



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

SIGNAL WARRANTS ANALYSIS

LOCATION: TH-149 at Wescott Rd.

COUNTY: Dakota

REF. POINT: 000+00.834

DATE: 6/8/1998

OPERATOR: DR

Speed	Approach Description	Lanes
55	Major App1: TH-149 NB S. of Wescott Rd.	2
55	Major App3: TH-149 SB N. of Wescott Rd.	2
45	Minor App2: Wescott Rd. EB W. of TH-149	2
0	Minor App4: N/A	0

EXISTING SIGNAL ? No

POPULATION LESS THAN 10,000? No

HOUR	MAJOR APP. 1	MAJOR APP. 3	TOTAL 1+3	420/630			140/70		0/0	MET SAME HOURS
				WARRANT MET	MINOR APP. 2	MINOR APP. 4	WARRANT MET APP.2	WARRANT MET APP. 4		
0:00 - 1:00	3	16	19	/	55	0	/	/	/	
1:00 - 2:00	4	8	12	/	32	0	/	/	/	
2:00 - 3:00	5	6	11	/	24	0	/	/	/	
3:00 - 4:00	10	9	19	/	20	0	/	/	/	
4:00 - 5:00	47	56	103	/	68	0	/	/	/	
5:00 - 6:00	118	173	291	/	207	0	X/X	/	/	
6:00 - 7:00	10	312	322	/	238	0	X/X	/	/	
7:00 - 8:00	0	213	213	/	222	0	X/X	/	/	
8:00 - 9:00	57	136	193	/	211	0	X/X	/	/	
9:00 - 10:00	50	88	138	/	199	0	X/X	/	/	
10:00 - 11:00	71	100	171	/	245	0	X/X	/	/	
11:00 - 12:00	75	102	177	/	263	0	X/X	/	/	
12:00 - 13:00	57	109	166	/	267	0	X/X	/	/	
13:00 - 14:00	72	136	208	/	312	0	X/X	/	/	
14:00 - 15:00	75	254	329	/	540	0	X/X	/	/	
15:00 - 16:00	80	241	321	/	741	0	X/X	/	/	
16:00 - 17:00	78	221	299	/	807	0	X/X	/	/	
17:00 - 18:00	57	174	231	/	454	0	X/X	/	/	
18:00 - 19:00	42	125	167	/	256	0	X/X	/	/	
19:00 - 20:00	29	116	145	/	217	0	X/X	/	/	
20:00 - 21:00	35	76	111	/	212	0	X/X	/	/	
21:00 - 22:00	22	43	65	/	119	0	/X	/	/	
22:00 - 23:00	5	59	64	/	94	0	/X	/	/	
23:00 - 24:00	0	6	6	/	48	0	/	/	/	

- Warrant 1 was met for 0 hours
- Warrant 2 was met for 0 hours
- Warrant 6 was met for 0 hours
- Warrant 8 was met for 0 hours
- Warrant 9 was met for 4 hours
- Warrant 11 was met for 3 hours

LOCATION: TH-149 at Wescott Rd.

COUNTY: Dakota

REF. POINT: 000+00.834

DATE: 6/8/1998

OPERATOR: DR

EXISTING SIGNAL ?

No

POPULATION LESS THAN 10,000?

No

Speed	Approach Description	Lanes
55	Major App1: TH-149 NB S. of Wescott Rd.	2
55	Major App3: TH-149 SB N. of Wescott Rd.	2
45	Minor App2: Wescott Rd. EB W. of TH-149	2
0	Minor App4: N/A	0

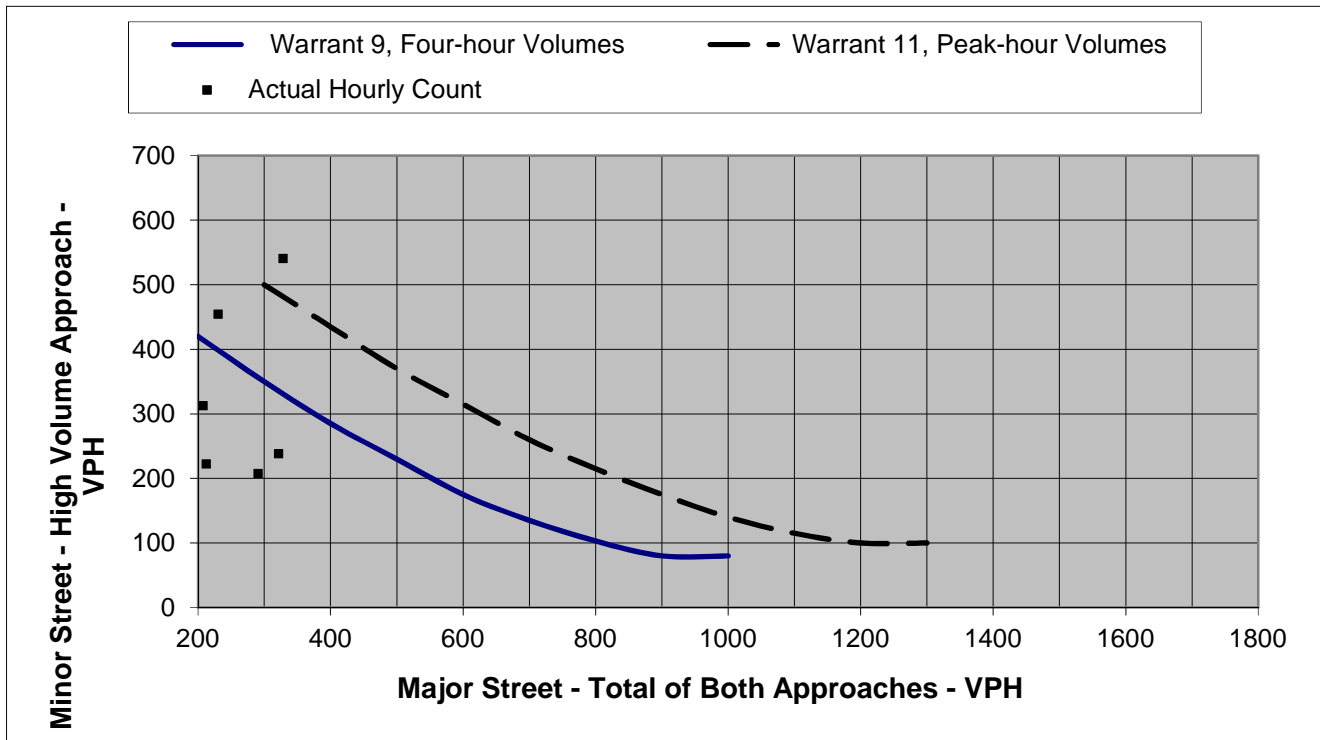


Figure 1. Four Hour and Peak Hour Warrant Analysis

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		19	55
300	350	500	12	32
400	285	435	11	24
500	230	370	19	20
600	175	315	103	68
700	135	260	291	207
800	103	215	322	238
900	80	175	213	222
1000	80	140	193	211
1100		115	138	199
1200		100	171	245
1300		100	177	263
1400			166	267
1500			208	312
1600			329	540
1700			321	741
1800			299	807
			231	454
			167	256
			145	217
			111	212
			65	119
			64	94
			6	48

Four Hour Warrant

Peak Hour

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

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

Major App	Peak Hour
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-149 at Wescott Rd.

COUNTY: Dakota

REF. POINT: 000+00.834

DATE:

OPERATOR: DR

EXISTING SIGNAL ?

POPULATION LESS THAN 10,000?

Speed	Approach Description	Lanes
55	Major App1: TH-149 NB S. of Wescott Rd.	2
55	Major App3: TH-149 SB N. of Wescott Rd.	2
45	Minor App2: Wescott Rd. EB W. of TH-149	2
0	Minor App4: N/A	0

No

No

350

140

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	TOTAL Σ (APP.1 to APP. 4)	MINOR TOTAL APP. 2 + APP. 4	WARRANT MET
0:00 - 1:00	3	16	55	0	74	55	/
1:00 - 2:00	4	8	32	0	44	32	/
2:00 - 3:00	5	6	24	0	35	24	/
3:00 - 4:00	10	9	20	0	39	20	/
4:00 - 5:00	47	56	68	0	171	68	/
5:00 - 6:00	118	173	207	0	498	207	X/X
6:00 - 7:00	10	312	238	0	560	238	X/X
7:00 - 8:00	0	213	222	0	435	222	X/X
8:00 - 9:00	57	136	211	0	404	211	X/X
9:00 - 10:00	50	88	199	0	337	199	/X
10:00 - 11:00	71	100	245	0	416	245	X/X
11:00 - 12:00	75	102	263	0	440	263	X/X
12:00 - 13:00	57	109	267	0	433	267	X/X
13:00 - 14:00	72	136	312	0	520	312	X/X
14:00 - 15:00	75	254	540	0	869	540	X/X
15:00 - 16:00	80	241	741	0	1062	741	X/X
16:00 - 17:00	78	221	807	0	1106	807	X/X
17:00 - 18:00	57	174	454	0	685	454	X/X
18:00 - 19:00	42	125	256	0	423	256	X/X
19:00 - 20:00	29	116	217	0	362	217	X/X
20:00 - 21:00	35	76	212	0	323	212	/X
21:00 - 22:00	22	43	119	0	184	119	/
22:00 - 23:00	5	59	94	0	158	94	/
23:00 - 24:00	0	6	48	0	54	48	/

Warrant Was Met :

14 Hours Satisfied Requirements

REMARKS:



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

TRAFFIC COUNT DATA

ROUTE #: TH-149 NB S. of Wescott Rd.

COUNTY: Dakota

REF. PT.: 000+00.834

SITE CODE: Approach

OPERATOR: DR

FOR COUNTS BEGINNING: **June 8, 1998**

DATE	8	9	10	11	12	13	14	AVE.	AVE.
HOUR \ DAY	MON.	9	0	0	FRI.	SAT.	SUN.	WK.DAY	WKEND
0:00 - 1:00		10	0	0				3	
1:00 - 2:00		14	0	0				4	
2:00 - 3:00		17	0	0				5	
3:00 - 4:00		32	0	0				10	
4:00 - 5:00		141	0	0				47	
5:00 - 6:00		356	0	0				118	
6:00 - 7:00		31	0	0				10	
7:00 - 8:00		0	0	0				0	
8:00 - 9:00	228	1	0	0				57	
9:00 - 10:00	199	1	0	0				50	
10:00 - 11:00	283	1	0	0				71	
11:00 - 12:00	226	0	0					75	
12:00 - 13:00	173	0	0					57	
13:00 - 14:00	218	0	0					72	
14:00 - 15:00	226	0	1					75	
15:00 - 16:00	241	0	0					80	
16:00 - 17:00	235	0	0					78	
17:00 - 18:00	172	0	0					57	
18:00 - 19:00	126	0	0					42	
19:00 - 20:00	89	0	0					29	
20:00 - 21:00	106	0	0					35	
21:00 - 22:00	68	0	0					22	
22:00 - 23:00	17	0	0					5	
23:00 - 24:00									
TOTAL	2607	604	1	0				1002	

24 HOURS FACTOR:

FACTORED ADT:

REMARKS:

CORRECTED AADT:

DATA FILE --> a:\TH149Wes.da1



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

TRAFFIC COUNT DATA

ROUTE #: Wescott Rd. EB W. of TH-149

COUNTY: Dakota

REF. PT.: 000+00.834

SITE CODE: Approach

OPERATOR: DR

FOR COUNTS BEGINNING: **June 8, 1998**

DATE HOUR \ DAY	8 MON.	9 TUE.	10 WED.	11 THU.	12 FRI.	13 SAT.	14 SUN.	AVE. WK.DAY	AVE. WKEND
0:00 - 1:00		48	57	61				55	
1:00 - 2:00		35	33	30				32	
2:00 - 3:00		28	25	21				24	
3:00 - 4:00		23	18	21				20	
4:00 - 5:00		70	70	66				68	
5:00 - 6:00		189	208	225				207	
6:00 - 7:00		250	235	230				238	
7:00 - 8:00		220	217	231				222	
8:00 - 9:00		185	236	213				211	
9:00 - 10:00		182	211	205				199	
10:00 - 11:00		215	272	248				245	
11:00 - 12:00		252	274					263	
12:00 - 13:00	276	234	292					267	
13:00 - 14:00	303	291	344					312	
14:00 - 15:00	507	500	614					540	
15:00 - 16:00	738	720	767					741	
16:00 - 17:00	829	776	818					807	
17:00 - 18:00	446	435	481					454	
18:00 - 19:00	248	227	295					256	
19:00 - 20:00	180	218	254					217	
20:00 - 21:00	202	232	204					212	
21:00 - 22:00	118	130	109					119	
22:00 - 23:00	85	100	99					94	
23:00 - 24:00	47	41	58					48	
TOTAL	3979	5601	6191	1551				5851	

24 HOURS FACTOR:

FACTORED ADT:

REMARKS: _____

CORRECTED AADT: _____

DATA FILE --> a:\TH149Wes.da2



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

TRAFFIC COUNT DATA

ROUTE #: TH-149 SB N. of Wescott Rd.

COUNTY: Dakota

REF. PT.: 000+00.834

SITE CODE: Approach

OPERATOR: DR

FOR COUNTS BEGINNING: **June 8, 1998**

DATE HOUR \ DAY	8 MON.	9 TUE.	10 WED.	11 THU.	12 FRI.	13 SAT.	14 SUN.	AVE. WK.DAY	AVE. WKEND
0:00 - 1:00		19	16	15				16	
1:00 - 2:00		10	9	6				8	
2:00 - 3:00		9	5	6				6	
3:00 - 4:00		10	7	11				9	
4:00 - 5:00		59	58	52				56	
5:00 - 6:00		166	173	182				173	
6:00 - 7:00		331	309	297				312	
7:00 - 8:00		222	208	209				213	
8:00 - 9:00		125	137	148				136	
9:00 - 10:00		83	86	96				88	
10:00 - 11:00		109	102	91				100	
11:00 - 12:00		94	110					102	
12:00 - 13:00	116	93	120					109	
13:00 - 14:00	147	130	131					136	
14:00 - 15:00	260	232	271					254	
15:00 - 16:00	228	233	264					241	
16:00 - 17:00	225	203	236					221	
17:00 - 18:00	173	162	188					174	
18:00 - 19:00	115	118	143					125	
19:00 - 20:00	101	124	124					116	
20:00 - 21:00	66	71	91					76	
21:00 - 22:00	40	46	44					43	
22:00 - 23:00	48	62	67					59	
23:00 - 24:00	2	10	7					6	
TOTAL	1521	2721	2906	1113				2779	

24 HOURS FACTOR:

FACTORED ADT:

REMARKS: _____

CORRECTED AADT: _____

DATA FILE --> a:\TH149Wes.da3



MINNESOTA DEPARTMENT OF TRANSPORTATION

METRO DIVISION - TRAFFIC ENGINEERING

TRAFFIC COUNT DATA

ROUTE #: N/A
 COUNTY: Dakota
 REF. PT.: 000+00.834

SITE CODE: Approach

OPERATOR: DR

FOR COUNTS BEGINNING:

DATE HOUR DAY	MON.	TUE.	WED.	THU.	FRI.	SAT.	SUN.	AVE. WK.DAY	AVE. WKEND
0:00 - 1:00									
1:00 - 2:00									
2:00 - 3:00									
3:00 - 4:00									
4:00 - 5:00									
5:00 - 6:00									
6:00 - 7:00									
7:00 - 8:00									
8:00 - 9:00									
9:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									

TOTAL

24 HOURS FACTOR:

FACTORED ADT:

REMARKS: _____

CORRECTED AADT: _____

DATA FILE --> a:\TH149Wes.da4