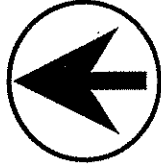


Date : 5/20/02

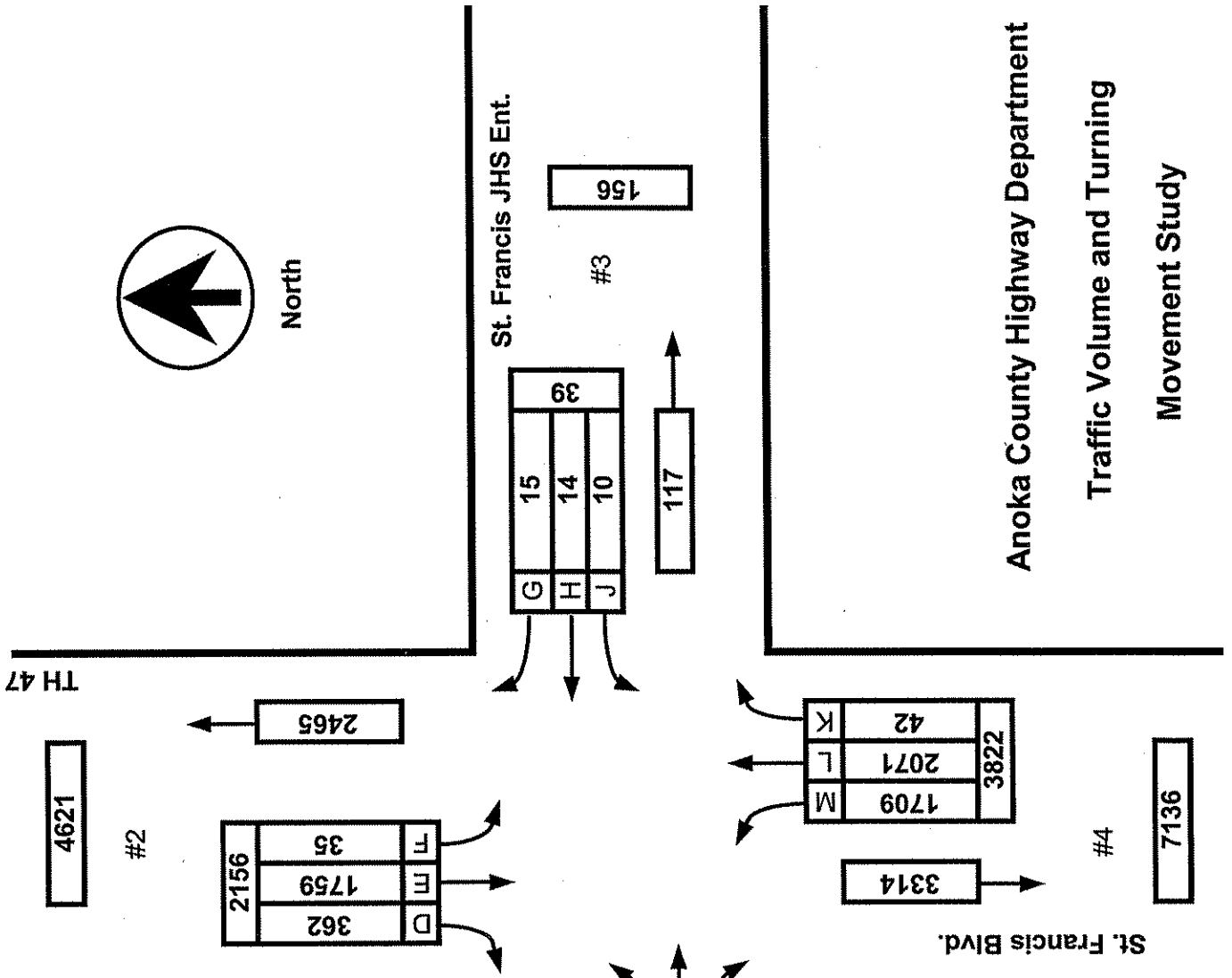
Count Number : TMC0203

Location : TH 47 (St. Francis Blvd.)

@ CR 81/St. Francis JHS Entrance



North



#	LANES OF APPROACH			TOTAL
	RIGHT TURN LANE	LEFT TURN LANE	THRU LANES	
#1	0	0	1	1
#2	0	1	2	3
#3	0	0	1	1
#4	0	1	2	3

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department
Traffic Engineering

Weather: Cloudy and Mild
Inter TDC-8
Counted by: Blake/Krystal

Traffic Volume and Turning Movement Stud

File Name : TMC0203B
Site Code : 02030102
Start Date : 05/20/2002
Page No : 1

Groups Printed- 1 - Unshifted

Start Time	TH 47 Southbound					ST FRANCIS JHS ENTRANCE Westbound					TH 47 Northbound					CR 81 Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0				
06:00	0	33	2	1	35	0	0	2	0	2	6	1	0	0	7	2	0	37	1	39	2	83	85
06:15	0	43	4	2	47	0	0	0	0	0	4	6	2	1	12	3	0	39	2	42	5	101	106
06:30	0	7	1	0	8	0	0	0	0	0	4	2	0	1	6	4	0	40	1	44	2	58	60
06:45	0	23	3	7	26	1	0	0	0	1	6	7	1	4	14	3	2	34	1	39	12	80	92
Total	0	106	10	10	116	1	0	2	0	3	20	16	3	6	39	12	2	150	5	164	21	322	343
07:00	11	71	3	11	85	0	3	1	0	4	19	21	7	8	47	8	6	52	5	66	24	202	226
07:15	10	63	6	14	79	3	6	9	6	18	12	35	8	7	55	6	15	32	1	53	28	205	233
07:30	4	65	10	7	79	1	1	1	0	3	29	33	0	10	62	3	6	41	2	50	19	194	213
07:45	1	67	7	6	75	0	0	0	0	0	14	30	0	7	44	10	2	36	3	48	16	167	183
Total	26	266	26	38	318	4	10	11	6	25	74	119	15	32	208	27	29	161	11	217	87	768	855
08:00	1	40	7	7	48	0	0	0	0	0	15	17	1	5	33	7	0	26	3	33	15	114	129
08:15	0	37	4	2	41	0	0	0	0	0	17	23	0	4	40	8	0	31	9	39	15	120	135
08:30	0	36	10	4	46	0	0	0	0	0	6	19	0	5	25	4	0	25	2	29	11	100	111
08:45	0	48	7	8	55	0	0	0	0	0	24	19	1	11	44	7	0	18	1	25	20	124	144
Total	1	161	28	21	190	0	0	0	0	0	62	78	2	25	142	26	0	100	15	126	61	458	519
09:00	0	48	6	2	54	0	0	0	0	0	26	35	0	10	61	5	0	53	5	58	17	173	190
09:15	0	35	8	7	43	1	0	0	0	1	20	18	0	9	38	5	0	31	5	36	21	118	139
09:30	0	26	5	4	31	0	0	0	0	0	22	20	1	6	43	5	0	37	5	42	15	116	131
09:45	0	20	1	1	21	0	0	0	0	0	14	18	2	4	34	5	0	25	4	30	9	85	94
Total	0	129	20	14	149	1	0	0	0	1	62	91	3	29	176	20	0	146	19	166	62	492	554
10:00	0	25	3	4	28	0	0	0	0	0	17	28	0	7	45	5	0	19	3	24	14	97	111
10:15	0	20	3	4	23	0	0	0	0	0	22	27	1	8	50	5	0	14	1	19	13	92	105
10:30	0	32	5	7	37	0	0	0	0	0	20	30	9	14	59	4	0	17	1	21	22	117	139
10:45	0	17	5	3	22	0	0	0	0	0	30	18	0	3	48	6	0	23	2	29	8	99	107
Total	0	94	16	18	110	0	0	0	0	0	89	103	10	32	202	20	0	73	7	93	57	405	462
11:00	0	20	7	5	27	0	0	0	0	0	15	19	0	7	34	6	0	21	3	27	15	88	103
11:15	0	32	3	3	35	0	0	0	0	0	28	22	0	3	50	8	1	21	2	30	8	115	123
11:30	0	33	3	3	36	0	0	0	0	0	25	19	0	4	44	8	0	19	4	27	11	107	118
11:45	0	26	8	6	34	0	0	0	0	0	32	33	0	6	65	4	0	27	5	31	17	130	147
Total	0	111	21	17	132	0	0	0	0	0	100	93	0	20	193	26	1	88	14	115	51	440	491
12:00	0	15	4	1	19	0	0	0	0	0	36	14	0	2	50	6	0	20	1	26	4	95	99
12:15	0	20	11	0	31	0	0	0	0	0	31	20	0	8	51	8	0	27	1	35	9	117	126
12:30	0	31	6	7	37	0	0	0	0	0	27	31	0	5	58	7	0	22	4	29	16	124	140
12:45	0	20	7	3	27	0	0	1	0	1	17	25	2	3	44	3	0	21	0	24	6	96	102
Total	0	86	28	11	114	0	0	1	0	1	111	90	2	18	203	24	0	90	6	114	35	432	467
13:00	0	15	8	3	23	0	0	0	0	0	19	26	0	2	45	3	1	16	2	20	7	88	95
13:15	0	25	1	5	26	0	0	0	0	0	24	17	1	2	42	4	0	22	0	26	7	94	101
13:30	0	26	9	3	35	0	0	0	0	0	25	27	0	2	52	6	0	23	0	29	5	116	121
13:45	0	29	6	3	35	0	2	0	0	2	19	21	0	3	40	8	2	24	4	34	10	111	121
Total	0	95	24	14	119	0	2	0	0	2	87	91	1	9	179	21	3	85	6	109	29	409	438
14:00	1	31	13	6	45	0	0	0	0	0	32	44	0	11	78	9	0	20	2	29	19	150	169
14:15	3	46	5	11	54	4	2	0	0	6	40	29	2	6	71	7	2	21	3	30	20	161	181
14:30	0	28	3	7	31	0	0	1	0	1	37	40	0	6	77	7	0	19	0	26	13	135	148
14:45	0	28	6	3	34	0	0	0	0	0	46	46	0	8	92	10	0	32	3	42	14	168	182
Total	4	133	27	27	164	4	2	1	0	7	155	159	2	31	316	33	2	92	8	127	66	614	680
15:00	0	32	4	9	36	0	0	0	0	0	36	34	0	2	70	3	0	26	3	29	14	135	149
15:15	0	35	5	6	40	0	0	0	0	0	51	52	0	4	103	15	1	18	1	34	11	177	188
15:30	0	25	8	6	33	0	0	0	0	0	46	78	0	7	124	5	0	38	4	43	17	200	217
15:45	0	34	11	9	45	0	0	0	0	0	55	85	0	10	140	4	0	25	3	29	22	214	236
Total	0	126	28	30	154	0	0	0	0	0	188	249	0	23	437	27	1	107	11	135	64	726	790
16:00	0	22	13	1	35	0	0	0	0	0	61	67	0	3	128	6	0	40	6	46	10	209	219
16:15	2	33	6	3	41	0	0	0	0	0	54	66	0	1	120	10	0	24	4	34	8	195	203
16:30	0	26	10	4	36	0	0	0	0	0	49	88	2	7	139	9	0	22	1	31	12	206	218
16:45	0	31	5	2	36	0	0	0	0	0	53	97	1	6	151	8	0	20	3	28	11	215	226
Total	2	112	34	10	148	0	0	0	0	0	217	318	3	17	538	33	0	106	14	139	41	825	866

Anoka County Highway Department
Traffic Engineering

Weather: Cloudy and Mild
Inter TDC-8
Counted by: Blake/Krystal

Traffic Volume and Turning Movement Stud

File Name : TMC0203B
Site Code : 02030102
Start Date : 05/20/2002
Page No : 2

Groups Printed- 1 - Unshifted

Start Time	TH 47 Southbound					ST FRANCIS JHS ENTRANCE Westbound					TH 47 Northbound					CR 81 Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total			
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0				
17:00	0	28	13	4	41	0	0	0	0	0	61	75	0	6	136	9	0	25	2	34	12	211	223
17:15	0	34	12	5	46	0	0	0	0	0	58	85	0	6	143	7	0	19	2	26	13	215	228
17:30	0	35	8	9	43	0	0	0	0	0	62	77	0	6	139	12	0	16	0	28	15	210	225
17:45	0	32	6	4	38	0	0	0	0	0	59	65	0	8	124	13	1	54	4	68	16	230	246
Total	0	129	39	22	168	0	0	0	0	0	240	302	0	26	542	41	1	114	8	156	56	866	922
18:00	0	30	12	3	42	0	0	0	0	0	41	68	0	6	109	17	0	33	2	50	11	201	212
18:15	0	42	9	3	51	0	0	0	0	0	33	58	0	5	91	10	0	29	1	39	9	181	190
18:30	1	33	3	4	37	0	0	0	0	0	38	58	0	6	96	9	1	47	0	57	10	190	200
18:45	0	23	11	1	34	0	0	0	0	0	44	44	0	5	88	7	0	29	2	36	8	158	166
Total	1	128	35	11	164	0	0	0	0	0	156	228	0	22	384	43	1	138	5	182	38	730	768
19:00	0	21	7	3	28	0	0	0	0	0	38	40	0	0	78	9	0	33	0	42	3	148	151
19:15	0	15	2	1	17	0	0	0	0	0	28	40	1	5	69	7	0	20	1	27	7	113	120
19:30	1	23	11	3	35	0	0	0	0	0	33	29	0	2	62	3	0	23	0	26	5	123	128
19:45	0	24	6	3	30	0	0	0	0	0	29	25	0	0	54	7	0	19	2	26	5	110	115
Total	1	83	26	10	110	0	0	0	0	0	128	134	1	7	263	26	0	95	3	121	20	494	514
Grand Total	35	1759	362	253	2156	10	14	15	6	39	1709	2071	42	297	3822	379	40	1545	132	1964	688	7981	8669
Apprch %	1.6	81.6	16.8			25.6	35.9	38.5			44.7	54.2	1.1			19.3	2.0	78.7					
Total %	0.4	22.0	4.5		27.0	0.1	0.2	0.2		0.5	21.4	25.9	0.5		47.9	4.7	0.5	19.4		24.6	7.9	92.1	

for Street Approaches:

Northbound:

TH 47

Data File: E:\2002 COUNT FILES\TMC0203.war
 Count Type: IMC. Channel: 0. Count Date: 5/20/ 2
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 3822

Southbound:

TH 47

Data File: E:\2002 COUNT FILES\TMC0203.war
 Count Type: IMC. Channel: 0. Count Date: 5/20/ 2
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 2156

Minor Street Approaches:

Eastbound:

CR 81

Data File: E:\2002 COUNT FILES\TMC0203.war
 Count Type: IMC. Channel: 0. Count Date: 5/20/ 2
 Number of Lanes: 1
 Approach Speed: 55
 Total Approach Traffic: 1964

Westbound:

ST FRANCIS JHS ENTRANCE

Data File: E:\2002 COUNT FILES\TMC0203.war
 Count Type: IMC. Channel: 0. Count Date: 5/20/ 2
 Number of Lanes: 1
 Approach Speed: 25
 Total Approach Traffic: 39

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main Begin (Total)	Side			Warrant 1		Warrant 2		Warrant 8	
		Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	W	15		105		52		84
1	0	0	W	16		105		52		84
2	0	0	W	17		105		52		84
3	0	0	W	18		105		52		84
4	0	0	W	19		105		52		84
5	0	0	W	20		105		52		84
6	155	164	E	4	SIDE	105	SIDE	52	SIDE	84
7	526	217	E	1	--BOTH--	105	SIDE	52	--BOTH--	84
8	332	126	E	9	SIDE	105	SIDE	52	SIDE	84
9	325	166	E	3	SIDE	105	SIDE	52	SIDE	84
10	312	93	E	14		105	SIDE	52	SIDE	84
11	325	115	E	11	SIDE	105	SIDE	52	SIDE	84
12	317	114	E	12	SIDE	105	SIDE	52	SIDE	84
13	298	109	E	13	SIDE	105	SIDE	52	SIDE	84
14	480	127	E	8	--BOTH--	105	SIDE	52	SIDE	84
15	591	135	E	7	--BOTH--	105	SIDE	52	--BOTH--	84
16	686	139	E	6	--BOTH--	105	--BOTH--	52	--BOTH--	84
17	710	156	E	5	--BOTH--	105	--BOTH--	52	--BOTH--	84
18	548	182	E	2	--BOTH--	105	SIDE	52	--BOTH--	84
19	373	121	E	10	SIDE	105	SIDE	52	SIDE	84
20	0	0	W	21		105		52		84
21	0	0	W	22		105		52		84
22	0	0	W	23		105		52		84
23	0	0	W	24		105		52		84

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 6 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 2 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. 8th-High Hour--Pedestrians: 0. Criteria--Pedestrians: 105; Vehicles: 420.

Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

Warrant 7 - Systems Warrant

NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 866.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which connect areas of principal traffic generation.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which have surface street freeway or expressway ramp terminals.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 5 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 5 hours.

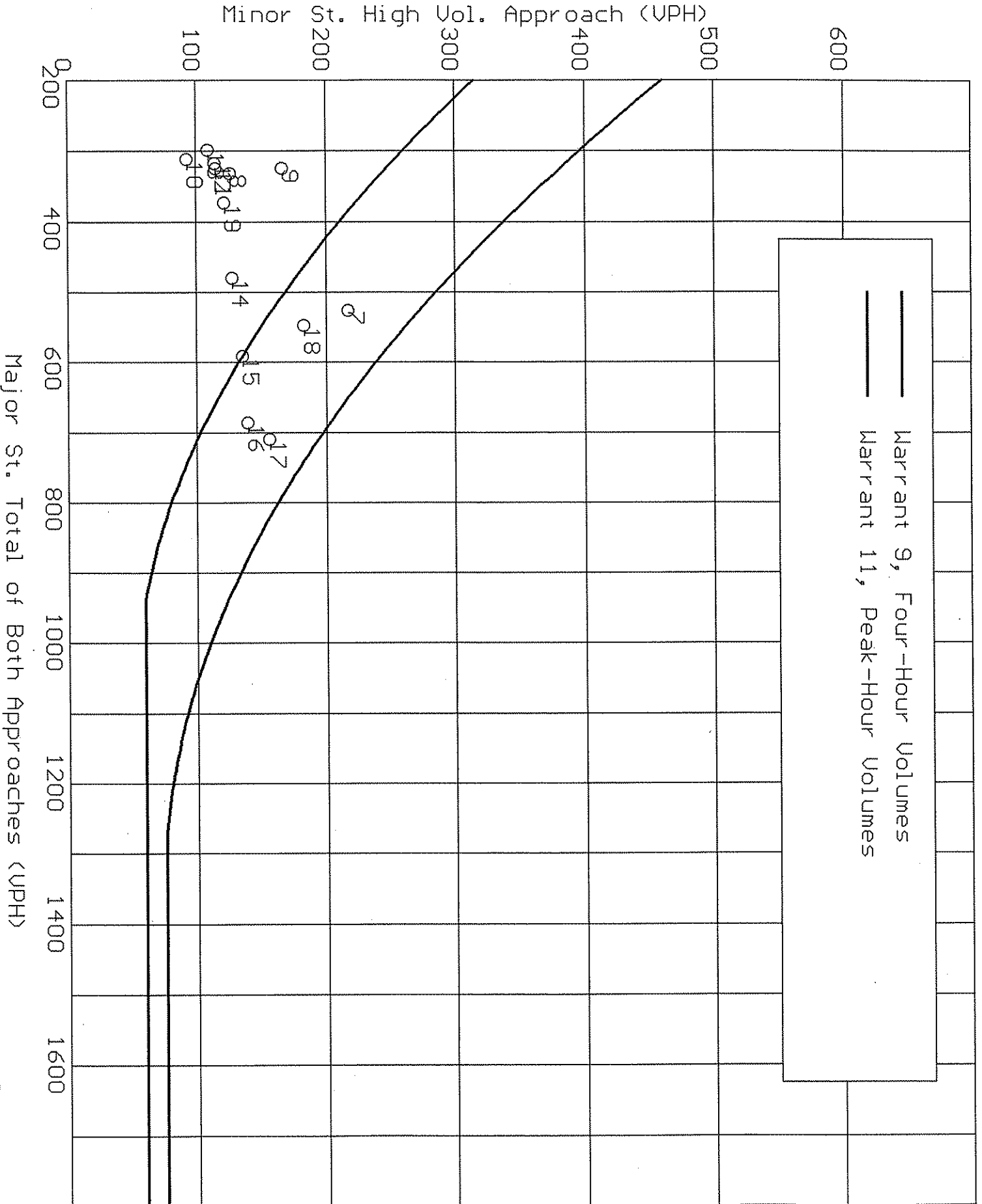
Warrant 10 - Peak Hour Delay

NOT SATISFIED. Peak hour (1700 hours) volume not adequate.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

Warrant 11 - Peak Hour Volume

NOT SATISFIED.



Multiway Stop Warrant Analysis
TMC 0204 TH 47 @ CR 81/St. Francis JHS Entrance
Speed Limit of Major Roadway..... 50

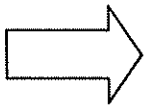
Minimum Traffic Volumes Multiway Stop Warrant Criteria:

- a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour (vph) for any 8 hours of an average day, AND:
- b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 vph for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, BUT:
- c) When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum volume warrant is 70% of the above requirements.

Hour	Total Vehicular Traffic Entering the Intersection	Vehicular Traffic Entering on First Minor Roadway	Vehicular Traffic Entering on Second Minor Roadway	Sum of Minor Approaches	Hours Stop Warrant Met
6 AM - 7 AM	322	164	3	167	NO
7 AM - 8 AM	768	217	25	242	YES
8 AM - 9 AM	458	126	0	126	NO
9 AM - 10 AM	492	166	1	167	YES
10 AM - 11 AM	405	93	0	93	NO
11 AM - 12 PM	440	115	0	115	NO
12 PM - 13 PM	432	114	1	115	NO
1 PM - 2 PM	409	109	2	111	NO
2 PM - 3 PM	614	127	7	134	NO
3 PM - 4 PM	726	135	0	135	NO
4 PM - 5 PM	825	139	0	139	NO
5 PM - 6 PM	866	156	0	156	YES
6 PM - 7 PM	730	182	0	182	YES
7 PM - 8 PM	494	121	0	121	NO

TOTAL HOURS MET: 4

MULTIWAY STOP WARRANT IS NOT MET



COUNT LOCATION:

TH 47 (St. Francis Blvd.) @

DATE:

5/23/02

CR 81/St Francis JHS Entrance

NORTH

APP. #1= TH 47
APP. #2 = CR 81
APP. #3= TH 47
APP. #4= School Entrance

APP.
#1

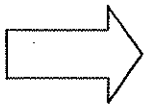
APP.
#2

APP.
#3

APP.
#4

- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
 - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
 - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						2		
6:15-6:30						3		
6:30-6:45						3		
6:45-7:00			1		1	10		2
HOURLY TOTAL					1	HOURLY TOTAL		20
7:00-7:15						16		8
7:15-7:30						12		15
7:30-7:45						14		5
7:45-8:00						15		1
HOURLY TOTAL						HOURLY TOTAL		86
8:00-8:15						14		1
8:15-8:30						14		1
8:30-8:45						9		2
8:45-9:00						17	1	2
HOURLY TOTAL						HOURLY TOTAL		61
9:00-9:15						15		2
9:15-9:30						21		
9:30-9:45						14	1	
9:45-10:00		1			1	9		
HOURLY TOTAL					1	HOURLY TOTAL		62
10:00-10:15						12	1	
10:15-10:30						11		2
10:30-10:45						22		
10:45-11:00						5		3
HOURLY TOTAL						HOURLY TOTAL		56
11:00-11:15						12		3
11:15-11:30						8		
11:30-11:45						11		
11:45-12:00						16		1
HOURLY TOTAL						HOURLY TOTAL		51
12:00-12:15				1	1	4		
12:15-12:30						9		
12:30-12:45						14		1
12:45-1:00						6		
HOURLY TOTAL					1	HOURLY TOTAL		34
1:00-1:15						7		
1:15-1:30		1			1	7		
1:30-1:45			2		2	6		
1:45-2:00						8	1	1
HOURLY TOTAL					3	HOURLY TOTAL		30



COUNT LOCATION:

TH 47 (St. Francis Blvd.) @

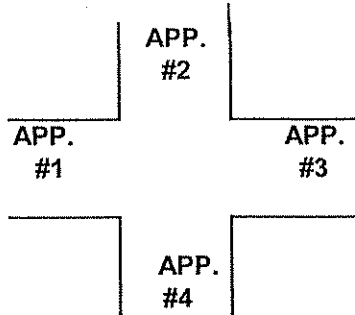
DATE:

5/20/02

CR 81/St Francis JHS Entrance

NORTH

APP. #1= TH 47
APP. #2 = CR 81
APP. #3= TH 47
APP. #4= School Entrance



- HEAVY VEHICLE- ANY VEHICLE HAVING MORE THAN FOUR TIRES TOUCHING THE PAVEMENT
- A. TRUCKS- A HEAVY VEHICLE INVOLVED PRIMARILY IN THE TRANSPORT OF GOODS OR IN THE DELIVERY OF A SERVICE.
 - B. RV- A HEAVY VEHICLE OPERATED BY A PRIVATE MOTORIST AND INVOLVED IN THE TRANSPORT OF RECREATIONAL EQUIPMENT OR FACILITIES.
 - C. BUSES- A HEAVY VEHICLE INVOLVED IN THE TRANSPORTATION OF GROUPS OF PEOPLE.

TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
2:00-2:15PM						13		6
2:15-2:30						12		8
2:30-2:45			9		9	12		2
2:45-3:00			7			11		3
HOURLY TOTAL					16	HOURLY TOTAL		67
3:00-3:15		7	7		14	12	1	
3:15-3:30						11		
3:30-3:45						16		
3:45-4:00		3	10		13	17		5
HOURLY TOTAL					27	HOURLY TOTAL		62
4:00-4:15		1	3		4	9		1
4:15-4:30		1	4		5	7	1	
4:30-4:45						12		
4:45-5:00			6		6	10	1	
HOURLY TOTAL					15	HOURLY TOTAL		41
5:00-5:15			7		7	11	1	1
5:15-5:30		4	2		6	12	1	
5:30-5:45		1	1		2	14		1
5:45-6:00			1		1	16		
HOURLY TOTAL					16	HOURLY TOTAL		57
6:00-6:15						11		
6:15-6:30						9		
6:30-6:45			1		1	10		
6:45-7:00						8		
HOURLY TOTAL					1	HOURLY TOTAL		38
7:00-7:15		2			2	3		
7:15-7:30						7		
7:30-7:45						4		
7:45-8:00			2		2	5		
HOURLY TOTAL					4	HOURLY TOTAL		19