



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: CSAH-2 E.B. W. OF I-35

COUNTY: SCOTT

REF. POINT: 076.840

DATE: 4/24/2002

OPERATOR: DR

Speed	Approach Description	Lanes
55	Major App1: CSAH-2 E.B. W. OF I-35 W. RAMPS	2
55	Major App3: CSAH-2 W.B. E. OF I-35 W. RAMPS	2
30	Minor App2: I-35 S.B. RAMP TO CSAH-2	2
0	Minor App4: N/A	0

0.70 FACTOR USED? YES

POPULATION < 10,000? YES

EXISTING SIGNAL ? NO

420/630

140/70

HOUR	420/630			140/70			WARRANT MET APP. 4	MET SAME HOURS
	MAJOR APP. 1	MAJOR APP. 3	TOTAL 1+3	WARRANT MET	MINOR APP. 2	MINOR APP. 4		
0:00 - 1:00	19	37	56	/	10	0	/	/
1:00 - 2:00	14	23	37	/	6	0	/	/
2:00 - 3:00	10	14	24	/	5	0	/	/
3:00 - 4:00	16	13	29	/	6	0	/	/
4:00 - 5:00	45	13	58	/	7	0	/	/
5:00 - 6:00	208	27	235	/	11	0	/	/
6:00 - 7:00	452	124	576	X/	41	0	/	/
7:00 - 8:00	479	151	630	X/X	123	0	/X	/X
8:00 - 9:00	320	152	472	X/	70	0	/X	/
9:00 - 10:00	250	138	388	/	68	0	/	/
10:00 - 11:00	199	150	349	/	59	0	/	/
11:00 - 12:00	199	173	372	/	81	0	/X	/
12:00 - 13:00	215	196	411	/	86	0	/X	/
13:00 - 14:00	204	197	401	/	83	0	/X	/
14:00 - 15:00	201	290	491	X/	96	0	/X	/
15:00 - 16:00	245	466	711	X/X	154	0	X/X	X/X
16:00 - 17:00	291	599	890	X/X	176	0	X/X	X/X
17:00 - 18:00	276	561	837	X/X	138	0	/X	/X
18:00 - 19:00	266	373	639	X/X	100	0	/X	/X
19:00 - 20:00	198	246	444	X/	71	0	/X	/
20:00 - 21:00	156	221	377	/	64	0	/	/
21:00 - 22:00	83	208	291	/	32	0	/	/

22:00 - 23:00	59	113	172	/	19	0	/		/
23:00 - 24:00	24	61	85	/	28	0	/		/

	Met (Hr)	Required (Hr)	
Warrant 1	2	8	Not satisfied
Warrant 2	5	8	Not satisfied
Warrant 6	5	8	Not satisfied
Warrant 8	4	8	Not satisfied
Warrant 9	3	4	Not satisfied
Warrant 11	0	1	Not satisfied

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0	Minor App4: N/A	0

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

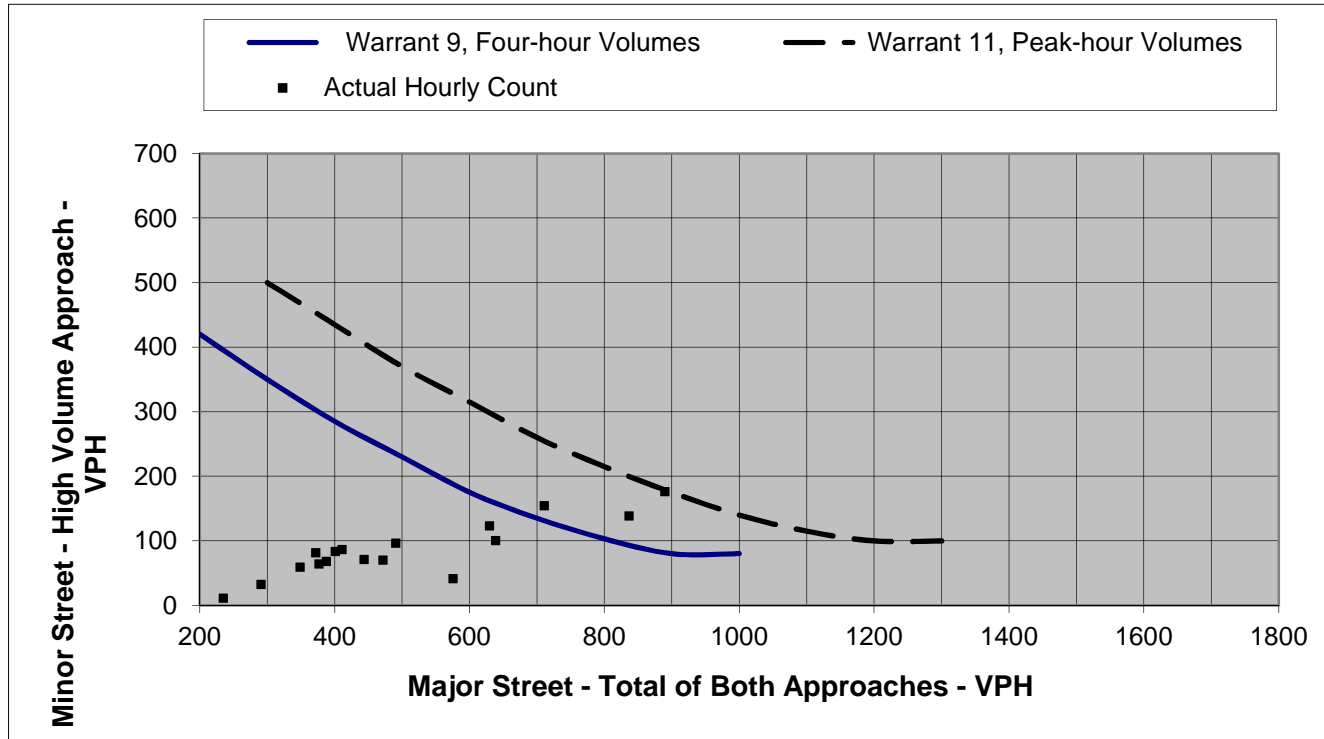


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		56	10
300	350	500	37	6
400	285	435	24	5
500	230	370	29	6
600	175	315	58	7
700	135	260	235	11
800	103	215	576	41
900	80	175	630	123

1000	80	140	472	70
1100		115	388	68
1200		100	349	59
1300		100	372	81
1400			411	86
1500			401	83
1600			491	96
1700			711	154
1800			890	176
			837	138
			639	100
			444	71
			377	64
			291	32
			172	19
			85	28

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 Warrant

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
400	475	570	725
500	425	520	665
600	370	465	600
700	330	420	540
800	280	370	480
900	240	330	425
1000	204	285	375
1100	175	250	330
1200	150	220	285
1300	130	190	250
1400	115	160	220
1500	100	140	187
1600	100	115	165
1700	100	100	150
1800	100	100	150

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 Warrant Factored

Major App	Minor App		
	1 & 1	2 & 1	2 & 2
300	320	380	500
400	270	335	435
500	225	285	370
600	180	240	315
700	145	200	260
800	115	160	215
900	90	135	175
1000	75	110	140
1100	75	95	115
1200	75	75	100
1300	75	75	100