



# MINNESOTA DEPARTMENT OF TRANSPORTATION

## METRO DIVISION - TRAFFIC ENGINEERING

### SIGNAL WARRANTS ANALYSIS

LOCATION: TH-212 & REGIONAL CENTER RD

COUNTY: HENNEPIN

REF. POINT: 158.824

DATE: 9/18/1997

OPERATOR: DR

Speed	Approach Description	Lanes
45	Major App1: TH-212 EB, S OF REGIONAL CENTER RD	4
45	Major App3: TH-212 WB, N OF REGIONAL CENTER RD	4
30	Minor App2: REGIONAL CENTER RD EB, W OF TH-212	2
30	Minor App4: REGIONAL CENTER RD WB, E OF TH-212	3

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	51	135	186	/	8	9	/	/	/
1:00 - 2:00	49	67	116	/	4	3	/	/	/
2:00 - 3:00	36	52	88	/	1	1	/	/	/
3:00 - 4:00	42	39	81	/	5	0	/	/	/
4:00 - 5:00	107	66	173	/	1	3	/	/	/
5:00 - 6:00	409	158	567	X/	3	12	/	/	/
6:00 - 7:00	1215	627	1842	X/X	18	64	/	/	/
7:00 - 8:00	1889	635	2524	X/X	13	103	/	/X	/X
8:00 - 9:00	1354	700	2054	X/X	19	116	/	/X	/X
9:00 - 10:00	895	688	1583	X/X	36	130	/	/X	/X
10:00 - 11:00	757	696	1453	X/X	52	161	/	X/X	X/X
11:00 - 12:00	969	1135	2104	X/X	68	238	/	X/X	X/X
12:00 - 13:00	1066	1119	2185	X/X	133	389	/X	X/X	X/X
13:00 - 14:00	992	968	1960	X/X	104	328	/X	X/X	X/X
14:00 - 15:00	878	926	1804	X/X	78	229	/X	X/X	X/X
15:00 - 16:00	862	1260	2122	X/X	101	188	/X	X/X	X/X
16:00 - 17:00	797	1603	2400	X/X	189	176	X/X	X/X	X/X
17:00 - 18:00	799	1716	2515	X/X	79	199	/X	X/X	X/X
18:00 - 19:00	931	1241	2172	X/X	141	218	X/X	X/X	X/X
19:00 - 20:00	799	866	1665	X/X	94	197	/X	X/X	X/X
20:00 - 21:00	594	793	1387	X/X	62	145	/	X/X	X/X
21:00 - 22:00	481	617	1098	X/X	51	97	/	/X	/X
22:00 - 23:00	239	366	605	X/	28	28	/	/	/
23:00 - 24:00	108	235	343	/	14	7	/	/	/

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

LOCATION: TH-212 & REGIONAL CENTER RD

COUNTY: HENNEPIN

REF. POINT: 158.824

DATE: 9/18/1997

OPERATOR: DR

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

Speed	Approach Description	Lanes
45	Major App1: TH-212 EB, S OF REGIONAL CENTER RD	4
45	Major App3: TH-212 WB, N OF REGIONAL CENTER RD	4
30	Minor App2: REGIONAL CENTER RD EB, W OF TH-212	2
30	Minor App4: REGIONAL CENTER RD WB, E OF TH-212	3

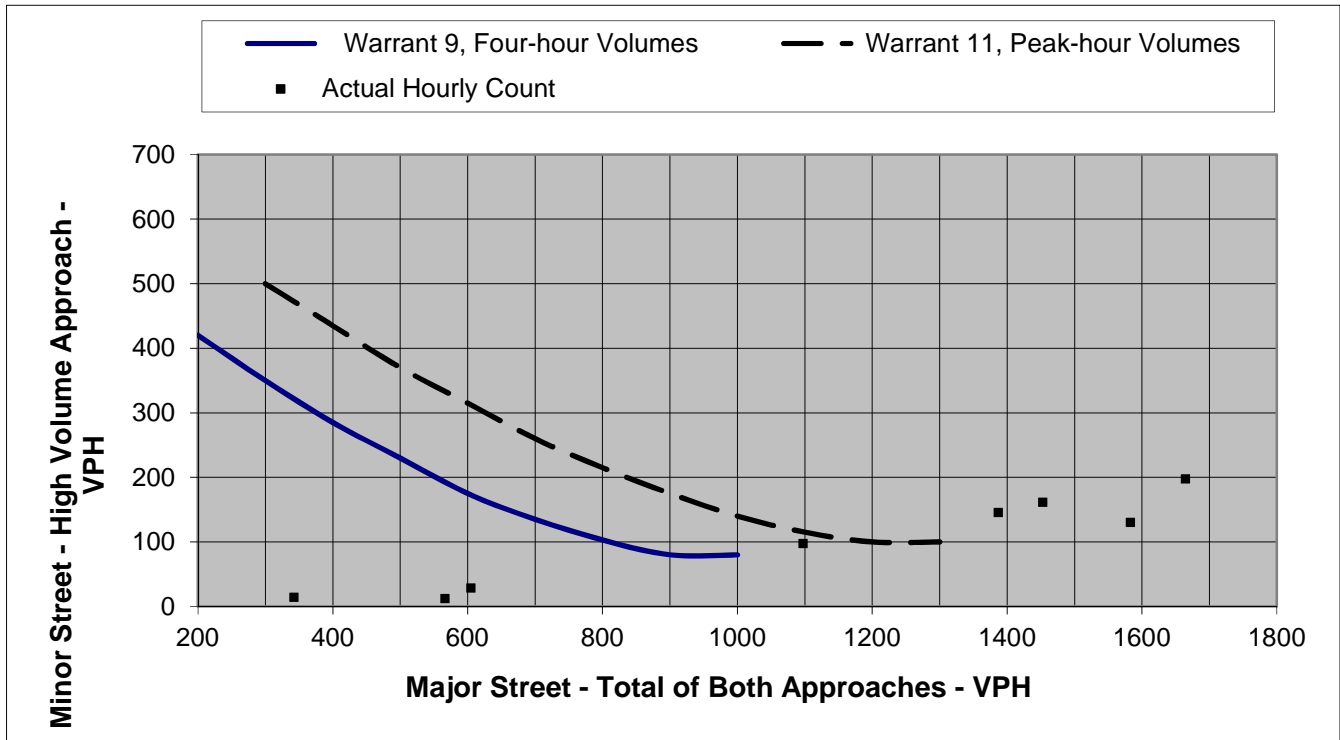


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		186	9
300	350	500	116	4
400	285	435	88	1
500	230	370	81	5
600	175	315	173	3
700	135	260	567	12
800	103	215	1842	64
900	80	175	2524	103
1000	80	140	2054	116
1100		115	1583	130
1200		100	1453	161
1300		100	2104	238
1400			2185	389
1500			1960	328
1600			1804	229
1700			2122	188
1800			2400	189
			2515	199
			2172	218
			1665	197
			1387	145
			1098	97
			605	28
			343	14

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-212 & REGIONAL CENTER RD

COUNTY: HENNEPIN

REF. POINT: 158.824

DATE: 9/18/1997

OPERATOR: DR

Speed	Approach Description	Lanes
45	Major App1: TH-212 EB, S OF REGIONAL CENTER RD	4
45	Major App3: TH-212 WB, N OF REGIONAL CENTER RD	4
30	Minor App2: REGIONAL CENTER RD EB, W OF TH-212	2
30	Minor App4: REGIONAL CENTER RD WB, E OF TH-212	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	51	135	8	9	203	17	/
1:00 - 2:00	49	67	4	3	123	7	/
2:00 - 3:00	36	52	1	1	90	2	/
3:00 - 4:00	42	39	5	0	86	5	/
4:00 - 5:00	107	66	1	3	177	4	/
5:00 - 6:00	409	158	3	12	582	15	X/
6:00 - 7:00	1215	627	18	64	1924	82	X/
7:00 - 8:00	1889	635	13	103	2640	116	X/
8:00 - 9:00	1354	700	19	116	2189	135	X/
9:00 - 10:00	895	688	36	130	1749	166	X/X
10:00 - 11:00	757	696	52	161	1666	213	X/X
11:00 - 12:00	969	1135	68	238	2410	306	X/X
12:00 - 13:00	1066	1119	133	389	2707	522	X/X
13:00 - 14:00	992	968	104	328	2392	432	X/X
14:00 - 15:00	878	926	78	229	2111	307	X/X
15:00 - 16:00	862	1260	101	188	2411	289	X/X
16:00 - 17:00	797	1603	189	176	2765	365	X/X
17:00 - 18:00	799	1716	79	199	2793	278	X/X
18:00 - 19:00	931	1241	141	218	2531	359	X/X
19:00 - 20:00	799	866	94	197	1956	291	X/X
20:00 - 21:00	594	793	62	145	1594	207	X/X
21:00 - 22:00	481	617	51	97	1246	148	X/X
22:00 - 23:00	239	366	28	28	661	56	X/
23:00 - 24:00	108	235	14	7	364	21	X/

Met (Hr) Required (Hr)

Allway Stop Warrant: **13** 8 **Satisfied**

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