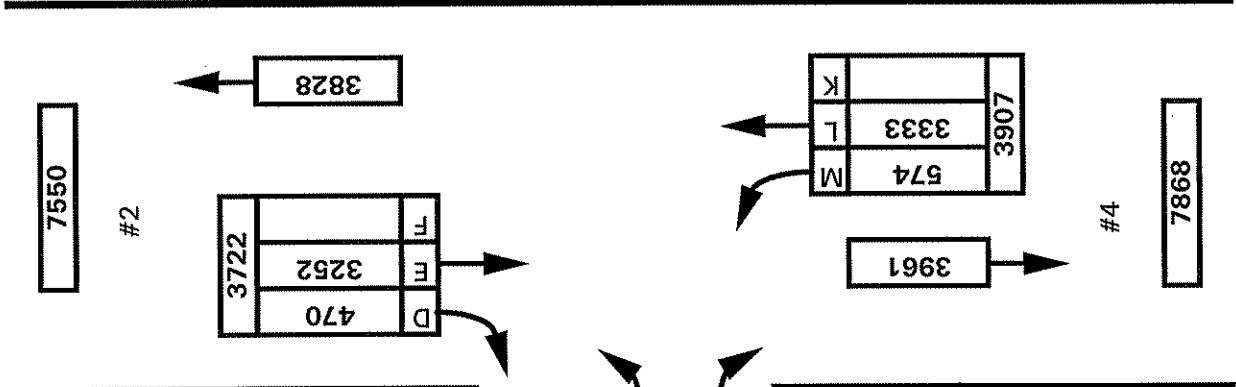
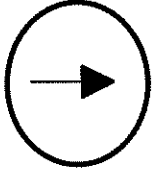


Date : 8/10/95AM 8/8/95PM
 Count Number : TMC 9522
 Location : CSAH 18 (COON CREEK
 BLVD) @ 133RD AVE NW



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME
 TURNING MOVEMENT STUDY

Counter : TRIGHT
 Counted by ANNE LAURIE
 AM: CLEAR PM: CLOUDY

Vehicle group 1

| Date | CSAH 18 (CROSTOWN BLVD) | | | | 133RD AVE NW | | | | CSAH 18 (COON CREEK BLVD) | | | | | |
|----------|-------------------------|------|------|------------|--------------|-------|------|-----------|---------------------------|-------|------|------------|---------|-------|
| | Other | Thru | Left | Southbound | Other | Right | Left | Westbound | Other | Right | Thru | Northbound | Vehicle | Other |
| | | | | | | | | | | | | | Total | Total |
| 06:00 | 0 | 76 | 0 | | 0 | 0 | 15 | | 2 | 3 | 20 | | 114 | 2 |
| 06:15 | 3 | 96 | 1 | | 0 | 1 | 20 | | 1 | 5 | 9 | | 132 | 4 |
| 06:30 | 3 | 134 | 0 | | 1 | 5 | 18 | | 1 | 0 | 19 | | 176 | 5 |
| 06:45 | 1 | 115 | 3 | | 1 | 4 | 18 | | 0 | 0 | 24 | | 164 | 2 |
| Hr Total | 7 | 421 | 4 | | 2 | 10 | 71 | | 4 | 8 | 72 | | 586 | 13 |
| 07:00 | 0 | 102 | 2 | | 2 | 6 | 19 | | 0 | 5 | 30 | | 164 | 2 |
| 07:15 | 1 | 102 | 3 | | 0 | 4 | 19 | | 0 | 4 | 20 | | 152 | 1 |
| 07:30 | 2 | 97 | 2 | | 0 | 9 | 9 | | 2 | 2 | 36 | | 155 | 4 |
| 07:45 | 1 | 99 | 4 | | 0 | 5 | 16 | | 0 | 3 | 27 | | 154 | 1 |
| Hr Total | 4 | 400 | 11 | | 2 | 24 | 63 | | 2 | 14 | 113 | | 625 | 8 |
| 08:00 | 1 | 64 | 5 | | 0 | 4 | 16 | | 1 | 3 | 30 | | 122 | 2 |
| 08:15 | 2 | 53 | 7 | | 2 | 20 | 4 | | 1 | 4 | 26 | | 114 | 5 |
| 08:30 | 0 | 50 | 6 | | 0 | 15 | 8 | | 3 | 3 | 19 | | 101 | 3 |
| 08:45 | 1 | 62 | 7 | | 0 | 16 | 6 | | 0 | 2 | 22 | | 115 | 1 |
| Hr Total | 4 | 229 | 25 | | 2 | 55 | 34 | | 5 | 12 | 97 | | 452 | 11 |
| 09:00 | 0 | 44 | 8 | | 1 | 15 | 5 | | 0 | 3 | 24 | | 99 | 1 |
| 09:15 | 5 | 63 | 13 | | 0 | 11 | 6 | | 2 | 5 | 25 | | 123 | 7 |
| 09:30 | 2 | 41 | 6 | | 1 | 13 | 8 | | 1 | 2 | 23 | | 93 | 4 |
| 09:45 | 2 | 58 | 8 | | 0 | 12 | 7 | | 2 | 7 | 30 | | 122 | 4 |
| Hr Total | 9 | 206 | 35 | | 2 | 51 | 26 | | 5 | 17 | 102 | | 437 | 16 |
| 10:00 | 2 | 41 | 11 | | 0 | 16 | 10 | | 2 | 7 | 27 | | 112 | 4 |
| 10:15 | 0 | 33 | 4 | | 0 | 17 | 7 | | 0 | 14 | 24 | | 99 | 0 |
| 10:30 | 3 | 39 | 11 | | 1 | 19 | 8 | | 4 | 11 | 27 | | 115 | 8 |
| 10:45 | 4 | 42 | 11 | | 1 | 17 | 7 | | 2 | 7 | 25 | | 109 | 7 |
| Hr Total | 9 | 155 | 37 | | 2 | 69 | 32 | | 8 | 39 | 103 | | 435 | 19 |
| 11:00 | 2 | 37 | 9 | | 0 | 10 | 4 | | 1 | 5 | 43 | | 108 | 3 |
| 11:15 | 1 | 29 | 9 | | 1 | 18 | 2 | | 1 | 11 | 29 | | 98 | 3 |
| 11:30 | 1 | 48 | 7 | | 0 | 14 | 10 | | 2 | 14 | 37 | | 130 | 3 |
| 11:45 | 4 | 37 | 11 | | 2 | 12 | 4 | | 5 | 4 | 31 | | 99 | 11 |
| Hr Total | 8 | 151 | 36 | | 3 | 54 | 20 | | 9 | 34 | 140 | | 435 | 20 |
| 12:00 | 2 | 51 | 11 | | 0 | 11 | 7 | | 1 | 7 | 47 | | 134 | 3 |
| 12:15 | 0 | 36 | 8 | | 1 | 16 | 8 | | 2 | 6 | 37 | | 111 | 3 |
| 12:30 | 2 | 34 | 14 | | 0 | 12 | 12 | | 2 | 7 | 41 | | 120 | 4 |
| 12:45 | 1 | 53 | 7 | | 0 | 10 | 6 | | 1 | 6 | 34 | | 116 | 2 |
| Hr Total | 5 | 174 | 40 | | 1 | 49 | 33 | | 6 | 26 | 159 | | 481 | 12 |

TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME STUDY
 TURNING MOVEMENT STUDY

Counter : TIGHT
 Counted by ANA LAURIE
 AM: CLEAR PM: CLOUDY

Vehicle group 1

| Date | CSAH 18 (CROSTOWN BLVD) Southbound | | 133RD AVE NW Westbound | | CSAH 18 (COON CREEK BLVD) Northbound | | Vehicle Total | Other Total | | |
|-----------------|------------------------------------|------------|------------------------|-----------|--------------------------------------|-----------|---------------|-------------|-------------|-----------|
| | Thru | Left | Other | Right | Left | Right | | | Thru | |
| 13:00 | 0 | 35 | 0 | 13 | 8 | 0 | 10 | 31 | 106 | 0 |
| 13:15 | 1 | 43 | 0 | 8 | 8 | 3 | 9 | 32 | 107 | 4 |
| 13:30 | 1 | 35 | 0 | 9 | 3 | 3 | 4 | 31 | 90 | 4 |
| 13:45 | 4 | 39 | 0 | 13 | 9 | 1 | 5 | 32 | 104 | 5 |
| Hr Total | 6 | 152 | 0 | 43 | 28 | 7 | 28 | 126 | 407 | 13 |
| 14:00 | 2 | 37 | 0 | 7 | 4 | 2 | 2 | 46 | 102 | 4 |
| 14:15 | 2 | 43 | 1 | 8 | 2 | 3 | 5 | 41 | 107 | 6 |
| 14:30 | 2 | 51 | 2 | 6 | 13 | 1 | 4 | 44 | 123 | 5 |
| 14:45 | 2 | 45 | 0 | 8 | 8 | 3 | 7 | 48 | 121 | 5 |
| Hr Total | 8 | 176 | 3 | 29 | 27 | 9 | 18 | 179 | 453 | 20 |
| 15:00 | 0 | 43 | 0 | 11 | 1 | 5 | 6 | 59 | 128 | 5 |
| 15:15 | 1 | 40 | 0 | 6 | 8 | 3 | 6 | 70 | 138 | 4 |
| 15:30 | 3 | 38 | 0 | 5 | 5 | 2 | 3 | 73 | 128 | 5 |
| 15:45 | 1 | 40 | 0 | 18 | 3 | 5 | 6 | 71 | 151 | 6 |
| Hr Total | 5 | 161 | 0 | 40 | 17 | 15 | 21 | 273 | 545 | 20 |
| 16:00 | 1 | 45 | 0 | 9 | 4 | 0 | 9 | 89 | 159 | 1 |
| 16:15 | 1 | 46 | 0 | 6 | 6 | 5 | 12 | 119 | 198 | 6 |
| 16:30 | 2 | 60 | 0 | 14 | 4 | 0 | 10 | 102 | 199 | 2 |
| 16:45 | 1 | 71 | 1 | 14 | 5 | 0 | 19 | 127 | 251 | 2 |
| Hr Total | 5 | 222 | 1 | 43 | 19 | 5 | 50 | 437 | 807 | 11 |
| 17:00 | 0 | 63 | 0 | 17 | 9 | 1 | 21 | 119 | 242 | 1 |
| 17:15 | 1 | 65 | 0 | 16 | 15 | 0 | 18 | 133 | 258 | 1 |
| 17:30 | 1 | 67 | 0 | 17 | 10 | 3 | 18 | 132 | 261 | 4 |
| 17:45 | 0 | 65 | 0 | 13 | 8 | 3 | 18 | 128 | 241 | 3 |
| Hr Total | 2 | 260 | 0 | 63 | 42 | 7 | 75 | 512 | 1002 | 9 |
| 18:00 | 0 | 73 | 0 | 17 | 9 | 2 | 16 | 112 | 241 | 2 |
| 18:15 | 0 | 53 | 0 | 14 | 6 | 2 | 14 | 92 | 203 | 2 |
| 18:30 | 2 | 53 | 0 | 11 | 9 | 1 | 7 | 71 | 164 | 3 |
| 18:45 | 0 | 46 | 0 | 15 | 5 | 1 | 12 | 75 | 166 | 1 |
| Hr Total | 2 | 225 | 0 | 57 | 29 | 6 | 49 | 350 | 774 | 8 |
| 19:00 | 1 | 43 | 0 | 13 | 7 | 1 | 5 | 56 | 145 | 2 |
| 19:15 | 0 | 49 | 0 | 11 | 5 | 0 | 17 | 73 | 170 | 0 |
| 19:30 | 2 | 54 | 0 | 17 | 6 | 1 | 4 | 45 | 139 | 3 |
| 19:45 | 0 | 34 | 0 | 12 | 3 | 0 | 6 | 48 | 117 | 0 |
| Hr Total | 3 | 180 | 0 | 53 | 21 | 2 | 32 | 222 | 571 | 5 |

TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME
 TURNING MOVEMENT STUDY

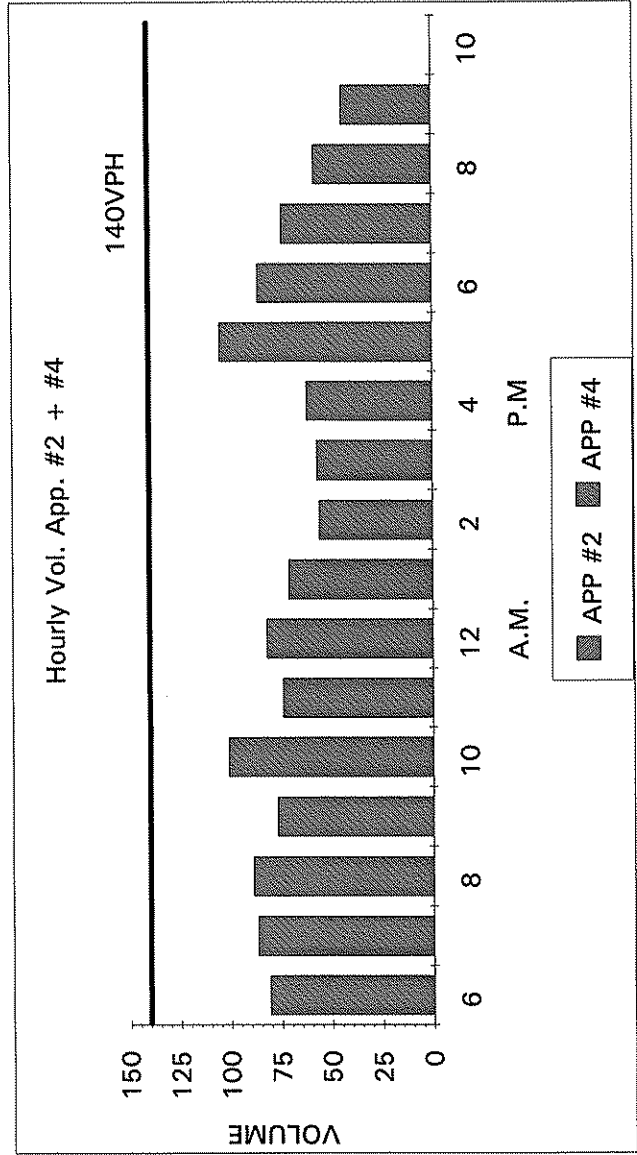
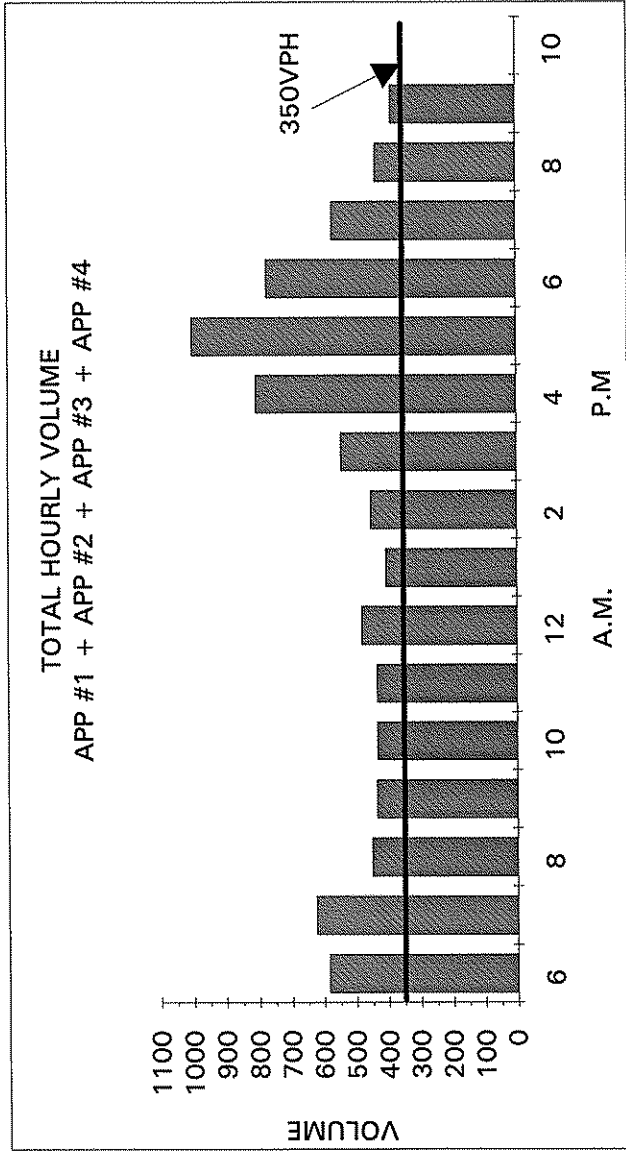
Counter : TIGHT
 Counted by ANAURIE
 AM: CLEAR PM: CLOUDY

Vehicle group 1

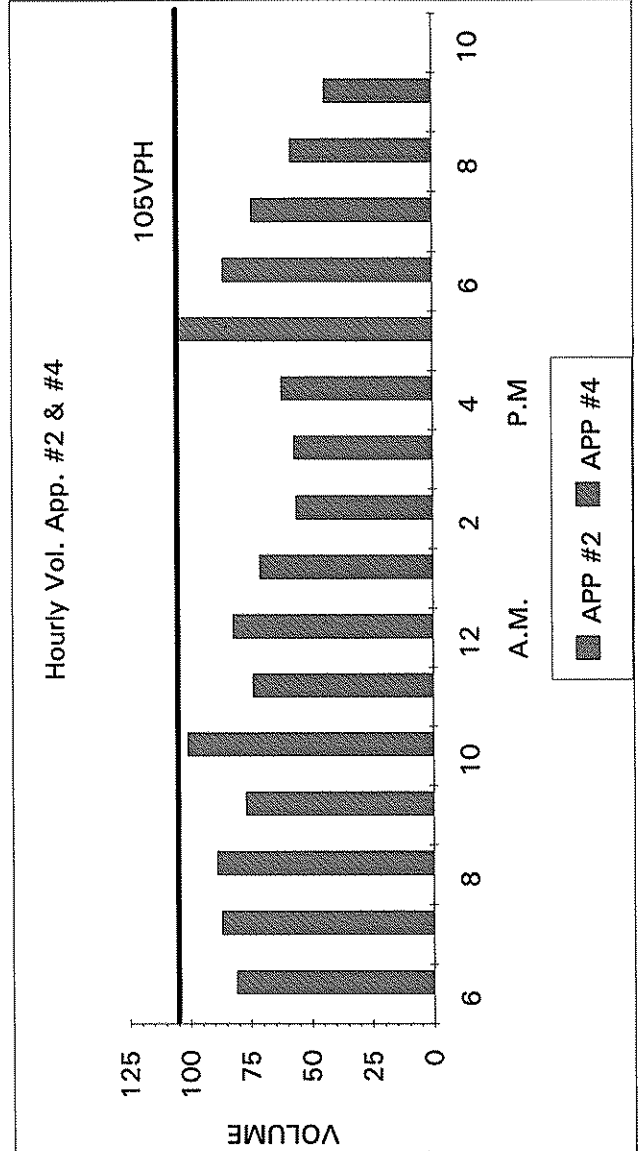
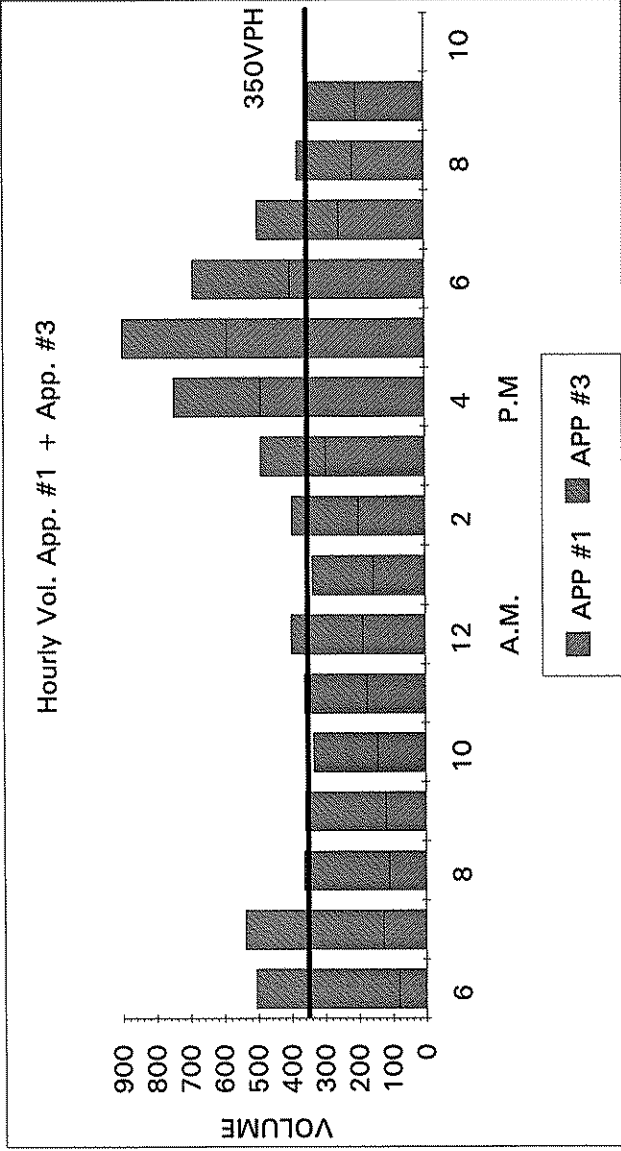
| Date 08/08/95 | CSAH 18 (CROSTOWN BLVD) Southbound | | 133RD AVE NW Westbound | | CSAH 18 (COON CREEK BLVD) Northbound | | Vehicle Total | Other Total | | | |
|---------------|------------------------------------|------|------------------------|-------|--------------------------------------|-------|---------------|-------------|------|-----|---|
| | Thru | Left | Other | Right | Other | Right | | | Thru | | |
| 20:00 | 0 | 33 | 7 | 0 | 9 | 4 | 0 | 5 | 39 | 97 | 0 |
| 20:15 | 0 | 22 | 10 | 0 | 10 | 9 | 2 | 5 | 48 | 104 | 2 |
| 20:30 | 0 | 32 | 12 | 0 | 12 | 2 | 2 | 6 | 55 | 119 | 2 |
| 20:45 | 1 | 34 | 15 | 0 | 8 | 4 | 0 | 12 | 43 | 116 | 1 |
| Hr Total | 1 | 121 | 44 | 0 | 39 | 19 | 4 | 28 | 185 | 436 | 5 |
| 21:00 | 0 | 27 | 9 | 0 | 7 | 4 | 0 | 5 | 51 | 103 | 0 |
| 21:15 | 0 | 30 | 9 | 0 | 4 | 7 | 2 | 7 | 57 | 114 | 2 |
| 21:30 | 1 | 23 | 15 | 0 | 6 | 1 | 0 | 4 | 35 | 84 | 1 |
| 21:45 | 0 | 20 | 9 | 1 | 13 | 2 | 0 | 3 | 39 | 86 | 1 |
| Hr Total | 1 | 100 | 42 | 1 | 30 | 14 | 2 | 19 | 182 | 387 | 4 |

TOTAL 79 3333 574 19 709 495 96 470 3252 8833 194

TMC9522 STOP WARRANT STUDY



TMC9522 SIGNAL WARRANT 1 STUDY



TMC9522 SIGNAL WARRANT 2 STUDY

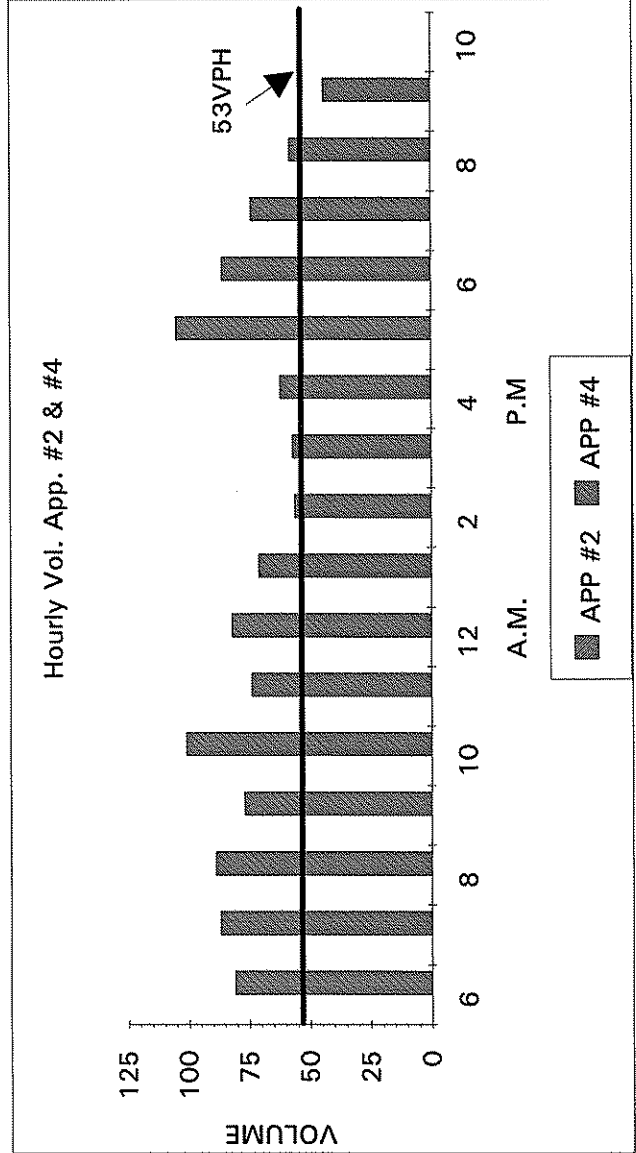
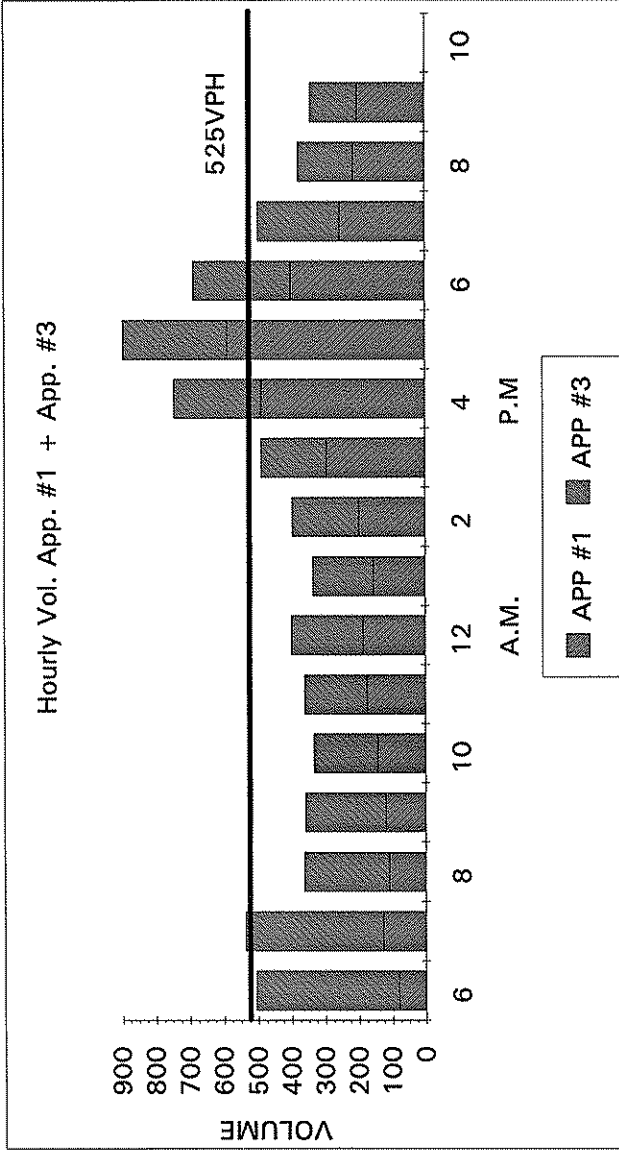
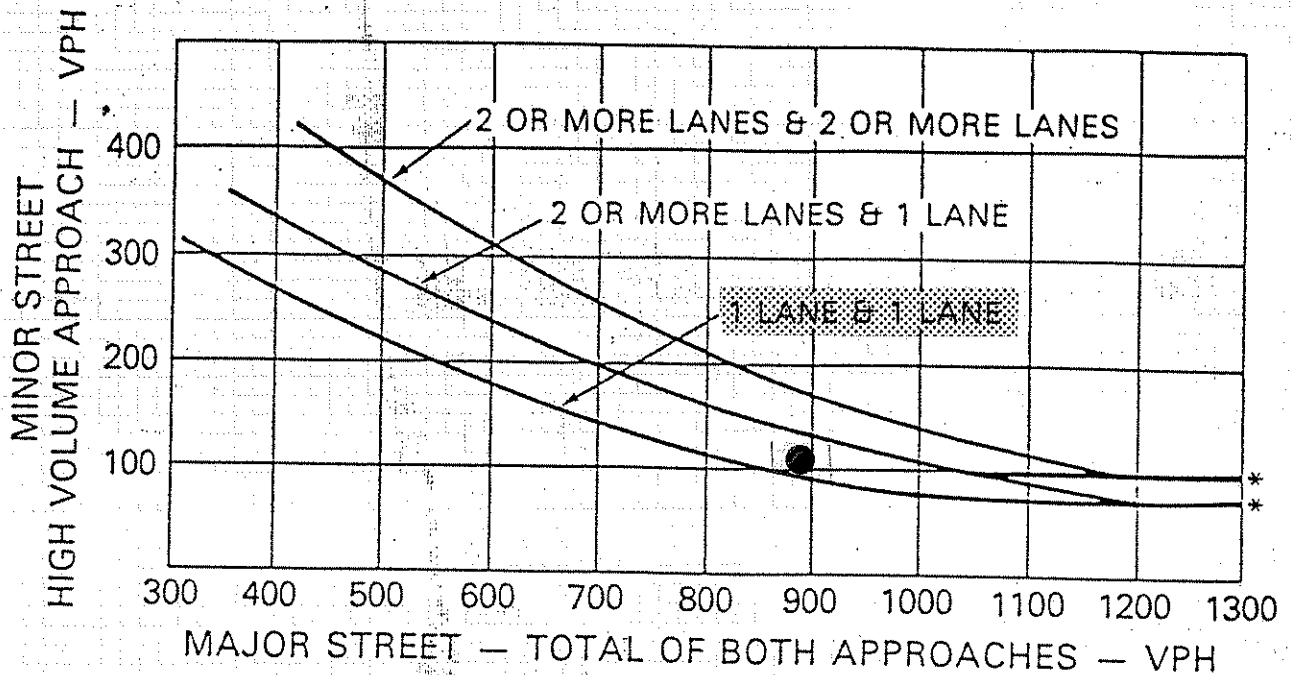


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



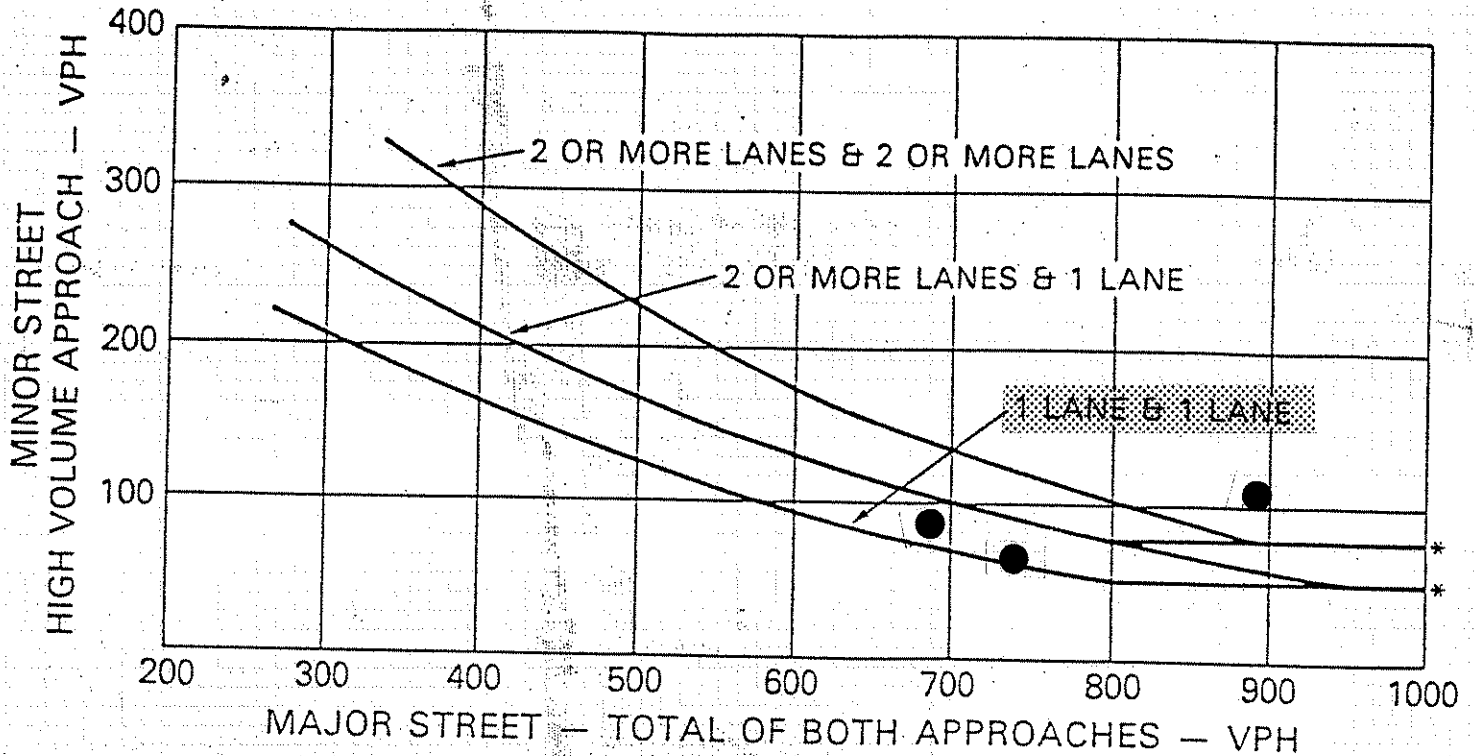
*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

| TIME | MAJOR STREETS (VPH) | MINOR STREET (VPH) |
|----------|---------------------|--------------------|
| 6-7 am | 505 | 81 |
| 7-8 am | 538 | 87 |
| 8-9 am | 363 | 89 |
| 9-10 am | 360 | 77 |
| 10-11 am | 334 | 101 |
| 11-12 pm | 361 | 74 |
| 12-1 pm | 399 | 82 |
| 1-2 pm | 336 | 71 |
| 2-3 pm | 397 | 56 |
| 3-4 pm | 488 | 57 |
| 4-5 pm | 745 | 62 |
| ● 5-6 pm | 897 | 105 |
| 6-7 pm | 688 | 86 |
| 7-8 pm | 497 | 74 |
| 8-9 pm | 378 | 58 |
| 9-10 pm | 343 | 44 |

FIGURE 4-8. FOUR HOUR VOLUME WARRANT
 (COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

| TIME | MAJOR STREETS (VPH) | MINOR STREET (VPH) |
|----------|---------------------|--------------------|
| 6-7 am | 505 | |
| 7-8 am | 538 | 81 |
| 8-9 am | 363 | 87 |
| 9-10 am | 360 | 89 |
| 10-11 am | 334 | 77 |
| 11-12 pm | 361 | 101 |
| 12-1 pm | 399 | 74 |
| 1-2 pm | 336 | 82 |
| 2-3 pm | 397 | 71 |
| 3-4 pm | 488 | 56 |
| ● 4-5 pm | 745 | 57 |
| ● 5-6 pm | 897 | 62 |
| ● 6-7 pm | 688 | 105 |
| 7-8 pm | 497 | 86 |
| 8-9 pm | 378 | 74 |
| 9-10 pm | 343 | 58 |
| | | 44 |

| |
|--|
| ↓ NORTH |
| APP. #1= WB 133RD AVE NW |
| APP. #2= NB CSAH 18 (COON CREEK BLVD) |
| |
| APP. #4= SB CSAH 18 (CROSSTOWN BLVD) |

COUNT LOCATION: CSAH 18 (COON CREEK BLVD)
@ 133RD AVE NW

DATE: 8/10/95

| | |
|---------|---|
| APP. #2 | |
| APP. #1 | X |
| | X |
| | X |
| 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 | | | | | | 4 | | |
| 6:30-6:45 | | | | | | 5 | | |
| 6:45-7:00 | | | | | | 2 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 13 |
| 7:00-7:15 | | | | | | 2 | | |
| 7:15-7:30 | | | | | | | 1 | |
| 7:30-7:45 | | | | | | 4 | | |
| 7:45-8:00 | | | | | | 1 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 8 |
| 8:00-8:15 | | | | | | 2 | | 1 |
| 8:15-8:30 | | | | | | 4 | | 1 |
| 8:30-8:45 | | | | | | 3 | | |
| 8:45-9:00 | | | | | | 1 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 12 |
| 9:00-9:15 | | | | | | 1 | | |
| 9:15-9:30 | | | | | | 6 | 1 | |
| 9:30-9:45 | | | | | | 4 | | |
| 9:45-10:00 | | | | | | 3 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 15 |
| 10:00-10:15 | | | | | | 4 | | 1 |
| 10:15-10:30 | | | | | | | | |
| 10:30-10:45 | | | | | | 5 | 1 | 1 |
| 10:45-11:00 | | 5 | | | 5 | 7 | | |
| HOURLY TOTAL | | | | | 5 | HOURLY TOTAL | | 19 |
| 11:00-11:15 | | | | | | 3 | | 2 |
| 11:15-11:30 | | | | | | 1 | | |
| 11:30-11:45 | 5 | | | | 5 | 3 | | |
| 11:45-12:00 | | | | | | 11 | | |
| HOURLY TOTAL | | | | | 5 | HOURLY TOTAL | | 20 |
| 12:00-12:15 | | | | | | 4 | | |
| 12:15-12:30 | | | | | | 2 | | 1 |
| 12:30-12:45 | | | | | | 3 | | |
| 12:45-1:00 | | | | | | 2 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 12 |
| 1:00-1:15 | | | | | | | | |
| 1:15-1:30 | | | | | | 4 | | |
| 1:30-1:45 | | | | | | 4 | | |
| 1:45-2:00 | | | | | | 4 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 12 |

↓
NORTH

APP. #1= WB 133RD AVE
NW

APP. #2= NB CSAH 18
(COON CREEK BLVD)

APP. #4= SB CSAH 18
(CROSTOWN BLVD)

COUNT LOCATION: CSAH 18 (COON CREEK BLVD)
@ 133RD AVE NW

DATE: 8/8/95

| | |
|---------|---|
| APP. #2 | |
| APP. #1 | X |
| | X |
| | X |
| 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 |
| 2:00-2:15PM | | | | | | 4 | | |
| 2:15-2:30 | | | | | | 6 | | |
| 2:30-2:45 | | | | | | 5 | | |
| 2:45-3:00 | | | | | | 4 | | 1 |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 20 |
| 3:00-3:15 | | | | | | 4 | | 1 |
| 3:15-3:30 | 1 | 1 | | | 2 | 4 | | |
| 3:30-3:45 | | | | | | 3 | | 1 |
| 3:45-4:00 | | | | | | 4 | | 1 |
| HOURLY TOTAL | | | | | 2 | HOURLY TOTAL | | 18 |
| 4:00-4:15 | | | | | | 1 | | |
| 4:15-4:30 | | | | | | 6 | | |
| 4:30-4:45 | | | | | | 2 | | |
| 4:45-5:00 | | | | | | 2 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 11 |
| 5:00-5:15 | | | | | | 1 | | |
| 5:15-5:30 | | | | | | 1 | | |
| 5:30-5:45 | | | | | | 4 | | |
| 5:45-6:00 | | | | | | 3 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 9 |
| 6:00-6:15 | | | | | | 2 | | |
| 6:15-6:30 | | | | | | 2 | | |
| 6:30-6:45 | | | | | | 3 | | |
| 6:45-7:00 | | 1 | | | 1 | 1 | | |
| HOURLY TOTAL | | | | | 1 | HOURLY TOTAL | | 8 |
| 7:00-7:15 | | | | | | 2 | | |
| 7:15-7:30 | | | | | | | | |
| 7:30-7:45 | | | | | | 3 | | |
| 7:45-8:00 | | | | | | | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 5 |
| 8:00-8:15 | | | | | | | | |
| 8:15-8:30 | | | | | | 2 | | |
| 8:30-8:45 | | | | | | 2 | | |
| 8:45-9:00 | | | | | | 1 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 5 |
| 9:00-9:15 | | | | | | | | |
| 9:15-9:30 | | | | | | 2 | | |
| 9:30-9:45 | | | | | | 1 | | |
| 9:45-10:00 | | | | | | 1 | | |
| HOURLY TOTAL | | | | | | HOURLY TOTAL | | 4 |