



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-55 & CSAH 50/ REBECCA PK DR

COUNTY: DAKOTA

REF. POINT: 165.507

DATE: 6/25/1996

OPERATOR: DR

Speed	Approach Description	Lanes
45	Major App1: TH-55 EB, W OF CSAH-50	4
45	Major App3: TH-55 WB, E OF CSAH-50	4
35	Minor App2: CSAH-50 NB, S OF TH-55	2
45	Minor App4: CSAH-50 SB, N OF TH-55	2

0.70 FACTOR USED? YES

POPULATION < 10,000? NO

EXISTING SIGNAL ? NO

HOUR	420/630				140/70		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	27	82	109	/	11	21	/	/	/
1:00 - 2:00	22	51	73	/	6	9	/	/	/
2:00 - 3:00	24	33	57	/	5	6	/	/	/
3:00 - 4:00	47	22	69	/	7	4	/	/	/
4:00 - 5:00	198	21	219	/	11	6	/	/	/
5:00 - 6:00	767	54	821	X/X	39	36	/	/	/
6:00 - 7:00	1309	137	1446	X/X	63	73	/	/X	/X
7:00 - 8:00	1163	269	1432	X/X	57	113	/	/X	/X
8:00 - 9:00	624	294	918	X/X	32	76	/	/X	/X
9:00 - 10:00	484	310	794	X/X	52	67	/	/	/
10:00 - 11:00	428	314	742	X/X	56	79	/	/X	/X
11:00 - 12:00	416	395	811	X/X	52	79	/	/X	/X
12:00 - 13:00	411	430	841	X/X	62	78	/	/X	/X
13:00 - 14:00	442	424	866	X/X	70	76	/X	/X	/X
14:00 - 15:00	450	582	1032	X/X	73	106	/X	/X	/X
15:00 - 16:00	421	903	1324	X/X	93	155	/X	X/X	X/X
16:00 - 17:00	481	1192	1673	X/X	116	161	/X	X/X	X/X
17:00 - 18:00	467	1183	1650	X/X	91	181	/X	X/X	X/X
18:00 - 19:00	384	844	1228	X/X	81	125	/X	/X	/X
19:00 - 20:00	311	526	837	X/X	71	91	/X	/X	/X
20:00 - 21:00	307	436	743	X/X	65	93	/	/X	/X
21:00 - 22:00	291	334	625	X/	53	64	/	/	/
22:00 - 23:00	146	223	369	/	18	31	/	/	/
23:00 - 24:00	65	131	196	/	20	25	/	/	/

	Met (Hr)	Required (Hr)	
Warrant 1	3	8	Not satisfied
Warrant 2	14	8	Satisfied
Warrant 6	16	8	Satisfied, check accident record
Warrant 8	5	8	Not satisfied
Warrant 9	6	4	Satisfied
Warrant 11	5	1	Satisfied

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

Speed	Approach Description	Lanes
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45	Minor App4: CSAH-50 SB, N OF TH-55	2

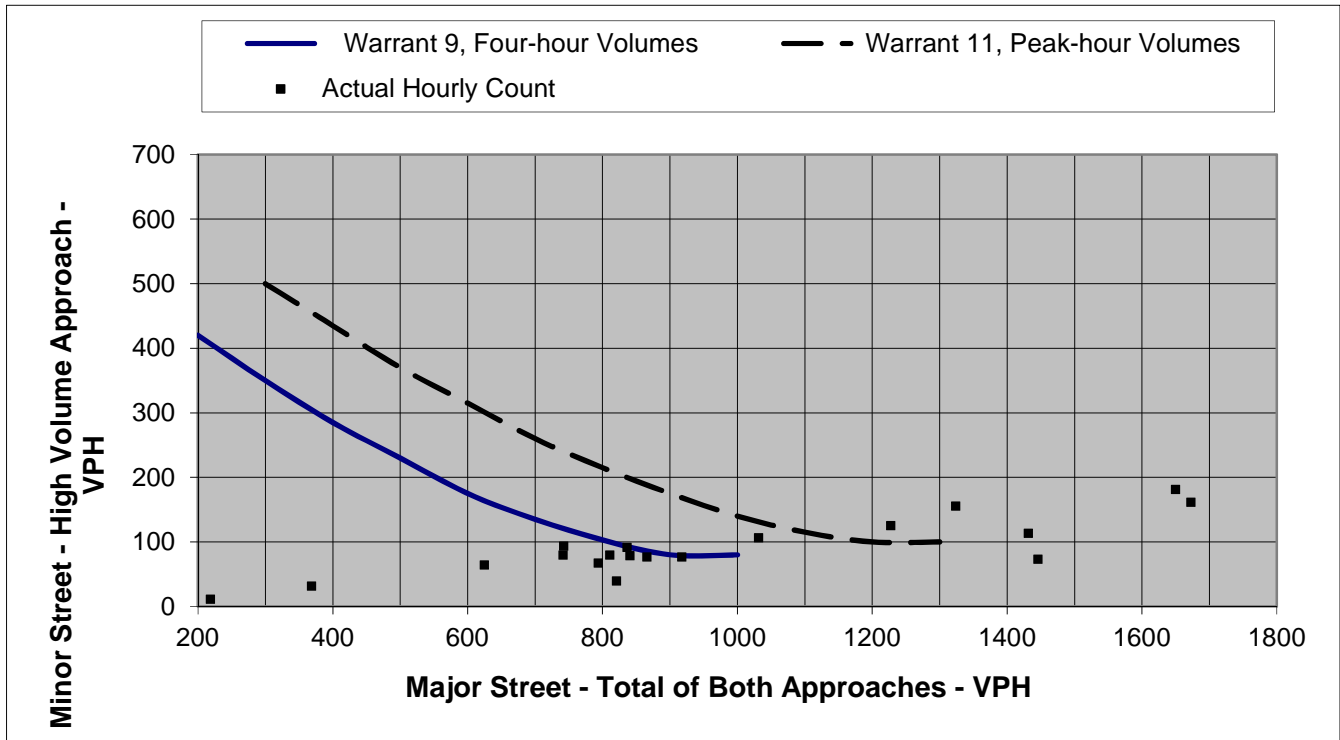


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		109	21
300	350	500	73	9
400	285	435	57	6
500	230	370	69	7
600	175	315	219	11
700	135	260	821	39
800	103	215	1446	73
900	80	175	1432	113
1000	80	140	918	76
1100		115	794	67
1200		100	742	79
1300		100	811	79
1400			841	78
1500			866	76
1600			1032	106
1700			1324	155
1800			1673	161
			1650	181
			1228	125
			837	91
			743	93
			625	64
			369	31
			196	25

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 & CSAH 50/ REBECCA PK DR

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REF. POINT: 165.507

DATE: 6/25/1996

OPERATOR: DR

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45	Major App3: TH-55 WB, E OF CSAH-50	4
35	Minor App2: CSAH-50 NB, S OF TH-55	2
45	Minor App4: CSAH-50 SB, N OF TH-55	2

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	27	82	11	21	141	32	/
1:00 - 2:00	22	51	6	9	88	15	/
2:00 - 3:00	24	33	5	6	68	11	/
3:00 - 4:00	47	22	7	4	80	11	/
4:00 - 5:00	198	21	11	6	236	17	/
5:00 - 6:00	767	54	39	36	896	75	X/
6:00 - 7:00	1309	137	63	73	1582	136	X/
7:00 - 8:00	1163	269	57	113	1602	170	X/X
8:00 - 9:00	624	294	32	76	1026	108	X/
9:00 - 10:00	484	310	52	67	913	119	X/
10:00 - 11:00	428	314	56	79	877	135	X/
11:00 - 12:00	416	395	52	79	942	131	X/
12:00 - 13:00	411	430	62	78	981	140	X/X
13:00 - 14:00	442	424	70	76	1012	146	X/X
14:00 - 15:00	450	582	73	106	1211	179	X/X
15:00 - 16:00	421	903	93	155	1572	248	X/X
16:00 - 17:00	481	1192	116	161	1950	277	X/X
17:00 - 18:00	467	1183	91	181	1922	272	X/X
18:00 - 19:00	384	844	81	125	1434	206	X/X
19:00 - 20:00	311	526	71	91	999	162	X/X
20:00 - 21:00	307	436	65	93	901	158	X/X
21:00 - 22:00	291	334	53	64	742	117	X/
22:00 - 23:00	146	223	18	31	418	49	X/
23:00 - 24:00	65	131	20	25	241	45	/

Met (Hr) Required (Hr)

Allway Stop Warrant: **10** 8 **Satisfied**

REMARKS: _____

