Of-Week does not appear to be a factor;
- The Average Speed does not indicate a speeding issue;
- The 85th Percentile Speed does not indicate a speeding issue although there may be an engineering issue;
- The Infraction Rate seems very high and the Fast Infraction Rate is moderate-to-high;
- Infraction Rates and Fast Infraction Rates, due to Volume, should be disregarded during 11PM-6AM; and
- Police Enforcement should take place from 3PM-6PM.

2021
NB Avg =
28.2 mph
comparable
to traffic
counter

Southbound
Speed just
slightly
higher at
29.8 mph

92nd Ave NE (1900)

The following pages depict three charts from each of 2018's quarters: 1) Hourly Volume (Non-Infraction & Infraction); 2) Infraction Rate By Hour & Day of Week; and 3) Fast Infraction Rate By Hour (defined as > 10 MPH over the speed limit). The averages of these charts are summarized as follows:

TRAFFIC COUNTER

	APR	AUG	OCT	DEC	
Average Speed	27.5	28.1	27.7	27.5	27.7
85th Percentile Speed	31.0	32	31.0	31.0	31.3
AADT	1418.5	1628.7	1698.9	1579.9	1581.5

2021

Avg = 27.6 –
27.9 mph

Comparable
to traffic
counter

The information contained herein indicates the following:

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- Day-Of-Week does not appear to be a factor;
- The Average Speed does not indicate a speeding issue;
- The 85th Percentile Speed does not indicate a speeding issue although there may be an engineering issue;
- While the Infraction Rate seems high, the Fast Infraction Rate is low;
- Infraction Rates and Fast Infraction Rates, due to Volume, should be disregarded during 11PM-6AM; and
- This is not an ideal location for Police Enforcement to take place.

92nd Ave NE (2200)

92nd AVE NE – 2200 BLK ANALYSIS – ANNUAL REVIEW

The following pages depict three charts from each of 2018's quarters: 1) Hourly Volume (Non-Infraction & Infraction); 2) Infraction Rate By Hour & Day of Week; and 3) Fast Infraction Rate By Hour (defined as > 10 MPH over the speed limit). The averages of these charts are summarized as follows:

TRAFFIC COUNTER

	FEB	APR	AUG	OCT	DEC	
Average Speed	27.6	27.5	28.4	28.0	28.4	28.0
85th Percentile Speed	31.0	31.0	32.0	31.0	32.0	31.4
AADT	1768.0	1618.1	1804.5	1846.7	1780.9	1763.6

2021
Avg = 27.9 –
28.9 mph

Comparable
to traffic
counter

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- Day-Of-Week does not appear to be a factor;
- The Average Speed does not indicate a speeding issue;
- The 85th Percentile Speed does not indicate a speeding issue although there may be an engineering issue;
- While the Infraction Rate seems very high, the Fast Infraction Rate is low;
- Infraction Rates and Fast Infraction Rates, due to Volume, should be disregarded during 11PM-6AM; and
- This is not an ideal location for Police Enforcement to take place.

92nd Ave NE (3000)

The following pages depict three charts from each of 2018's quarters: 1) Hourly Volume (Non-Infraction & Infraction); 2) Infraction Rate By Hour & Day of Week; and 3) Fast Infraction Rate By Hour (defined as > 10 MPH over the speed limit). The averages of these charts are summarized as follows:

TRAFFIC COUNTER

	APR	AUG	OCT	DEC	
Average Speed	27.3	27.7	27.6	27.5	27.5
85th Percentile Speed	30.0	31.0	31.0	31.0	30.8
AADT	2113.0	2355.5	2341.8	2077.7	2222.0

2021

Avg = 28.6 to
29.3 mph

Comparable
to 2018

The information contained herein indicates the following:

- Volume is moderate-to-high at this location and is fairly consistent over seasons;
- Day-Of-Week does not appear to be a factor;
- The Average Speed does not indicate a speeding issue;
- The 85th Percentile Speed does not indicate a speeding issue although there may be an engineering issue;
- While the Infraction Rate seems high, the Fast Infraction Rate is low;
- Infraction Rates and Fast Infraction Rates, due to Volume, should be disregarded during 11PM-6AM; and
- This is not an ideal location for Police Enforcement to take place.

Next Steps

- Consider speed sign data analysis on a 2x – 4x per year basis
- Follow-up within 1 year to see how reporting is going