



# MINNESOTA DEPARTMENT OF TRANSPORTATION

## METRO DIVISION - TRAFFIC ENGINEERING

### SIGNAL WARRANTS ANALYSIS

LOCATION: TH-55 AT NEADOW LN

COUNTY: HENNEPIN

REF. POINT: 187.525

DATE: 3/21/1995

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-55 EB, W OF MEADOW LN	4
50	Major App3: TH-55 WB, E OF MEADOW LN	4
30	Minor App2: MEADOW LN NB, S OF TH-55	1
30	Minor App4: MEADOW LN SB, N OF TH-55	3

0.70 FACTOR USED? YES

POPULATION < 10,000? NO

EXISTING SIGNAL ? NO

HOUR	420/630				105/52		140/70		MET SAME HOURS
	MAJOR APP. 1	MAJOR APP. 3	TOTAL 1+3	WARRANT MET	MINOR APP. 2	MINOR APP. 4	WARRANT MET APP. 2	WARRANT MET APP. 4	
0:00 - 1:00	83	85	168	/	9	16	/	/	/
1:00 - 2:00	75	65	140	/	5	22	/	/	/
2:00 - 3:00	51	48	99	/	5	2	/	/	/
3:00 - 4:00	51	33	84	/	4	1	/	/	/
4:00 - 5:00	65	72	137	/	1	10	/	/	/
5:00 - 6:00	360	271	631	X/X	19	23	/	/	/
6:00 - 7:00	1178	632	1810	X/X	66	112	/X	/X	/X
7:00 - 8:00	2583	1060	3643	X/X	161	235	X/X	X/X	X/X
8:00 - 9:00	1691	911	2602	X/X	133	129	X/X	/X	X/X
9:00 - 10:00	911	700	1611	X/X	97	106	/X	/X	/X
10:00 - 11:00	849	711	1560	X/X	108	103	X/X	/X	X/X
11:00 - 12:00	1078	938	2016	X/X	143	121	X/X	/X	X/X
12:00 - 13:00	1066	1073	2139	X/X	176	189	X/X	X/X	X/X
13:00 - 14:00	942	1004	1946	X/X	167	137	X/X	/X	X/X
14:00 - 15:00	984	1082	2066	X/X	169	125	X/X	/X	X/X
15:00 - 16:00	1328	1352	2680	X/X	199	157	X/X	X/X	X/X
16:00 - 17:00	1511	1737	3248	X/X	321	203	X/X	X/X	X/X
17:00 - 18:00	1279	1943	3222	X/X	446	178	X/X	X/X	X/X
18:00 - 19:00	828	1011	1839	X/X	181	114	X/X	/X	X/X
19:00 - 20:00	514	603	1117	X/X	110	74	X/X	/X	X/X
20:00 - 21:00	368	503	871	X/X	104	58	/X	/	/X
21:00 - 22:00	335	426	761	X/X	68	56	/X	/	/X
22:00 - 23:00	250	281	531	X/	38	31	/	/	/
23:00 - 24:00	153	182	335	/	18	18	/	/	/

	Met (Hr)	Required (Hr)	
Warrant 1	12	8	Satisfied
Warrant 2	16	8	Satisfied
Warrant 6	16	8	Satisfied, check accident record
Warrant 8	14	8	Satisfied
Warrant 9	15	4	Satisfied
Warrant 11	13	1	Satisfied

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50	Major App3: TH-55 WB, E OF MEADOW LN	4
30	Minor App2: MEADOW LN NB, S OF TH-55	1
30	Minor App4: MEADOW LN SB, N OF TH-55	3

0.70 FACTOR USED? YES  
 POPULATION < 10,000? NO  
 EXISTING SIGNAL ? NO

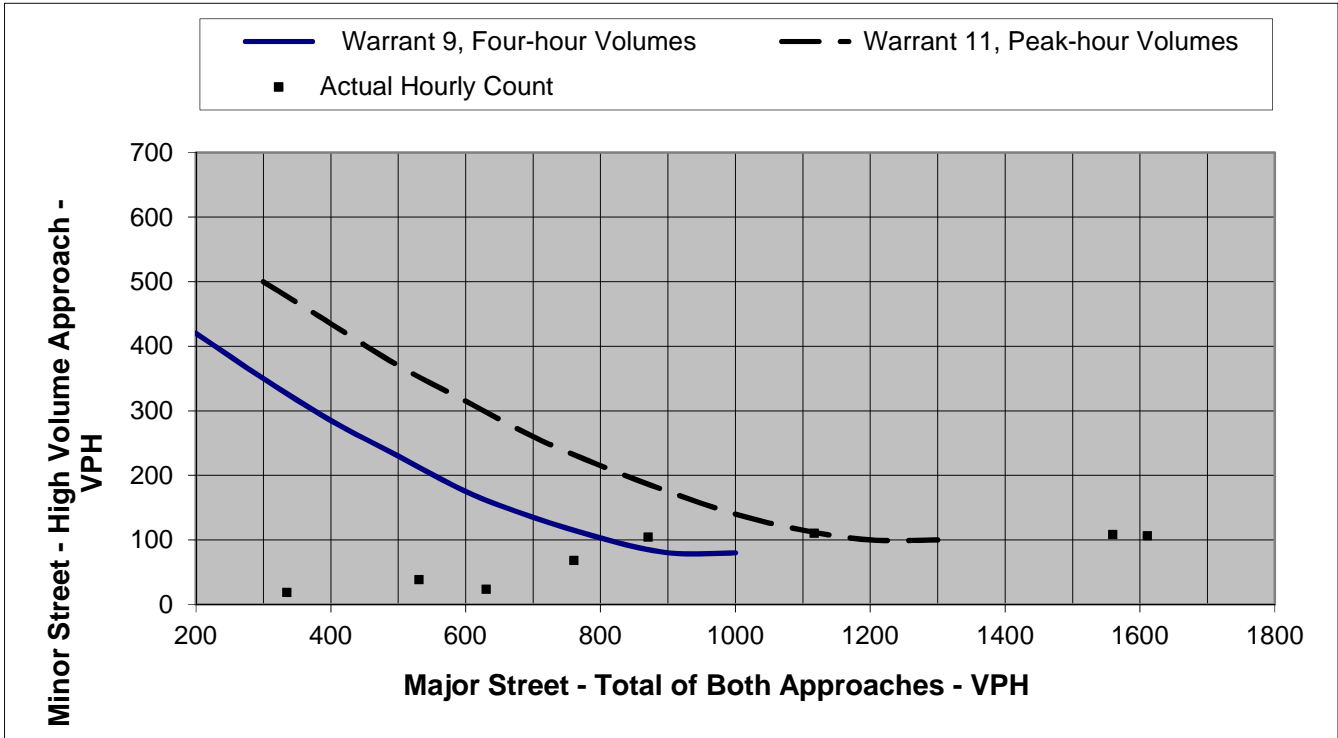


Figure 1. Four Hour and Peak Hour Warrant Analysis

Note: For data points outside the graph range, check the minor street volume against the lower thresholds

Major	Warrant Criteria		Actual Hourly Count	
	Warrant 9, F	Warrant 11, P	Major	Actual Hourly Count
200	420		168	16
300	350	500	140	22
400	285	435	99	5
500	230	370	84	4
600	175	315	137	10
700	135	260	631	23
800	103	215	1810	112
900	80	175	3643	235
1000	80	140	2602	133
1100		115	1611	106
1200		100	1560	108
1300		100	2016	143
1400			2139	189
1500			1946	167
1600			2066	169
1700			2680	199
1800			3248	321
			3222	446
			1839	181
			1117	110
			871	104
			761	68
			531	38
			335	18

Four Hour Warrant

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
300	360	440	590
400	310	390	530
500	260	340	460
600	215	290	390
700	180	245	330
800	150	205	280
900	125	170	235
1000	100	145	195
1100	85	120	165
1200	80	100	135
1300	80	83	110
1400	80	80	110

Peak Hour

Major App	1 & 1
400	475
500	425
600	370
700	330
800	280
900	240
1000	204
1100	175
1200	150
1300	130
1400	115
1500	100
1600	100
1700	100
1800	100

Four Hour Warrant Factored

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
200	250	320	420
300	210	265	350
400	170	215	285
500	130	170	230
600	93	130	175
700	70	100	135
800	60	80	103
900	60	65	80
1000	60	60	80

Peak Hour

Major App	1 & 1
300	320
400	270
500	225
600	180
700	145
800	115
900	90
1000	75
1100	75
1200	75
1300	75



Warrant

Minor App

2 & 1	2 & 2
570	725
520	665
465	600
420	540
370	480
330	425
285	375
250	330
220	285
190	250
160	220
140	187
115	165
100	150
100	150

Warrant Factored

Minor App

2 & 1	2 & 2
380	500
335	435
285	370
240	315
200	260
160	215
135	175
110	140
95	115
75	100
75	100



# MINNESOTA DEPARTMENT OF TRANSPORTATION

## METRO DIVISION - TRAFFIC ENGINEERING

### ALL WAY STOP WARRANT

LOCATION: TH-55 AT MEADOW LN

COUNTY: HENNEPIN

REF. POINT: 187.525

DATE: 3/21/1995

OPERATOR: DR

Speed	Approach Description	Lanes
50	Major App1: TH-55 EB, W OF MEADOW LN	4
50	Major App3: TH-55 WB, E OF MEADOW LN	4
30	Minor App2: MEADOW LN NB, S OF TH-55	1
30	Minor App4: MEADOW LN SB, N OF TH-55	3

0.70 FACTOR USED? Yes

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	350	140	WARRANT MET
					TOTAL Σ (APP.1 to APP. 4)	MINOR TOTAL APP. 2 + APP. 4	
0:00 - 1:00	83	85	9	16	193	25	/
1:00 - 2:00	75	65	5	22	167	27	/
2:00 - 3:00	51	48	5	2	106	7	/
3:00 - 4:00	51	33	4	1	89	5	/
4:00 - 5:00	65	72	1	10	148	11	/
5:00 - 6:00	360	271	19	23	673	42	X/
6:00 - 7:00	1178	632	66	112	1988	178	X/X
7:00 - 8:00	2583	1060	161	235	4039	396	X/X
8:00 - 9:00	1691	911	133	129	2864	262	X/X
9:00 - 10:00	911	700	97	106	1814	203	X/X
10:00 - 11:00	849	711	108	103	1771	211	X/X
11:00 - 12:00	1078	938	143	121	2280	264	X/X
12:00 - 13:00	1066	1073	176	189	2504	365	X/X
13:00 - 14:00	942	1004	167	137	2250	304	X/X
14:00 - 15:00	984	1082	169	125	2360	294	X/X
15:00 - 16:00	1328	1352	199	157	3036	356	X/X
16:00 - 17:00	1511	1737	321	203	3772	524	X/X
17:00 - 18:00	1279	1943	446	178	3846	624	X/X
18:00 - 19:00	828	1011	181	114	2134	295	X/X
19:00 - 20:00	514	603	110	74	1301	184	X/X
20:00 - 21:00	368	503	104	58	1033	162	X/X
21:00 - 22:00	335	426	68	56	885	124	X/
22:00 - 23:00	250	281	38	31	600	69	X/
23:00 - 24:00	153	182	18	18	371	36	X/

Met (Hr) Required (Hr)

Allway Stop Warrant: **15** 8 **Satisfied**

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_