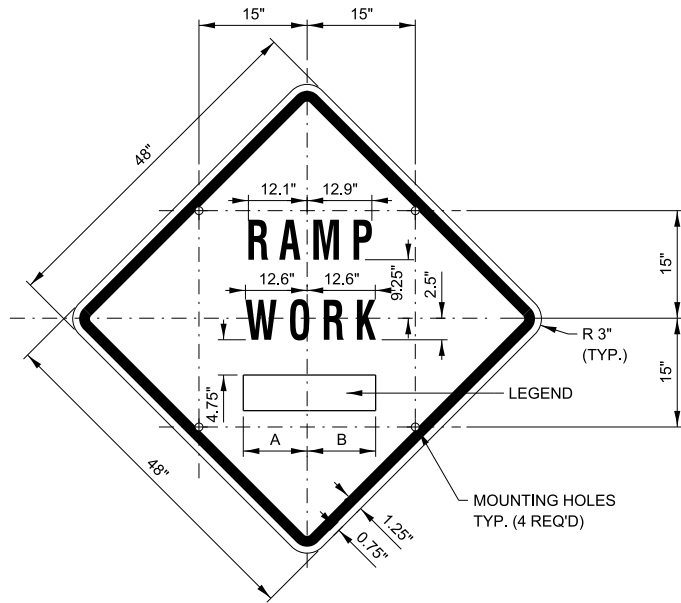


|                                             |
|---------------------------------------------|
| Illinois Tollway Standard Drawing Revisions |
|---------------------------------------------|

| Section E | Maintenance of Traffic |                                                                                                                                                                                                                                                                     |                       |
|-----------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
|           | Standard               | Modification Summary                                                                                                                                                                                                                                                | Effective: 03-01-2025 |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           |                        | This set of standard drawings has been converted from v8i to OpenRoads.                                                                                                                                                                                             |                       |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           | E2-12                  | Lane Closure Details                                                                                                                                                                                                                                                |                       |
|           | Sheet 1                | Deleted "Worker" from Legend                                                                                                                                                                                                                                        |                       |
|           | Sheet 2 & 3            | Deleted "Worker" from Legend and work area. Removed "Flagger" from work area hatching. Revised distance from Flagger sign to flagger and flagger to work area. Revised note 18 to increase buffer to active lane and revised description for flagger in the legend. |                       |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           | E3-11                  | Shoulder Closure Details                                                                                                                                                                                                                                            |                       |
|           |                        | Revised Notes 1 and 2 to increase buffer to active lane.                                                                                                                                                                                                            |                       |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           | E5-11                  | Temporary Gore Details                                                                                                                                                                                                                                              |                       |
|           | Sheets 1 & 2           | Revised work area hatching to increase buffer to active lane                                                                                                                                                                                                        |                       |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           | E6-09                  | Contractor Access to Work Area                                                                                                                                                                                                                                      |                       |
|           | Sheet 1                | Various notes revised and revised Contractor Access to Work Area design to include full shoulder and named it as Type A.                                                                                                                                            |                       |
|           | Sheet 2                | Included new designs for Contractor Access Type B and Type C.                                                                                                                                                                                                       |                       |
|           | Sheet 3                | Added callout for Note 15 to the flagger in Construction Access w/o Barrier Wall detail.                                                                                                                                                                            |                       |
|           |                        |                                                                                                                                                                                                                                                                     |                       |
|           | E7-06                  | Pull-out Area                                                                                                                                                                                                                                                       |                       |
|           | Sheets 1 & 2           | Revised work area hatching behind TCB                                                                                                                                                                                                                               |                       |

New Sheet

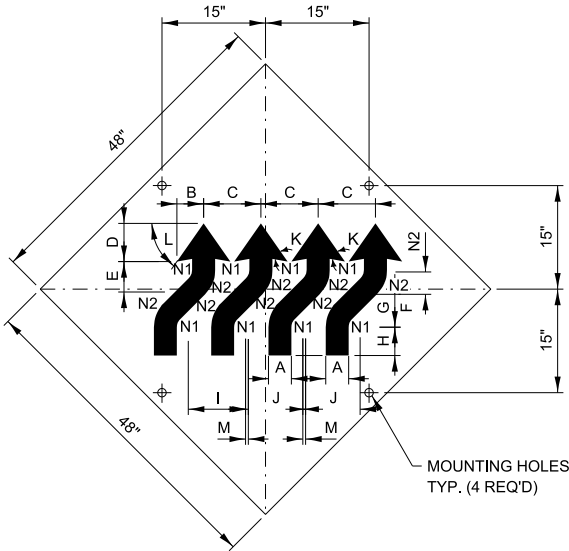
Retired Standard



SIGN TS-2 (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)  
BORDER AND SYMBOL - BLACK  
SIZE: 48"x48"  
LETTERING: 7" FEDERAL SERIES D  
MOUNTING HOLES: 7/16" DIA., 4 HOLES SPACED AS SHOWN

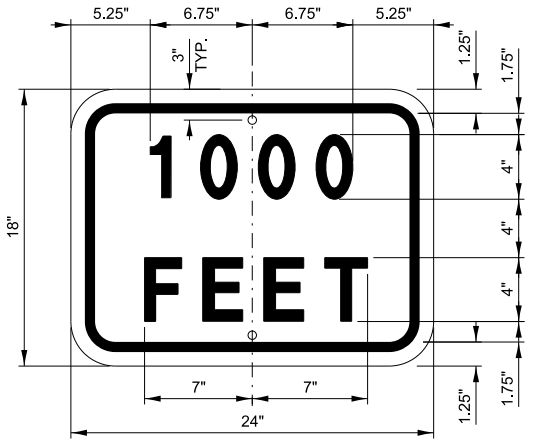
| SIGN NO. | LEGEND   | A          | B          |
|----------|----------|------------|------------|
| TS-2A    | AHEAD    | 15.50"     | 15.50"     |
| TS-2B    | 500 FT   | 14.25"     | 15.13"     |
| TS-2C    | 1000 FT  | 14.88" ∠ 2 | 15.75" ∠ 2 |
| TS-2D    | 1500 FT  | 14.88" ∠ 2 | 15.75" ∠ 2 |
| TS-2E    | 1/2 MILE | 15.75" ∠ 3 | 15.75" ∠ 3 |
| TS-2F    | 1 MILE   | 13.06"     | 13.06"     |



SIGN W1-4dR (O)

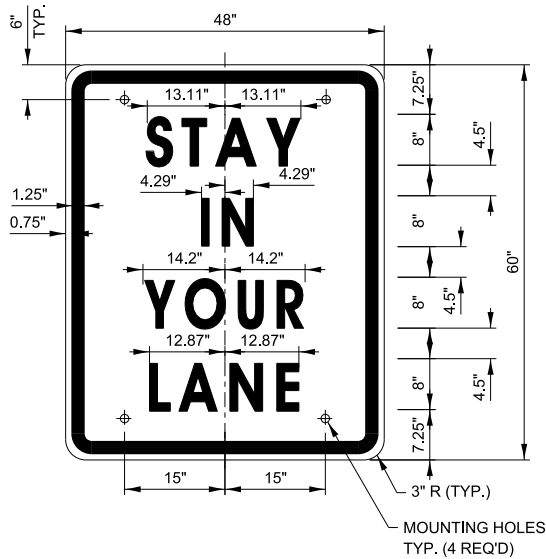
COLOR: BACKGROUND-FLUORESCENT ORANGE (O)  
TYPE A REFLECTIVE SHEETING PER STANDARD SPECIFICATIONS (★ A)  
BORDER AND LETTERS-BLACK  
SIZE: 48"x48"  
MOUNTING HOLES: 7/16" DIA., 4 HOLES SPACED AS SHOWN.

|    |         |
|----|---------|
| A  | 4 1/2"  |
| B  | 5 3/4"  |
| C  | 12 1/2" |
| D  | 7 3/4"  |
| E  | 6 1/2"  |
| F  | 4 1/2"  |
| G  | 6 1/2"  |
| H  | 6"      |
| I  | 12 3/4" |
| J  | 12"     |
| K  | 45°     |
| L  | 55°     |
| M  | 3/4"    |
| N1 | 2"      |
| N2 | 6 1/2"  |



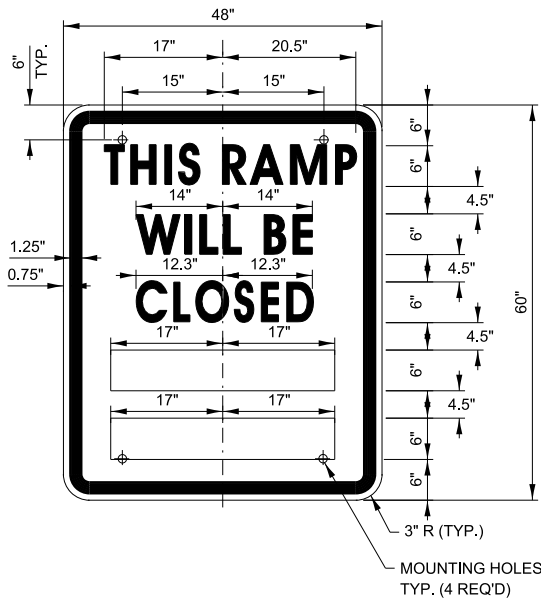
SUPPLEMENTAL PLATE (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)  
BORDER AND LETTERS - BLACK  
SIZE: 24"x18"  
LETTERING: 4" FEDERAL SERIES D  
MOUNTING HOLES: 7/16" DIA., 2 HOLES SPACED AS SHOWN



SIGN TS-3

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (★ A)  
BORDER AND LETTERS - BLACK  
SIZE: 48"x60"  
LETTERING: LEGEND - 8" FEDERAL SERIES D  
MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN

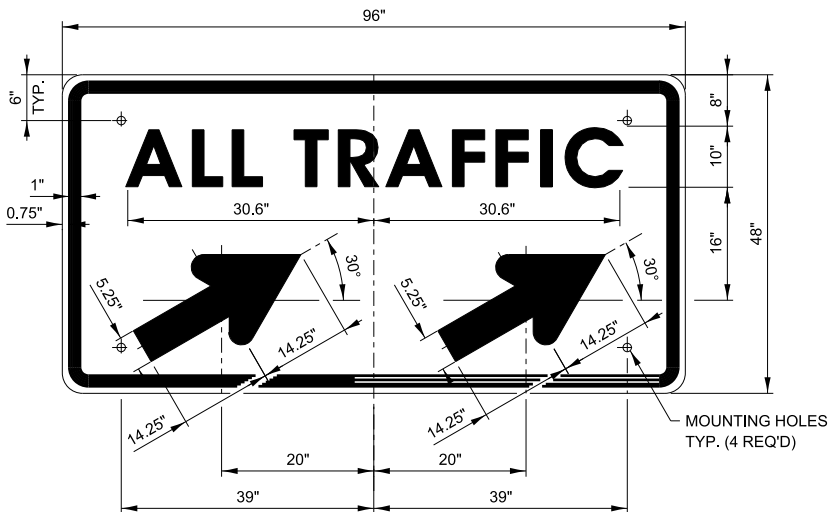


SIGN TS-4

COLOR: BACKGROUND - WHITE (REFLECTORIZED)(★ A)  
BORDER AND LETTERS - BLACK  
SIZE: 48"x60"  
LETTERING: LEGEND - 6" FEDERAL SERIES C  
MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN

RAMP CLOSURE ADVANCE INFORMATION SIGN

THE VARIABLE MESSAGE WITH DATES FOR THE BOTTOM TWO LINES SHALL BE DETERMINED BY THE ENGINEER AND GIVEN TO THE CONTRACTOR BEFORE THE REQUIRED FIELD ERECTION DATE.



SIGN TS-5a & TS-5b

COLOR: BACKGROUND - WHITE (REFLECTORIZED)(★ A)  
BORDER AND LETTERS - BLACK  
ARROW - BLACK  
SIZE: 96"x48"  
LETTERING: 10" FEDERAL SERIES D  
MOUNTING HOLES: 7/16" DIA., 4 HOLES, SPACED AS SHOWN  
NOTE: SIGN TS-5a IS SHOWN, SUBSTITUTE LEGEND "↗" FOR "↘" FOR SIGN TS-5b

NOTES:

- ALL LETTERING IS DESIGNATED BY SIZE AND SERIES IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. LETTERING SPACING SHALL BE IN ACCORDANCE WITH THIS GUIDE EXCEPT WHERE NOTED.
- SYMBOLS AND ARROWS SHALL CONFORM TO THE DETAILS SHOWN IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.
- SEE THE CONTRACT REQUIREMENTS FOR ADDITIONAL NOTES AND SPECIFICATIONS.  
(O) FLUORESCENT ORANGE REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.  
(★ A) - REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.
- DIMENSIONS INDICATED THUS ∠ ARE BASED ON A REDUCTION IN STANDARD LETTERING SPACING AS SHOWN BELOW:  
∠1 SPACING REDUCED BY 25%  
∠2 SPACING REDUCED BY 40%  
∠3 SPACING REDUCED BY 50%

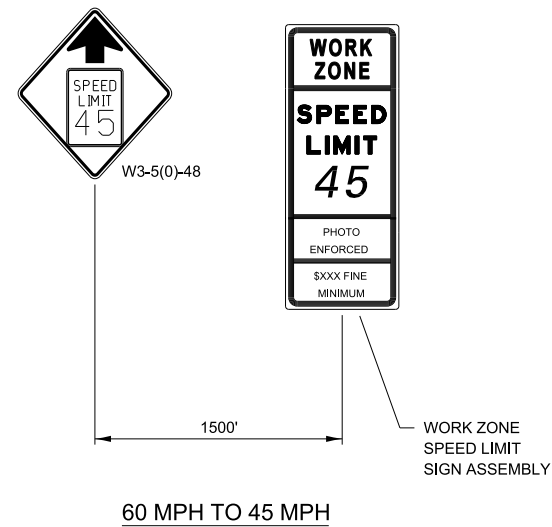
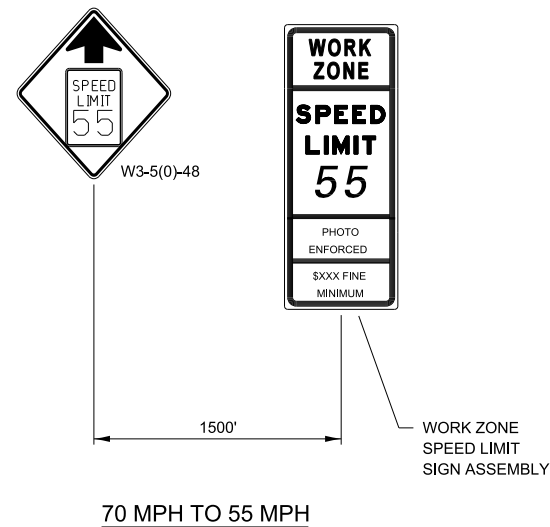
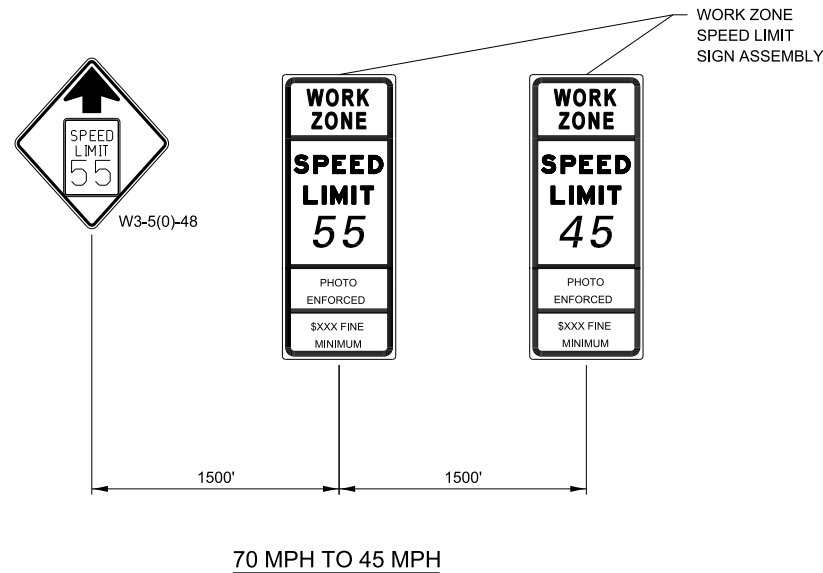
APPROVED BY: *Paul Kovacs* DATE: 03/01/2019  
CHIEF ENGINEERING OFFICER

| REVISIONS  |                                              |
|------------|----------------------------------------------|
| DATE       | DESCRIPTION                                  |
| 03-01-2019 | REMOVED STANDARD IDOT SIGNS.                 |
|            | REVISED WZSL ASSEMBLY, ADDED WZSL TRANSITION |
| 03-31-2017 | REVISED END WZSL SIGN COLOR                  |
| 03-11-2015 | REVISED NOTES                                |

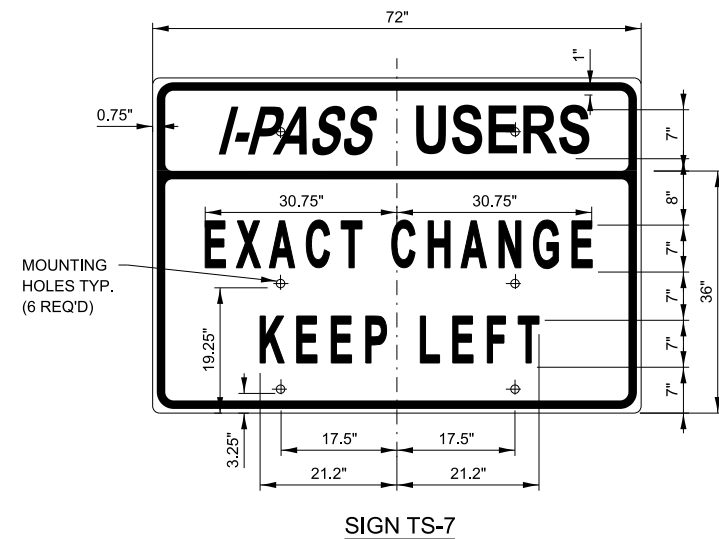
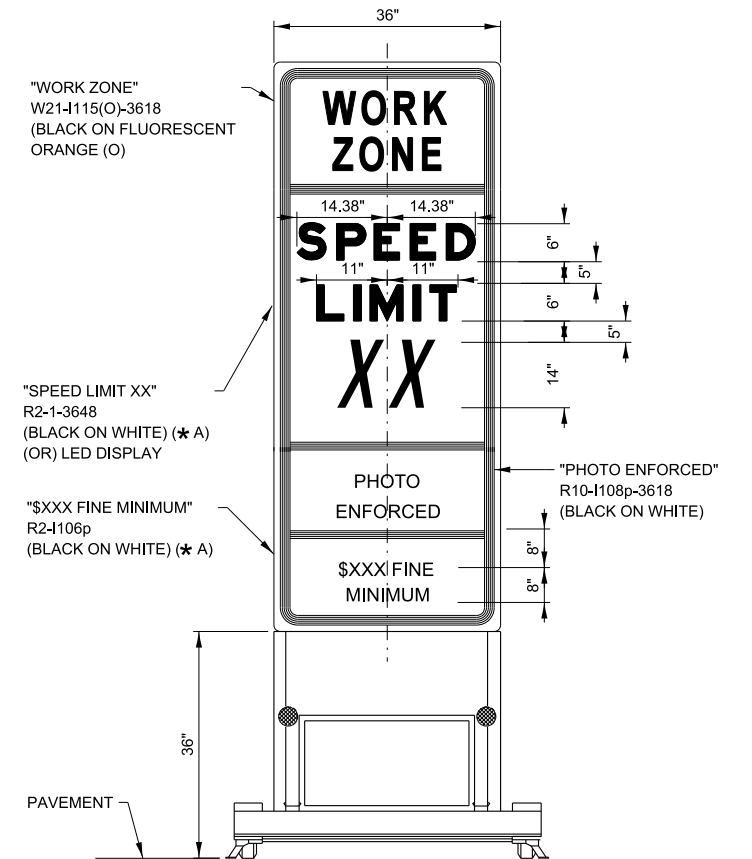


CONSTRUCTION SIGNS

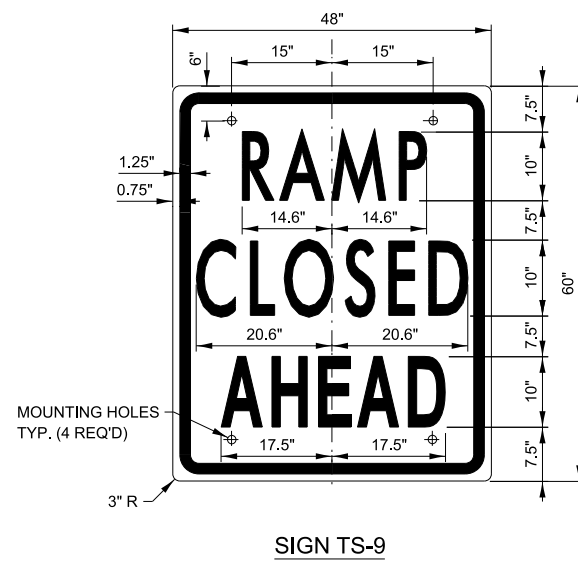
VERSION: 2019-03 STANDARD: E1-07 SHEET: 1 OF 2



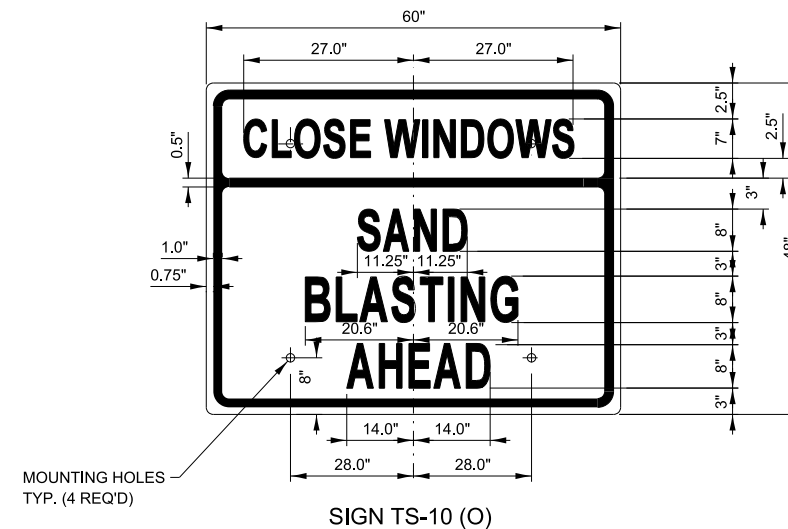
### WORK ZONE SPEED LIMIT TRANSITION SIGNAGE



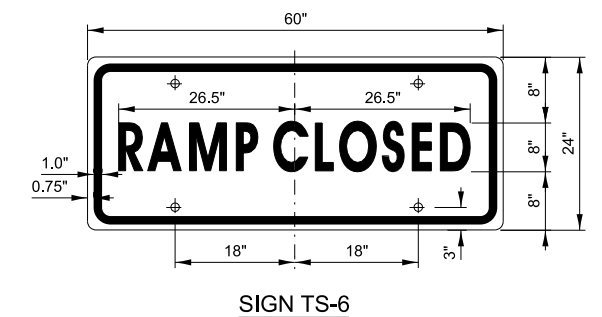
COLOR: BACKGROUND - WHITE (REFLECTORIZED) (★ A)  
BORDER AND LETTERS - BLACK  
SIZE: 72"x36"  
LETTERING: 7" FEDERAL SERIES C  
MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



COLOR: BACKGROUND - WHITE (REFLECTORIZED) (★ A)  
BORDER AND LETTERS - BLACK  
SIZE: 48"x60"  
LETTERING: 10" FEDERAL SERIES C  
MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



COLOR: BACKGROUND - FLUORESCENT ORANGE (O)  
BORDER AND LETTERS - BLACK  
SIZE: 60"x48"  
LETTERING: 8" FEDERAL SERIES C, 7" FEDERAL SERIES B  
MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN

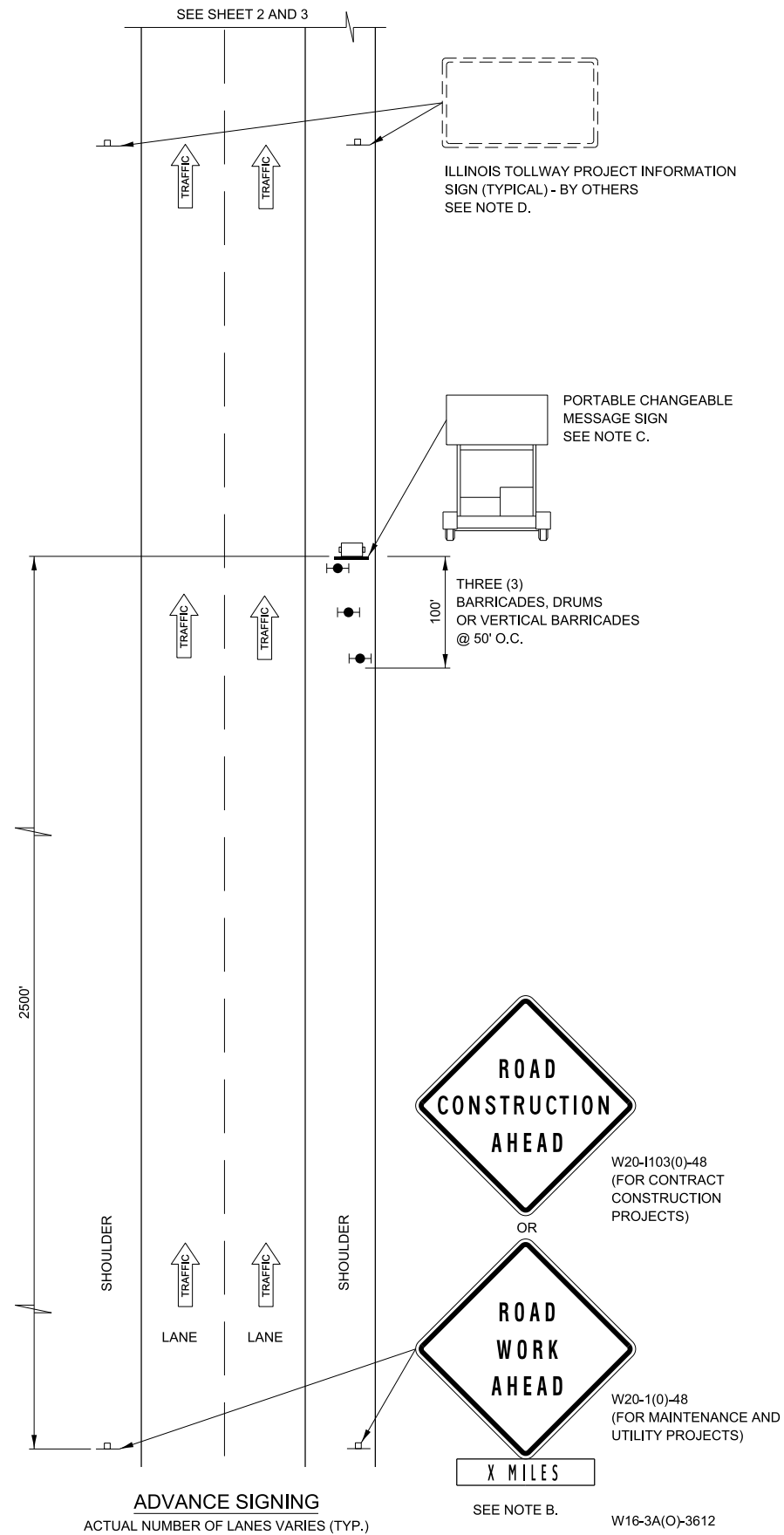


COLOR: BACKGROUND - WHITE (REFLECTORIZED) (★ A)  
BORDER AND LETTERS - BLACK  
SIZE: 60"x24"  
LETTERING: 8" FEDERAL SERIES C  
MOUNTING HOLES: 1/16" DIA., 4 HOLES SPACED AS SHOWN



### CONSTRUCTION SIGNS

NOTE:  
SEE SHEET 1 OF THIS SERIES FOR NOTES.



ADVANCE SIGNING NOTES:

- A. THE ADVANCE SIGNING SHOWN ON THIS STANDARD SHALL APPLY ANY TIME THE CONTRACTOR CLOSES ONE OR MORE LANES, OR IS REQUIRED TO SHIFT THE LANE ALIGNMENT. THE "ROAD WORK AHEAD" OR "ROAD CONSTRUCTION AHEAD" SIGNS, WORK ZONE PUBLIC INFORMATION SIGNS AND PORTABLE CHANGEABLE MESSAGE ARE STATIONARY.
- B. THE ROAD CONSTRUCTION AHEAD SIGN (W20-1A, WITH W16-3a SUPPLEMENTAL PLATE) OR ROAD WORK AHEAD SIGN (W20-1, WITH W16-3A SUPPLEMENTAL PLATE) SHALL BE LOCATED UP TO 5 MILES IN ADVANCE OF THE PROJECT LIMITS, WITH THE LOCATION BEING DETERMINED BY THE ENGINEER.
- C. THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE USED TO DISPLAY THE STATUS OF LANE WITHIN THE CONTRACT LIMITS. THE PRIMARY MESSAGES SHALL BE: "RIGHT LANE(S) CLOSED" / "x MILES AHEAD", "LEFT LANE(S) CLOSED" / "x MILES AHEAD", "LANE(S) SHIFT" / "x MILES AHEAD", "ALL LANES OPEN". THE PORTABLE CHANGEABLE MESSAGE SIGN MAY BE MOVED TO THE MEDIAN SHOULDER WHEN THE LANE CLOSURES ARE ON THE LEFT, PROVIDED THE EXISTING SHOULDER WIDTH IS ADEQUATE.
- D. THE ILLINOIS TOLLWAY WILL FURNISH AND INSTALL STATIC PROJECT INFORMATION SIGNS IN ADVANCE, THROUGH AND AT THE END OF THE WORK ZONE. THESE SIGNS WILL BE INSTALLED ALONG THE OUTSIDE SHOULDER WITH THE ADVANCE SIGNS LOCATED BEYOND THE PORTABLE CHANGEABLE MESSAGE SIGN. THE ENGINEER AND CONTRACTOR SHALL COORDINATE WITH THE ILLINOIS TOLLWAY REGARDING THE LOCATION OF THESE SIGNS AND NOTIFY THE ILLINOIS TOLLWAY OF ANY DAMAGE TO THE SIGNS OR SUPPORTS.

LEGEND

- ➡ ARROW BOARD
- ▨ WORK AREA
- 🚧 SIGN
- 🚧 DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- 🚧 TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH LIGHT IF REQUIRED. SEE ARTICLE 701.05(a)(5)
- FLAGGER WITH TRAFFIC CONTROL SIGN
- ✕ LANE CLOSED
- 🚧 CHECK BARRICADE
- 🚧 TRUCK MOUNTED ATTENUATOR



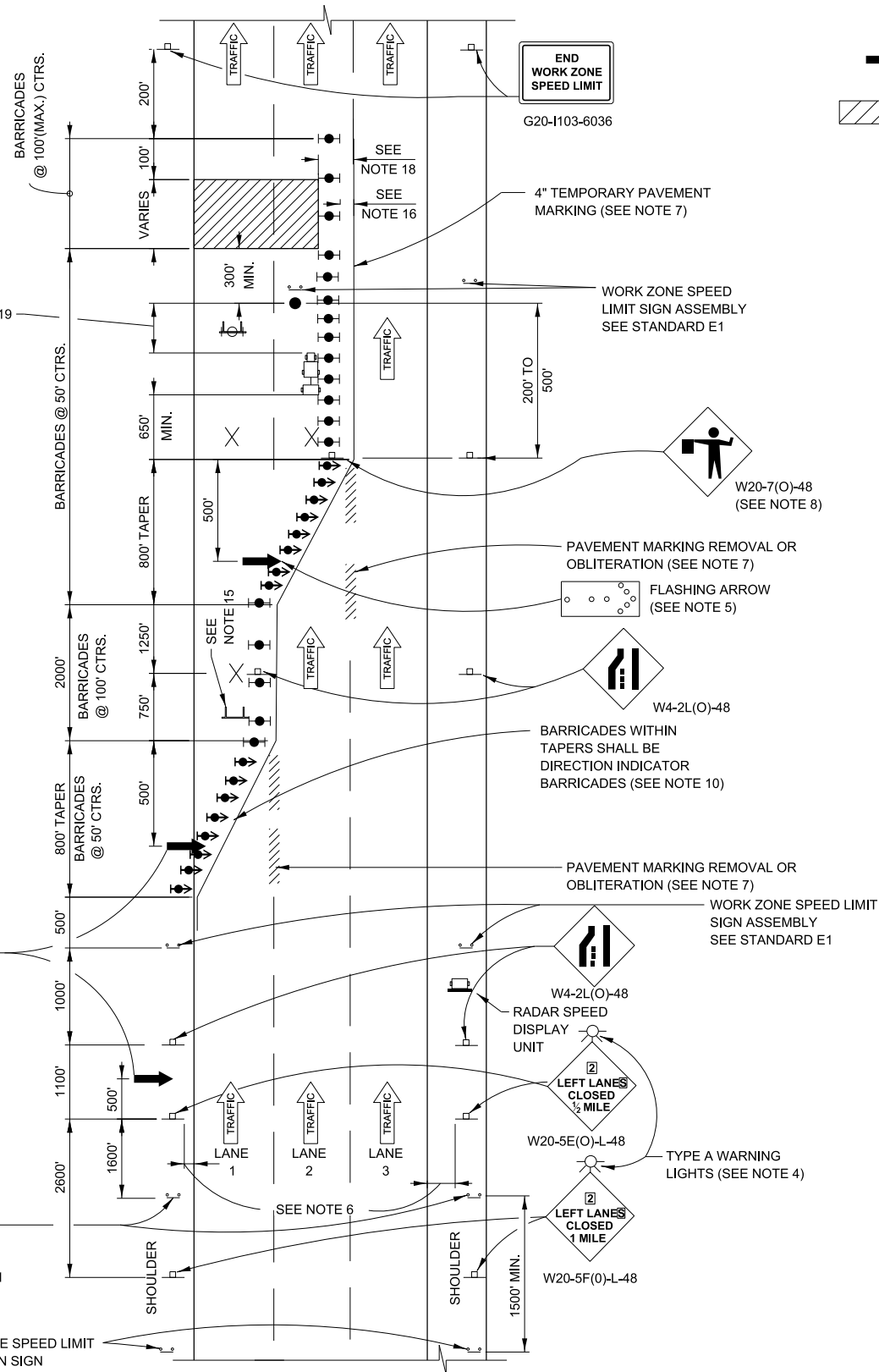
LANE CLOSURE DETAILS

| REVISIONS  |                                                                   |
|------------|-------------------------------------------------------------------|
| DATE       | DESCRIPTION                                                       |
| 03-01-2025 | REVISED NOTE 18 TO INCREASE BUFFER TO ACTIVE LANES, DELETE WORKER |
|            | LEGEND AND WORK AREA, REVISED                                     |
|            | DIMENSIONS FOR FLAGGER SIGN TO                                    |
|            | FLAGGER, AND TMA TO FLAGGER.                                      |

|                     |                    |                  |
|---------------------|--------------------|------------------|
| VERSION:<br>2025-03 | STANDARD:<br>E2-12 | SHEET:<br>1 OF 3 |
|---------------------|--------------------|------------------|

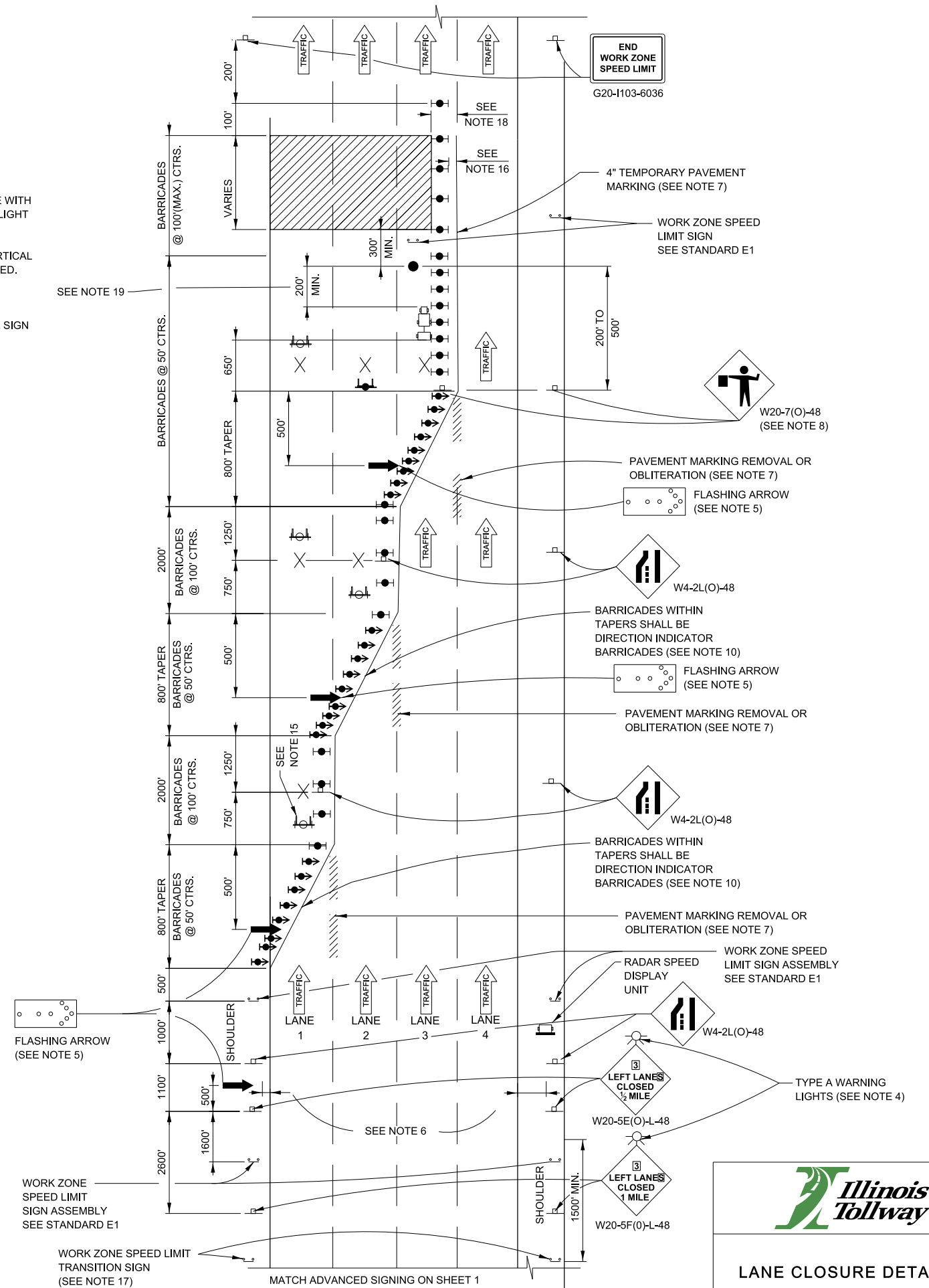
APPROVED BY:  DATE: 03/01/2025  
CHIEF ENGINEERING OFFICER





MATCH ADVANCED SIGNING ON SHEET 1  
**TWO - LANE CLOSURE  
 WITH BARRICADE**  
 ACTUAL NUMBER OF LANES VARIES (TYP.)

- LEGEND**
- ARROW BOARD
  - ▨ WORK AREA
  - ⊥ SIGN
  - ↑ DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
  - TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH LIGHT IF REQUIRED. SEE ARTICLE 701.05(a)(5)
  - FLAGGER WITH TRAFFIC CONTROL SIGN
  - × LANE CLOSED
  - ⚙ CHECK BARRICADE
  - 🚚 TRUCK MOUNTED ATTENUATOR
  - 📡 RADAR SPEED DISPLAY UNIT



MATCH ADVANCED SIGNING ON SHEET 1  
**THREE - LANE CLOSURE WITH BARRICADE**

APPROVED BY: *Manar Nashif*  
 CHIEF ENGINEERING OFFICER  
 DATE: 03/01/2025

SEE SHEET 1 IN  
 THIS SERIES FOR  
 NOTES



**LANE CLOSURE DETAILS**

GENERAL NOTES:

- THE SHOULDER SHALL BE CLOSED WHEN A WORK ACTIVITY REQUIRING 15 OR MORE MINUTES IS PERFORMED AT A DISTANCE WHICH IS LESS THAN 15 FEET BUT NO CLOSER THAN 3 FEET FROM THE EDGE OF TRAVELED WAY (INSIDE OF PAVEMENT MARKING LINE).
- THE ADJACENT EXTERIOR LANE SHALL BE CLOSED WHEN WORK IS PERFORMED WITHIN 3 FEET FROM THE EDGE OF TRAVELED WAY (INSIDE OF PAVEMENT MARKING LINE).
- THE CHANNELIZING DEVICES WHICH SEPARATE THE WORK SPACE FROM THE ADJACENT TRAVEL LANE SHALL BE SPACED AT 25' FOR (200 FEET) AND AT A MAXIMUM OF 50' FOR ALL ADDITIONAL DEVICES.
- WHEN THE WORK SITE IS UNATTENDED, SUBSTITUTE - "SHOULDER WORK AHEAD" SIGN.
- WORKER SIGNS OR SHOULDER WORK SIGNS AND CHANNELIZATION DEVICES ARE PLACED ONLY ON THE SIDE OF THE ROADWAY ON WHICH THE ACTIVITY IS PERFORMED.
- FOR SHOULDER CLOSURE EXTENDING OVERNIGHT, BARRICADE TYPE II SHALL BE USED. SEE ARTICLE 701.05(a)(5) FOR BARRICADE LIGHT REQUIREMENTS
- FOR SHORT TERM CLOSURE (SUNRISE TO ONE HOUR BEFORE SUNSET) NOT EXTENDING INTO DARKNESS, CONES MAY BE USED.
- ONE WORK ZONE SPEED LIMIT SIGN ASSEMBLY SHALL BE PLACED AT A DISTANCE OF 500' TO 2,500' MAXIMUM IN ADVANCE OF WORKERS THROUGHOUT THE SHOULDER CLOSURE. MOVING OPERATIONS MAY REQUIRE CONTINUOUS ADJUSTMENT OF THE SIGN ASSEMBLY LOCATION TO MAINTAIN THE ABOVE INTERVAL.
- AN ADDITIONAL SIGN ASSEMBLY SHALL BE PLACED 500' BEYOND THE LAST ENTRANCE RAMP FOR EACH INTERCHANGE THAT FALLS WITHIN THE 2,500'.
- THE SIGN ASSEMBLY SHALL BE PLACED NO CLOSER THAN 500' TO ANY OTHER SIGN.
- THE WORK ZONE SPEED LIMIT SIGNS AND SIGN ASSEMBLY SHALL BE PROMPTLY REMOVED OR COVERED WHEN SHOULDER CLOSURE IS REMOVED.
- ALL CONFLICTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
- "END WORK ZONE SPEED LIMIT" SIGNS SHALL BE IN PLACE ONLY WHEN THE EXISTING POSTED SPEED > 55MPH.
- FOR SHOULDER REPAIRS OR REPLACEMENT THE CHANNELIZING DEVICES SHALL BE PLACED AT THE EDGE OF PAVEMENT WHENEVER THE WORK ACTIVITIES RESULT IN A DROP OFF AT THE EDGE OF PAVEMENT.
- ANY UNATTENDED OBSTACLE OR EXCAVATION LEFT ON THE SHOULDER OVERNIGHT SHALL BE IN COMPLIANCE WITH THE ROADWAY TRAFFIC CONTROL AND COMMUNICATIONS MANUAL.
- A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.
- SEE STANDARD E1 FOR ADDITIONAL SIGNAGE REQUIRED WHEN WORK ZONE SPEED LIMIT IS REDUCED BY MORE THAN 10 MPH.
- IN WORK ZONES WITH NO POSITIVE PROTECTION, A TRUCK MOUNTED ATTENUATOR SHALL BE PROVIDED WITH A BUFFER AREA BETWEEN THE FRONT OF THE TMA AND WORKERS OR EQUIPMENT. THE BUFFER AREA SHALL BE 200' UNLESS OTHERWISE DETERMINED. WHERE WORKERS OR EQUIPMENT ARE PRESENT BEYOND THE WORK AREA, AN ADDITIONAL TMA SHALL BE PROVIDED FOR EACH WORK AREA IS DEFINED AS STARTING AT THE END OF THE BUFFER AREA, EXTENDING 1000 FEET BEYOND THIS POINT.

END  
WORK ZONE  
SPEED LIMIT

G20-I103-6036  
(SEE NOTE 13)

TAPER RATES

| WORK<br>ZONE<br>SPEED<br>(mph) | SHY LINE<br>(ft.) | BARRIER<br>INSIDE<br>SHY LINE | BARRIER<br>AT OR<br>BEYOND<br>SHY LINE |
|--------------------------------|-------------------|-------------------------------|----------------------------------------|
| 65                             | 8.5               | 28:1                          | 19:1                                   |
| 60                             | 8                 | 26:1                          | 18:1                                   |
| 55                             | 7                 | 24:1                          | 16:1                                   |
| 50                             | 6.5               | 21:1                          | 14:1                                   |
| 45                             | 6                 | 18:1                          | 12:1                                   |
| 40                             | 5                 | 16:1                          | 10:1                                   |
| 35                             | 4.5               | 15:1                          | 9:1                                    |
| 30                             | 4                 | 13:1                          | 8:1                                    |

TEMPORARY CONCRETE  
BARRIER (TYP.)

FOR FREE STANDING TCB, MAINTAIN A  
MINIMUM 3.5 FT BARRIER CLEARANCE TO  
THE WORK ZONE. THIS BARRIER CLEARANCE  
DISTANCE SHALL BE FREE OF ANY  
EQUIPMENT, MATERIAL OR WORKERS.

LEGEND

WORK AREA

SIGN

WORK ZONE SPEED LIMIT SIGN ASSEMBLY  
SEE STANDARD E1

TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE  
WITH LIGHT IF REQUIRED.  
SEE ARTICLE 701.05(a)(5)

TRUCK MOUNTED ATTENUATOR

SEE NOTE 18

SEE  
NOTE 16

SEE TAPER  
RATES TABLE

IMPACT ATTENUATOR,  
TEMPORARY  
(SEVERE USE  
TEST LEVEL 3)

WORK ZONE  
SPEED LIMIT  
SIGN ASSEMBLY

WORK ZONE  
SPEED LIMIT  
SIGN ASSEMBLY  
OR W3-5(O)-48  
IF REQUIRED  
SEE NOTE 17

WORK ZONE WITH BARRIERS

N.T.S.



W3-5(O)-48

W21-1(O)-48  
(SEE NOTE 4)

SHOULDER  
WORK  
AHEAD

W21-5a(O)-48

WORK ZONE WITH BARRICADES

N.T.S.

WORK ZONE  
SPEED LIMIT  
SIGN ASSEMBLY



W3-5(O)-48

WORK ZONE  
SPEED LIMIT  
SIGN ASSEMBLY  
OR W3-5(O)-48  
IF REQUIRED  
SEE NOTE 17

W21-1(O)-48  
(SEE NOTE 4)

RIGHT  
SHOULDER  
CLOSED

W21-5a(O)-48

RIGHT  
SHOULDER  
CLOSED  
1000 FT

W21-5b(O)-48

SHOULDER  
WORK  
AHEAD

W21-5a(O)-48



SHOULDER CLOSURE  
DETAILS

| REVISIONS  |                                                                                  |
|------------|----------------------------------------------------------------------------------|
| DATE       | DESCRIPTION                                                                      |
| 03-01-2025 | REVISED NOTE 1 AND 2 TO INCREASE<br>BUFFER TO ACTIVE LANES                       |
| 03-01-2024 | REVISED NOTE 1, 2 AND 6, ADDED<br>CALLOUT FOR NOTE 2, REDUCED<br>WORK ZONE HATCH |

VERSION:  
2025-03

STANDARD:  
E3-11

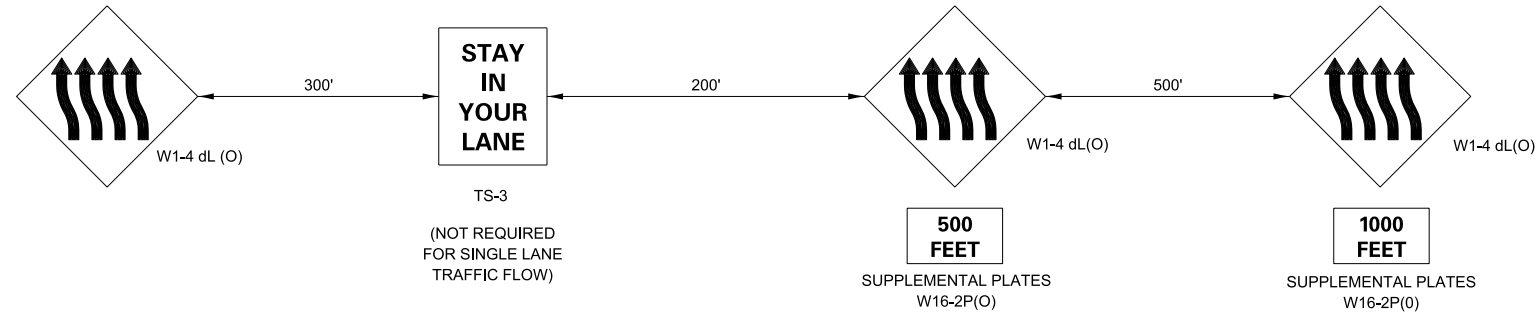
SHEET:  
1 OF 1

APPROVED BY:

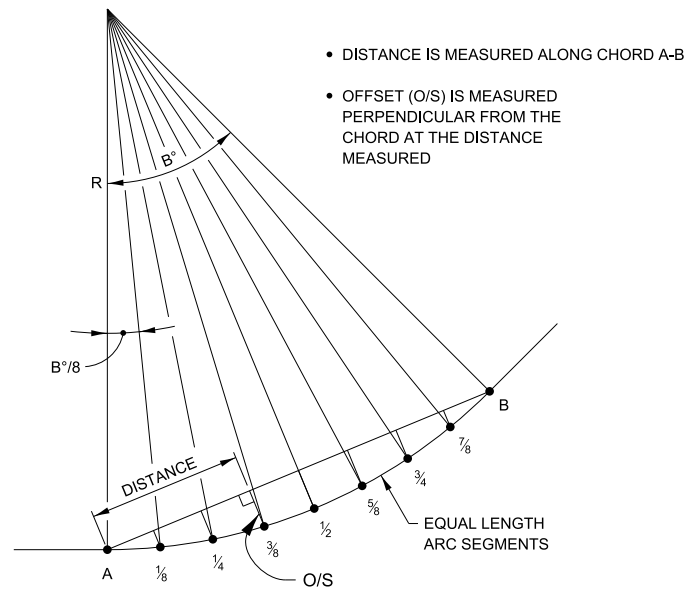
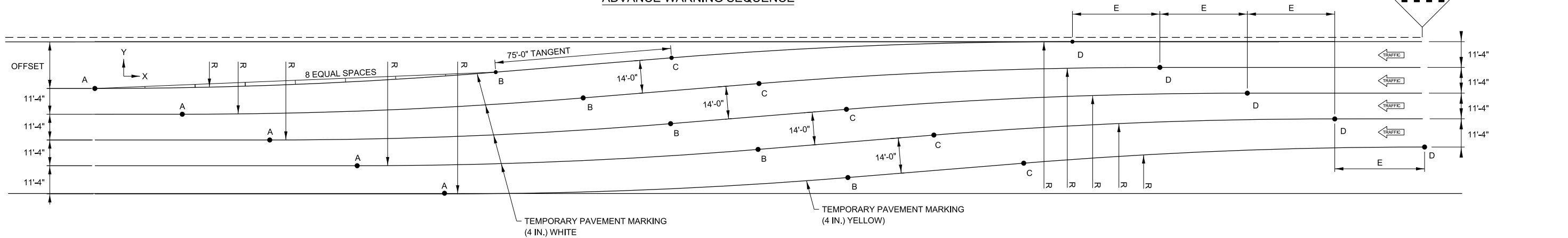
DATE:

Manar Nashif  
CHIEF ENGINEERING OFFICER

03/01/2025



ADVANCE WARNING SEQUENCE



CHORD OFFSET SKETCH

GENERAL NOTES:

1. REVERSE CURVE INFORMATION CAN BE USED FOR SINGLE LANE OR MULTILANE TRAFFIC FLOWS, SHIFTING RIGHT TO LEFT (AS SHOWN) OR LEFT TO RIGHT BY CHANGING TO THE APPROPRIATE ADVANCE WARNING SEQUENCE.
2. THE REVERSE CURVE SHALL NOT BE USED OUTSIDE THE ACTIVITY AREA. LANE SHIFTS IN ADVANCE OF OR ON THE APPROACH TO THE ACTIVITY AREA SHALL BE IMPLEMENTED WITH A SHIFT RATE OF 65:1.
3. LANE SHIFTS FOR DEPARTURES OUT OF THE ACTIVITY AREA SHALL BE IMPLEMENTED WITH A SHIFT RATE OF 65:1.

APPROVED BY:  DATE: 03/31/2017  
CHIEF ENGINEERING OFFICER

| REVISIONS  |                                                      |
|------------|------------------------------------------------------|
| DATE       | DESCRIPTION                                          |
| 03-31-2017 | REVISED TABLE DATA ON SHEET 2.                       |
| 03-31-2016 | REVISED TABLE DATA ON SHEET 2.                       |
| 03-11-2015 | REVISED NOTES AND ADDED RADIUS DIMENSIONS TO TABLES. |
| 03-31-2014 | REVISED CURVE DATA PER MPH AND REVISED NOTES.        |



MAINTENANCE OF TRAFFIC  
REVERSE CURVE

|                     |                    |                  |
|---------------------|--------------------|------------------|
| VERSION:<br>2017-03 | STANDARD:<br>E4-07 | SHEET:<br>1 OF 2 |
|---------------------|--------------------|------------------|

TYPE I (45 MPH) (RADIUS: 2100')

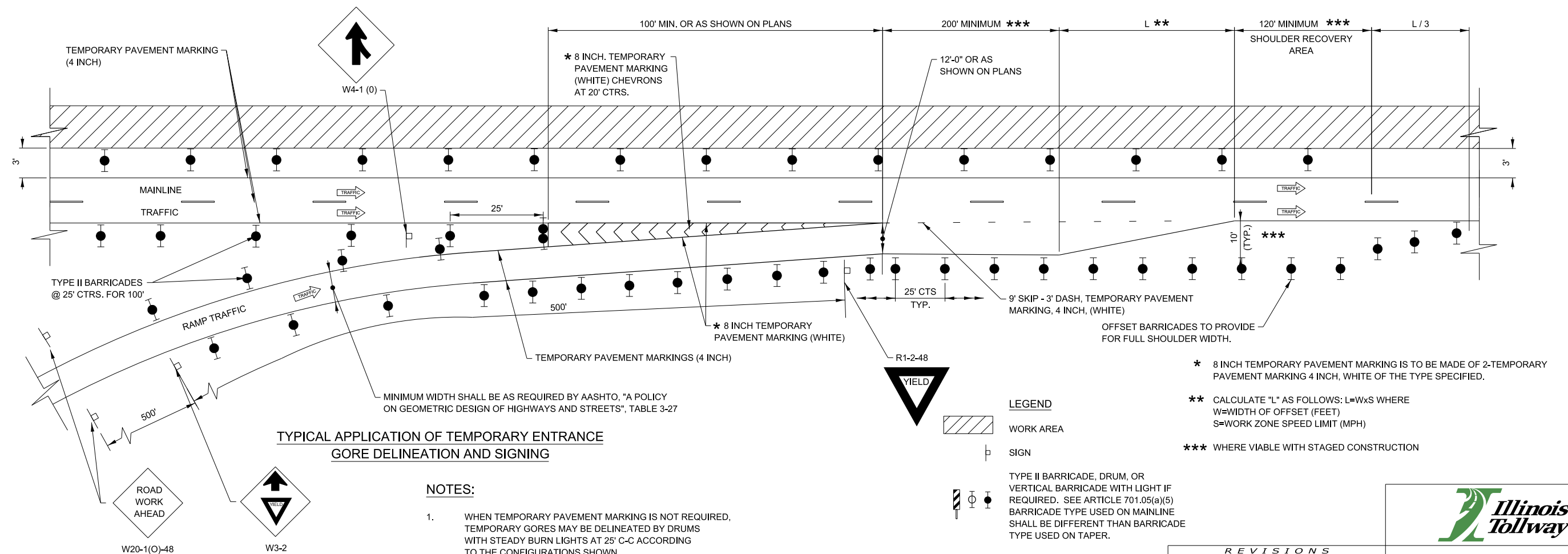
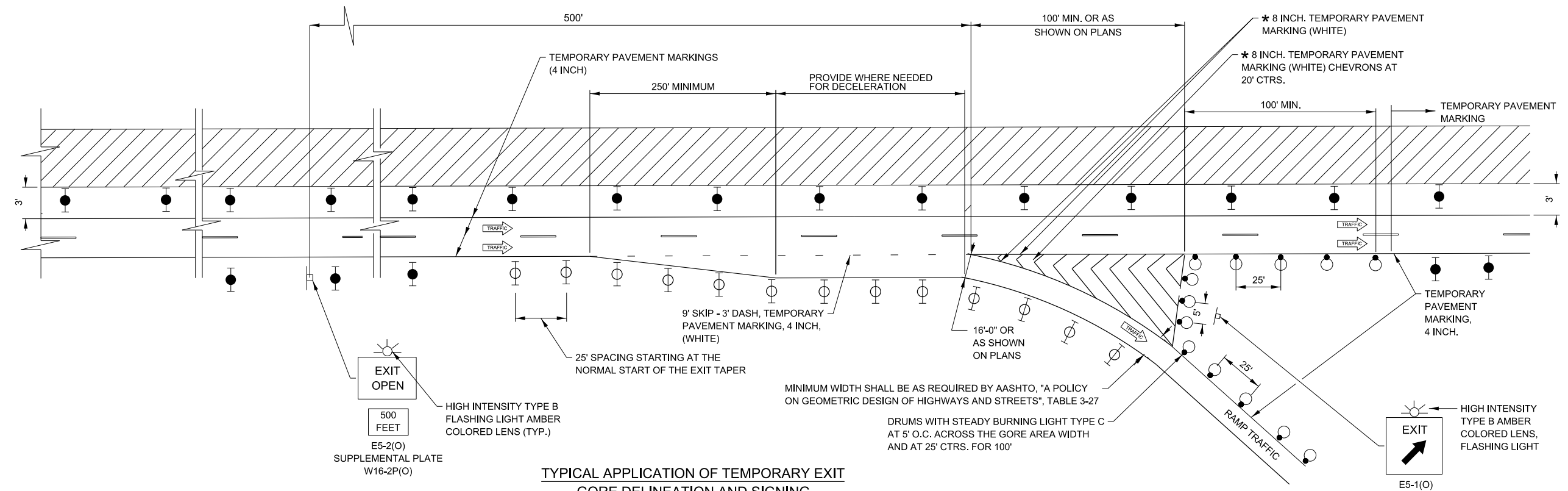
|        |       |      | POINT LAY-OUT |   |       |      |       |      |       |      | CHORD OFFSET DATA |      |           |      |           |       |     |       |
|--------|-------|------|---------------|---|-------|------|-------|------|-------|------|-------------------|------|-----------|------|-----------|-------|-----|-------|
| OFFSET | E     | B    | A             |   | B     |      | C     |      | D     |      | 1/8 & 7/8         |      | 1/4 & 3/4 |      | 3/8 & 5/8 |       | 1/2 |       |
|        |       |      | X             | Y | X     | Y    | X     | Y    | X     | Y    | O/S               | DIST | O/S       | DIST | O/S       | DIST  | O/S | DIST  |
| 10     | 50.23 | 3.06 | 0             | 0 | 112.2 | 3.0  | 187.1 | 7.0  | 299.2 | 10.0 | 0.3               | 14.0 | 0.6       | 28.0 | 0.7       | 42.1  | 0.7 | 56.1  |
| 12     | 44.94 | 3.43 | 0             | 0 | 125.6 | 3.8  | 200.4 | 8.2  | 326.0 | 12.0 | 0.4               | 15.7 | 0.7       | 31.4 | 0.9       | 47.1  | 0.9 | 62.8  |
| 14     | 40.96 | 3.77 | 0             | 0 | 138.0 | 4.5  | 212.8 | 9.5  | 350.8 | 14.0 | 0.5               | 17.3 | 0.9       | 34.5 | 1.1       | 51.8  | 1.1 | 69.0  |
| 16     | 37.86 | 4.08 | 0             | 0 | 149.5 | 5.3  | 224.3 | 10.7 | 373.9 | 16.0 | 0.6               | 18.7 | 1.0       | 37.4 | 1.2       | 56.1  | 1.3 | 74.8  |
| 18     | 35.34 | 4.38 | 0             | 0 | 160.4 | 6.1  | 235.2 | 11.9 | 395.6 | 18.0 | 0.7               | 20.1 | 1.2       | 40.1 | 1.4       | 60.2  | 1.5 | 80.3  |
| 20     | 33.26 | 4.66 | 0             | 0 | 170.7 | 7.0  | 245.5 | 13.0 | 416.2 | 20.0 | 0.8               | 21.4 | 1.3       | 42.7 | 1.6       | 64.1  | 1.7 | 85.4  |
| 22     | 31.50 | 4.93 | 0             | 0 | 180.5 | 7.8  | 255.3 | 14.2 | 435.8 | 22.0 | 0.9               | 22.6 | 1.5       | 45.2 | 1.8       | 67.8  | 1.9 | 90.4  |
| 24     | 30.00 | 5.19 | 0             | 0 | 189.9 | 8.6  | 264.6 | 15.4 | 454.6 | 24.0 | 0.9               | 23.8 | 1.6       | 47.5 | 2.0       | 71.3  | 2.2 | 95.1  |
| 26     | 28.68 | 5.44 | 0             | 0 | 199.0 | 9.4  | 273.6 | 16.6 | 472.6 | 26.0 | 1.0               | 24.9 | 1.8       | 49.8 | 2.2       | 74.7  | 2.4 | 99.6  |
| 28     | 27.53 | 5.67 | 0             | 0 | 207.7 | 10.3 | 282.3 | 17.7 | 489.9 | 28.0 | 1.1               | 26.0 | 1.9       | 52.0 | 2.4       | 78.0  | 2.6 | 104.0 |
| 30     | 26.51 | 5.90 | 0             | 0 | 216.0 | 11.1 | 290.6 | 18.9 | 506.7 | 30.0 | 1.2               | 27.0 | 2.1       | 54.1 | 2.6       | 81.1  | 2.8 | 108.2 |
| 32     | 25.59 | 6.13 | 0             | 0 | 224.2 | 12.0 | 298.7 | 20.0 | 522.9 | 32.0 | 1.3               | 28.0 | 2.3       | 56.1 | 2.8       | 84.2  | 3.0 | 112.2 |
| 34     | 24.76 | 6.34 | 0             | 0 | 232.0 | 12.9 | 306.6 | 21.1 | 538.6 | 34.0 | 1.4               | 29.0 | 2.4       | 58.1 | 3.0       | 87.1  | 3.2 | 116.2 |
| 36     | 24.02 | 6.55 | 0             | 0 | 239.7 | 13.7 | 314.2 | 22.3 | 553.8 | 36.0 | 1.5               | 30.0 | 2.6       | 60.0 | 3.2       | 90.0  | 3.4 | 120.0 |
| 38     | 23.33 | 6.76 | 0             | 0 | 247.1 | 14.6 | 321.6 | 23.4 | 568.7 | 38.0 | 1.6               | 30.9 | 2.7       | 61.9 | 3.4       | 92.8  | 3.7 | 123.8 |
| 40     | 22.71 | 6.96 | 0             | 0 | 254.3 | 15.5 | 328.8 | 24.5 | 583.1 | 40.0 | 1.7               | 31.8 | 2.9       | 63.7 | 3.6       | 95.5  | 3.9 | 127.4 |
| 42     | 22.13 | 7.15 | 0             | 0 | 261.4 | 16.3 | 335.8 | 25.7 | 597.2 | 42.0 | 1.8               | 32.7 | 3.1       | 65.4 | 3.8       | 98.2  | 4.1 | 131.0 |
| 44     | 21.60 | 7.34 | 0             | 0 | 268.3 | 17.2 | 342.7 | 26.8 | 611.0 | 44.0 | 1.9               | 33.6 | 3.2       | 67.2 | 4.0       | 100.8 | 4.3 | 134.4 |
| 46     | 21.11 | 7.53 | 0             | 0 | 275.0 | 18.1 | 349.4 | 27.9 | 624.4 | 46.0 | 2.0               | 34.4 | 3.4       | 68.9 | 4.2       | 103.3 | 4.5 | 137.8 |
| 48     | 20.65 | 7.71 | 0             | 0 | 281.6 | 19.0 | 356.0 | 29.0 | 637.6 | 48.0 | 2.1               | 35.2 | 3.6       | 70.5 | 4.5       | 105.8 | 4.7 | 141.1 |
| 50     | 20.22 | 7.89 | 0             | 0 | 288.1 | 19.9 | 362.4 | 30.1 | 650.5 | 50.0 | 2.2               | 36.1 | 3.7       | 72.2 | 4.7       | 108.3 | 5.0 | 144.4 |
| 52     | 19.82 | 8.06 | 0             | 0 | 294.4 | 20.7 | 368.7 | 31.3 | 663.1 | 52.0 | 2.3               | 36.9 | 3.9       | 73.7 | 4.9       | 110.7 | 5.2 | 147.6 |
| 54     | 19.44 | 8.23 | 0             | 0 | 300.6 | 21.6 | 374.9 | 32.4 | 675.5 | 54.0 | 2.4               | 37.6 | 4.1       | 75.3 | 5.1       | 113.0 | 5.4 | 150.7 |
| 56     | 19.09 | 8.40 | 0             | 0 | 306.7 | 22.5 | 380.9 | 33.5 | 687.7 | 56.0 | 2.5               | 38.4 | 4.2       | 76.8 | 5.3       | 115.3 | 5.6 | 153.8 |
| 58     | 18.76 | 8.56 | 0             | 0 | 312.7 | 23.4 | 386.9 | 34.6 | 699.6 | 58.0 | 2.6               | 39.2 | 4.4       | 78.3 | 5.5       | 117.6 | 5.9 | 156.8 |
| 60     | 18.44 | 8.73 | 0             | 0 | 318.6 | 24.3 | 392.7 | 35.7 | 711.4 | 60.0 | 2.7               | 39.9 | 4.6       | 79.8 | 5.7       | 119.8 | 6.1 | 159.8 |

TYPE II (50-55 MPH) (RADIUS: 3100')

|        |       |      | POINT LAY-OUT |   |       |      |       |      |       |      | CHORD OFFSET DATA |      |           |      |           |       |     |       |
|--------|-------|------|---------------|---|-------|------|-------|------|-------|------|-------------------|------|-----------|------|-----------|-------|-----|-------|
| OFFSET | E     | B    | A             |   | B     |      | C     |      | D     |      | 1/8 & 7/8         |      | 1/4 & 3/4 |      | 3/8 & 5/8 |       | 1/2 |       |
|        |       |      | X             | Y | X     | Y    | X     | Y    | X     | Y    | O/S               | DIST | O/S       | DIST | O/S       | DIST  | O/S | DIST  |
| 10     | 58.28 | 2.63 | 0             | 0 | 142.5 | 3.3  | 217.4 | 6.7  | 359.9 | 10.0 | 0.4               | 17.8 | 0.6       | 35.6 | 0.8       | 53.4  | 0.8 | 71.3  |
| 12     | 52.30 | 2.94 | 0             | 0 | 158.9 | 4.1  | 233.8 | 7.9  | 392.8 | 12.0 | 0.4               | 19.9 | 0.8       | 39.7 | 1.0       | 59.6  | 1.0 | 79.5  |
| 14     | 47.80 | 3.22 | 0             | 0 | 174.1 | 4.9  | 249.0 | 9.1  | 423.1 | 14.0 | 0.5               | 21.8 | 0.9       | 43.5 | 1.1       | 65.3  | 1.2 | 87.1  |
| 16     | 44.25 | 3.48 | 0             | 0 | 188.3 | 5.7  | 263.1 | 10.3 | 451.4 | 16.0 | 0.6               | 23.5 | 1.1       | 47.1 | 1.3       | 70.6  | 1.4 | 94.2  |
| 18     | 41.38 | 3.73 | 0             | 0 | 201.6 | 6.6  | 276.4 | 11.4 | 478.0 | 18.0 | 0.7               | 25.2 | 1.2       | 50.4 | 1.5       | 75.6  | 1.6 | 100.8 |
| 20     | 38.99 | 3.96 | 0             | 0 | 214.2 | 7.4  | 289.0 | 12.6 | 503.2 | 20.0 | 0.8               | 26.8 | 1.4       | 53.6 | 1.7       | 80.4  | 1.9 | 107.2 |
| 22     | 36.96 | 4.18 | 0             | 0 | 226.2 | 8.3  | 301.0 | 13.7 | 527.2 | 22.0 | 0.9               | 28.3 | 1.5       | 56.6 | 1.9       | 84.9  | 2.1 | 113.2 |
| 24     | 35.22 | 4.40 | 0             | 0 | 237.7 | 9.1  | 312.5 | 14.9 | 550.1 | 24.0 | 1.0               | 29.7 | 1.7       | 59.5 | 2.1       | 89.2  | 2.3 | 118.9 |
| 26     | 33.70 | 4.60 | 0             | 0 | 248.7 | 10.0 | 323.5 | 16.0 | 572.1 | 26.0 | 1.1               | 31.1 | 1.9       | 62.2 | 2.3       | 93.3  | 2.5 | 124.4 |
| 28     | 32.36 | 4.80 | 0             | 0 | 259.3 | 10.9 | 334.0 | 17.1 | 593.3 | 28.0 | 1.2               | 32.4 | 2.0       | 64.9 | 2.5       | 97.3  | 2.7 | 129.8 |
| 30     | 31.16 | 4.99 | 0             | 0 | 269.5 | 11.7 | 344.2 | 18.3 | 613.8 | 30.0 | 1.3               | 33.7 | 2.2       | 67.4 | 2.8       | 101.2 | 2.9 | 134.9 |
| 32     | 30.10 | 5.17 | 0             | 0 | 279.4 | 12.6 | 354.1 | 19.4 | 633.6 | 32.0 | 1.4               | 34.9 | 2.4       | 69.9 | 3.0       | 104.9 | 3.2 | 139.9 |
| 34     | 29.13 | 5.35 | 0             | 0 | 289.0 | 13.5 | 363.7 | 20.5 | 652.7 | 34.0 | 1.5               | 36.2 | 2.5       | 72.3 | 3.2       | 108.5 | 3.4 | 144.7 |
| 36     | 28.25 | 5.52 | 0             | 0 | 298.4 | 14.4 | 373.0 | 21.6 | 671.4 | 36.0 | 1.6               | 37.3 | 2.7       | 74.7 | 3.4       | 112.0 | 3.6 | 149.4 |
| 38     | 27.45 | 5.69 | 0             | 0 | 307.4 | 15.3 | 382.1 | 22.7 | 689.5 | 38.0 | 1.7               | 38.5 | 2.9       | 76.9 | 3.6       | 115.4 | 3.8 | 153.9 |
| 40     | 26.72 | 5.86 | 0             | 0 | 316.3 | 16.2 | 390.9 | 23.8 | 707.1 | 40.0 | 1.8               | 39.6 | 3.0       | 79.1 | 3.8       | 118.7 | 4.0 | 158.3 |
| 42     | 26.04 | 6.02 | 0             | 0 | 324.9 | 17.1 | 399.5 | 24.9 | 724.3 | 42.0 | 1.9               | 40.6 | 3.2       | 81.3 | 4.0       | 122.0 | 4.3 | 162.7 |
| 44     | 25.41 | 6.17 | 0             | 0 | 333.3 | 18.0 | 407.9 | 26.0 | 741.1 | 44.0 | 2.0               | 41.7 | 3.4       | 83.4 | 4.2       | 125.1 | 4.5 | 166.9 |
| 46     | 24.83 | 6.32 | 0             | 0 | 341.5 | 18.9 | 416.1 | 27.1 | 757.6 | 46.0 | 2.1               | 42.7 | 3.5       | 85.5 | 4.4       | 128.2 | 4.7 | 171.0 |
| 48     | 24.29 | 6.47 | 0             | 0 | 349.6 | 19.8 | 424.1 | 28.2 | 773.6 | 48.0 | 2.2               | 43.7 | 3.7       | 87.5 | 4.6       | 131.3 | 4.9 | 175.1 |
| 50     | 23.78 | 6.62 | 0             | 0 | 357.4 | 20.7 | 431.9 | 29.3 | 789.4 | 50.0 | 2.3               | 44.7 | 3.9       | 89.5 | 4.8       | 134.2 | 5.2 | 179.0 |
| 52     | 23.31 | 6.76 | 0             | 0 | 365.2 | 21.6 | 439.6 | 30.4 | 804.8 | 52.0 | 2.4               | 45.7 | 4.0       | 91.4 | 5.1       | 137.2 | 5.4 | 182.9 |
| 54     | 22.86 | 6.91 | 0             | 0 | 372.7 | 22.5 | 447.2 | 31.5 | 819.9 | 54.0 | 2.5               | 46.6 | 4.2       | 93.3 | 5.3       | 140.0 | 5.6 | 186.7 |
| 56     | 22.44 | 7.04 | 0             | 0 | 380.2 | 23.4 | 454.6 | 32.6 | 834.8 | 56.0 | 2.6               | 47.6 | 4.4       | 95.2 | 5.5       | 142.8 | 5.9 | 190.5 |
| 58     | 22.05 | 7.18 | 0             | 0 | 387.5 | 24.3 | 461.9 | 33.7 | 849.4 | 58.0 | 2.7               | 48.5 | 4.6       | 97.0 | 5.7       | 145.6 | 6.1 | 194.1 |
| 60     | 21.67 | 7.31 | 0             | 0 | 394.7 | 25.2 | 469.1 | 34.8 | 863.7 | 60.0 | 2.8               | 49.4 | 4.7       | 98.8 | 5.9       | 148.3 | 6.3 | 197.7 |

TYPE III (60-65 MPH) (RADIUS: 4400')

|        |       |      | POINT LAY-OUT |   |       |      |       |      |        |      | CHORD OFFSET DATA |      |           |       |           |       |     |       |
|--------|-------|------|---------------|---|-------|------|-------|------|--------|------|-------------------|------|-----------|-------|-----------|-------|-----|-------|
| OFFSET | E     | B    | A             |   | B     |      | C     |      | D      |      | 1/8 & 7/8         |      | 1/4 & 3/4 |       | 3/8 & 5/8 |       | 1/2 |       |
|        |       |      | X             | Y | X     | Y    | X     | Y    | X      | Y    | O/S               | DIST | O/S       | DIST  | O/S       | DIST  | O/S | DIST  |
| 10     | 67.06 | 2.29 | 0             | 0 | 175.6 | 3.5  | 250.5 | 6.5  | 426.1  | 10.0 | 0.4               | 21.9 | 0.7       | 43.9  | 0.8       | 65.8  | 0.9 | 87.8  |
| 12     | 60.34 | 2.54 | 0             | 0 | 195.3 | 4.3  | 270.2 | 7.7  | 465.5  | 12.0 | 0.5               | 24.4 | 0.8       | 48.8  | 1.0       | 73.2  | 1.1 | 97.7  |
| 14     | 55.24 | 2.78 | 0             | 0 | 213.5 | 5.2  | 288.4 | 8.8  | 501.8  | 14.0 | 0.6               | 26.7 | 1.0       | 53.4  | 1.2       | 80.1  | 1.3 | 106.8 |
| 16     | 51.22 | 3.00 | 0             | 0 | 230.4 | 6.0  | 305.3 | 10.0 | 535.7  | 16.0 | 0.7               | 28.8 | 1.1       | 57.6  | 1.4       | 86.4  | 1.5 | 115.2 |
| 18     | 47.95 | 3.21 | 0             | 0 | 246.3 | 6.9  | 321.2 | 11.1 | 567.5  | 18.0 | 0.8               | 30.8 | 1.3       | 61.6  | 1.6       | 92.4  | 1.7 | 123.2 |
| 20     | 45.22 | 3.41 | 0             | 0 | 261.4 | 7.8  | 336.3 | 12.2 | 597.7  | 20.0 | 0.9               | 32.7 | 1.5       | 65.4  | 1.8       | 98.1  | 1.9 | 130.8 |
| 22     | 42.90 | 3.59 | 0             | 0 | 275.8 | 8.6  | 350.6 | 13.4 | 626.4  | 22.0 | 0.9               | 34.5 | 1.6       | 69.0  | 2.0       | 103.5 | 2.2 | 137.9 |
| 24     | 40.91 | 3.77 | 0             | 0 | 289.5 | 9.5  | 364.3 | 14.5 | 653.8  | 24.0 | 1.0               | 36.2 | 1.8       | 72.4  | 2.2       | 108.6 | 2.4 | 144.8 |
| 26     | 39.16 | 3.94 | 0             | 0 | 302.6 | 10.4 | 377.5 | 15.6 | 680.1  | 26.0 | 1.1               | 37.8 | 2.0       | 75.7  | 2.4       | 113.6 | 2.6 | 151.4 |
| 28     | 37.62 | 4.11 | 0             | 0 | 315.3 | 11.3 | 390.1 | 16.7 | 705.4  | 28.0 | 1.2               | 39.4 | 2.1       | 78.9  | 2.7       | 118.3 | 2.8 | 157.8 |
| 30     | 36.24 | 4.27 | 0             | 0 | 327.5 | 12.2 | 402.3 | 17.8 | 729.9  | 30.0 | 1.3               | 41.0 | 2.3       | 81.9  | 2.9       | 122.9 | 3.1 | 163.9 |
| 32     | 35.01 | 4.42 | 0             | 0 | 339.4 | 13.1 | 414.2 | 18.9 | 753.5  | 32.0 | 1.4               | 42.4 | 2.5       | 84.9  | 3.1       | 127.4 | 3.3 | 169.8 |
| 34     | 33.90 | 4.57 | 0             | 0 | 350.8 | 14.0 | 425.6 | 20.0 | 776.4  | 34.0 | 1.5               | 43.9 | 2.6       | 87.8  | 3.3       | 131.7 | 3.5 | 175.6 |
| 36     | 32.88 | 4.72 | 0             | 0 | 362.0 | 14.9 | 436.7 | 21.1 | 798.7  | 36.0 | 1.6               | 45.3 | 2.8       | 90.6  | 3.5       | 135.8 | 3.7 | 181.1 |
| 38     | 31.95 | 4.86 | 0             | 0 | 372.8 | 15.8 | 447.5 | 22.2 | 820.4  | 38.0 | 1.7               | 46.6 | 3.0       | 93.3  | 3.7       | 139.9 | 4.0 | 186.6 |
| 40     | 31.10 | 5.00 | 0             | 0 | 383.4 | 16.7 | 458.1 | 23.3 | 841.4  | 40.0 | 1.8               | 47.9 | 3.1       | 95.9  | 3.9       | 143.9 | 4.2 | 191.9 |
| 42     | 30.31 | 5.13 | 0             | 0 | 393.7 | 17.6 | 468.4 | 24.4 | 862.0  | 42.0 | 1.9               | 49.2 | 3.3       | 98.5  | 4.1       | 147.8 | 4.4 | 197.0 |
| 44     | 29.59 | 5.26 | 0             | 0 | 403.7 | 18.6 | 478.4 | 25.4 | 882.1  | 44.0 | 2.0               | 50.5 | 3.5       | 101.0 | 4.4       | 151.5 | 4.6 | 202.1 |
| 46     | 28.91 | 5.39 | 0             | 0 | 413.5 | 19.5 | 488.2 | 26.5 | 901.7  | 46.0 | 2.1               | 51.7 | 3.7       | 103.5 | 4.6       | 155.2 | 4.9 | 207.0 |
| 48     | 28.28 | 5.52 | 0             | 0 | 423.1 | 20.4 | 497.8 | 27.6 | 920.9  | 48.0 | 2.2               | 52.9 | 3.8       | 105.9 | 4.8       | 158.8 | 5.1 | 211.8 |
| 50     | 27.68 | 5.64 | 0             | 0 | 432.6 | 21.3 | 507.2 | 28.7 | 939.7  | 50.0 | 2.3               | 54.1 | 4.0       | 108.2 | 5.0       | 162.4 | 5.3 | 216.5 |
| 52     | 27.13 | 5.76 | 0             | 0 | 441.8 | 22.2 | 516.4 | 29.8 | 958.2  | 52.0 | 2.4               | 55.3 | 4.2       | 110.6 | 5.2       | 165.9 | 5.6 | 221.2 |
| 54     | 26.61 | 5.88 | 0             | 0 | 450.8 | 23.2 | 525.4 | 30.8 | 976.3  | 54.0 | 2.5               | 56.4 | 4.3       | 112.8 | 5.4       | 169.3 | 5.8 | 225.7 |
| 56     | 26.12 | 6.00 | 0             | 0 | 459.7 | 24.1 | 534.3 | 31.9 | 994.0  | 56.0 | 2.6               | 57.5 | 4.5       | 115.0 | 5.6       | 172.6 | 6.0 | 230.2 |
| 58     | 25.65 | 6.11 | 0             | 0 | 468.4 | 25.0 | 543.0 | 33.0 | 1011.5 | 58.0 | 2.7               | 58.6 | 4.7       | 117.2 | 5.9       | 175.9 | 6.3 | 234.6 |
| 60     | 25.21 | 6.22 | 0             | 0 | 477.0 | 25.9 | 551.6 | 34.1 | 1028.6 | 60.0 | 2.8               | 59.7 | 4.9       | 119.4 | 6.1       | 179.1 | 6.5 | 238.9 |



- NOTES:

1. WHEN TEMPORARY PAVEMENT MARKING IS NOT REQUIRED, TEMPORARY GORES MAY BE DELINEATED BY DRUMS WITH STEADY BURN LIGHTS AT 25' C-C ACCORDING TO THE CONFIGURATIONS SHOWN.
2. THE TAPER LENGTHS ARE MINIMUMS. EXISTING ACCELERATION, DECELERATION, AND TAPER LENGTHS SHOULD BE PRESERVED TO THE EXTENT POSSIBLE.

### LEGEND

WORK AREA

S

TYPE II BARRICADE, DRUM, OR  
VERTICAL BARRICADE WITH LIGHT IF  
REQUIRED. SEE ARTICLE 701.05(a)(5)  
BARRICADE TYPE USED ON MAINLINE  
SHALL BE DIFFERENT THAN BARRICADE  
TYPE USED ON TAPER.

DRUM WITH LIGHT IF REQUIRED  
SEE ARTICLE 701.05(a)(5)

### TYPE III BARRICADE

\* 8 INCH TEMPORARY PAVEMENT MARKING IS TO BE MADE OF 2-TEMPORARY PAVEMENT MARKING 4 INCH, WHITE OF THE TYPE SPECIFIED.

**\*\* CALCULATE "L" AS FOLLOWS:  $L=W \times S$  WHERE**  
**W=WIDTH OF OFFSET (FEET)**  
**S=WORK ZONE SPEED LIMIT (MPH)**

\*\*\* WHERE VIABLE WITH STAGED CONSTRUCTION

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*R E V I S I O N S*

| DATE       | DESCRIPTION                                                                                |
|------------|--------------------------------------------------------------------------------------------|
| 03-01-2025 | REDUCED WORK AREA TO PROVIDE 3 FT<br>BUFFER TO ACTIVE LANES                                |
| 03-01-2023 | REVISED DRUM W/LIGHT ARTICLE NO.,<br>REVISED SKIP DASH, REVISED RAMP<br>MINIMUM WIDTH NOTE |
|            |                                                                                            |



## TEMPORARY GORE DETAILS

VERSION:  
2025-03

**STANDARD:**  
**E5-11**

**SHEET:**  
**1 OF 2**

APPROVED BY:

DATE: \_\_\_\_\_

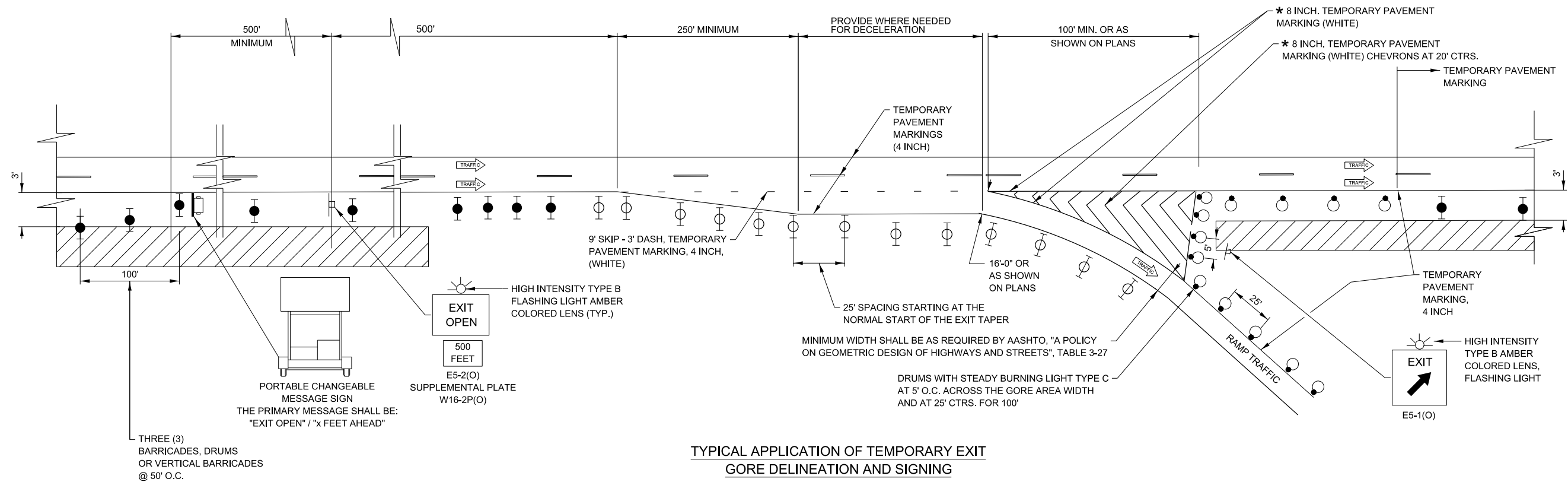
APPROVED BY:

*Manar Nashif*

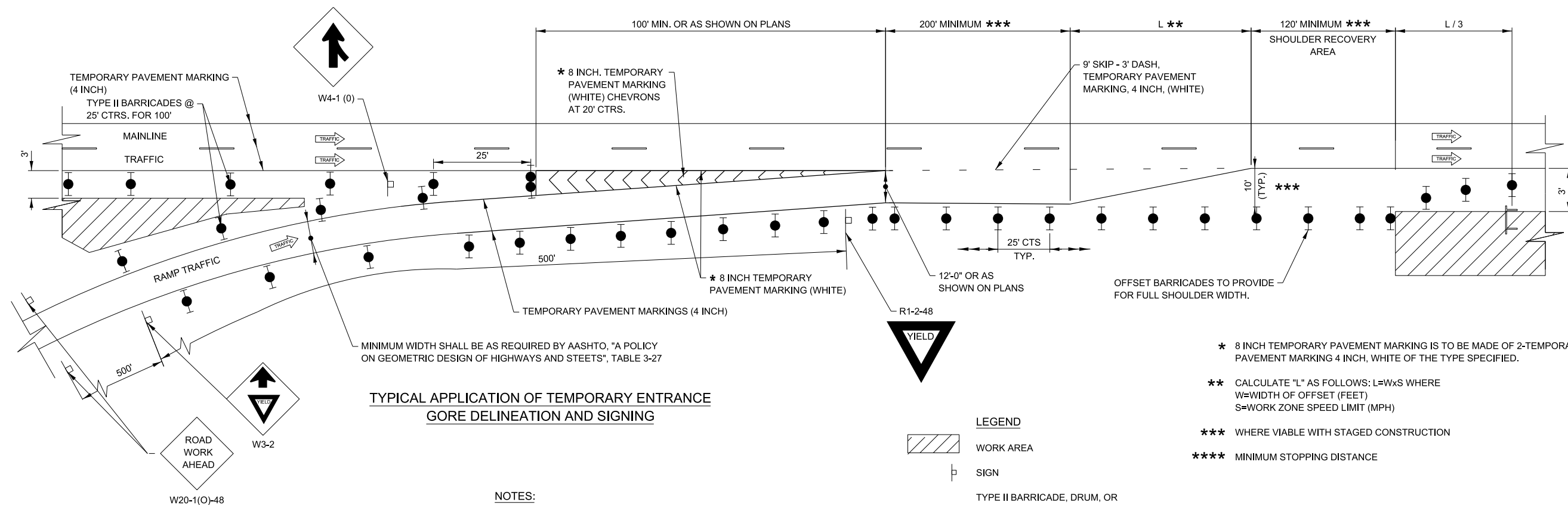
CHIEF ENGINEERING OFFICER

03/01/2025

CHIEF ENGINEERING OFFICER



TYPICAL APPLICATION OF TEMPORARY EXIT  
GORE DELINEATION AND SIGNING



TYPICAL APPLICATION OF TEMPORARY ENTRANCE  
GORE DELINEATION AND SIGNING

NOTES:

1. WHEN TEMPORARY PAVEMENT MARKING IS NOT REQUIRED, TEMPORARY GORES MAY BE DELINEATED BY DRUMS WITH STEADY BURN LIGHTS AT 25' C-C ACCORDING TO THE CONFIGURATIONS SHOWN.
2. THE TAPER LENGTHS ARE MINIMUMS. EXISTING ACCELERATION, DECELERATION, AND TAPER LENGTHS SHOULD BE PRESERVED TO THE EXTENT POSSIBLE.

LEGEND

- WORK AREA
- SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH LIGHT IF REQUIRED. SEE ARTICLE 701.05(a)(5)
- BARRICADE TYPE USED ON MAINLINE SHALL BE DIFFERENT THAN BARRICADE TYPE USED ON TAPER.
- DRUM WITH LIGHT IF REQUIRED SEE ARTICLE 701.05(a)(5)
- TYPE III BARRICADE

- \* 8 INCH TEMPORARY PAVEMENT MARKING IS TO BE MADE OF 2-TEMPORARY PAVEMENT MARKING 4 INCH, WHITE OF THE TYPE SPECIFIED.
- \*\* CALCULATE "L" AS FOLLOWS:  $L = W \times S$  WHERE  
W=WIDTH OF OFFSET (FEET)  
S=WORK ZONE SPEED LIMIT (MPH)
- \*\*\* WHERE VIABLE WITH STAGED CONSTRUCTION
- \*\*\*\* MINIMUM STOPPING DISTANCE

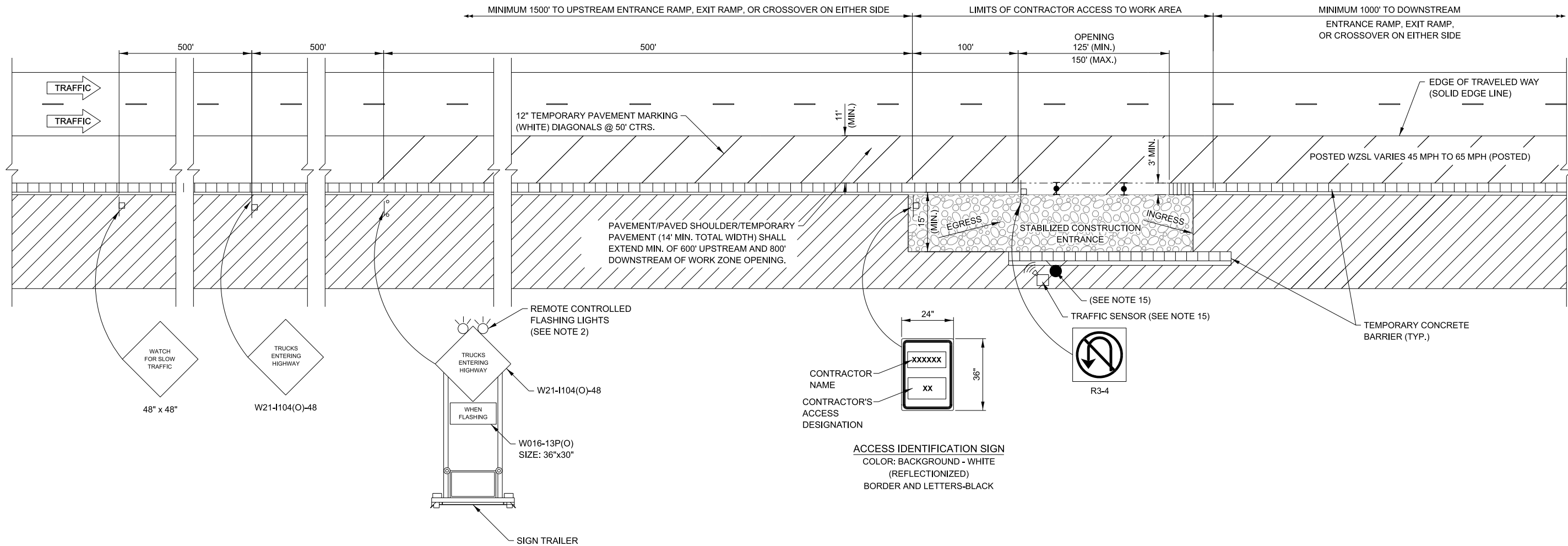
APPROVED BY: *Manar Nashif*  
CHIEF ENGINEERING OFFICER

DATE: 03/01/2025



TEMPORARY GORE DETAILS

VERSION: 2025-03 STANDARD: E5-11 SHEET: 2 OF 2



TYPE A : CONTRACTOR ACCESS TO WORK AREA WITH TEMPORARY CONCRETE BARRIER WITH FULL SHOULDER

NOTES:

- SIGNS DESIGNATED FOR THIS ACCESS TO WORK AREA SHALL BE COVERED OR TURNED AWAY FROM THE TRAFFIC WHEN THE ACCESS OPENINGS ARE NOT IN USE.
- THE FLASHING WARNING LIGHT SHALL MEET THE REQUIREMENTS OF ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS AND BE OPERATED REMOTELY. THE LIGHTS SHALL BE FLASHING ONLY WHEN A VEHICLE IS ENTERING THE ILLINOIS TOLLWAY.
- WHEN THREE LANES OR MORE ARE OPENED TO TRAFFIC, ADVANCE WARNING SIGNS AND ASSEMBLIES SHALL BE PROVIDED ON BOTH SIDES OF TRAVELED WAY.
- WHEN CONTRACTOR ACCESS TO WORK AREA IS ON OPPOSITE SIDE FROM SHOWN, ALL INSTALLATIONS ARE MIRROR IMAGE.
- FOR NIGHTTIME OPERATIONS, TEMPORARY LIGHTING OF CONSTRUCTION ACCESS TO WORK AREA SHALL BE PROVIDED.
- TEMPORARY PAVEMENT MARKINGS SHALL BE REPLACED AS OFTEN AS NECESSARY TO DELINEATE OPENINGS.
- IF POSSIBLE, LANE CLOSURES SHALL BE UTILIZED TO ELIMINATE THE MERGING OF CONSTRUCTION TRAFFIC INTO THROUGH TRAFFIC LANES.
- A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICES.
- "TRUCKS ENTERING HIGHWAY" SIGN MAY BE SUPPORTED BY OPTIONAL POST OR STAND MOUNTED DEVICES WHEN POSITIONED BEHIND TEMPORARY CONCRETE BARRIER.
- CONTRACTOR ACCESS LOCATIONS SHALL BE SPACED NO CLOSER THAN HALF A MILE BETWEEN AREAS, EXCEPT FOR BRIDGE WORK WHERE ONE ACCESS LOCATION MAY BE PROVIDED ON EACH SIDE OF THE STRUCTURE. AT THESE LOCATIONS, ONLY ONE ACCESS LOCATION AT A TIME WILL BE ALLOWED TO BE OPEN FOR USE.
- EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT WORK ZONE EXIT OPENING WILL BE PROHIBITED.
- ALL VEHICLES SHALL USE THEIR TURN SIGNALS TO WARN MOTORISTS WHEN ENTERING AND EXITING THE WORK ZONE OPENINGS.
- FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.
- IN WORK ZONES WITH NO POSITIVE PROTECTION, A TRUCK MOUNTED ATTENUATOR (TMA) SHALL BE PROVIDED WITH A BUFFER AREA BETWEEN THE FRONT OF THE TMA AND WORKERS OR EQUIPMENT. THE BUFFER AREA SHALL BE 200' UNLESS OTHERWISE DETERMINED. WHERE WORKERS OR EQUIPMENT ARE PRESENT BEYOND THE WORK AREA, AN ADDITIONAL TMA SHALL BE PROVIDED FOR EACH WORK AREA. A WORK AREA IS DEFINED AS STARTING AT THE END OF THE BUFFER AREA, EXTENDING 1000 FEET BEYOND THIS POINT.
- USE OF FLAGGER/SPOTTER IS OPTIONAL WHEN A TRAFFIC SENSOR IS PRESENT. TRAFFIC SENSOR IS NOT REQUIRED IF FLAGGER IS USED.

LEGEND

- FLAGGER
- SPOTTER
- CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS TOLLWAY STANDARD UNLESS NOTED
- TRAFFIC
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- DRUM WITH LIGHT IF REQUIRED SEE ARTICLE 701.05(a)(5)
- TRUCK MOUNTED ATTENUATOR (TMA) (ROLL WITH MOVING OPERATION)

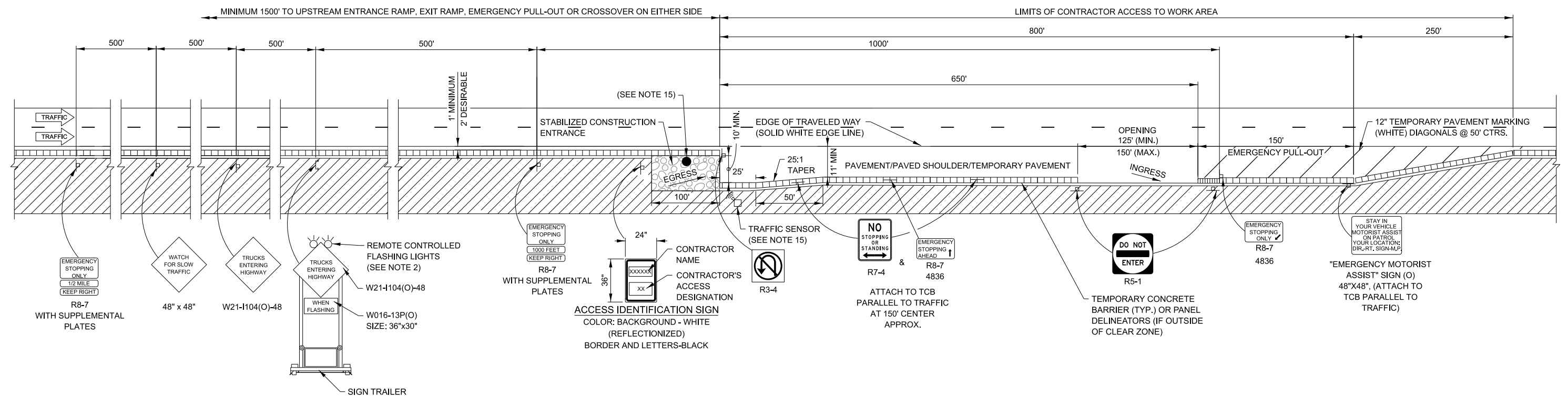
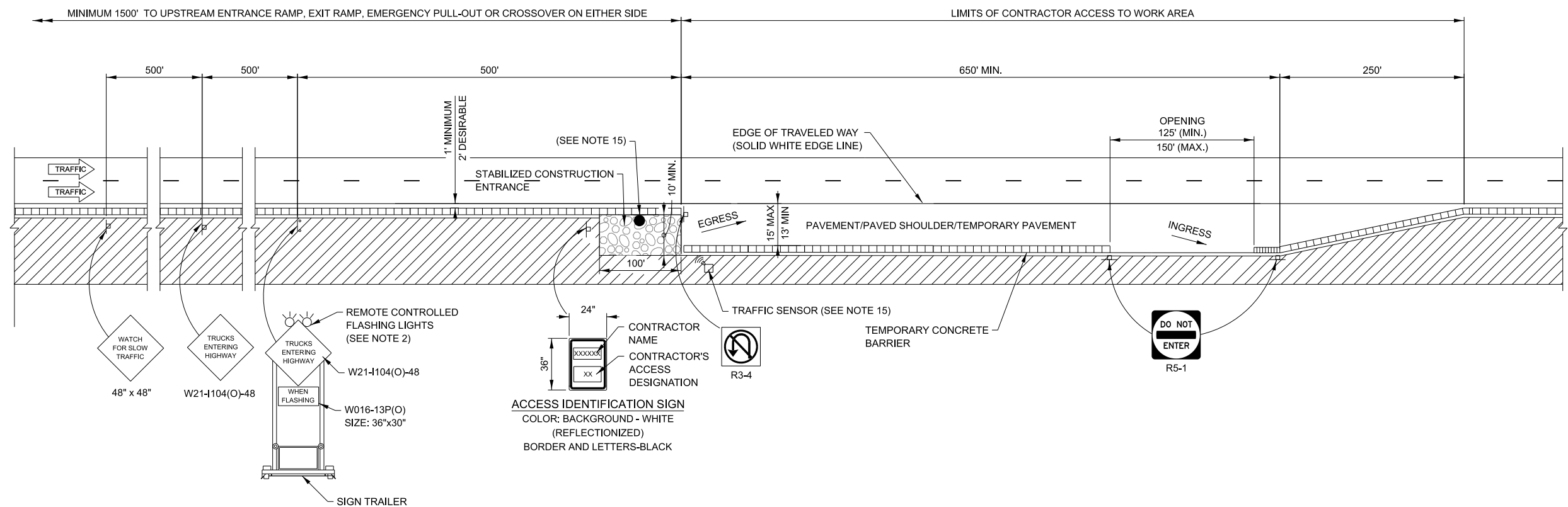
TAPER RATES

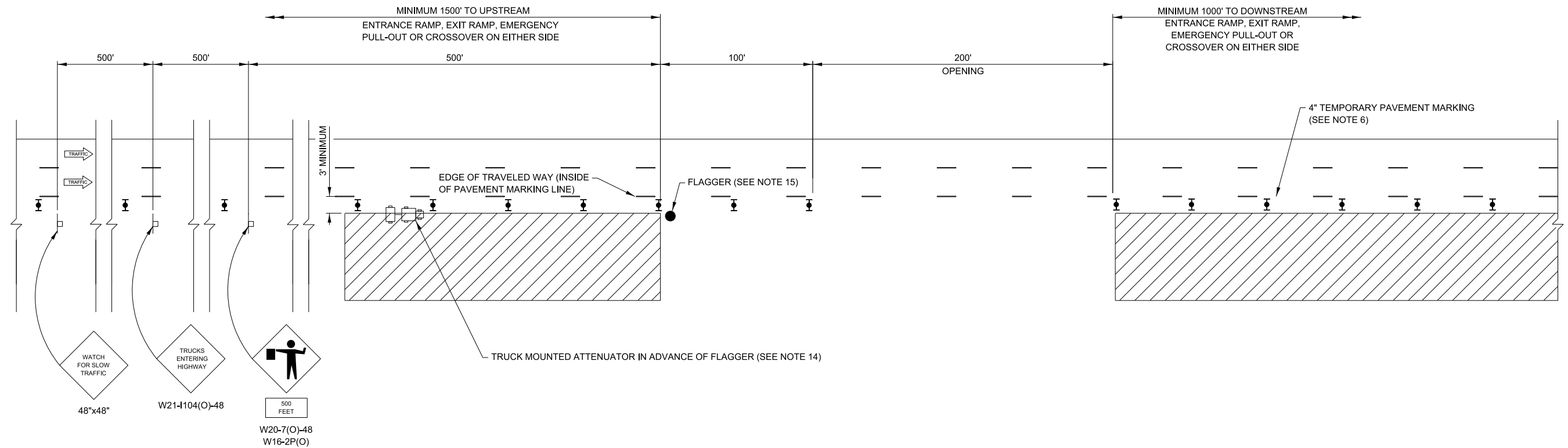
| WORK ZONE SPEED (mph) | SHY LINE (ft.) | BARRIER INSIDE SHY LINE | BARRIER AT OR BEYOND SHY LINE |
|-----------------------|----------------|-------------------------|-------------------------------|
| 65                    | 8.5            | 28:1                    | 19:1                          |
| 60                    | 8              | 26:1                    | 18:1                          |
| 55                    | 7              | 24:1                    | 16:1                          |
| 50                    | 6.5            | 21:1                    | 14:1                          |
| 45                    | 6              | 18:1                    | 12:1                          |
| 40                    | 5              | 16:1                    | 10:1                          |
| 35                    | 4.5            | 15:1                    | 9:1                           |
| 30                    | 4              | 13:1                    | 8:1                           |

| REVISIONS  |                                                           |
|------------|-----------------------------------------------------------|
| DATE       | DESCRIPTION                                               |
| 03-01-2025 | REDESIGNED CONSTRUCTION ENTRANCES                         |
| 03-01-2024 | ADDED NOTE 15 IN CALLOUT                                  |
| 03-01-2023 | REVISED DRUM W/LIGHT ARTICLE NO.                          |
| 03-01-2020 | CLARIFIED TMA REQUIREMENTS & UPDATED BARRICADE LIGHT REQ. |



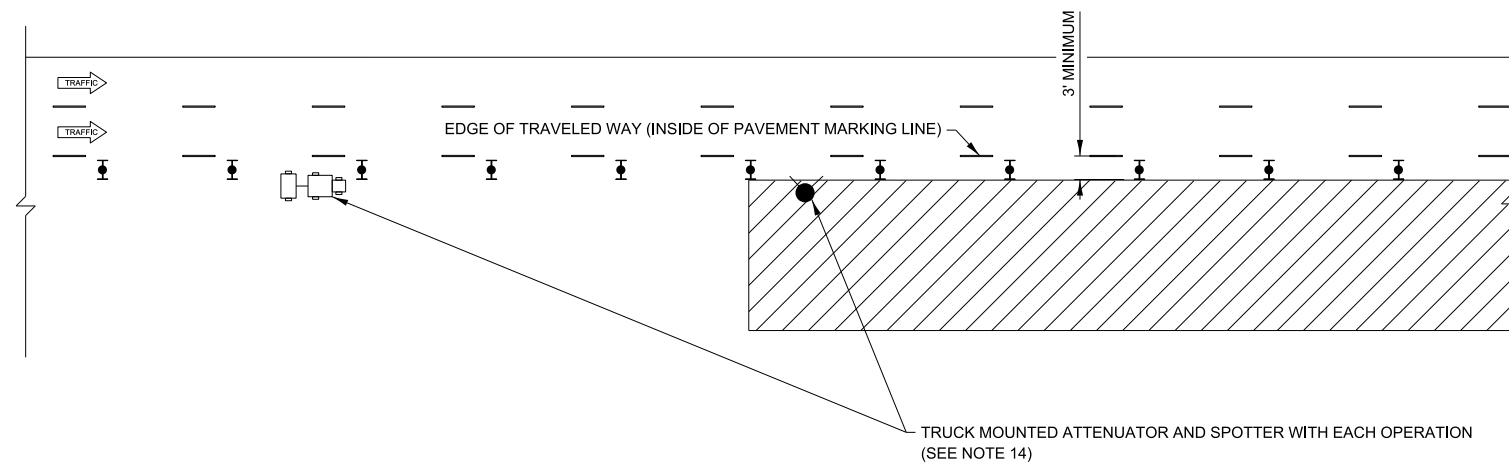
CONTRACTOR ACCESS TO WORK AREA



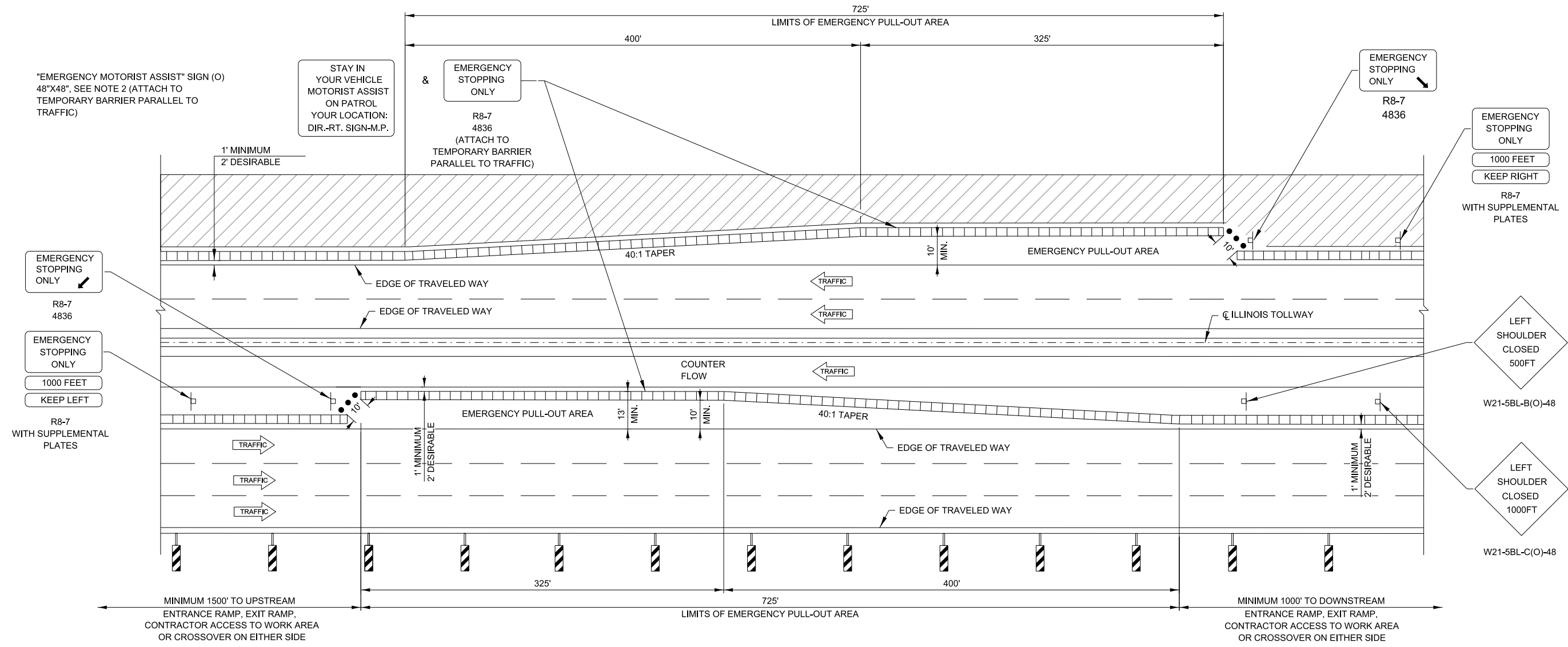


#### CONTRACTOR ACCESS TO WORK AREA WITHOUT TEMPORARY CONCRETE BARRIER

- LEGEND**
- FLAGGER
  - SPOTTER
  - CONSTRUCTION SIGN ON SUPPORT PER  
ILLINOIS TOLLWAY STANDARD UNLESS  
NOTED
  - TRAFFIC DIRECTION OF TRAFFIC FLOW
  - WORK AREA
  - DRUM WITH LIGHT IF REQUIRED  
SEE ARTICLE 701.05(a)(5)
  - TRUCK MOUNTED ATTENUATOR (TMA)  
(ROLL WITH MOVING OPERATION)



#### SPOTTER AND TMA AT WORK AREA



EMERGENCY PULL-OUT AREA

LEGEND

- TEMPORARY CONCRETE BARRIER WITH BARRIER DELINEATORS ON TRAFFIC SIDE
- VERTICAL PANELS @ 100 FT CENTERS ALONG ROADWAY (TANGENT) AND 50 FT CENTERS ALONG TAPERS.
- WORK AREA
- FLEXIBLE DELINEATOR POSTS
- DIRECTION OF TRAFFIC FLOW
- CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS TOLLWAY STANDARD UNLESS NOTED.

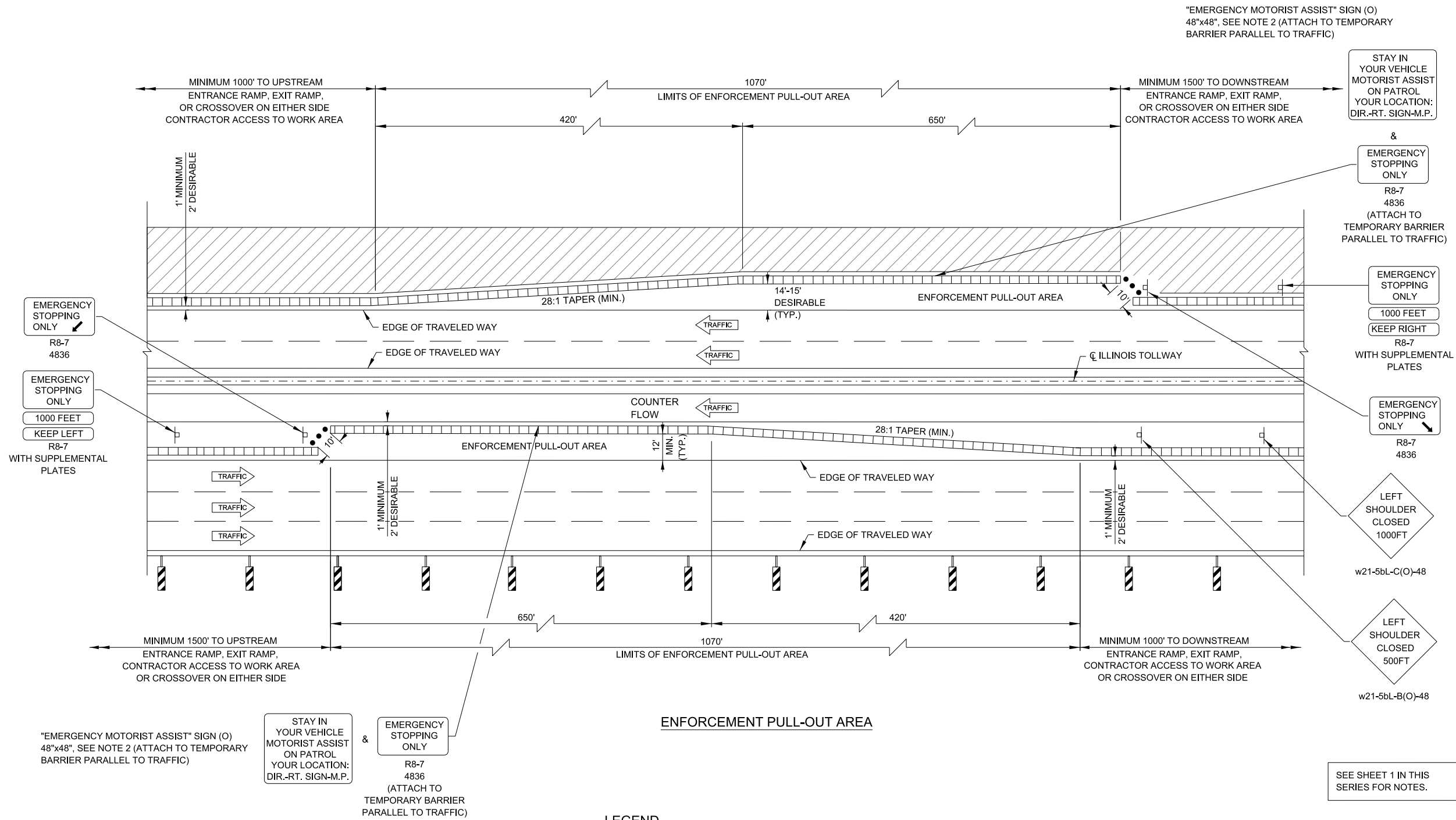
NOTES:

- PULL-OUT AREA SPACED PER CONTRACT DOCUMENTS.
- ENGINEER TO DETERMINE EMERGENCY ASSIST SIGN'S INFORMATION FOR DIRECTION - ROUTE SIGN - MILEPOST ONCE THE LOCATION HAS BEEN ACCEPTED.
- A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.
- FLEXIBLE DELINEATORS TO BE 48" IN HEIGHT ABOVE BASE, TUBULAR POSTS (ORANGE) WITH 360 DEGREES FULL VIEW TWO-4" FLORESCENT ORANGE REFLECTORIZED TAPE BANDS. FLEXIBLE DELINEATORS SHALL BE CAPABLE OF BENDING UNDER REPEATED IMPACTS AND RETURN TO AN UPRIGHT POSITION WITHOUT DAMAGE TO THE IMPACTING VEHICLE OR THE DELINEATORS. THE DELINEATOR'S BASE SHALL BE SECURELY MOUNTED TO THE ROADWAY SURFACE. THE POSTS SHALL BE REMOVABLE FROM THE BASES TO PERMIT REPLACEMENT OF DAMAGED UNITS AS REQUIRED.

| REVISIONS  |                                     |
|------------|-------------------------------------|
| DATE       | DESCRIPTION                         |
| 03-01-2025 | REDUCED WORK AREA BEHIND TCB        |
| 03-01-2020 | REMOVED LIGHTS FROM VERTICAL PANELS |
| 03-11-2015 | REVISED NOTES                       |
| 03-31-2014 | ADDED ENFORCEMENT PULL-OUT AREA     |



PULL-OUT AREA



LEGEND

- TEMPORARY CONCRETE BARRIER WITH BARRIER  
DELINEATORS ON TRAFFIC SIDE
- VERTICAL PANELS @ 100 FT CENTERS ALONG ROADWAY  
(TANGENT) AND 50 FT CENTERS ALONG TAPERS.
- WORK AREA
- FLEXIBLE DELINEATOR POSTS
- DIRECTION OF TRAFFIC FLOW
- CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS  
TOLLWAY STANDARD UNLESS NOTED.



PULL-OUT AREA