





GENERAL NOTES

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH DIGGERS HOTLINE AND AFFECTED UTILITIES TO FIELD LOCATE UTILITIES PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE SEPARATELY.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED BY DIRECTION OF ENGINEER WITH THE FOLLOWING FINISHING ITEMS: TOPSOIL, SOD LAWN AND FERTILIZER. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 3 FEET BEYOND THE SLOPE INTERCEPT SHOWN ON THE PLANS.

A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. MATCH EXISTING PAVEMENT ELEVATIONS AT SAWED JOINTS.

SAWCUT OF ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PAVING DETAILS OR AS DIRECTED BY THE ENGINEER.

INLET PROTECTION SHALL BE PLACED AT ALL INLET LOCATIONS ACCEPTING STORM WATER FROM THE PROJECT AREA OR AS DIRECTED BY THE ENGINEER.

CONTRACTOR TO FIELD VERIFY ALL INLET & CATCH BASIN LOCATIONS PRIOR TO EROSION CONTROL INSTALLATION.

ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED AS NEEDED AND/OR DIRECTED BY THE ENGINEER. ALL EXISTING TYPE II SIGN THAT NEED TO BE COVERED WILL BE PAID FOR AS 'TRAFFIC CONTROL COVERING SIGNS TYPE II'. NO WORKING LIGHTS SHALL BE VISIBLE ON A LAID DOWN SIGN.

CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND SEWRPC AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

OTHER CONTACTS

WISDOT DESIGN  
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STANDARD ABBREVIATIONS

|        |                                                     |
|--------|-----------------------------------------------------|
| AGG    | AGGREGATE                                           |
| ASPH   | ASPHALTIC                                           |
| BM     | BENCHMARK                                           |
| BP     | BEGIN PROJECT                                       |
| C/L    | CENTER LINE OR CONSTRUCTION LINE                    |
| CONC   | CONCRETE                                            |
| CP     | CONTROL POINT                                       |
| CY     | CUBIC YARD                                          |
| D      | DEGREE OF CURVE                                     |
| DWF    | DETECTABLE WARNING FIELD                            |
| EB     | EASTBOUND                                           |
| ELEV   | ELEVATION                                           |
| EP     | END PROJECT                                         |
| HMA    | HOT MIX ASPHALT                                     |
| L      | LENGTH OF CURVE                                     |
| LT     | LEFT                                                |
| MIN    | MINIMUM                                             |
| M/L    | MATCHLINE                                           |
| NB     | NORTHBOUND                                          |
| NC     | NORMAL CROWN                                        |
| PAVT   | PAVEMENT                                            |
| PC     | POINT OF CURVE                                      |
| PCC    | POINT OF COMPOUND CURVE                             |
| PI     | POINT OF INTERSECTION                               |
| PT     | POINT OF TANGENT                                    |
| R      | RADIUS OF CURVE                                     |
| R/L    | REFERENCE LINE                                      |
| R/W    | RIGHT OF WAY                                        |
| RC     | REVERSE CROWN                                       |
| RT     | RIGHT                                               |
| SB     | SOUTHBOUND                                          |
| SDD    | STANDARD DETAIL DRAWING                             |
| SEWRPC | SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION |
|        | SQUARE FOOT                                         |
| SF     | SLOPE INTERCEPT                                     |
| SI     | STATION                                             |
| STA    | SQUARE YARD                                         |
| SY     | TANGENT LENGTH                                      |
| T      | TYPICAL                                             |
| TYP    | WESTBOUND                                           |
| WB     |                                                     |

ORDER OF DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- CURB RAMP DETAILS
- FTMS PLANS
- PERMANENT SIGNING
- TRAFFIC SIGNALS
- PAVEMENT MARKING REMOVALS
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOURS
- ALIGNMENT DETAILS

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

| PAVEMENT TYPE | TOTAL LAYER PAVEMENT | LAYERS                   |
|---------------|----------------------|--------------------------|
| 4 MT 58-28 V  | 4 1/4"               | 1 3/4" UPPER LAYER       |
| 3 MT 58-28 V  |                      | 2 1/2" LOWER LAYER       |
| 4 MT 58-28 V  | 3 1/2"               | 1 3/4" UPPER LAYER       |
| 4 MT 58-28 V  |                      | 1 3/4" LOWER LAYER       |
| 4 MT 58-28 V  | 6 3/4"               | 1 3/4" UPPER LAYER       |
| 3 MT 58-28 V  |                      | 2 1/2" UPPER-LOWER LAYER |
| 3 MT 58-28 V  |                      | 2 1/2" LOWER-LOWER LAYER |

AP1 & AP2

AP3 & AP4

AP5

UTILITY CONTACTS

AT&T WISCONSIN - COMMUNICATION LINE  
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PHONE: (414) 459-3561  
EMAIL: cschmuki@midwestfibernetworks.com

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1320 N. DR. MARTIN LUTHER KING JR DRIVE  
MILWAUKEE, WI 53212  
PHONE: (414) 908-4822  
EMAIL: Charles.brasile@charter.com

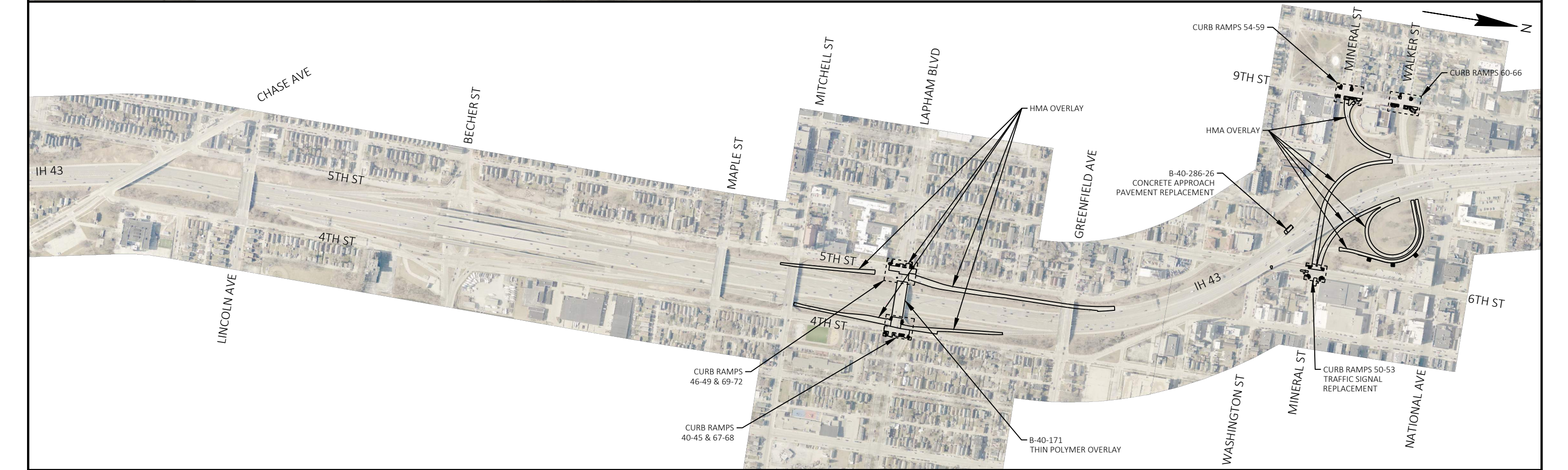
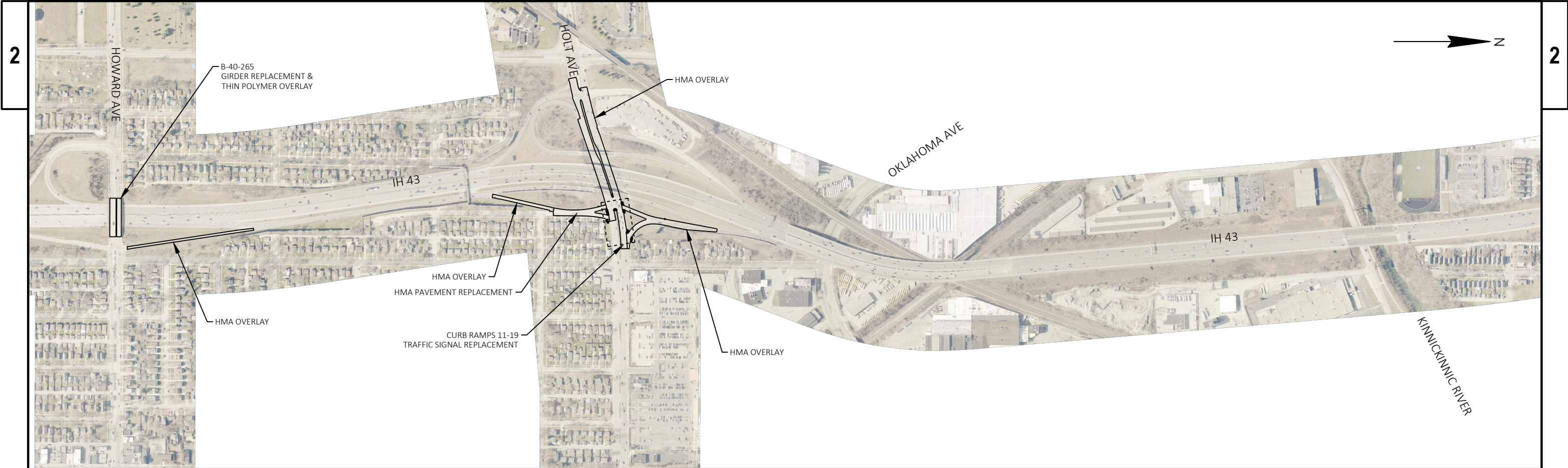
WE ENERGIES - ELECTRICITY  
JAKE CHRISTENSEN  
W140 N9100 LILLY RD  
MENOMONEE FALLS, WI 53051  
PHONE: (262) 502-6819  
DISPATCH: (800) 662-4797  
EMAIL: Jacob.Christensen@we-energies.com

WE ENERGIES - GAS/PETROLEUM  
JEANNETTE SCHULTZ  
500 S 116TH STREET  
WEST ALLIS, WI 53214  
PHONE: (414) 627-3046  
DISPATCH: (800) 261-5325  
EMAIL: Jeannette.Schultz@we-energies.com



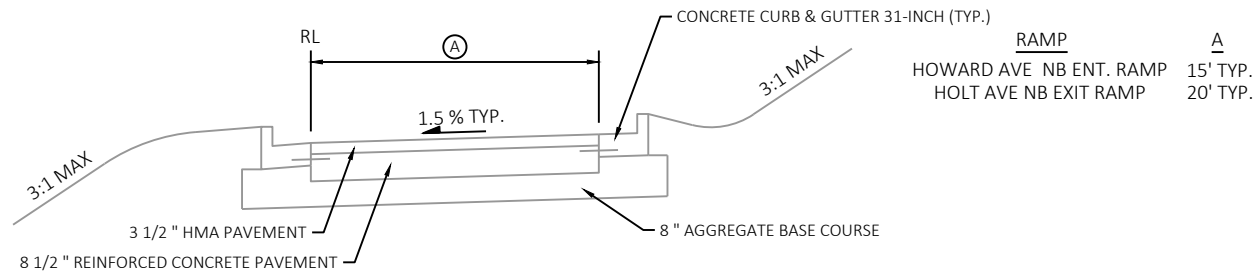
Dial 811 or (800)242-8511  
www.DiggersHotline.com



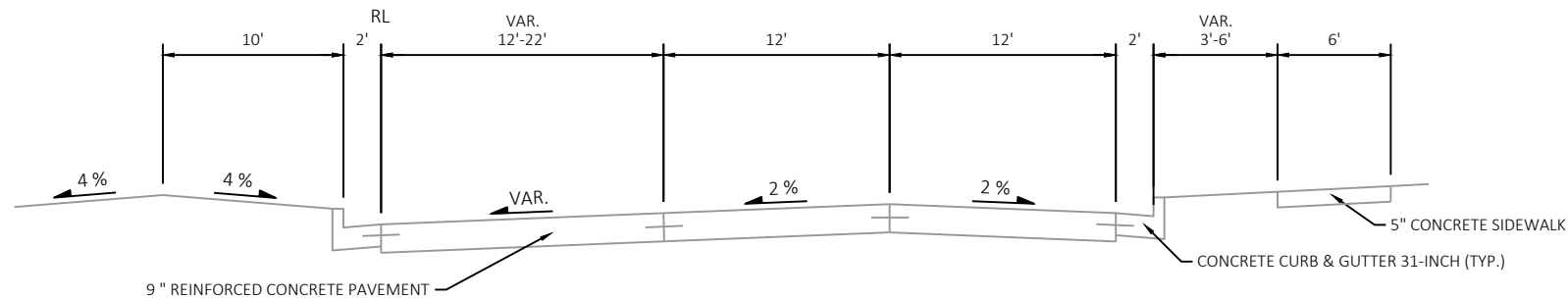


|                        |            |                   |                  |         |   |
|------------------------|------------|-------------------|------------------|---------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | PROJECT OVERVIEW | SHEET 3 | E |
|------------------------|------------|-------------------|------------------|---------|---|

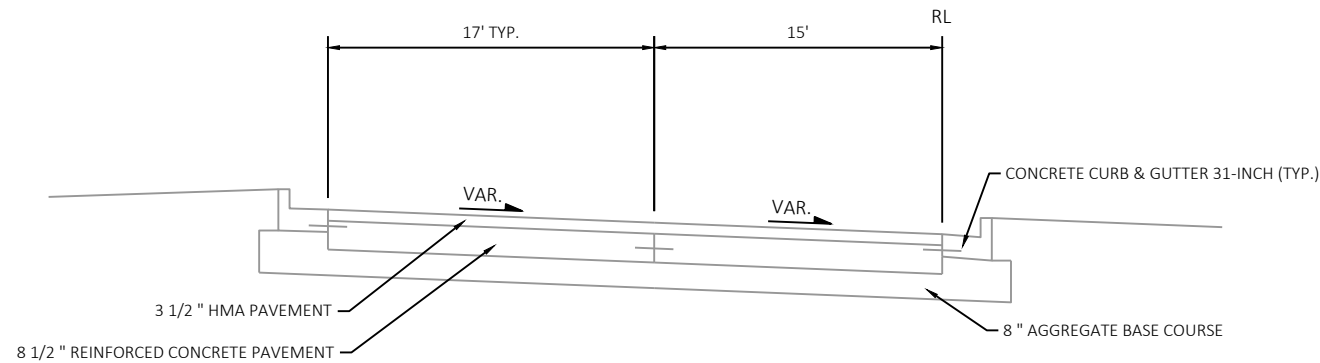




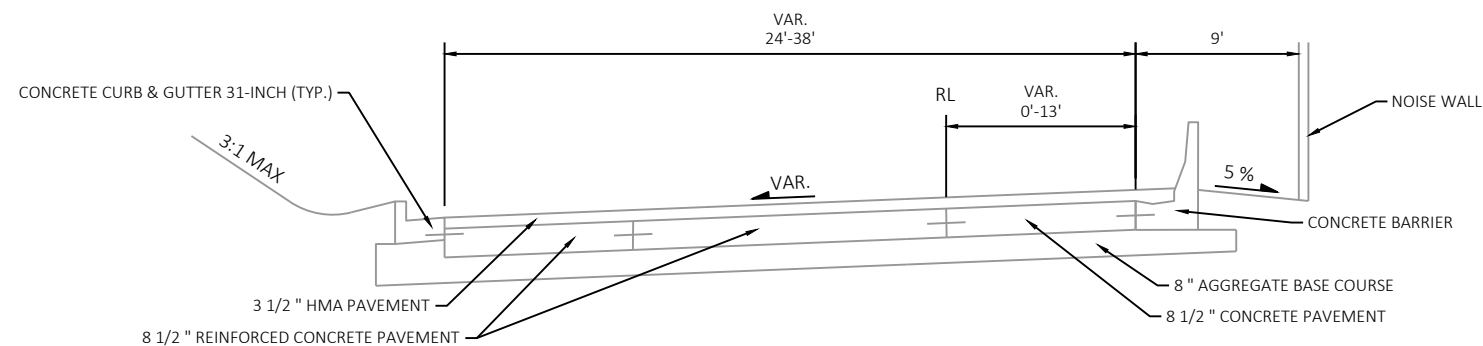
**EXISTING TYPICAL SECTION**  
HOWARD AVE NB ENTRANCE RAMP  
HOLT AVE NB EXIT RAMP STA 90+83 - 94+74 (HOLTNB2)



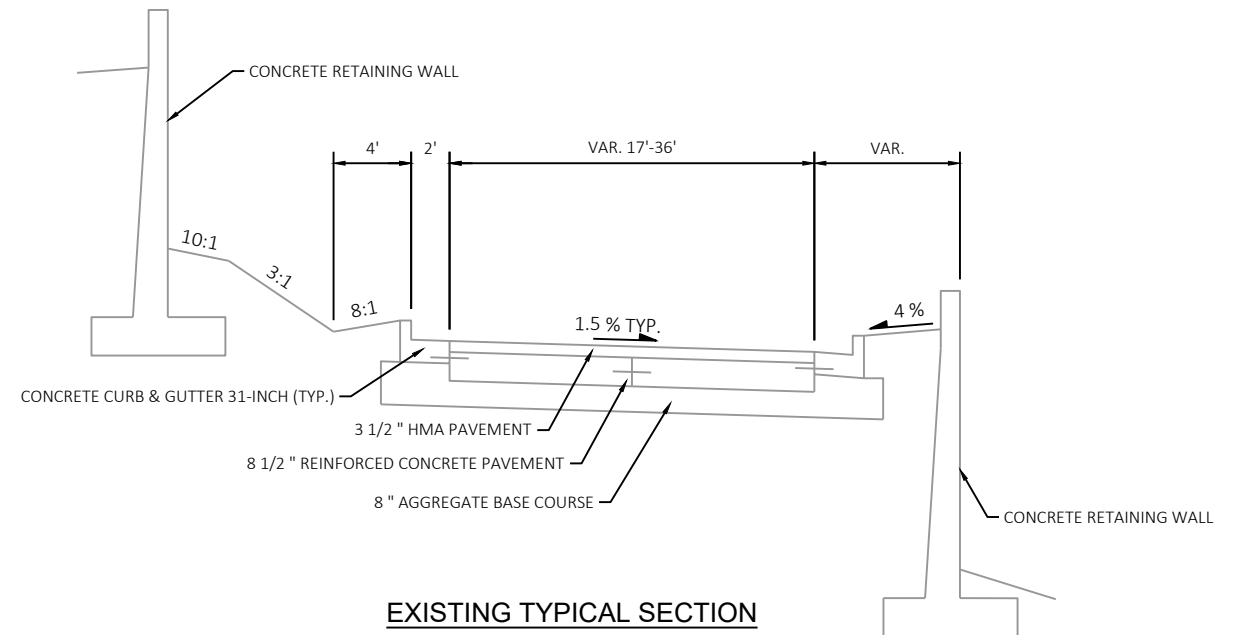
**EXISTING TYPICAL SECTION**  
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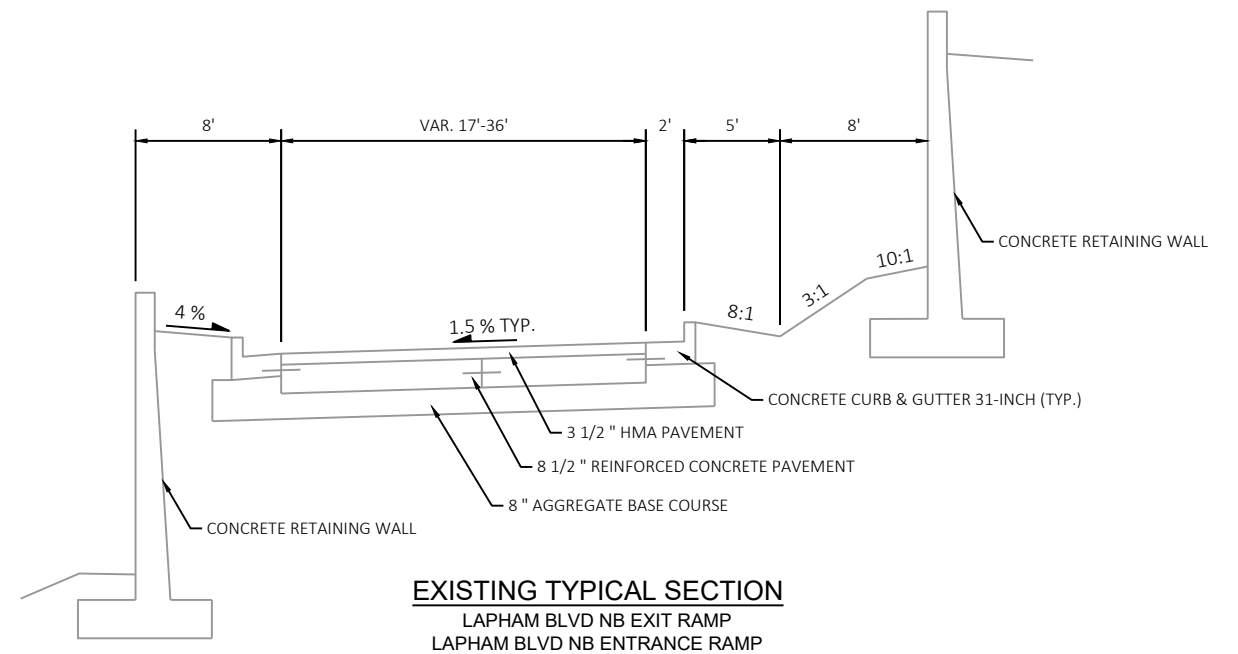
**EXISTING TYPICAL SECTION**  
HOLT AVE NB ENTRANCE RAMP STA 99+05 - 101+60 (HOLTNB3)



**EXISTING TYPICAL SECTION**  
HOLT AVE NB ENTRANCE RAMP STA 101+60 - 105+30 (HOLTNB3)

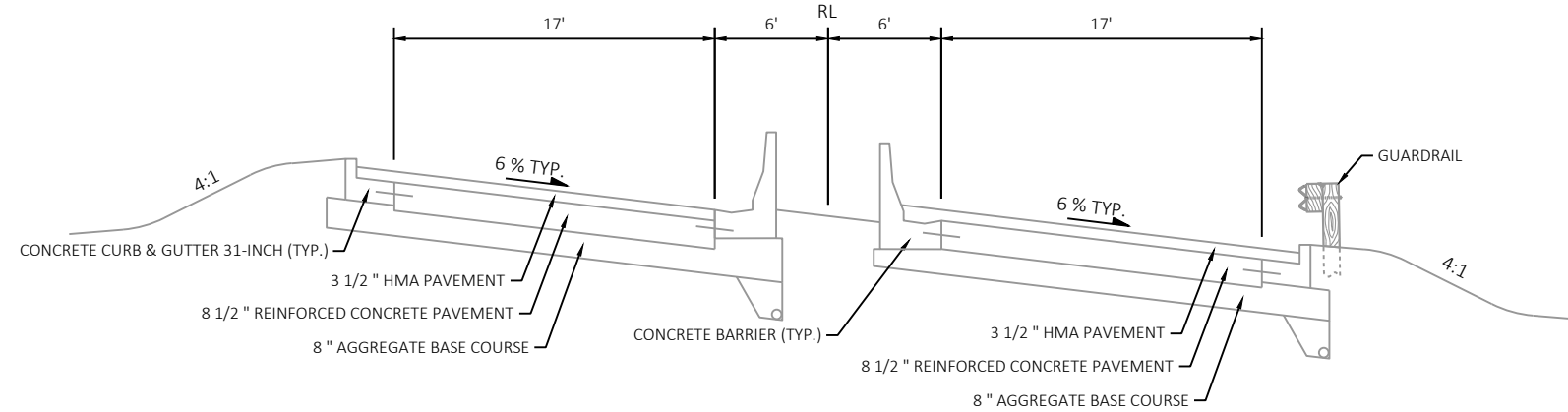


**EXISTING TYPICAL SECTION**  
LAPHAM BLVD SB ENTRANCE RAMP  
LAPHAM BLVD SB EXIT RAMP

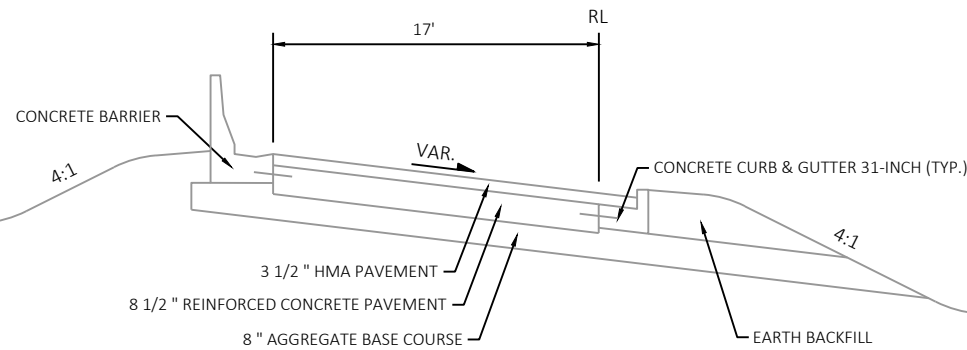


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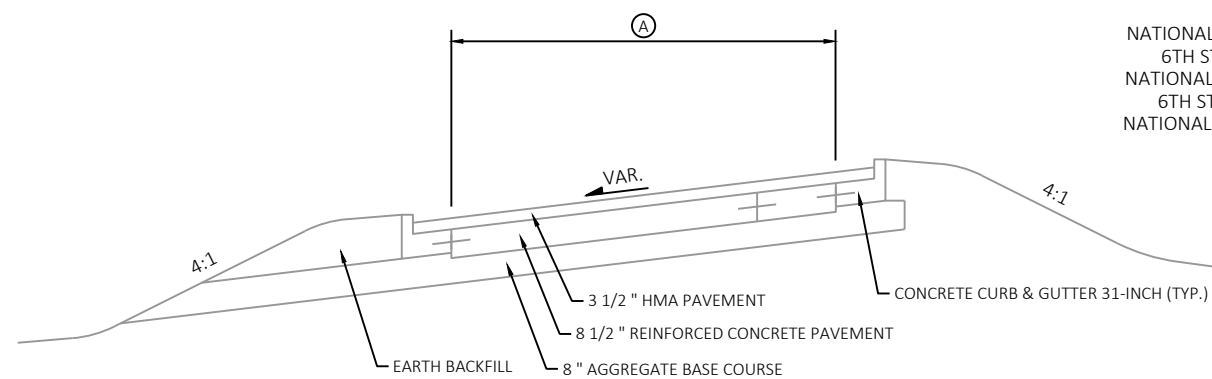




**EXISTING TYPICAL SECTION**  
NATIONAL AVE NB ENTRANCE/EXIT RAMP STA 16+15 - 20+00 (NATNB2)

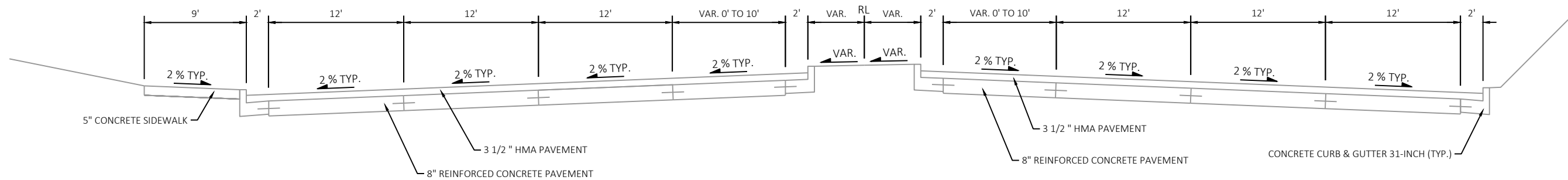


**EXISTING TYPICAL SECTION**  
NATIONAL AVE NB EXIT RAMP STA 6+55 - 11+08 (NATNB1)

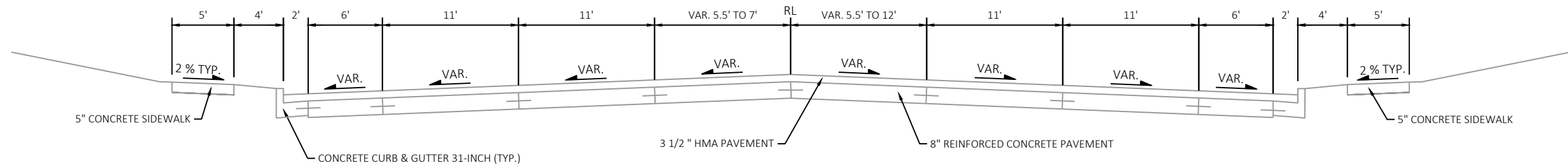


**EXISTING TYPICAL SECTION**  
NATIONAL AVE SB EXIT RAMP  
6TH ST SB EXIT RAMP  
NATIONAL AVE SB ENTRANCE RAMP  
6TH ST NB ENTRANCE RAMP  
NATIONAL AVE NB ENTRANCE RAMP STA 20+00 - 26+10 (NATNB3)

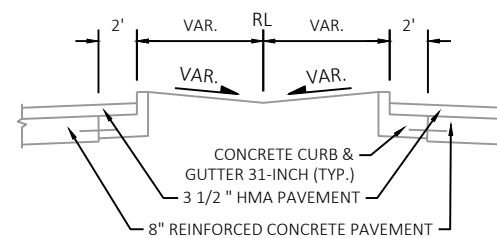
| <u>RAMP</u>               | <u>A</u> |
|---------------------------|----------|
| NATIONAL AVE SB EXIT RAMP | 16'-24'  |
| 6TH ST SB EXIT RAMP       | 16'-24'  |
| NATIONAL AVE SB ENT. RAMP | 15' TYP. |
| 6TH ST NB ENT. RAMP       | 12'-24'  |
| NATIONAL AVE NB ENT. RAMP | 12'-17'  |



**EXISTING TYPICAL SECTION**  
HOLT AVE

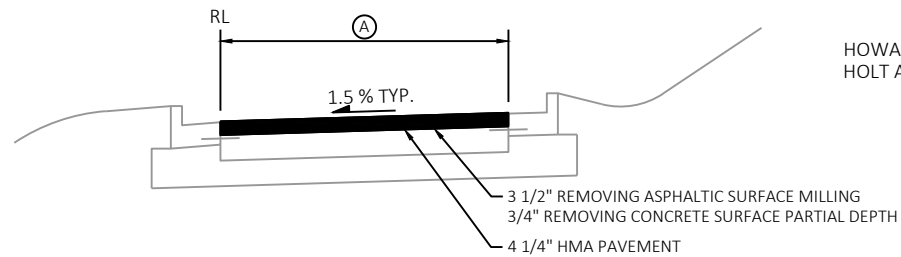


**EXISTING TYPICAL SECTION**  
W LAPHAM BLVD

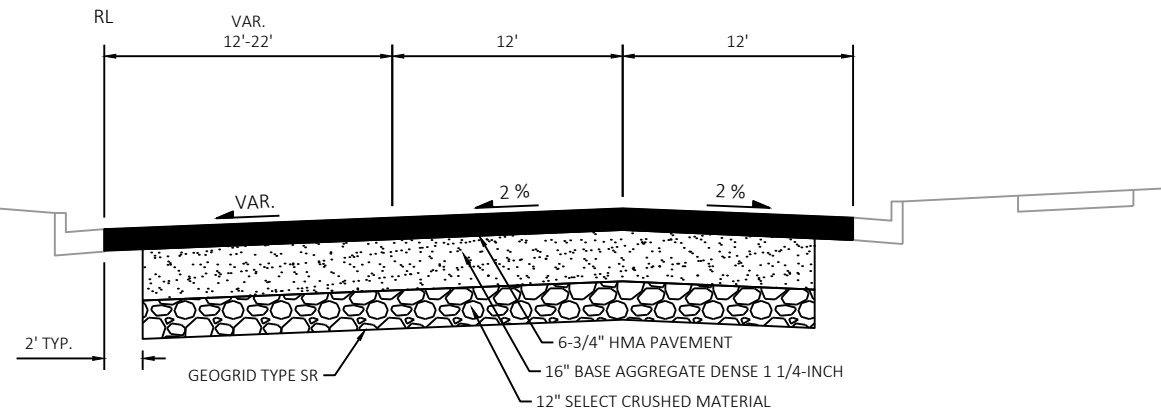


**EXISTING TYPICAL SECTION**  
W LAPHAM BLVD MEDIAN ISLAND

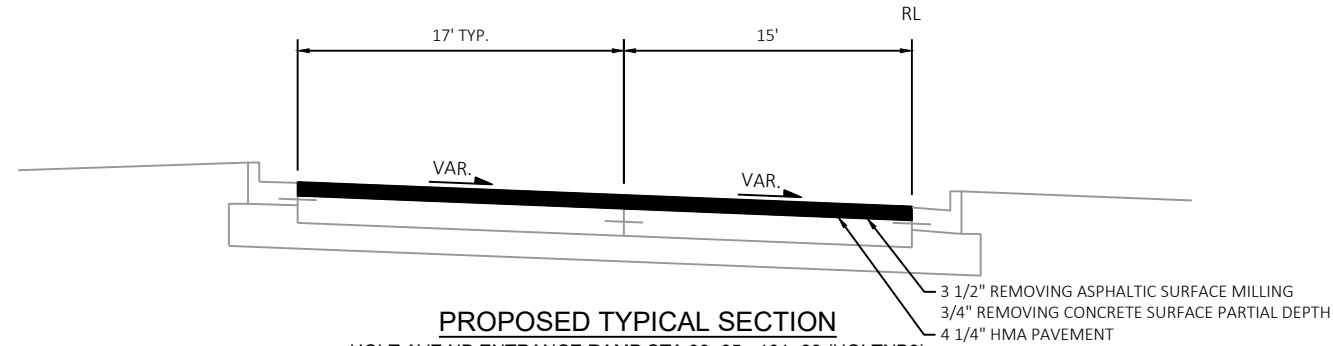




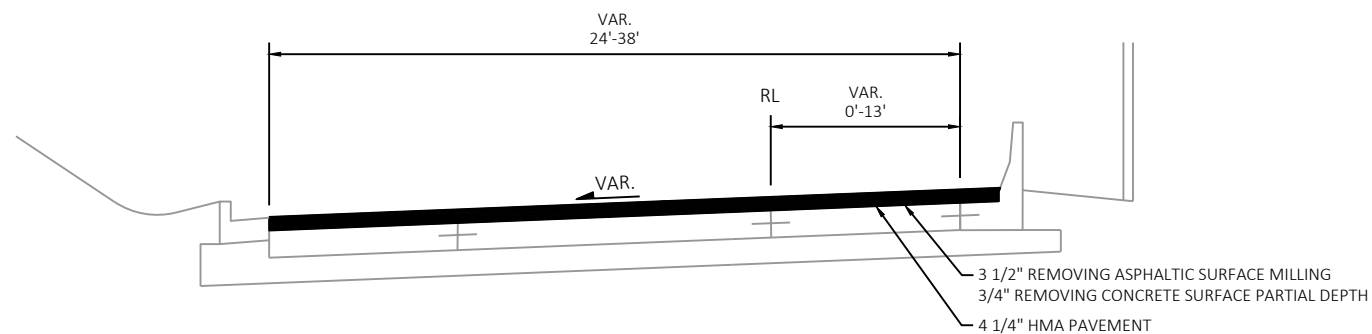
**PROPOSED TYPICAL SECTION**  
HOWARD AVE NB ENTRANCE RAMP  
HOLT AVE NB EXIT RAMP STA 90+83 - 94+74 (HOLTNB2)



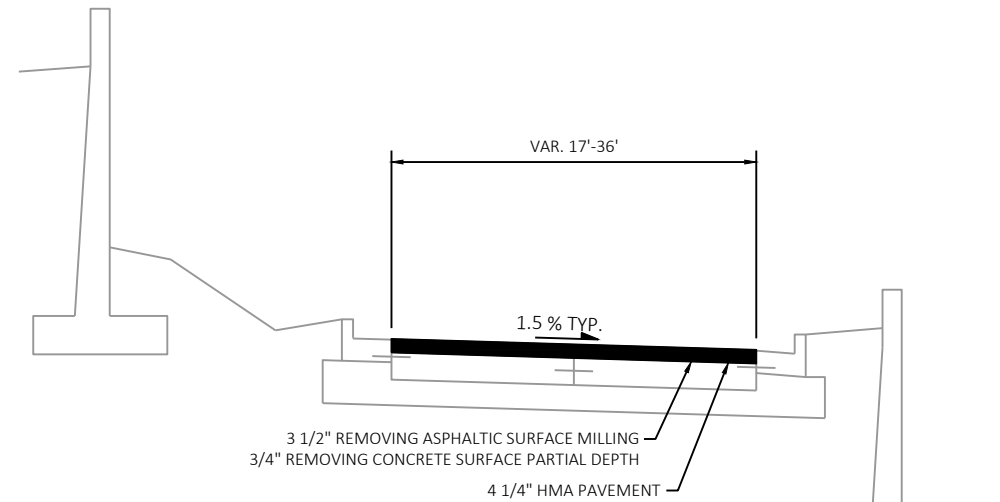
**PROPOSED TYPICAL SECTION**  
HOLT AVE NB EXIT RAMP STA 94+74 - 98+05 (HOLTB2)



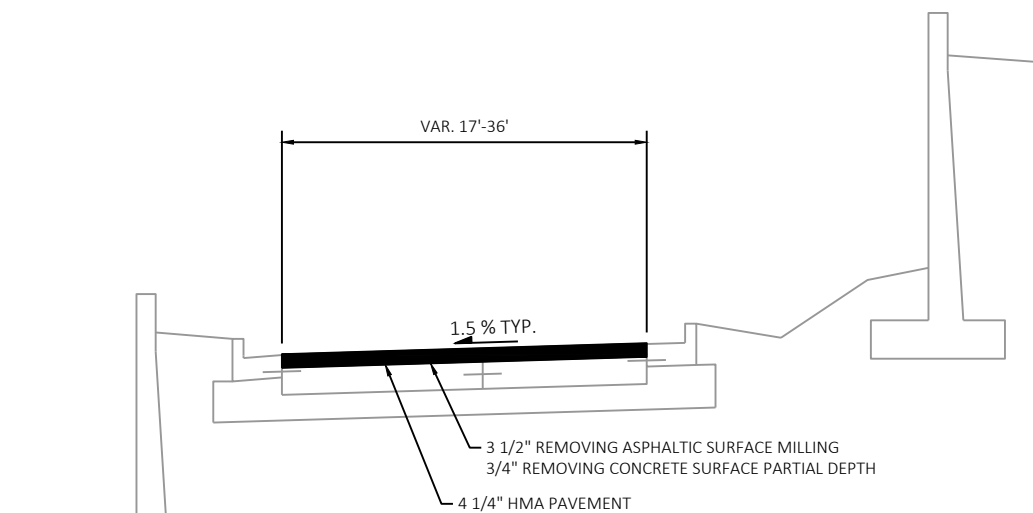
**PROPOSED TYPICAL SECTION**  
HOLT AVE NB ENTRANCE RAMP STA 99+05 - 101+60 (HOLTNB3)



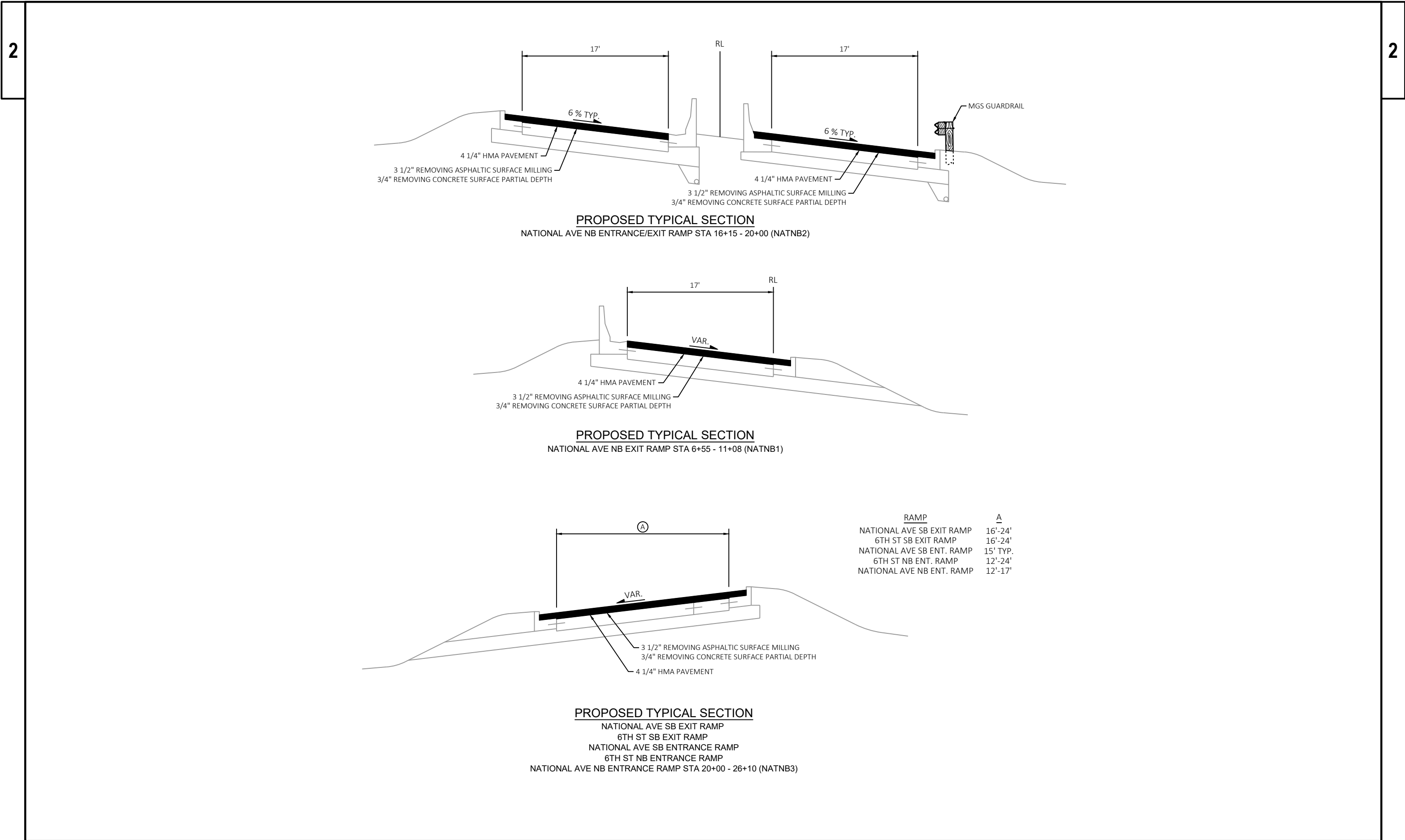
**PROPOSED TYPICAL SECTION**  
HOLT AVE NB ENTRANCE RAMP STA 101+60 - 105+30 (HOLTNB3)

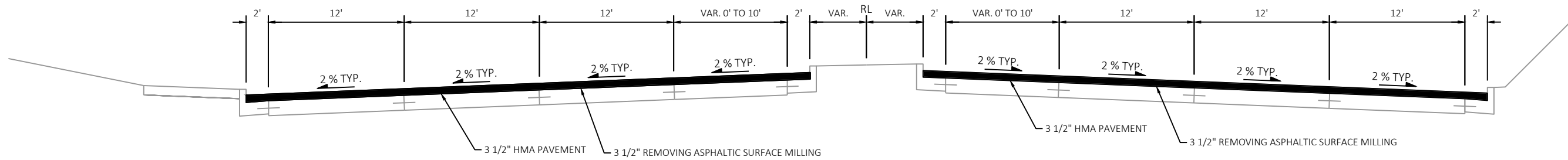


**PROPOSED TYPICAL SECTION**  
LAPHAM BLVD SB ENTRANCE RAMP  
LAPHAM BLVD SB EXIT RAMP

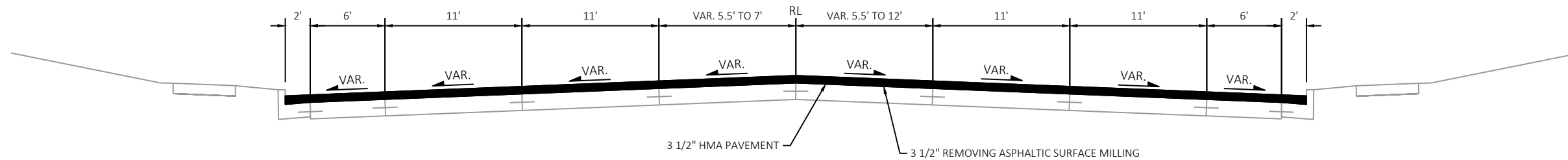


**PROPOSED TYPICAL SECTION**  
LAPHAM BLVD NB EXIT RAMP  
LAPHAM BLVD NB ENTRANCE RAMP

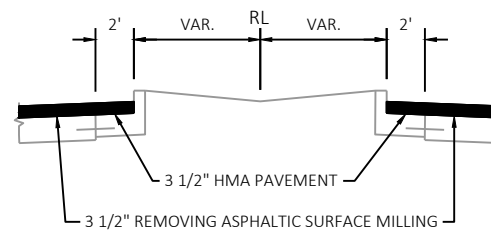




**PROPOSED TYPICAL SECTION**  
HOLT AVE

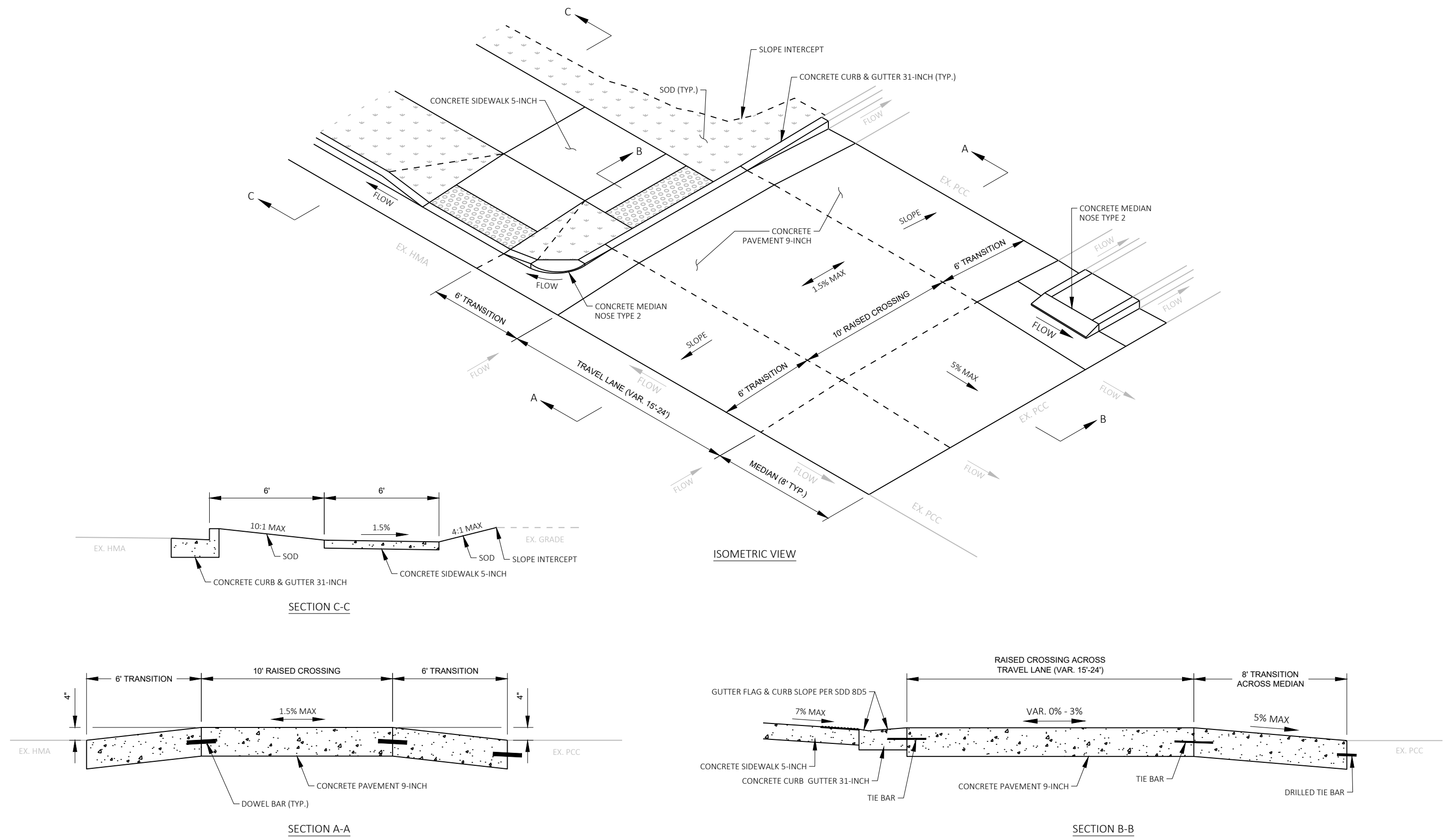


**PROPOSED TYPICAL SECTION**  
W LAPHAM BLVD



**PROPOSED TYPICAL SECTION**  
W LAPHAM BLVD MEDIAN ISLAND



**RAISED PEDESTRIAN CROSSING**

S. 9TH ST & W. MINERAL ST  
S. 9TH ST & W. WALKER ST

PROJECT NO: 1228-09-76

HWY: IH 43

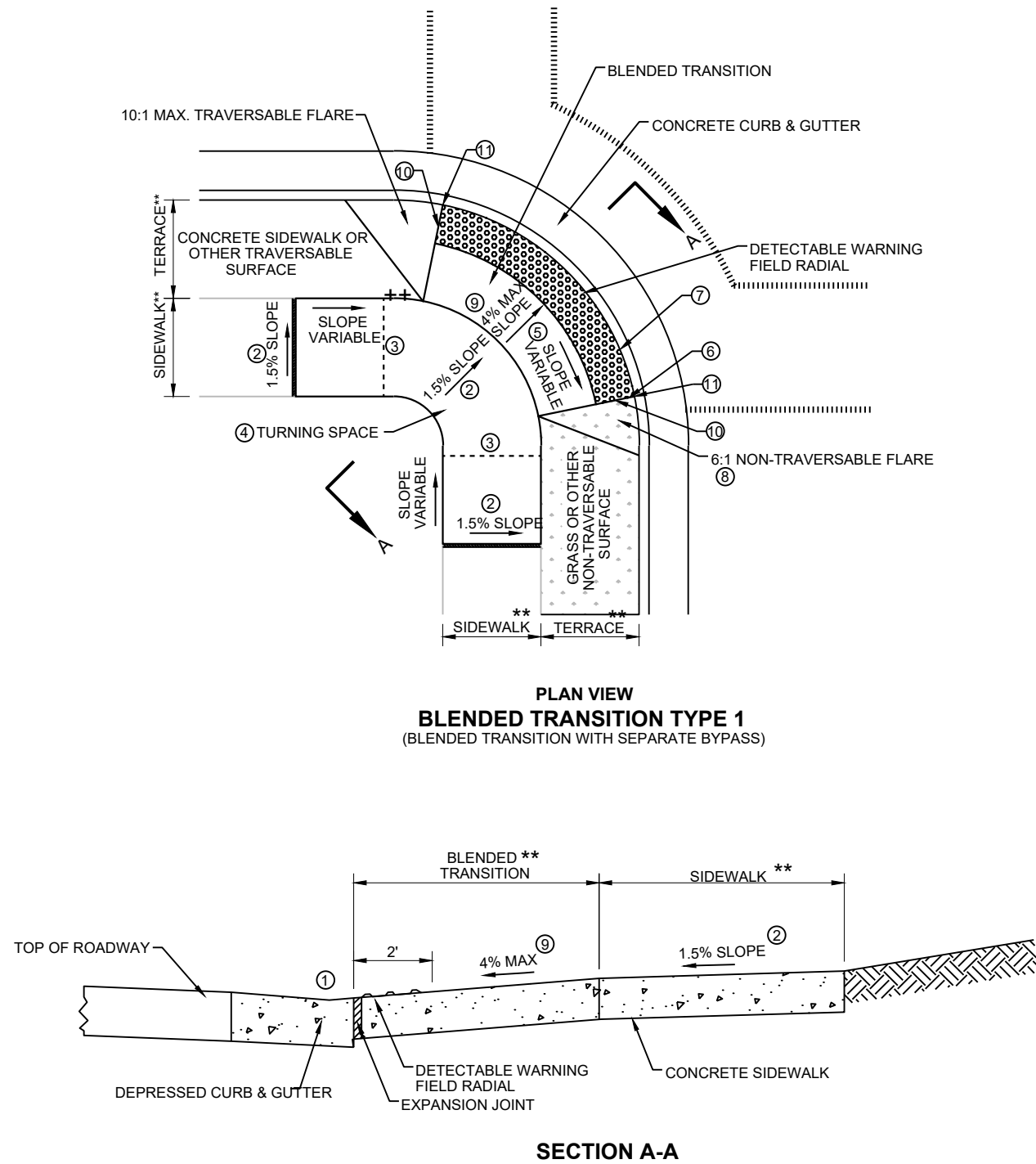
COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SHEET

10

E



**BLENDED TRANSITION CURB RAMP**  
RAMP #46

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF BLENDED TRANSITION ACCESS AREAS

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE BLENDED TRANSITION.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS 'CURB RAMP DETECTABLE WARNING FIELD RADIAL'. THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED BY THE LINEAR FOOT AS 'CONCRETE CURB PEDESTRIAN'. CONCRETE SIDEWALK IN THE BLENDED TRANSITION AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

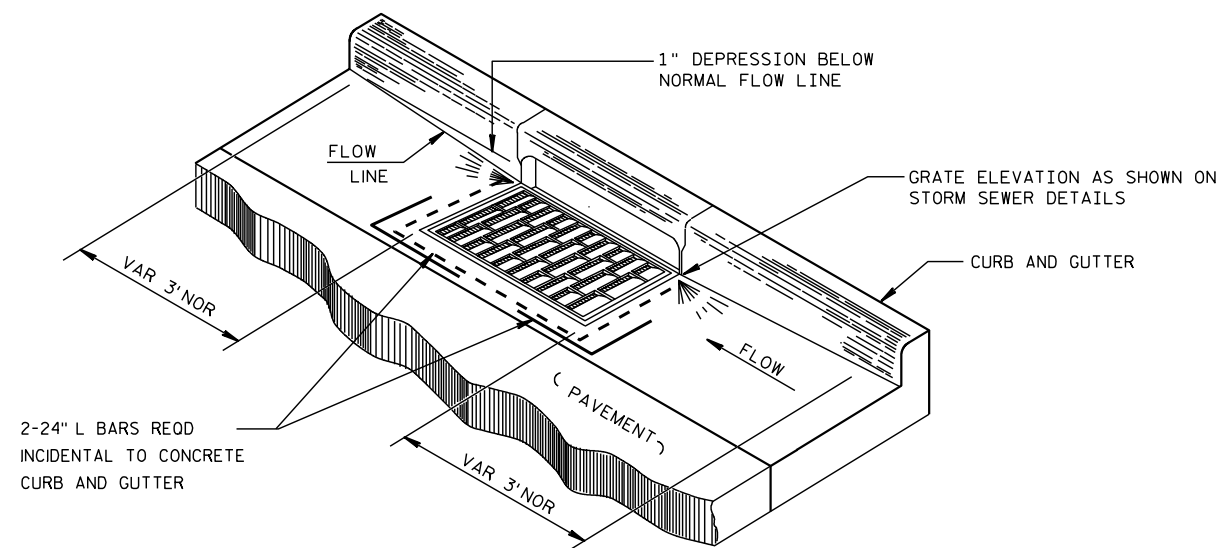
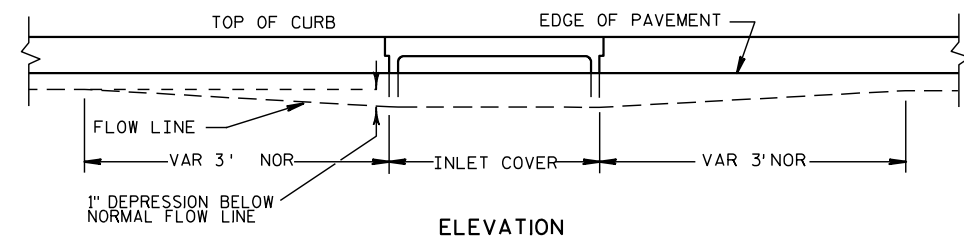
DETECTABLE WARNING FIELDS SHALL BE 2 FEET DEEP AND MATCH THE RADIUS OF THE BACK OF THE CURB AND GUTTER.

DETECTABLE WARNING FIELDS SHALL BE INSTALLED FOR THE ENTIRE WIDTH OF THE CURB OPENING.

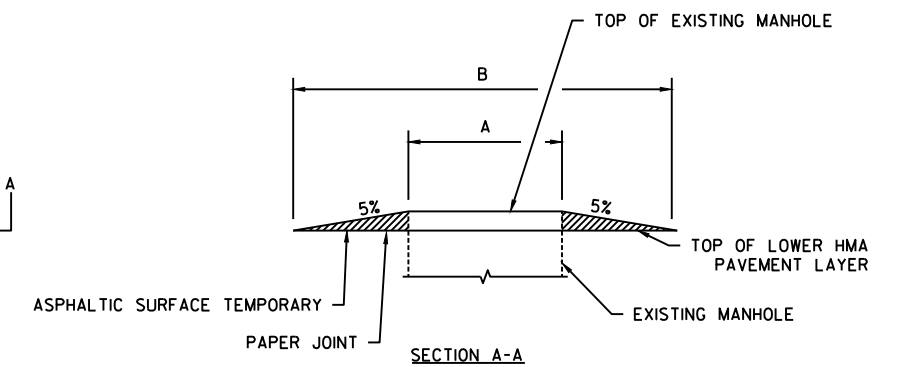
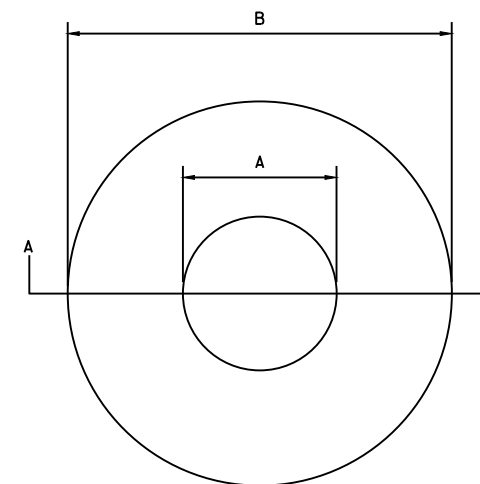
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE BLENDED TRANSITION.

SEE SDD 'CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES' FOR DETAILS OF RADIAL DETECTABLE WARNING FIELD PLATES.

- ① GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE BLENDED TRANSITION SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER FLAG SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM BLENDED TRANSITION. NO VERTICAL LIPS OR CHANGES IN LEVEL ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE BLENDED TRANSITION SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 4%.
- ② +/- 0.6% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL BE 2.1% MAXIMUM WITHOUT ENGINEER APPROVAL.
- ③ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ④ THE RUNNING SLOPE OF THE TURNING SPACE SHALL MATCH THE CURB & GUTTER LONGITUDINAL SLOPE ACROSS THE OPENING.
- ⑤ THE CROSS SLOPE OF THE BLENDED TRANSITION SHALL MATCH THE CURB & GUTTER LONGITUDINAL SLOPE ACROSS THE OPENING.
- ⑥ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH BLENDED TRANSITION EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN  $\frac{1}{8}$ " DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑦ A MAXIMUM OF 2 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.
- ⑧ A CURB RETURN MAY BE USED INSTEAD OF A NON-TRAVERSABLE FLARE.
- ⑨ THE RUNNING SLOPE OF THE BLENDED TRANSITION SHALL BE 5% MAXIMUM. A DESIGN MAXIMUM OF 4% WILL BE USED TO ALLOW FOR A CONSTRUCTION TOLERANCE. THE BLENDED TRANSITION RUNNING SLOPE SHALL BE PERPENDICULAR TO THE BACK OF CURB.
- ⑩ A MAXIMUM OF 2-INCH CONCRETE BORDER WIDTH IS ALLOWED ON THE SIDES OF THE DETECTABLE WARNING FIELDS FOR CONSTRUCTABILITY PURPOSES.
- ⑪ EDGE OF CURB RAMP OPENING SHALL BE LOCATED ALONG THE EXTENSION OF THE BACK OF SIDEWALK ON THE APPROACH STREET.



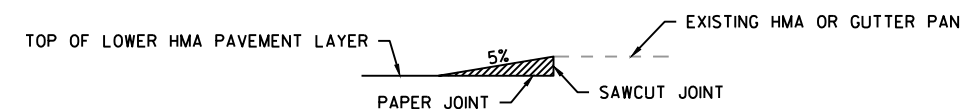
**DETAIL OF CURB AND GUTTER AT INLETS**



**NOTES**

1. PROVIDE RAMP AFTER MILLING EXISTING ASPHALT AND PAVING BINDER LIFT AND BEFORE OPENING TO TRAFFIC
2. RAMP MATERIAL SHALL BE ASPHALTIC SURFACE TEMPORARY
3. REMOVAL AND DISPOSAL OF WEDGE CONSIDERED INCIDENTAL TO THE ASPHALTIC SURFACE TEMPORARY BID ITEM.

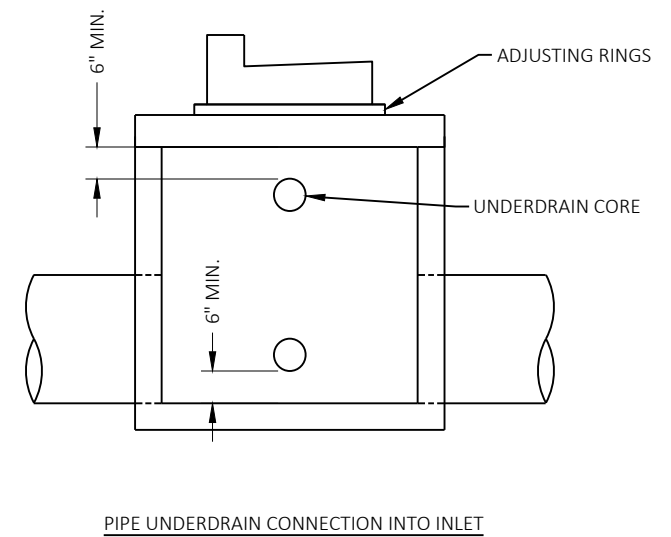
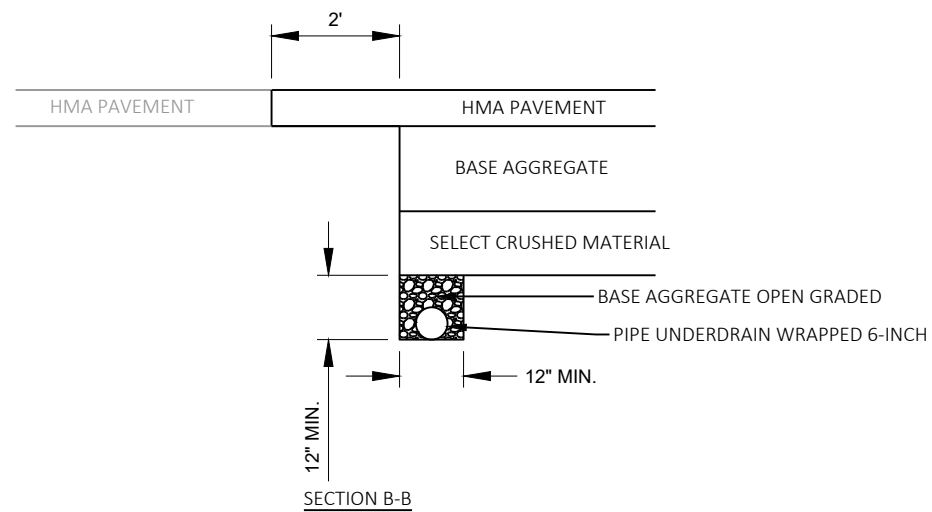
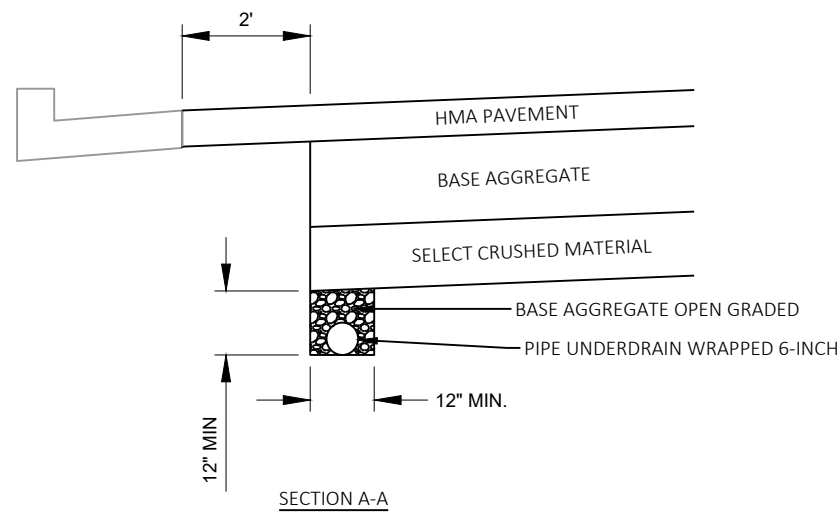
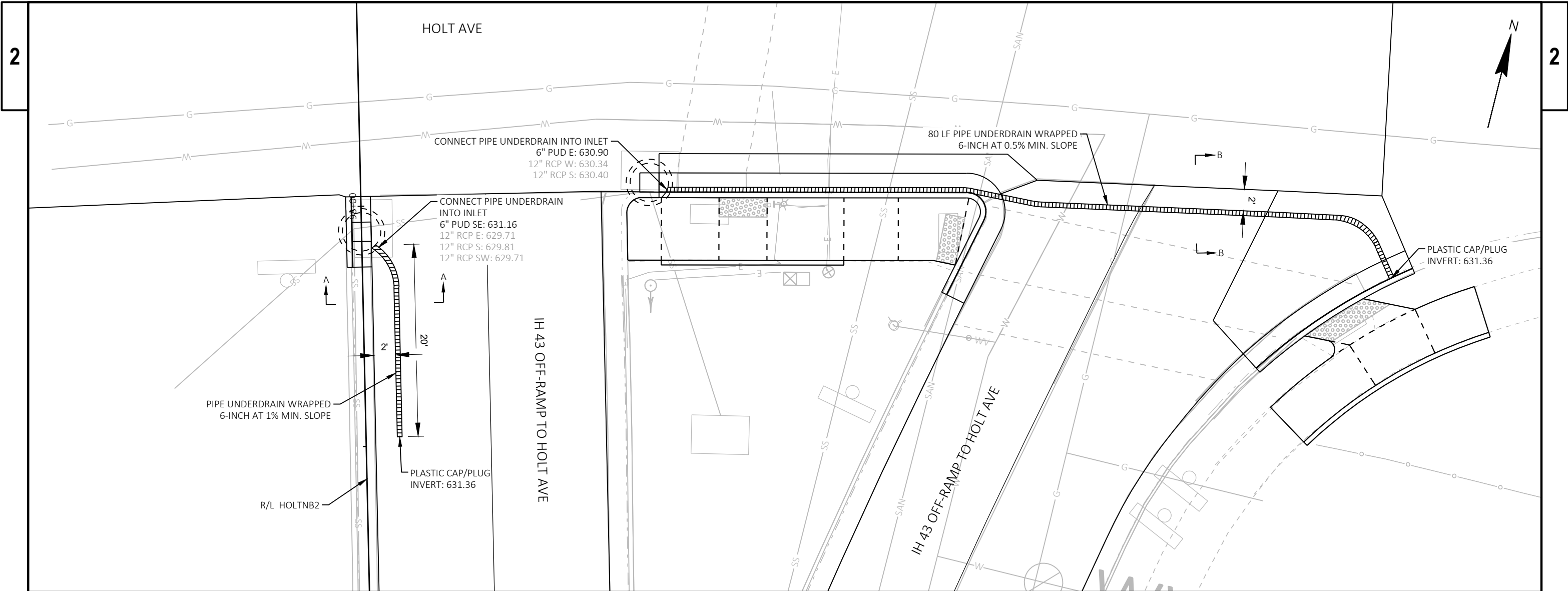
**MANHOLE RAMP**



**NOTES**

1. A CONSTRUCTION JOINT RAMP SHALL BE PROVIDED AT ALL TRANSVERSE CONSTRUCTION JOINTS, LONGITUDINAL JOINTS ACROSS MEDIAN OPENINGS, AND CURB RAMPS.

**CONSTRUCTION JOINT RAMP**



# PIPE UNDERDRAIN

PROJECT NO: 1228-09-76

HWY: IH 43

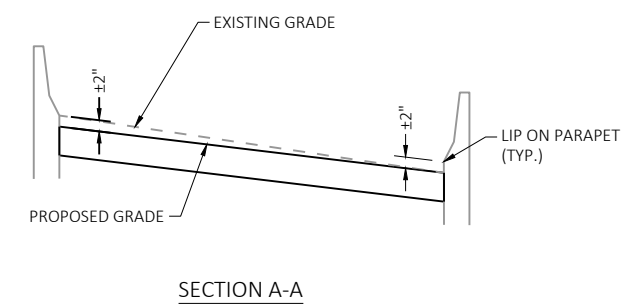
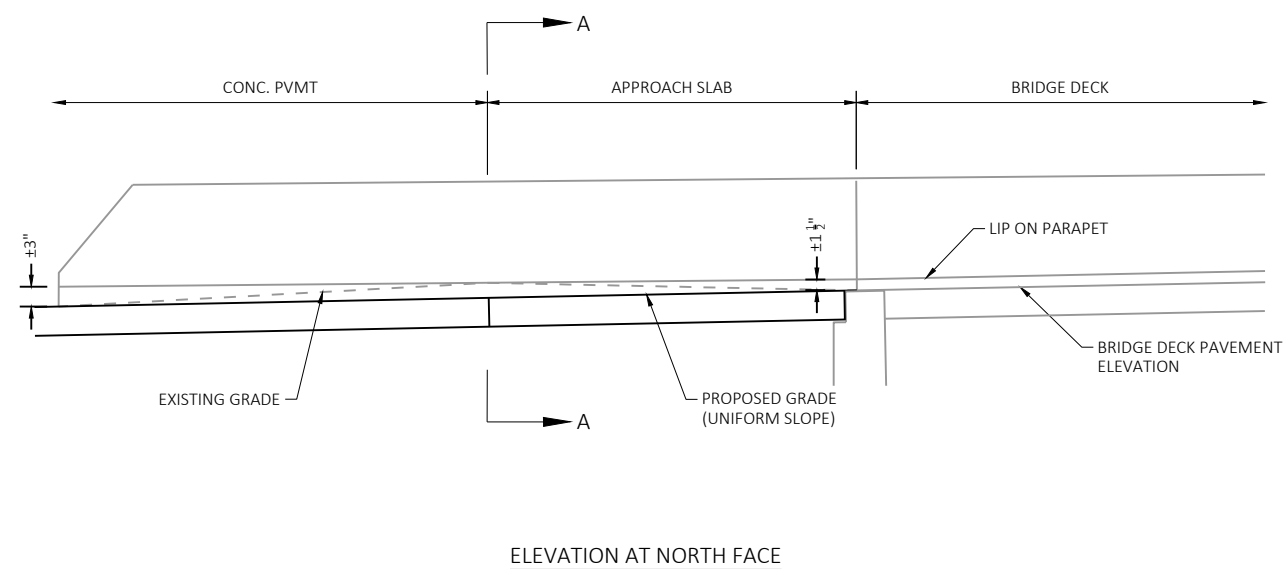
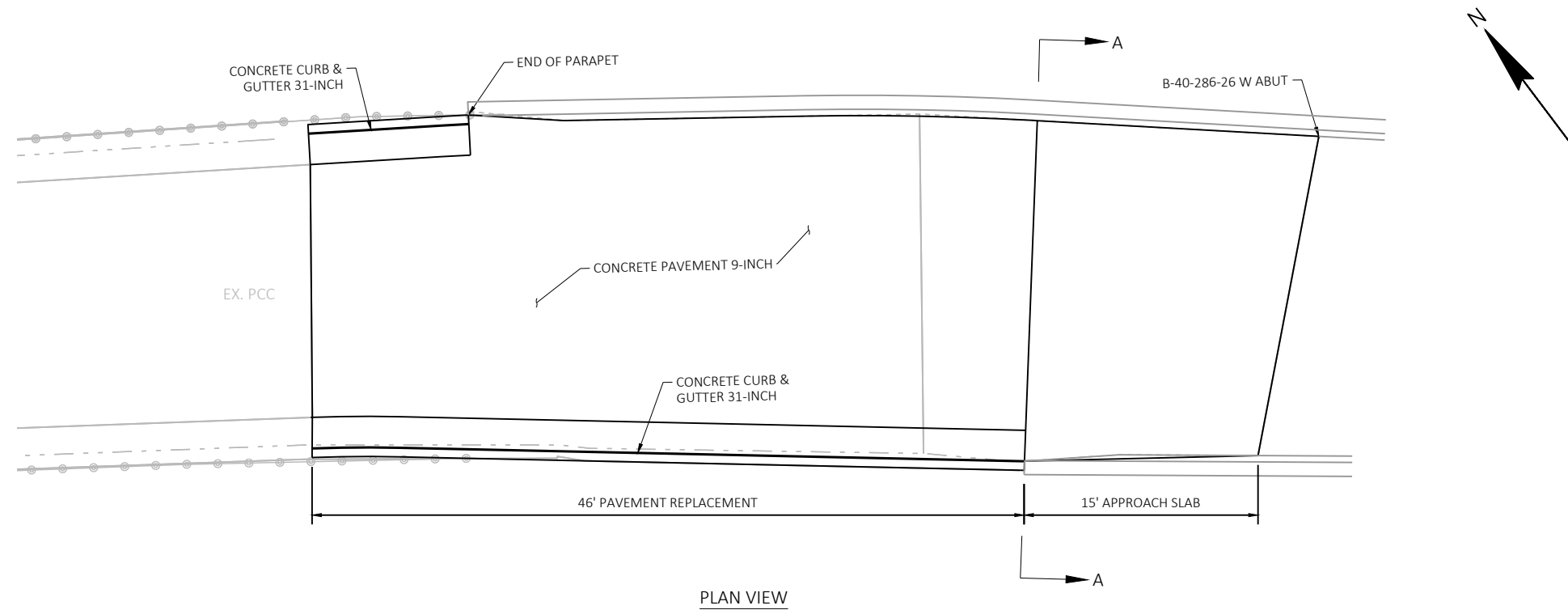
COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SHEET

13

E

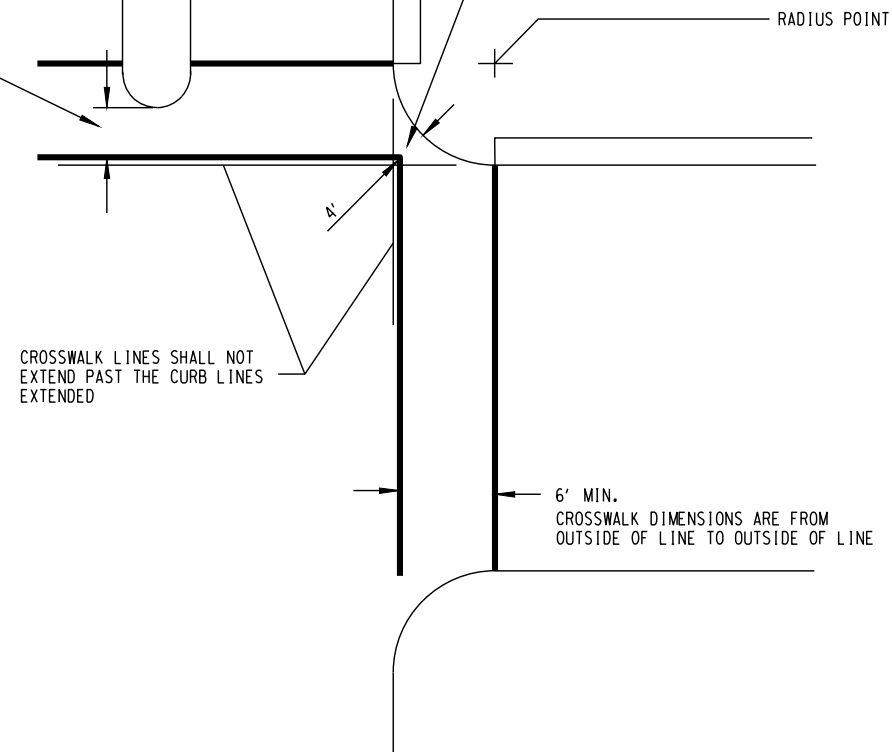


### B-40-286-26 APPROACH PAVEMENT REPLACEMENT

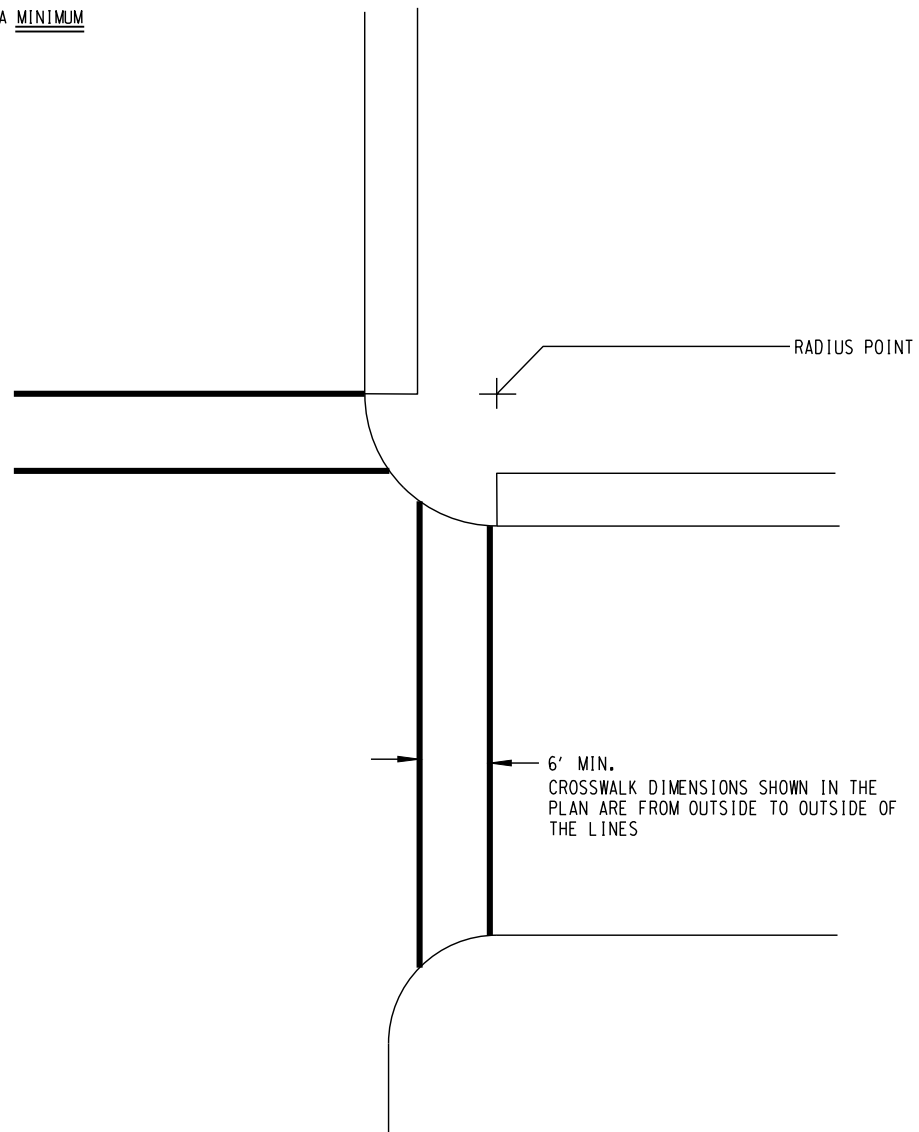


CROSSWALK SHOULD BE A MINIMUM 5' FROM THE ISLAND TIP.  
IF 5' FROM THE ISLAND CAN NOT BE OBTAINED WITHOUT GOING BEYOND THE CURB LINE EXTENDED THE CURB LINE EXTENDED SHALL BE THE OUTSIDE LINE OF THE CROSSWALK.

AT CENTER POINT OF RAMP, THE CROSSWALK SHALL BE A MINIMUM 4' FROM THE CURB  
THE 4' MARK SHALL BE TAKEN ALONG A LINE BETWEEN THE CURB LINES EXTENDED AND THE RADIUS POINT (DO NOT USE THE CENTER OF RAMP)  
IF 4' CAN NOT BE OBTAINED WITHOUT GOING BEYOND THE CURB LINE EXTENDED THE CURB LINE EXTENDED SHALL BE THE OUTSIDE LINE OF THE CROSSWALK.

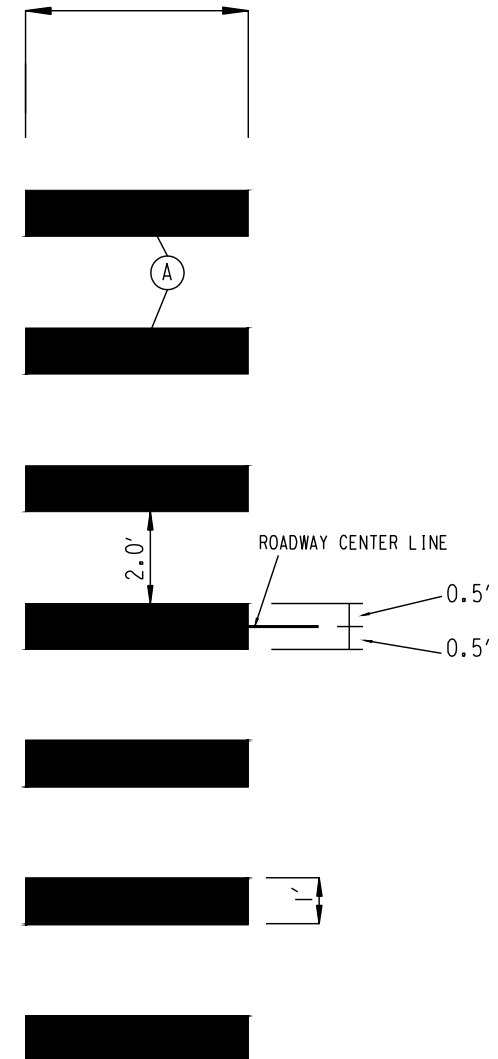


TYPICAL CROSS WALK INSTALLATION  
WITH TYPE 1 RAMP  
(PLASTIC, EPOXY, PAINT)



WITH TYPE 2 RAMP  
(PLASTIC, EPOXY, PAINT)

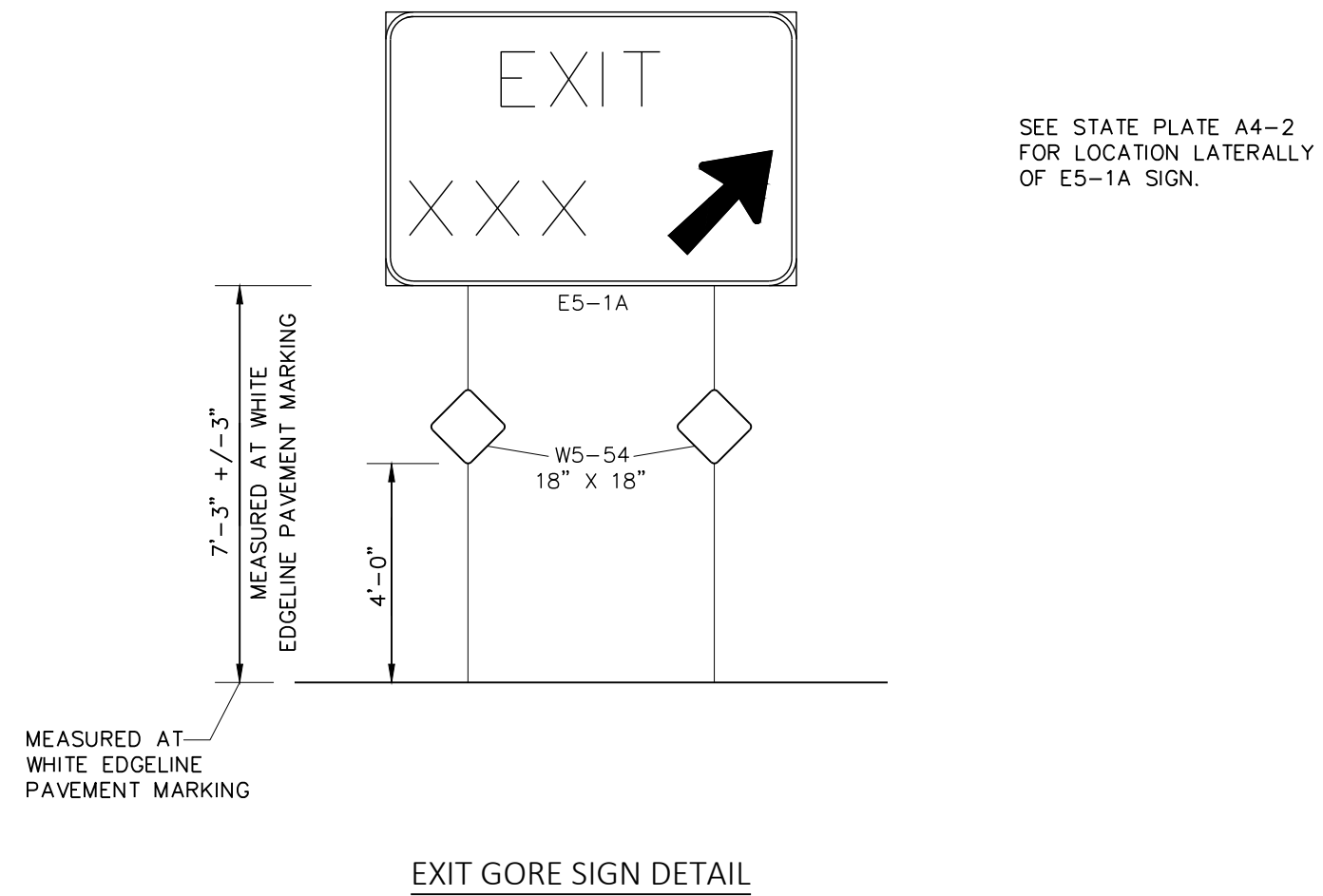
VARIABLE  
SEE PLAN



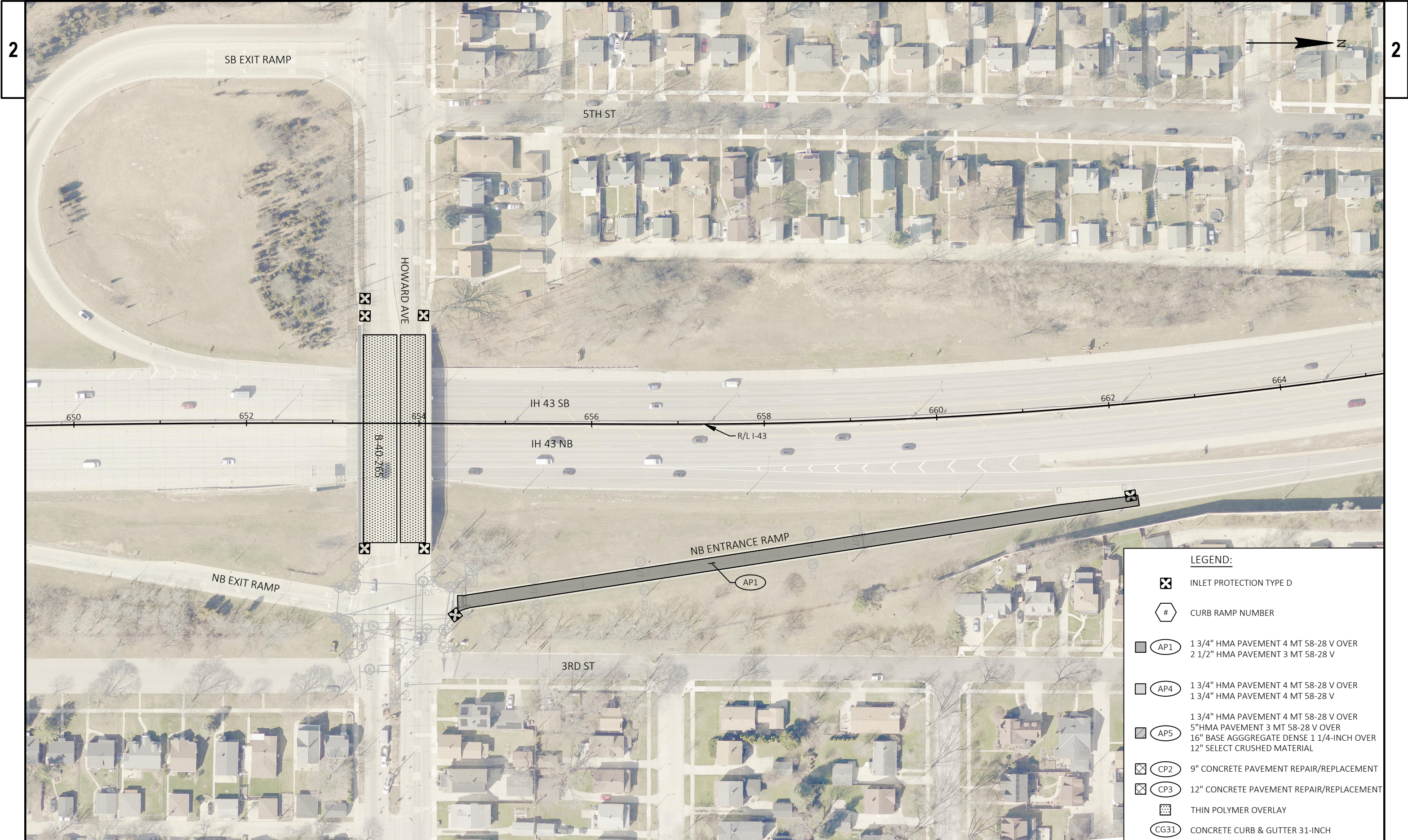
CONTINENTAL CROSSWALK  
DETAIL

NOTE: PAVEMENT MARKINGS SHOULD BE  
PARALLEL TO DIRECTION OF TRAVEL  
EVEN WHEN CROSSWALK IS SKEWED

## CROSSWALK PAVEMENT MARKING



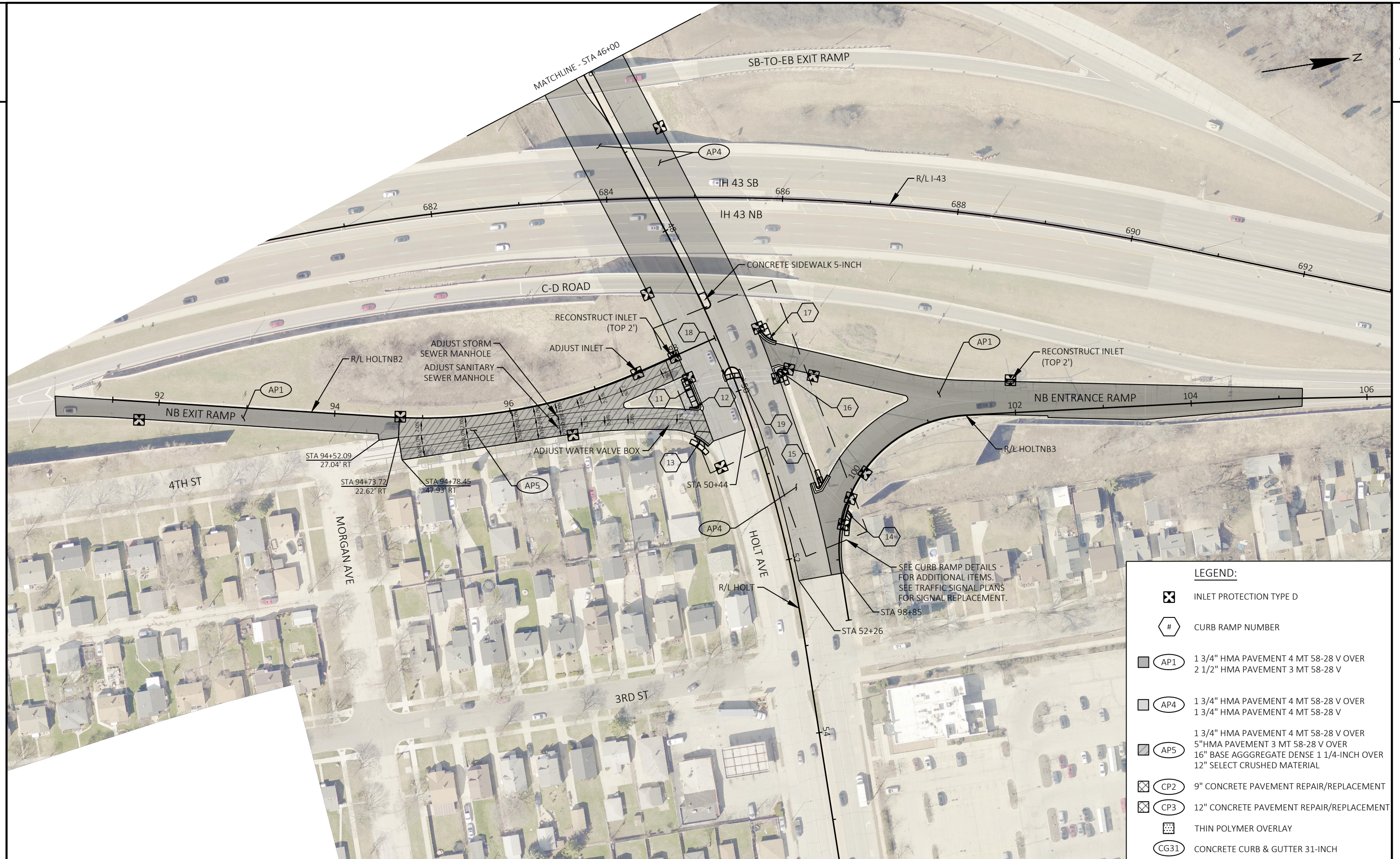




LEGEND:

- INLET PROTECTION TYPE D
- CURB RAMP NUMBER
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER 2 1/2" HMA PAVEMENT 3 MT 58-28 V
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER 1 3/4" HMA PAVEMENT 4 MT 58-28 V
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER 5" HMA PAVEMENT 3 MT 58-28 V OVER 16" BASE AGGREGATE DENSE 1 1/4-INCH OVER 12" SELECT CRUSHED MATERIAL
- 9" CONCRETE PAVEMENT REPAIR/REPLACEMENT
- 12" CONCRETE PAVEMENT REPAIR/REPLACEMENT
- THIN POLYMER OVERLAY
- CONCRETE CURB & GUTTER 31-INCH





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

PLAN DETAILS

SHEET

18

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\021201-PD.DWG  
LAYOUT NAME - 021202

PLOT DATE : 3/20/2025 1:45 PM

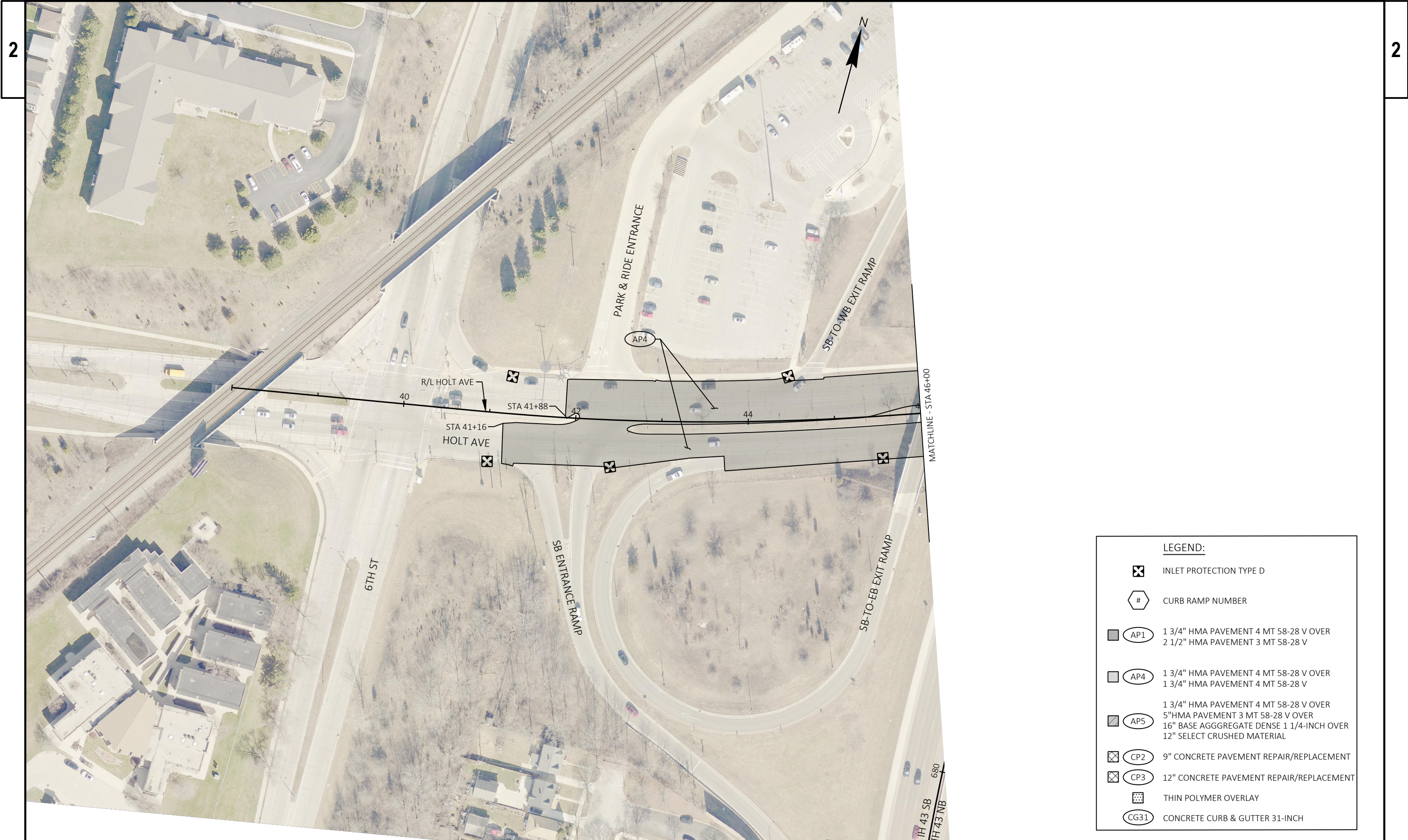
PLOT BY : CHASE ZASTROW

PLOT NAME :

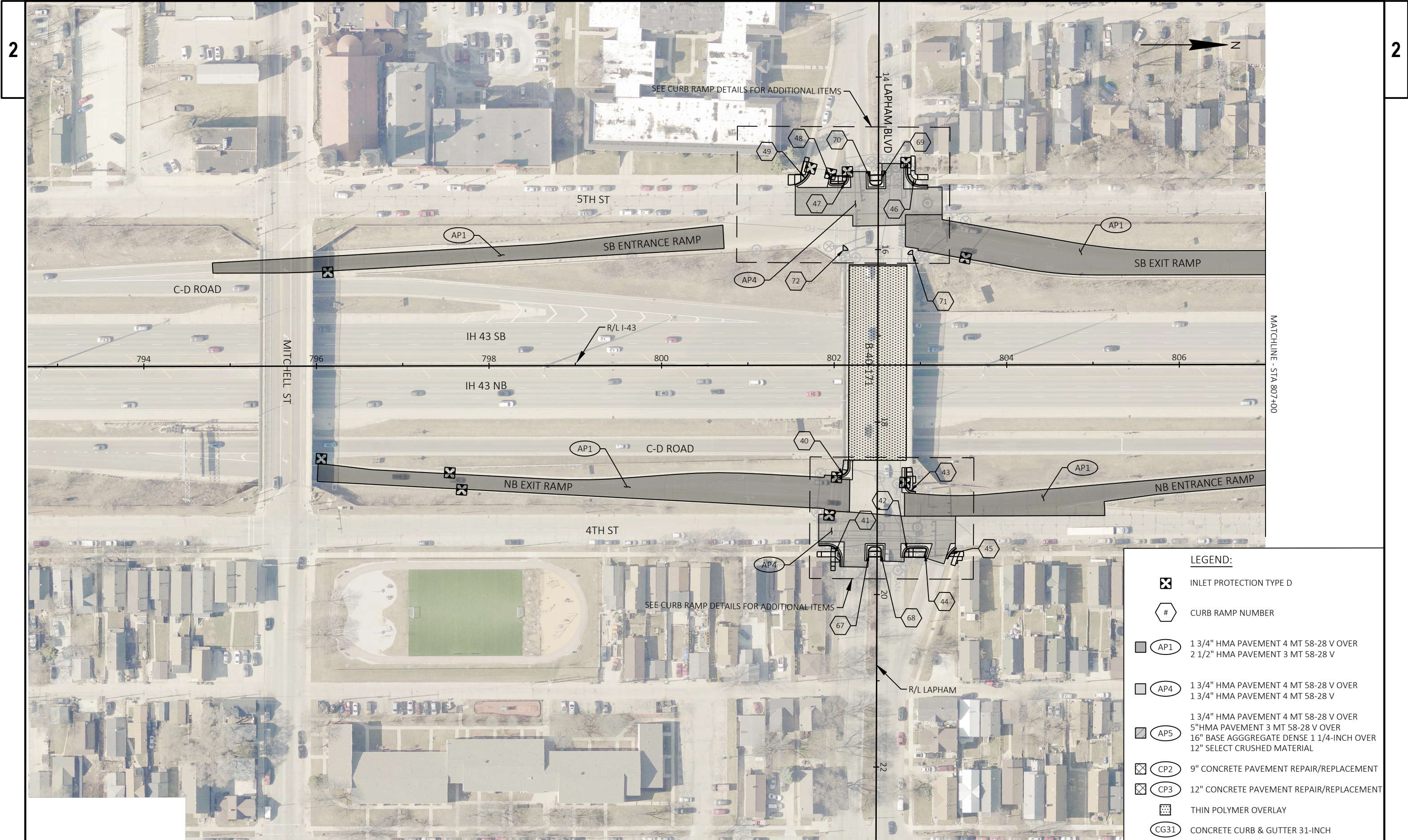
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42









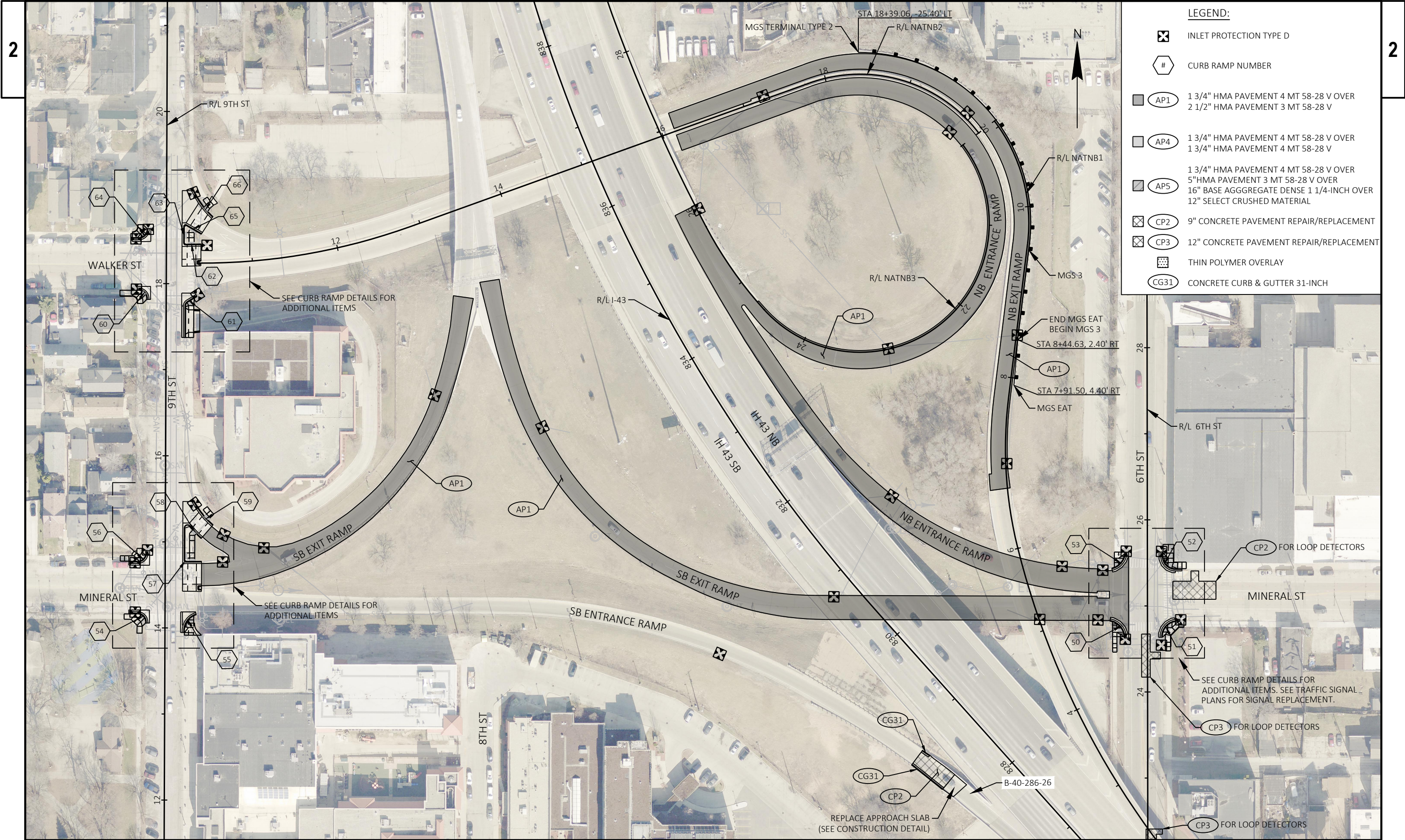




LEGEND:

- INLET PROTECTION TYPE D
- CURB RAMP NUMBER
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER  
2 1/2" HMA PAVEMENT 3 MT 58-28 V
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER  
1 3/4" HMA PAVEMENT 4 MT 58-28 V
- 1 3/4" HMA PAVEMENT 4 MT 58-28 V OVER  
5" HMA PAVEMENT 3 MT 58-28 V OVER  
16" BASE AGGREGATE DENSE 1 1/4-INCH OVER  
12" SELECT CRUSHED MATERIAL
- 9" CONCRETE PAVEMENT REPAIR/REPLACEMENT
- 12" CONCRETE PAVEMENT REPAIR/REPLACEMENT
- THIN POLYMER OVERLAY
- CONCRETE CURB & GUTTER 31-INCH

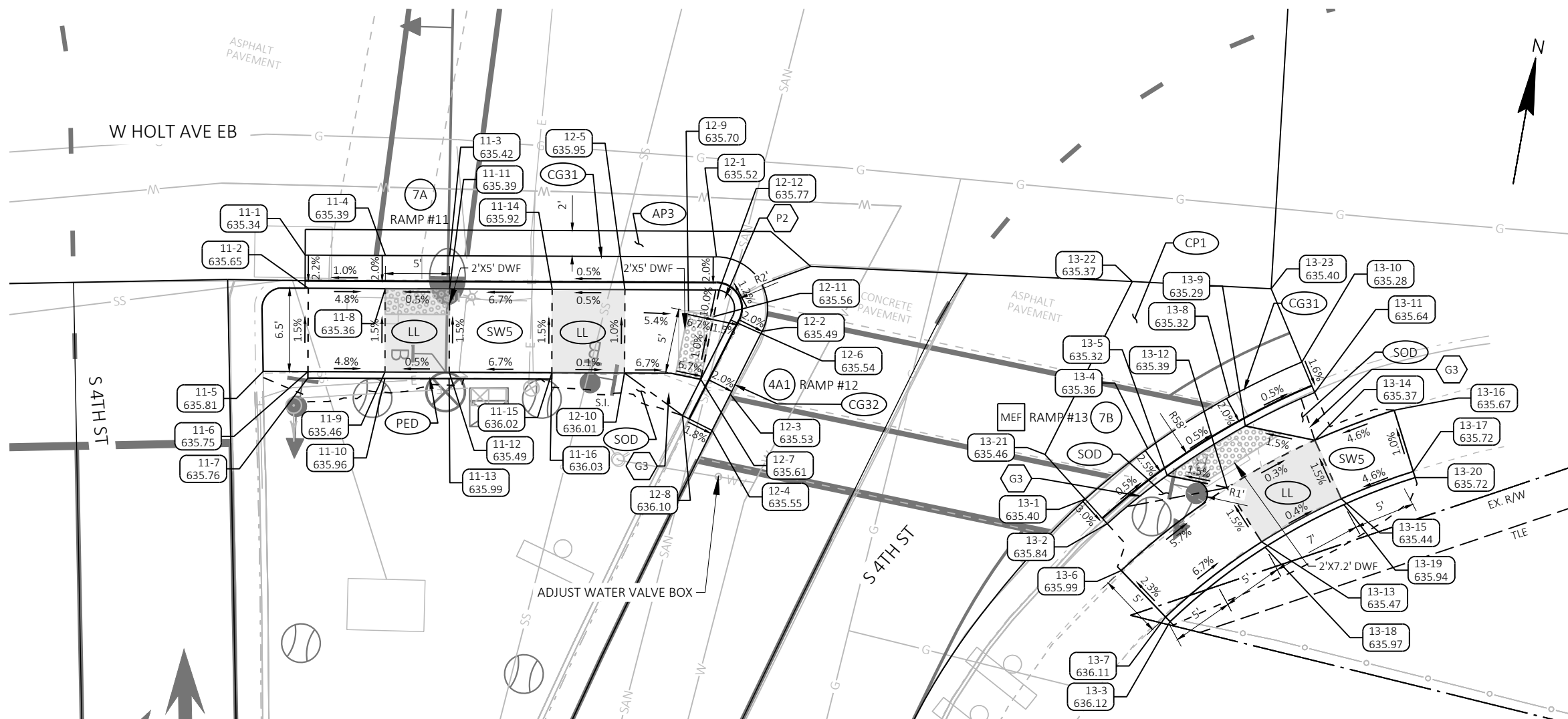












| LEGEND:     |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| RAMP #X     | (X) CURB RAMP NUMBER & TYPE                                                                    |
| (SOD)       | SOD                                                                                            |
| (SW5)       | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (PED)       | CONCRETE CURB PEDESTRIAN                                                                       |
| (CG31)      | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| (CG32)      | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| (CG33)      | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| (CM2)       | CONCRETE MEDIAN SLOPED NOSE TYPE 1                                                             |
| (AP1)       | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| (AP2)       | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (AP3)       | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (AP4)       | HMA PAVEMENT 3 1/2-INCH (MT) OVER EX. CONCRETE BASE                                            |
| (CP1)       | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (MEF)       | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| (XX YYY.YY) | POINT NUMBER & ELEVATION                                                                       |
| (LL)        | LEVEL LANDING                                                                                  |
| (P#)        | PAVED TRAVERSIBLE FLARE (WIDTH)                                                                |
| (G#)        | GRADED NON-TRAVERSIBLE FLARE (WIDTH)                                                           |

## NOTES:

- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
- ALL STATION AND OFFSET INFORMATION REFERENCES HOLT AVE.
- POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
- ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

## MAXIMUM EXTENT FEASIBLE (MEF) ELEMENTS

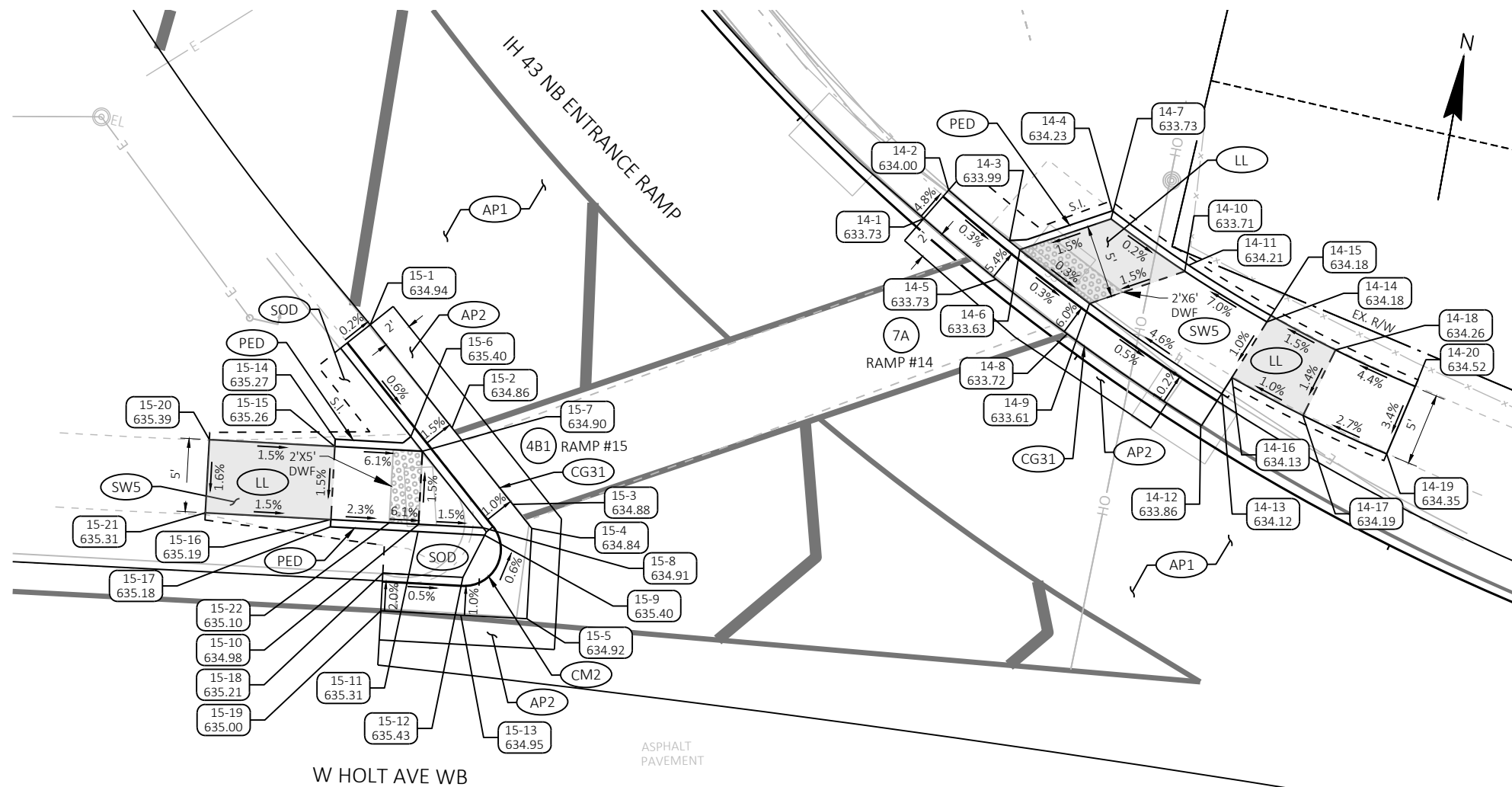
| RAMP | MEF ELEMENT                                      |
|------|--------------------------------------------------|
| #13  | NO LEVEL LANDING AT TOP OF SOUTH TRANSITION RAMP |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 11-1        | FLG  | 49+66.93 | 46.95 RT | 279005.97 | 604313.93 | 635.34    |
| 11-2        | BC   | 49+67.22 | 49.53 RT | 279003.52 | 604314.78 | 635.65    |
| 11-3        | FLG  | 49+78.56 | 46.79 RT | 279008.59 | 604324.87 | 635.42    |
| 11-4        | FLG  | 49+73.40 | 46.87 RT | 279007.43 | 604320.01 | 635.39    |
| 11-5        | SW   | 49+63.66 | 56.06 RT | 278996.39 | 604312.90 | 635.81    |
| 11-6        | SW   | 49+67.29 | 56.03 RT | 278997.20 | 604316.29 | 635.75    |
| 11-7        | BC   | 49+67.30 | 56.53 RT | 278996.71 | 604316.41 | 635.76    |
| 11-8        | BC   | 49+73.44 | 49.45 RT | 279004.92 | 604320.61 | 635.36    |
| 11-9        | SW   | 49+73.54 | 55.95 RT | 278998.59 | 604322.13 | 635.46    |
| 11-10       | BC   | 49+73.55 | 56.45 RT | 278998.11 | 604322.24 | 635.96    |
| 11-11       | BC   | 49+78.61 | 49.37 RT | 279006.08 | 604325.47 | 635.39    |
| 11-12       | SW   | 49+78.74 | 55.87 RT | 278999.76 | 604326.99 | 635.49    |
| 11-13       | BC   | 49+78.75 | 56.37 RT | 278999.27 | 604327.11 | 635.99    |
| 11-14       | BC   | 49+86.90 | 49.20 RT | 279007.95 | 604333.25 | 635.92    |
| 11-15       | SW   | 49+87.06 | 55.69 RT | 279001.62 | 604334.77 | 636.02    |
| 11-16       | BC   | 49+87.07 | 56.19 RT | 279001.14 | 604334.89 | 636.03    |
| 12-1        | FLG  | 50+00.03 | 46.25 RT | 279013.43 | 604345.08 | 635.52    |
| 12-2        | FLG  | 50+03.95 | 51.90 RT | 279008.64 | 604349.91 | 635.49    |
| 12-3        | FLG  | 50+01.58 | 56.90 RT | 279003.29 | 604348.67 | 635.53    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 12-4        | FLG  | 50+00.22 | 59.77 RT | 279000.21 | 604347.96 | 635.55    |
| 12-5        | BC   | 49+92.75 | 49.05 RT | 279009.26 | 604338.75 | 635.95    |
| 12-6        | BC   | 50+01.38 | 51.12 RT | 279008.91 | 604347.32 | 635.54    |
| 12-7        | BC   | 49+99.14 | 55.83 RT | 279003.87 | 604346.16 | 635.61    |
| 12-8        | BC   | 49+97.77 | 58.70 RT | 279000.79 | 604345.45 | 636.10    |
| 12-9        | SW   | 49+97.95 | 50.57 RT | 279008.79 | 604343.98 | 635.70    |
| 12-10       | SW   | 49+92.94 | 55.55 RT | 279002.94 | 604340.27 | 636.01    |
| 12-11       | SW   | 49+99.99 | 50.90 RT | 279008.87 | 604345.98 | 635.56    |
| 12-12       | BC   | 50+00.35 | 48.83 RT | 279010.96 | 604345.90 | 635.77    |
| 13-1        | FLG  | 50+30.82 | 63.71 RT | 279001.90 | 604377.46 | 635.40    |
| 13-2        | BC   | 50+32.74 | 65.52 RT | 279000.44 | 604379.59 | 635.84    |
| 13-3        | SW   | 50+38.37 | 72.83 RT | 278994.19 | 604386.15 | 636.12    |
| 13-4        | FLG  | 50+35.66 | 59.48 RT | 279006.88 | 604381.26 | 635.36    |
| 13-5        | BC   | 50+37.37 | 61.47 RT | 279005.21 | 604383.23 | 635.32    |
| 13-6        | SW   | 50+34.12 | 69.10 RT | 278997.16 | 604381.52 | 635.99    |
| 13-7        | SW   | 50+37.99 | 72.49 RT | 278994.46 | 604385.73 | 636.11    |
| 13-8        | FLG  | 50+41.99 | 55.05 RT | 279012.30 | 604386.48 | 635.32    |
| 13-9        | BC   | 50+43.44 | 57.22 RT | 279010.40 | 604388.22 | 635.29    |
| 13-10       | FLG  | 50+47.65 | 51.94 RT | 279016.29 | 604391.32 | 635.28    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 13-11       | BC   | 50+48.86 | 54.24 RT | 279014.21 | 604392.86 | 635.64    |
| 13-12       | SW   | 50+42.30 | 62.12 RT | 279005.39 | 604387.99 | 635.39    |
| 13-13       | SW   | 50+45.41 | 66.14 RT | 279001.93 | 604391.60 | 635.47    |
| 13-14       | SW   | 50+49.15 | 57.95 RT | 279010.60 | 604393.75 | 635.37    |
| 13-15       | SW   | 50+51.64 | 62.35 RT | 279006.66 | 604396.83 | 635.44    |
| 13-16       | SW   | 50+55.39 | 55.16 RT | 279014.34 | 604399.20 | 635.67    |
| 13-17       | SW   | 50+57.31 | 59.80 RT | 279010.06 | 604401.78 | 635.72    |
| 13-18       | BC   | 50+45.72 | 66.54 RT | 279001.58 | 604391.96 | 635.97    |
| 13-19       | BC   | 50+51.89 | 62.79 RT | 279006.27 | 604397.14 | 635.94    |
| 13-20       | BC   | 50+57.51 | 60.27 RT | 279009.63 | 604402.03 | 635.72    |
| 13-21       | EC   | 50+27.34 | 60.41 RT | 279004.54 | 604373.60 | 635.46    |
| 13-22       | EC   | 50+33.56 | 46.55 RT | 279019.25 | 604377.00 | 635.37    |
| 13-23       | EC   | 50+44.76 | 46.41 RT | 279021.26 | 604387.64 | 635.40    |





| LEGEND:      |                                                                                                |
|--------------|------------------------------------------------------------------------------------------------|
| RAMP #X      | X CURB RAMP NUMBER & TYPE                                                                      |
| SOD          | SOD                                                                                            |
| SW5          | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| PED          | CONCRETE CURB PEDESTRIAN                                                                       |
| CG31         | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| CG32         | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| CG33         | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| CM2          | CONCRETE MEDIAN SLOPED NOSE TYPE 1                                                             |
| AP1          | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| AP2          | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP3          | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP4          | HMA PAVEMENT 3 1/2-INCH (MT) OVER EX. CONCRETE BASE                                            |
| CP1          | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| MEF          | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| XX<br>YYY.YY | POINT NUMBER & ELEVATION                                                                       |
| LL           | LEVEL LANDING                                                                                  |
| P#           | PAVED TRAVERSIBLE FLARE (WIDTH)                                                                |
| G#           | GRADED NON-TRAVERSIBLE FLARE (WIDTH)                                                           |

## NOTES:

- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
- ALL STATION AND OFFSET INFORMATION REFERENCES HOLT AVE.
- POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
- ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 14-1        | FLG  | 51+56.15 | 78.87 LT | 279160.13 | 604482.90 | 633.73    |
| 14-2        | BC   | 51+57.52 | 81.00 LT | 279162.39 | 604484.14 | 634.00    |
| 14-3        | BC   | 51+61.86 | 78.16 LT | 279159.97 | 604488.96 | 633.99    |
| 14-4        | BC   | 51+68.19 | 81.10 LT | 279163.47 | 604495.37 | 634.23    |
| 14-5        | FLG  | 51+61.33 | 75.40 LT | 279157.17 | 604488.64 | 633.73    |
| 14-6        | BC   | 51+62.59 | 77.61 LT | 279159.49 | 604489.78 | 633.63    |
| 14-7        | SW   | 51+68.18 | 80.54 LT | 279162.91 | 604495.40 | 633.73    |
| 14-8        | FLG  | 51+66.36 | 72.32 LT | 279154.56 | 604494.19 | 633.72    |
| 14-9        | BC   | 51+67.55 | 74.62 LT | 279156.96 | 604495.23 | 633.61    |
| 14-10       | SW   | 51+73.38 | 77.69 LT | 279160.53 | 604501.10 | 633.71    |
| 14-11       | BC   | 51+73.58 | 78.15 LT | 279161.00 | 604501.28 | 634.21    |
| 14-12       | FLG  | 51+75.83 | 67.42 LT | 279150.49 | 604504.48 | 633.86    |
| 14-13       | BC   | 51+76.90 | 69.80 LT | 279152.95 | 604505.42 | 634.12    |
| 14-14       | SW   | 51+79.13 | 75.08 LT | 279158.40 | 604507.35 | 634.18    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 14-15       | BC   | 51+79.33 | 75.54 LT | 279158.87 | 604507.52 | 634.18    |
| 14-16       | SW   | 51+77.40 | 70.97 LT | 279154.15 | 604505.84 | 634.13    |
| 14-17       | SW   | 51+82.34 | 69.11 LT | 279152.70 | 604511.15 | 634.19    |
| 14-18       | SW   | 51+83.81 | 73.87 LT | 279157.56 | 604512.34 | 634.26    |
| 14-19       | SW   | 51+88.12 | 67.37 LT | 279151.40 | 604517.32 | 634.35    |
| 14-20       | SW   | 51+89.29 | 72.21 LT | 279156.32 | 604518.21 | 634.52    |
| 15-1        | FLG  | 51+21.19 | 67.23 LT | 279144.71 | 604447.58 | 634.94    |
| 15-2        | FLG  | 51+27.24 | 60.81 LT | 279139.06 | 604454.58 | 634.86    |
| 15-3        | FLG  | 51+31.76 | 56.07 LT | 279134.87 | 604459.78 | 634.88    |
| 15-4        | FLG  | 51+33.18 | 54.59 LT | 279133.56 | 604461.41 | 634.84    |
| 15-5        | FLG  | 51+33.53 | 48.42 LT | 279127.46 | 604462.45 | 634.92    |
| 15-6        | BC   | 51+24.61 | 59.91 LT | 279137.86 | 604451.97 | 635.40    |
| 15-7        | BC   | 51+25.48 | 59.00 LT | 279137.06 | 604452.96 | 634.90    |
| 15-8        | BC   | 51+29.99 | 54.25 LT | 279132.86 | 604458.16 | 634.91    |

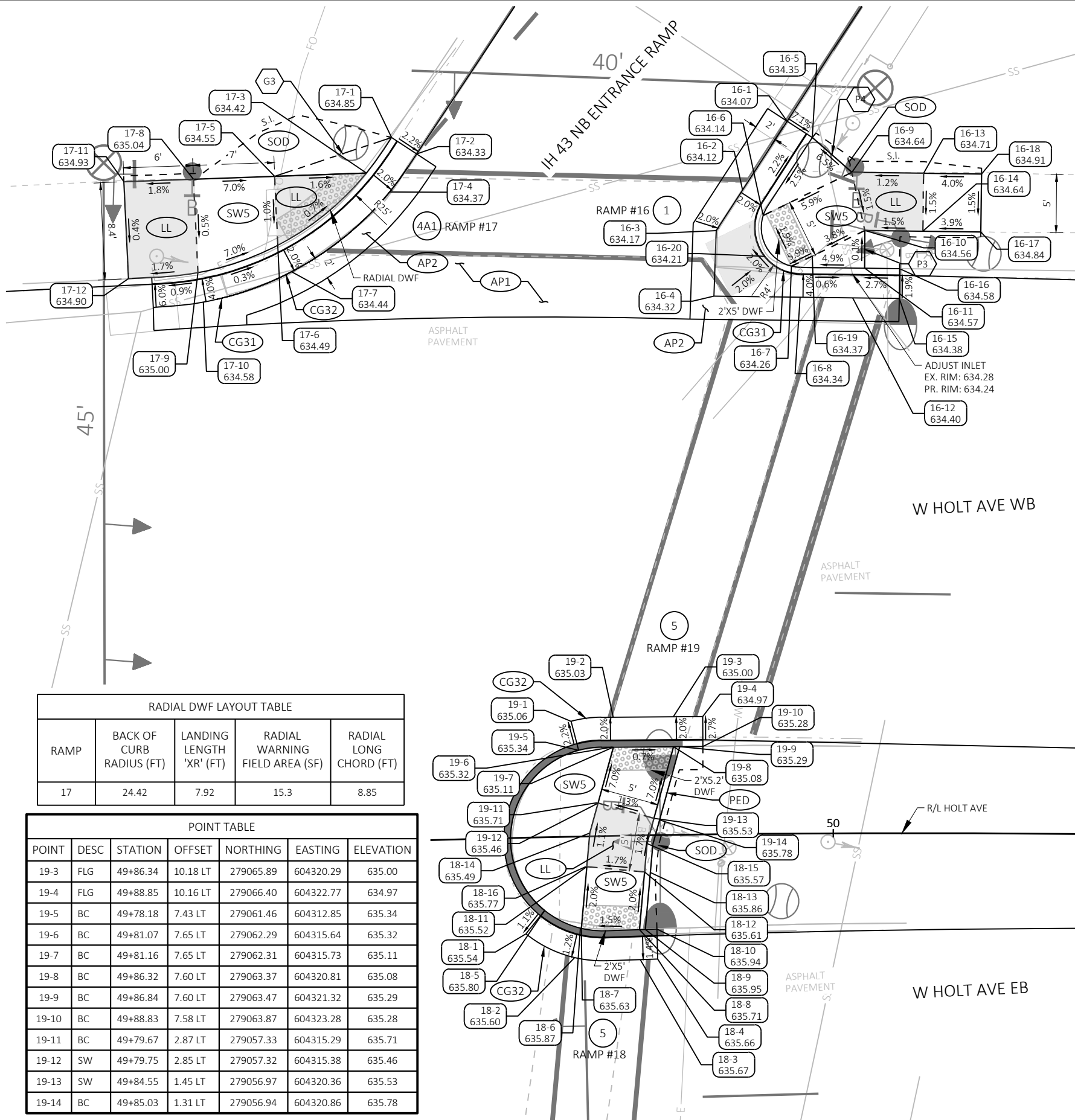
| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 15-9        | BC   | 51+30.15 | 53.76 LT | 279132.39 | 604458.38 | 635.40    |
| 15-10       | SW   | 51+25.73 | 54.01 LT | 279132.13 | 604453.80 | 634.98    |
| 15-11       | BC   | 51+25.76 | 53.51 LT | 279131.63 | 604453.88 | 635.31    |
| 15-12       | BC   | 51+29.03 | 50.73 LT | 279129.25 | 604457.56 | 635.43    |
| 15-13       | FLG  | 51+29.17 | 48.16 LT | 279126.71 | 604457.99 | 634.95    |
| 15-14       | BC   | 51+19.70 | 59.19 LT | 279136.55 | 604446.97 | 635.27    |
| 15-15       | SW   | 51+19.72 | 58.69 LT | 279136.05 | 604447.05 | 635.26    |
| 15-16       | SW   | 51+19.96 | 53.70 LT | 279131.12 | 604447.88 | 635.19    |
| 15-17       | BC   | 51+19.98 | 53.20 LT | 279130.63 | 604447.97 | 635.18    |
| 15-18       | BC   | 51+23.74 | 50.43 LT | 279128.34 | 604452.16 | 635.21    |
| 15-19       | FLG  | 51+23.88 | 47.86 LT | 279125.79 | 604452.59 | 635.00    |
| 15-20       | SW   | 51+11.48 | 58.29 LT | 279134.62 | 604438.58 | 635.39    |
| 15-21       | SW   | 51+11.69 | 53.29 LT | 279129.69 | 604439.41 | 635.31    |
| 15-22       | SW   | 51+23.81 | 53.90 LT | 279131.79 | 604451.83 | 635.10    |



| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 16-1        | FLG  | 49+96.44 | 61.45 LT | 279118.20 | 604319.86 | 634.07    |
| 16-2        | FLG  | 49+92.70 | 55.56 LT | 279111.64 | 604317.25 | 634.12    |
| 16-3        | FLG  | 49+90.47 | 52.07 LT | 279107.75 | 604315.70 | 634.17    |
| 16-4        | FLG  | 49+90.23 | 46.42 LT | 279102.16 | 604316.63 | 634.32    |
| 16-5        | BC   | 49+98.51 | 60.03 LT | 279117.24 | 604322.26 | 634.35    |
| 16-6        | BC   | 49+94.40 | 53.33 LT | 279109.81 | 604319.43 | 634.14    |
| 16-7        | BC   | 49+96.72 | 48.94 LT | 279106.00 | 604322.68 | 634.26    |
| 16-8        | FLG  | 49+97.42 | 46.26 LT | 279103.52 | 604323.93 | 634.34    |
| 16-9        | SW   | 50+01.78 | 57.01 LT | 279114.96 | 604326.20 | 634.64    |
| 16-10       | SW   | 50+02.85 | 51.99 LT | 279110.26 | 604328.28 | 634.56    |
| 16-11       | BC   | 50+02.82 | 48.74 LT | 279107.07 | 604328.90 | 634.57    |
| 16-12       | FLG  | 50+01.82 | 46.18 LT | 279104.35 | 604328.39 | 634.40    |
| 16-13       | SW   | 50+07.73 | 56.92 LT | 279116.09 | 604332.28 | 634.71    |
| 16-14       | SW   | 50+07.67 | 51.92 LT | 279111.18 | 604333.19 | 634.64    |
| 16-15       | FLG  | 50+05.70 | 46.12 LT | 279105.09 | 604332.33 | 634.38    |
| 16-16       | BC   | 50+05.74 | 48.70 LT | 279107.62 | 604331.86 | 634.58    |
| 16-17       | SW   | 50+12.50 | 51.87 LT | 279112.09 | 604338.11 | 634.84    |
| 16-18       | SW   | 50+12.54 | 56.87 LT | 279117.01 | 604337.19 | 634.91    |
| 16-19       | SW   | 49+98.47 | 49.80 LT | 279107.21 | 604324.27 | 634.37    |
| 16-20       | FLG  | 49+94.48 | 49.80 LT | 279106.38 | 604320.23 | 634.21    |
| 17-1        | BC   | 49+63.71 | 60.68 LT | 279110.15 | 604286.69 | 634.85    |
| 17-2        | FLG  | 49+65.74 | 59.20 LT | 279109.18 | 604289.08 | 634.33    |
| 17-3        | BC   | 49+61.53 | 57.67 LT | 279106.70 | 604285.15 | 634.42    |
| 17-4        | FLG  | 49+63.40 | 55.98 LT | 279105.50 | 604287.43 | 634.37    |
| 17-5        | SW   | 49+53.92 | 57.66 LT | 279104.88 | 604277.45 | 634.55    |
| 17-6        | BC   | 49+53.97 | 51.73 LT | 279099.12 | 604278.88 | 634.49    |
| 17-7        | FLG  | 49+55.05 | 49.39 LT | 279097.10 | 604280.50 | 634.44    |
| 17-8        | SW   | 49+47.19 | 57.69 LT | 279103.27 | 604270.63 | 635.04    |
| 17-9        | BC   | 49+47.23 | 49.62 LT | 279095.44 | 604272.58 | 635.00    |
| 17-10       | FLG  | 49+47.58 | 47.06 LT | 279093.04 | 604273.53 | 634.58    |
| 17-11       | SW   | 49+41.42 | 57.74 LT | 279101.89 | 604264.79 | 634.93    |
| 17-12       | BC   | 49+41.43 | 49.37 LT | 279093.77 | 604266.81 | 634.90    |
| 18-1        | FLG  | 49+73.29 | 8.31 RT  | 279045.03 | 604311.49 | 635.54    |
| 18-2        | FLG  | 49+77.46 | 10.44 RT | 279043.85 | 604316.00 | 635.60    |
| 18-3        | FLG  | 49+83.18 | 10.72 RT | 279044.79 | 604321.60 | 635.67    |
| 18-4        | FLG  | 49+84.69 | 10.70 RT | 279045.13 | 604323.06 | 635.66    |
| 18-5        | BC   | 49+74.96 | 6.34 RT  | 279047.32 | 604312.68 | 635.80    |
| 18-6        | BC   | 49+78.02 | 7.92 RT  | 279046.44 | 604315.99 | 635.87    |
| 18-7        | BC   | 49+78.10 | 7.94 RT  | 279046.44 | 604316.08 | 635.63    |
| 18-8        | BC   | 49+83.14 | 8.13 RT  | 279047.31 | 604321.01 | 635.71    |
| 18-9        | BC   | 49+83.64 | 8.13 RT  | 279047.43 | 604321.50 | 635.95    |
| 18-10       | BC   | 49+84.65 | 8.11 RT  | 279047.65 | 604322.48 | 635.94    |
| 18-11       | SW   | 49+78.68 | 2.63 RT  | 279051.74 | 604315.50 | 635.52    |
| 18-12       | SW   | 49+83.66 | 3.16 RT  | 279052.28 | 604320.47 | 635.61    |
| 18-13       | BC   | 49+84.16 | 3.21 RT  | 279052.34 | 604320.97 | 635.86    |
| 18-14       | SW   | 49+79.00 | 0.27 LT  | 279054.64 | 604315.19 | 635.49    |
| 18-15       | SW   | 49+83.92 | 0.71 RT  | 279054.74 | 604320.21 | 635.57    |
| 19-1        | FLG  | 49+77.58 | 9.94 LT  | 279063.78 | 604311.72 | 635.06    |
| 19-2        | FLG  | 49+81.18 | 10.23 LT | 279064.84 | 604315.20 | 635.03    |

| RADIAL DWF LAYOUT TABLE |                          |                          |                                |                        |
|-------------------------|--------------------------|--------------------------|--------------------------------|------------------------|
| RAMP                    | BACK OF CURB RADIUS (FT) | LANDING LENGTH 'XR' (FT) | RADIAL WARNING FIELD AREA (SF) | RADIAL LONG CHORD (FT) |
| 17                      | 24.42                    | 7.92                     | 15.3                           | 8.85                   |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 19-3        | FLG  | 49+86.34 | 10.18 LT | 279065.89 | 604320.29 | 635.00    |
| 19-4        | FLG  | 49+88.85 | 10.16 LT | 279066.40 | 604322.77 | 634.97    |
| 19-5        | BC   | 49+78.18 | 7.43 LT  | 279061.46 | 604312.85 | 635.34    |
| 19-6        | BC   | 49+81.07 | 7.65 LT  | 279062.29 | 604315.64 | 635.32    |
| 19-7        | BC   | 49+81.16 | 7.65 LT  | 279062.31 | 604315.73 | 635.11    |
| 19-8        | BC   | 49+86.32 | 7.60 LT  | 279063.37 | 604320.81 | 635.08    |
| 19-9        | BC   | 49+86.84 | 7.60 LT  | 279063.47 | 604321.32 | 635.29    |
| 19-10       | BC   | 49+88.83 | 7.58 LT  | 279063.87 | 604323.28 | 635.28    |
| 19-11       | BC   | 49+79.67 | 2.87 LT  | 279057.33 | 604315.29 | 635.71    |
| 19-12       | SW   | 49+79.75 | 2.85 LT  | 279057.32 | 604315.38 | 635.46    |
| 19-13       | SW   | 49+84.55 | 1.45 LT  | 279056.97 | 604320.36 | 635.53    |
| 19-14       | BC   | 49+85.03 | 1.31 LT  | 279056.94 | 604320.86 | 635.78    |

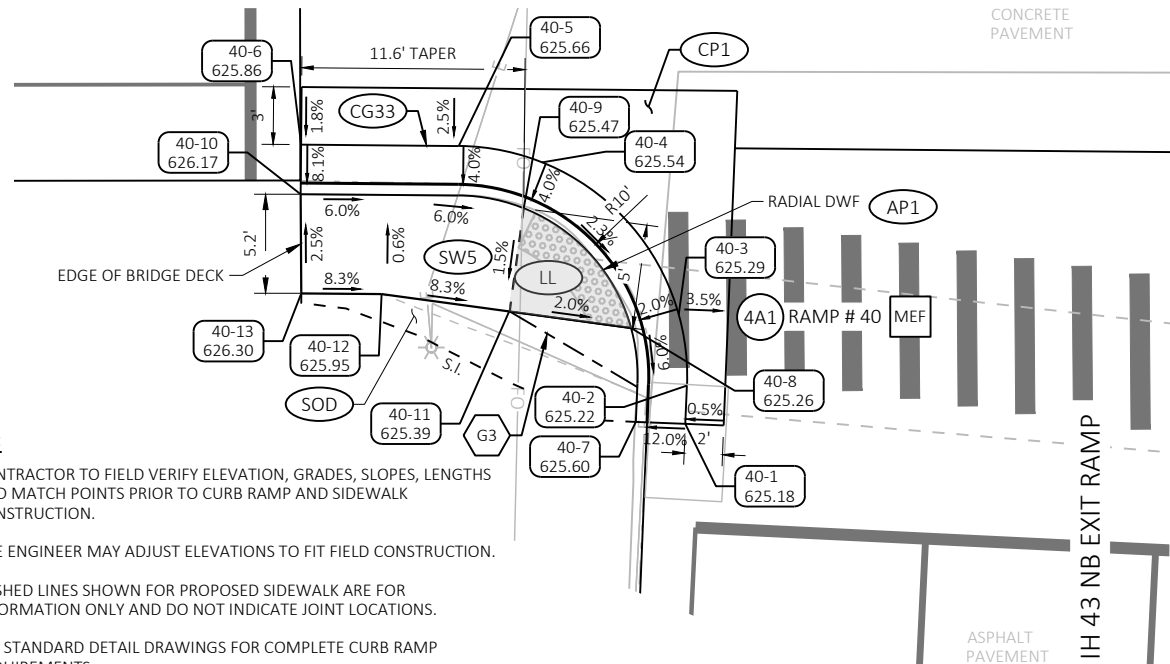
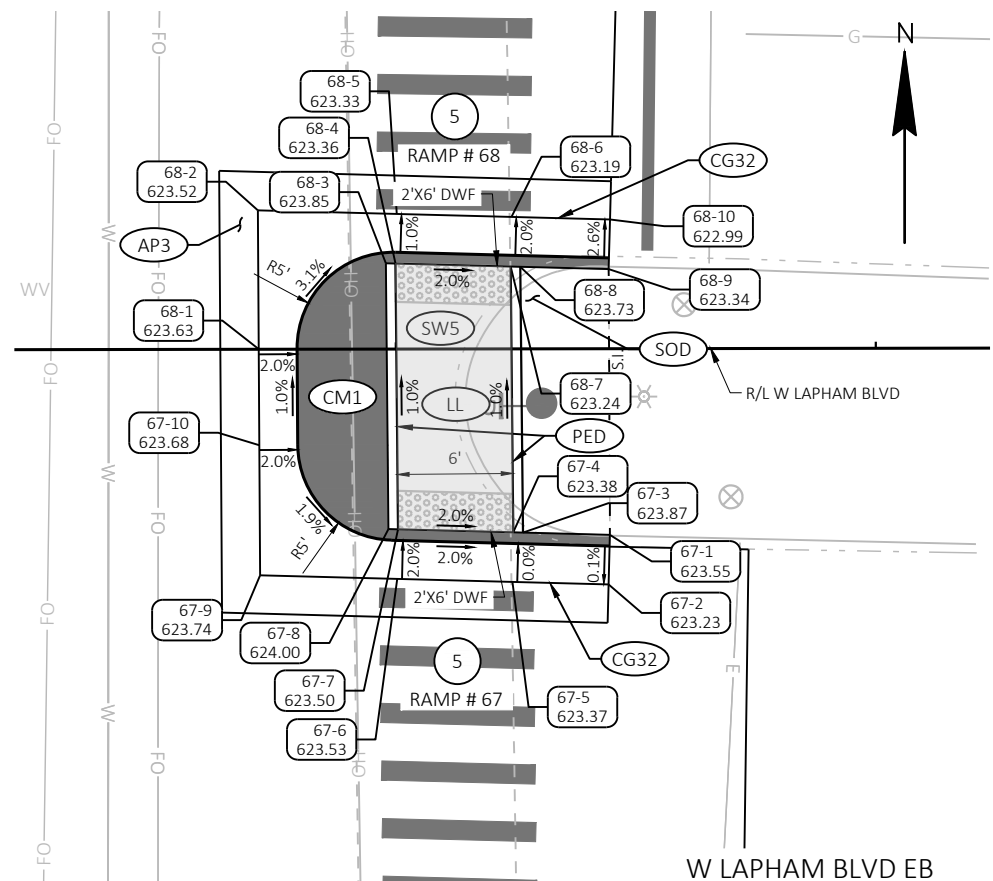




| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 40-1        | FLG  | 18+64.33 | 46.21 RT | 290621.29 | 604338.37 | 625.18    |
| 40-2        | FLG  | 18+64.42 | 44.22 RT | 290623.28 | 604338.45 | 625.22    |
| 40-3        | FLG  | 18+63.99 | 40.53 RT | 290626.98 | 604338.02 | 625.29    |
| 40-4        | FLG  | 18+56.89 | 32.58 RT | 290634.91 | 604330.91 | 625.54    |
| 40-5        | FLG  | 18+52.55 | 31.72 RT | 290635.77 | 604326.56 | 625.66    |
| 40-6        | FLG  | 18+44.34 | 31.64 RT | 290635.84 | 604318.36 | 625.86    |
| 40-7        | BC   | 18+61.75 | 46.11 RT | 290621.40 | 604335.79 | 625.60    |
| 40-8        | BC   | 18+61.51 | 41.22 RT | 290626.29 | 604335.54 | 625.26    |
| 40-9        | BC   | 18+55.93 | 34.98 RT | 290632.52 | 604329.95 | 625.47    |
| 40-10       | SW   | 18+44.31 | 34.22 RT | 290633.26 | 604318.33 | 626.17    |
| 40-11       | SW   | 18+55.17 | 40.33 RT | 290627.17 | 604329.20 | 625.39    |
| 40-12       | SW   | 18+48.52 | 39.43 RT | 290628.06 | 604322.55 | 625.95    |
| 40-13       | SW   | 18+44.34 | 39.38 RT | 290628.09 | 604318.37 | 626.30    |
| 41-1        | FLG  | 19+41.20 | 67.62 RT | 290600.00 | 604415.27 | 623.88    |
| 41-2        | FLG  | 19+41.14 | 57.58 RT | 290610.05 | 604415.20 | 623.81    |
| 41-3        | FLG  | 19+42.12 | 51.80 RT | 290615.83 | 604416.17 | 623.66    |
| 41-4        | FLG  | 19+45.34 | 46.29 RT | 290621.34 | 604419.38 | 623.56    |
| 41-5        | FLG  | 19+49.02 | 43.13 RT | 290624.50 | 604423.05 | 623.35    |
| 41-6        | FLG  | 19+56.08 | 40.60 RT | 290627.05 | 604430.10 | 623.15    |
| 41-7        | FLG  | 19+58.40 | 40.48 RT | 290627.17 | 604432.43 | 623.09    |
| 41-8        | FLG  | 19+67.90 | 40.63 RT | 290627.04 | 604441.92 | 622.66    |
| 41-9        | BC   | 19+43.78 | 67.61 RT | 290600.02 | 604417.85 | 624.20    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 41-11       | BC   | 19+44.55 | 52.66 RT | 290614.97 | 604418.60 | 623.58    |
| 41-12       | BC   | 19+47.28 | 47.99 RT | 290619.65 | 604421.32 | 623.51    |
| 41-13       | BC   | 19+50.40 | 45.31 RT | 290622.33 | 604424.44 | 623.28    |
| 41-14       | BC   | 19+56.39 | 43.17 RT | 290624.48 | 604430.42 | 623.12    |
| 41-15       | BC   | 19+67.86 | 43.21 RT | 290624.46 | 604441.89 | 622.83    |
| 41-16       | SW   | 19+50.55 | 69.47 RT | 290598.17 | 604424.62 | 624.52    |
| 41-17       | SW   | 19+50.52 | 64.47 RT | 290603.17 | 604424.58 | 624.45    |
| 41-18       | SW   | 19+50.45 | 53.47 RT | 290614.17 | 604424.50 | 623.64    |
| 41-19       | SW   | 19+46.60 | 52.94 RT | 290614.69 | 604420.65 | 623.60    |
| 41-20       | SW   | 19+50.42 | 48.42 RT | 290619.22 | 604424.46 | 623.54    |
| 41-21       | SW   | 19+56.40 | 45.28 RT | 290622.37 | 604430.44 | 623.16    |
| 41-22       | SW   | 19+56.42 | 48.48 RT | 290619.17 | 604430.46 | 623.43    |
| 41-23       | SW   | 19+62.38 | 48.48 RT | 290619.18 | 604436.43 | 623.40    |
| 41-24       | SW   | 19+67.38 | 48.48 RT | 290619.18 | 604441.43 | 623.33    |
| 41-25       | SW   | 19+72.38 | 48.49 RT | 290619.19 | 604446.43 | 623.26    |
| 41-26       | SW   | 19+72.38 | 53.49 RT | 290614.19 | 604446.43 | 623.35    |
| 41-27       | SW   | 19+67.38 | 53.48 RT | 290614.18 | 604441.43 | 623.40    |
| 41-28       | SW   | 19+62.38 | 53.48 RT | 290614.18 | 604436.43 | 623.45    |
| 41-29       | SW   | 19+56.45 | 53.48 RT | 290614.17 | 604430.50 | 623.53    |
| 41-30       | SW   | 19+56.52 | 64.48 RT | 290603.17 | 604430.58 | 624.39    |
| 41-31       | SW   | 19+56.55 | 69.48 RT | 290598.17 | 604430.62 | 624.49    |
| 41-32       | BC   | 19+61.39 | 43.11 RT | 290624.55 | 604435.42 | 623.32    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 41-33       | BC   | 19+62.39 | 43.12 RT | 290624.54 | 604436.42 | 623.32    |
| 67-1        | BC   | 19+61.14 | 9.69 RT  | 290657.97 | 604435.12 | 623.55    |
| 67-2        | FLG  | 19+61.07 | 12.27 RT | 290655.38 | 604435.05 | 623.23    |
| 67-3        | BC   | 19+56.60 | 9.56 RT  | 290658.09 | 604430.59 | 623.87    |
| 67-4        | BC   | 19+56.10 | 9.55 RT  | 290658.10 | 604430.09 | 623.38    |
| 67-5        | FLG  | 19+56.05 | 12.13 RT | 290655.52 | 604430.04 | 623.37    |
| 67-6        | FLG  | 19+50.05 | 11.97 RT | 290655.67 | 604424.04 | 623.53    |
| 67-7        | BC   | 19+50.10 | 9.38 RT  | 290658.26 | 604424.08 | 623.50    |
| 67-8        | BC   | 19+49.60 | 9.37 RT  | 290658.27 | 604423.58 | 624.00    |
| 67-9        | FLG  | 19+42.92 | 11.77 RT | 290655.86 | 604416.90 | 623.74    |
| 67-10       | FLG  | 19+42.88 | 4.99 RT  | 290662.64 | 604416.86 | 623.68    |
| 68-1        | FLG  | 19+42.86 | 0.01 LT  | 290667.64 | 604416.82 | 623.63    |
| 68-2        | FLG  | 19+42.82 | 7.24 LT  | 290674.87 | 604416.78 | 623.52    |
| 68-3        | BC   | 19+49.49 | 4.47 LT  | 290672.11 | 604423.44 | 623.85    |
| 68-4        | BC   | 19+49.99 | 4.46 LT  | 290672.10 | 604423.94 | 623.36    |
| 68-5        | FLG  | 19+50.06 | 7.04 LT  | 290674.68 | 604424.01 | 623.33    |
| 68-6        | FLG  | 19+56.04 | 6.87 LT  | 290674.52 | 604429.99 | 623.19    |
| 68-7        | BC   | 19+55.99 | 4.29 LT  | 290671.94 | 604429.95 | 623.24    |
| 68-8        | BC   | 19+56.49 | 4.28 LT  | 290671.93 | 604430.45 | 623.73    |
| 68-9        | BC   | 19+61.09 | 4.15 LT  | 290671.81 | 604435.05 | 623.34    |
| 68-10       | FLG  | 19+61.16 | 6.73 LT  | 290674.39 | 604435.12 | 622.99    |



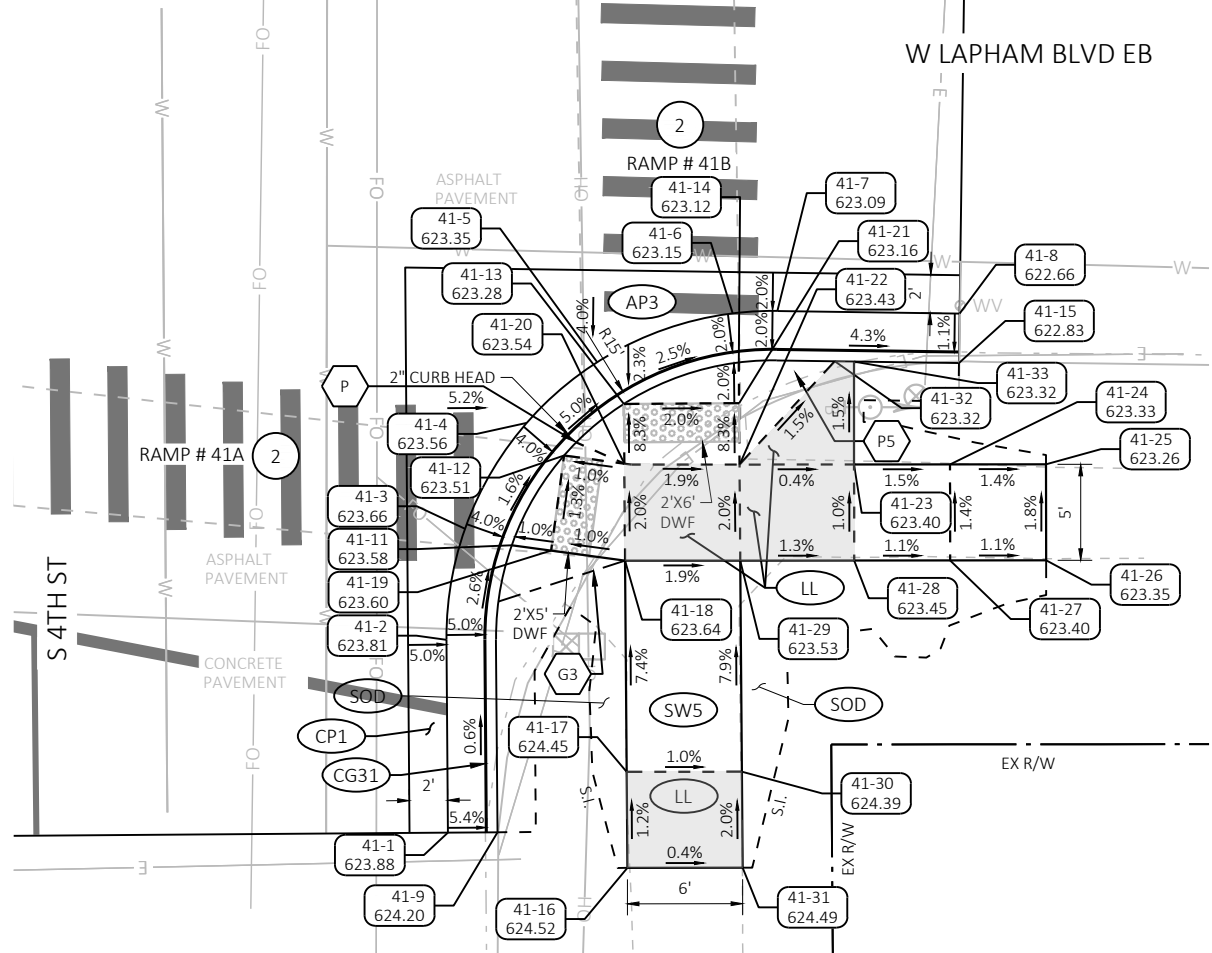
## NOTES:

- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
- ALL STATION AND OFFSET INFORMATION REFERENCES W LAPHAM BLVD.
- POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
- ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

| RADIAL DWF LAYOUT TABLE |                          |                          |                                |                        |
|-------------------------|--------------------------|--------------------------|--------------------------------|------------------------|
| RAMP                    | BACK OF CURB RADIUS (FT) | LANDING LENGTH 'XR' (FT) | RADIAL WARNING FIELD AREA (SF) | RADIAL LONG CHORD (FT) |
| 40                      | 9.42                     | 6.37                     | 13.4                           | 7.79                   |

| MAXIMUM EXTENT FEASIBLE (MEF) ELEMENTS |                                         |
|----------------------------------------|-----------------------------------------|
| RAMP                                   | MEF ELEMENT                             |
| #40                                    | NO LANDING AT TOP OF RAMP (BRIDGE DECK) |

| LEGEND:      |                                                                                                |
|--------------|------------------------------------------------------------------------------------------------|
| RAMP #X      | X CURB RAMP NUMBER & TYPE                                                                      |
| (SOD)        | SOD                                                                                            |
| (SW5)        | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (PED)        | CONCRETE CURB PEDESTRIAN                                                                       |
| (CG31)       | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| (CG32)       | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| (CG33)       | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| (CM1)        | CONCRETE MEDIAN SLOPED NOSE TYPE 1                                                             |
| (AP1)        | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| (AP2)        | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (AP3)        | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (AP4)        | HMA PAVEMENT 3 1/2-INCH (MT) OVER EX. CONCRETE BASE                                            |
| (CP1)        | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (MEF)        | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| XX<br>YYY.YY | POINT NUMBER & ELEVATION                                                                       |
| (LL)         | LEVEL LANDING                                                                                  |
| (P#)         | PAVED TRAVERSIBLE FLARE (WIDTH)                                                                |
| (G#)         | GRADED NON-TRAVERSIBLE FLARE (WIDTH)                                                           |



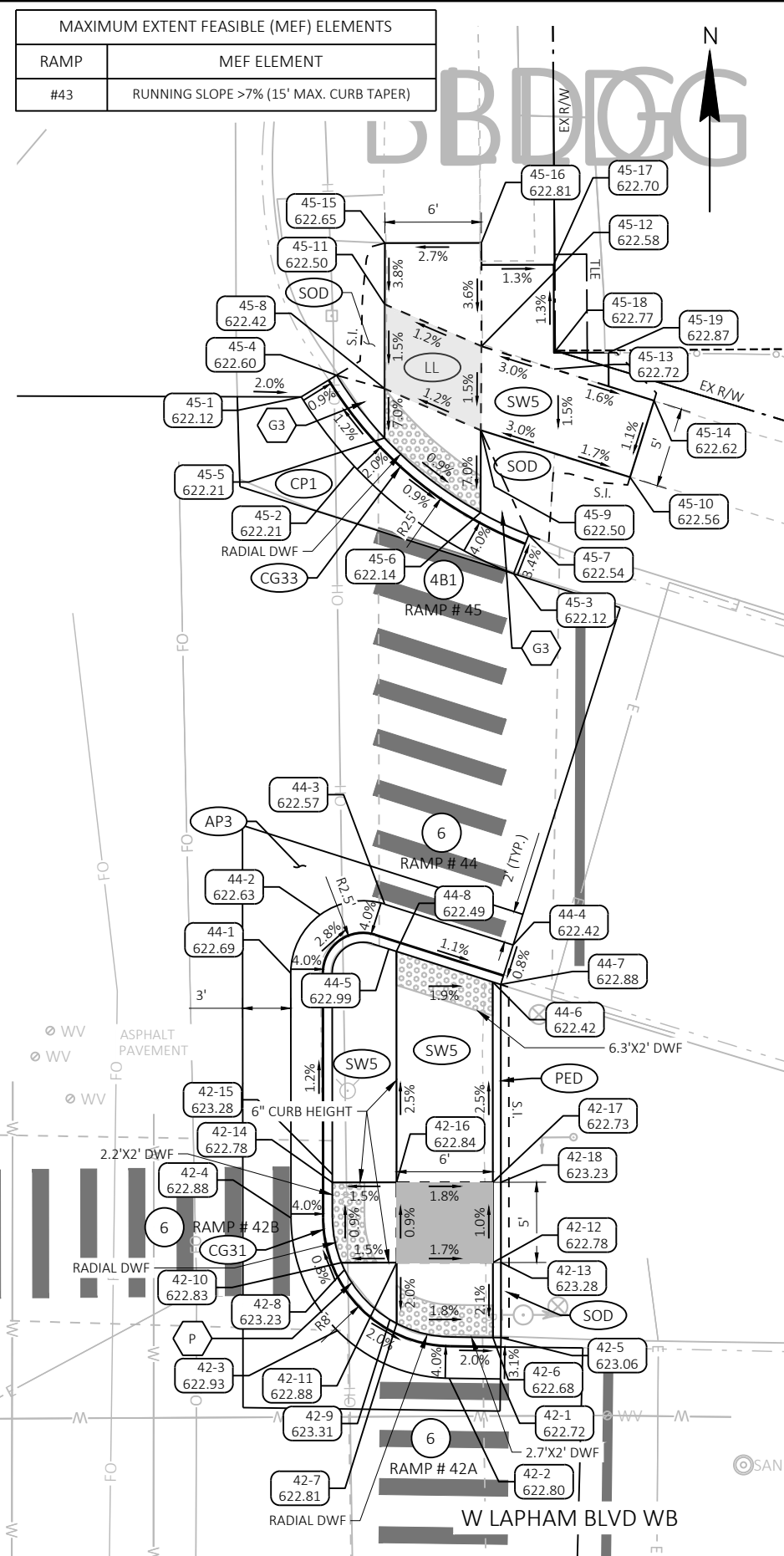
| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 42-1        | FLG  | 19+56.71 | 29.50 LT | 290697.15 | 604430.63 | 622.72    |
| 42-2        | FLG  | 19+53.52 | 29.55 LT | 290697.19 | 604427.44 | 622.80    |
| 42-3        | FLG  | 19+46.55 | 32.53 LT | 290700.17 | 604420.46 | 622.93    |
| 42-4        | FLG  | 19+43.67 | 39.55 LT | 290707.18 | 604417.58 | 622.88    |
| 42-5        | BC   | 19+56.75 | 32.08 LT | 290699.73 | 604430.67 | 623.06    |
| 42-6        | BC   | 19+56.25 | 32.09 LT | 290699.74 | 604430.17 | 622.68    |
| 42-7        | BC   | 19+50.25 | 32.96 LT | 290700.60 | 604424.17 | 622.81    |
| 42-8        | BC   | 19+47.00 | 36.31 LT | 290703.94 | 604420.91 | 623.23    |
| 42-9        | BC   | 19+49.83 | 33.20 LT | 290700.84 | 604423.74 | 623.31    |
| 42-10       | BC   | 19+46.80 | 36.76 LT | 290704.40 | 604420.71 | 622.83    |
| 42-11       | SW   | 19+50.26 | 36.76 LT | 290704.40 | 604424.16 | 622.88    |
| 42-12       | SW   | 19+56.26 | 36.76 LT | 290704.41 | 604430.16 | 622.78    |
| 42-13       | BC   | 19+56.76 | 36.75 LT | 290704.40 | 604430.66 | 623.28    |
| 42-14       | BC   | 19+46.26 | 41.76 LT | 290709.40 | 604420.16 | 622.78    |
| 42-15       | BC   | 19+46.26 | 42.26 LT | 290709.89 | 604420.16 | 623.28    |
| 42-16       | SW   | 19+50.26 | 41.76 LT | 290709.40 | 604424.16 | 622.84    |
| 42-17       | SW   | 19+56.26 | 41.76 LT | 290709.41 | 604430.16 | 622.73    |
| 42-18       | BC   | 19+56.76 | 41.75 LT | 290709.40 | 604430.66 | 623.23    |
| 43-1        | FLG  | 18+52.69 | 31.52 LT | 290699.00 | 604326.60 | 625.55    |
| 43-2        | FLG  | 18+72.44 | 31.54 LT | 290699.06 | 604346.36 | 624.79    |
| 43-3        | FLG  | 18+79.54 | 34.44 LT | 290701.97 | 604353.45 | 624.34    |
| 43-4        | FLG  | 18+82.48 | 40.94 LT | 290708.48 | 604356.39 | 624.12    |
| 43-5        | FLG  | 18+82.71 | 44.24 LT | 290711.77 | 604356.61 | 624.02    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 43-6        | BC   | 18+52.68 | 34.09 LT | 290701.58 | 604326.60 | 625.96    |
| 43-7        | BC   | 18+57.76 | 34.10 LT | 290701.60 | 604331.67 | 625.71    |
| 43-8        | BC   | 18+62.76 | 34.11 LT | 290701.62 | 604336.67 | 625.61    |
| 43-9        | BC   | 18+72.51 | 34.13 LT | 290701.65 | 604346.42 | 624.76    |
| 43-10       | BC   | 18+77.73 | 36.29 LT | 290703.81 | 604351.64 | 624.27    |
| 43-11       | BC   | 18+79.92 | 41.31 LT | 290708.84 | 604353.82 | 624.16    |
| 43-12       | BC   | 18+80.13 | 44.41 LT | 290711.95 | 604354.03 | 624.36    |
| 43-13       | SW   | 18+52.68 | 39.92 LT | 290707.41 | 604326.58 | 625.89    |
| 43-14       | SW   | 18+57.68 | 40.51 LT | 290708.01 | 604331.58 | 625.65    |
| 43-15       | SW   | 18+62.67 | 41.10 LT | 290708.60 | 604336.57 | 625.55    |
| 43-16       | SW   | 18+62.67 | 44.37 LT | 290711.88 | 604336.56 | 625.45    |
| 43-17       | SW   | 18+70.66 | 44.47 LT | 290711.99 | 604344.56 | 624.92    |
| 43-18       | SW   | 18+70.71 | 41.20 LT | 290708.72 | 604344.61 | 624.82    |
| 43-19       | FLG  | 18+62.76 | 31.53 LT | 290699.03 | 604336.68 | 625.19    |
| 43-20       | SW   | 18+77.67 | 41.29 LT | 290708.81 | 604351.57 | 624.20    |
| 44-1        | FLG  | 19+43.69 | 54.80 LT | 290722.43 | 604417.57 | 622.69    |
| 44-2        | FLG  | 19+45.53 | 58.43 LT | 290726.06 | 604419.41 | 622.63    |
| 44-3        | FLG  | 19+49.55 | 59.08 LT | 290726.72 | 604423.43 | 622.57    |
| 44-4        | FLG  | 19+57.55 | 56.54 LT | 290724.19 | 604431.43 | 622.42    |
| 44-5        | BC   | 19+49.79 | 56.30 LT | 290723.94 | 604423.67 | 622.99    |
| 44-6        | BC   | 19+56.27 | 54.24 LT | 290721.89 | 604430.15 | 622.42    |
| 44-7        | BC   | 19+56.77 | 54.08 LT | 290721.73 | 604430.65 | 622.88    |
| 44-8        | BC   | 19+50.27 | 56.15 LT | 290723.79 | 604424.15 | 622.49    |

| POINT TABLE |      |          |           |           |           |           |
|-------------|------|----------|-----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET    | NORTHING  | EASTING   | ELEVATION |
| 45-1        | FLG  | 19+44.40 | 90.69 LT  | 290758.32 | 604418.22 | 622.12    |
| 45-2        | FLG  | 19+47.70 | 86.36 LT  | 290754.00 | 604421.53 | 622.21    |
| 45-3        | FLG  | 19+57.61 | 79.66 LT  | 290747.31 | 604431.46 | 622.12    |
| 45-4        | BC   | 19+46.59 | 92.04 LT  | 290759.68 | 604420.42 | 622.60    |
| 45-5        | BC   | 19+49.58 | 88.13 LT  | 290755.77 | 604423.41 | 622.21    |
| 45-6        | BC   | 19+55.56 | 83.47 LT  | 290751.12 | 604429.39 | 622.14    |
| 45-7        | BC   | 19+58.55 | 82.07 LT  | 290749.72 | 604432.39 | 622.54    |
| 45-8        | SW   | 19+49.59 | 91.20 LT  | 290758.84 | 604423.41 | 622.42    |
| 45-9        | SW   | 19+55.58 | 88.61 LT  | 290756.26 | 604429.41 | 622.50    |
| 45-10       | SW   | 19+64.88 | 85.66 LT  | 290753.32 | 604438.71 | 622.56    |
| 45-11       | SW   | 19+49.61 | 96.44 LT  | 290764.08 | 604423.43 | 622.50    |
| 45-12       | SW   | 19+55.64 | 93.83 LT  | 290761.48 | 604429.46 | 622.58    |
| 45-13       | SW   | 19+60.15 | 92.40 LT  | 290760.06 | 604433.97 | 622.72    |
| 45-14       | SW   | 19+66.38 | 90.43 LT  | 290758.09 | 604440.20 | 622.62    |
| 45-15       | SW   | 19+49.63 | 100.27 LT | 290767.91 | 604423.44 | 622.65    |
| 45-16       | SW   | 19+55.63 | 100.27 LT | 290767.91 | 604429.44 | 622.81    |
| 45-17       | SW   | 19+60.14 | 98.90 LT  | 290766.56 | 604433.95 | 622.70    |
| 45-18       | SW   | 19+60.15 | 93.42 LT  | 290761.07 | 604433.97 | 622.77    |
| 45-19       | SW   | 19+63.55 | 93.42 LT  | 290761.08 | 604437.37 | 622.87    |

## NOTES:

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- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
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EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
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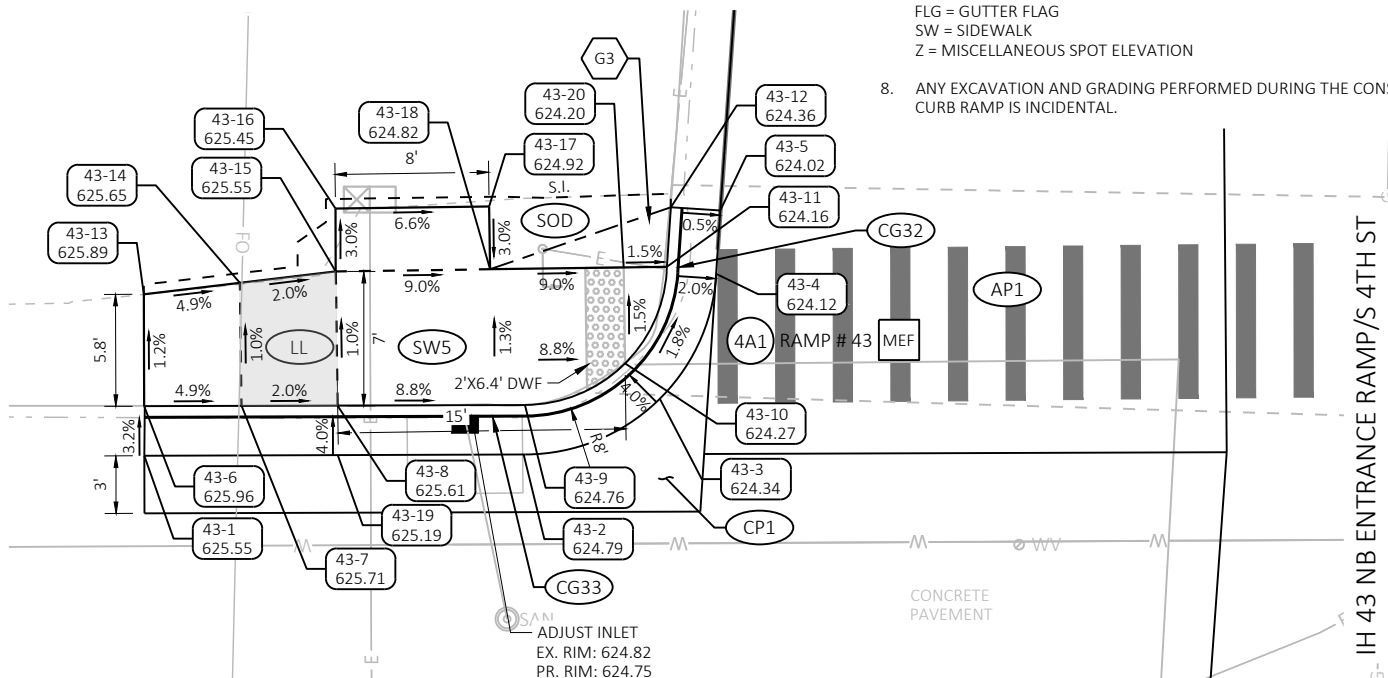


## LEGEND:

|          |          |                                                                                                |
|----------|----------|------------------------------------------------------------------------------------------------|
| RAMP #X  | X        | CURB RAMP NUMBER & TYPE                                                                        |
| SOD      | SOD      | SOD                                                                                            |
| SW5      | SW5      | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| PED      | PED      | CONCRETE CURB PEDESTRIAN                                                                       |
| CG31     | CG31     | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| CG32     | CG32     | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| CG33     | CG33     | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| CM1      | CM1      | CONCRETE MEDIAN SLOPED NOSE TYPE 1                                                             |
| AP1      | AP1      | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| AP2      | AP2      | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP3      | AP3      | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP4      | AP4      | HMA PAVEMENT 3 1/2-INCH (MT) OVER EX. CONCRETE BASE                                            |
| CP1      | CP1      | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| MEF      | MEF      | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| XX YY.YY | XX YY.YY | POINT NUMBER & ELEVATION                                                                       |
| LL       | LL       | LEVEL LANDING                                                                                  |
| P#       | P#       | PAVED TRAVERSIBLE FLARE (WIDTH)                                                                |
| G#       | G#       | GRADED NON-TRAVERSIBLE FLARE (WIDTH)                                                           |

RADIAL DWF LAYOUT TABLE

| RAMP | BACK OF CURB RADIUS (FT) | LANDING LENGTH 'XR' (FT) | RADIAL WARNING FIELD AREA (SF) | RADIAL LONG CHORD (FT) |
|------|--------------------------|--------------------------|--------------------------------|------------------------|
| 42A  | 7.42                     | 3.25                     | 7.0                            | 3.42                   |
| 42B  | 7.42                     | 2.77                     | 5.8                            | 2.65                   |
| 45   | 24.42                    | 7.68                     | 15.7                           | 7.58                   |



PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

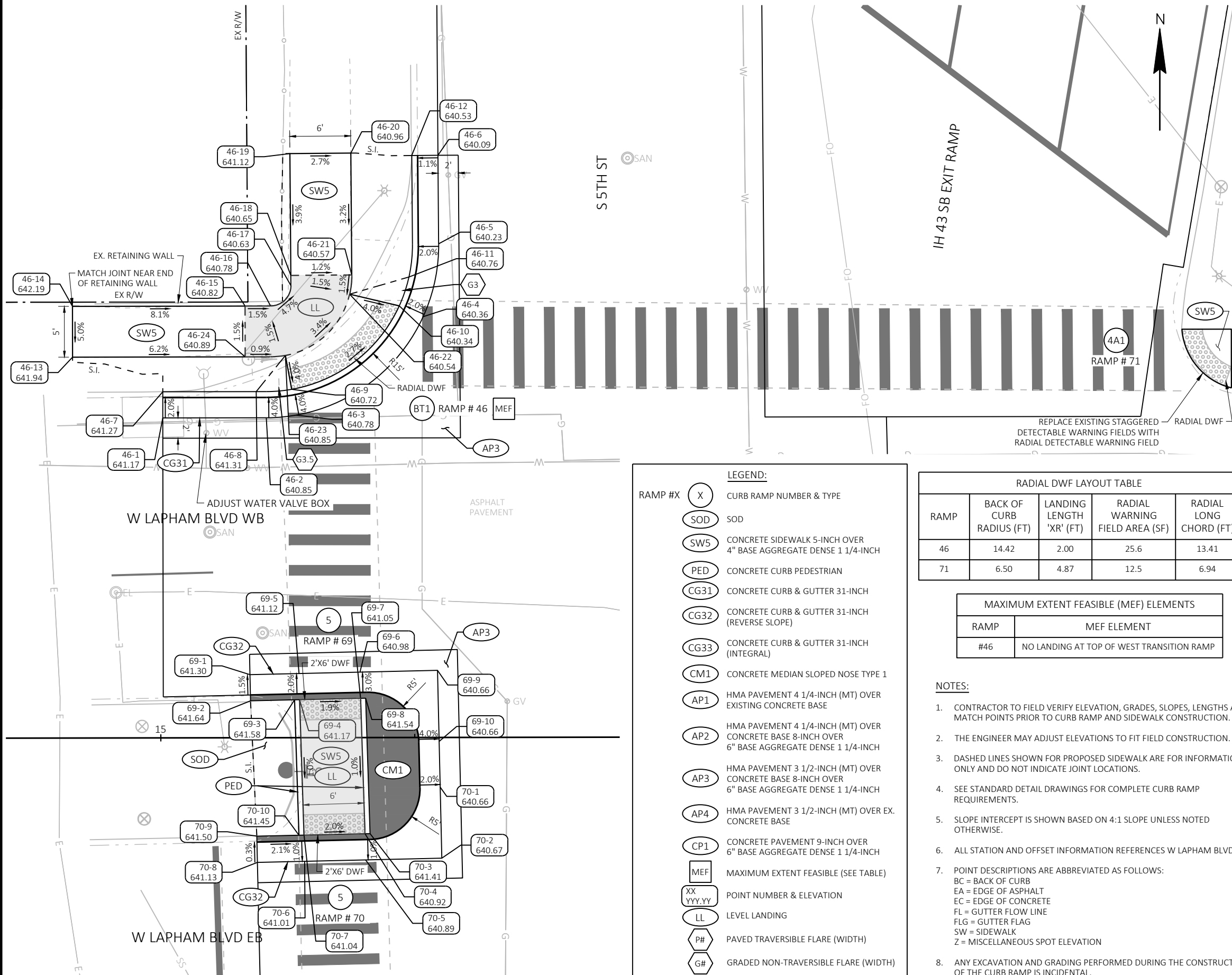
CURB RAMP DETAILS

SHEET

28

E





**LEGEND:**

RAMP #X (X) CURB RAMP NUMBER & TYPE

(SOD) SOD

(SW5) CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

(PED) CONCRETE CURB PEDESTRIAN

(CG31) CONCRETE CURB & GUTTER 31-INCH

(CG32) CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)

(CG33) CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)

(CM1) CONCRETE MEDIAN SLOPED NOSE TYPE 1

(AP1) HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE

(AP2) HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

(AP3) HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

(AP4) HMA PAVEMENT 3 1/2-INCH (MT) OVER EX. CONCRETE BASE

(CP1) CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

(MEF) MAXIMUM EXTENT FEASIBLE (SEE TABLE)

(XX YY.YY) POINT NUMBER & ELEVATION

(LL) LEVEL LANDING

(PH) PAVED TRAVERSIBLE FLARE (WIDTH)

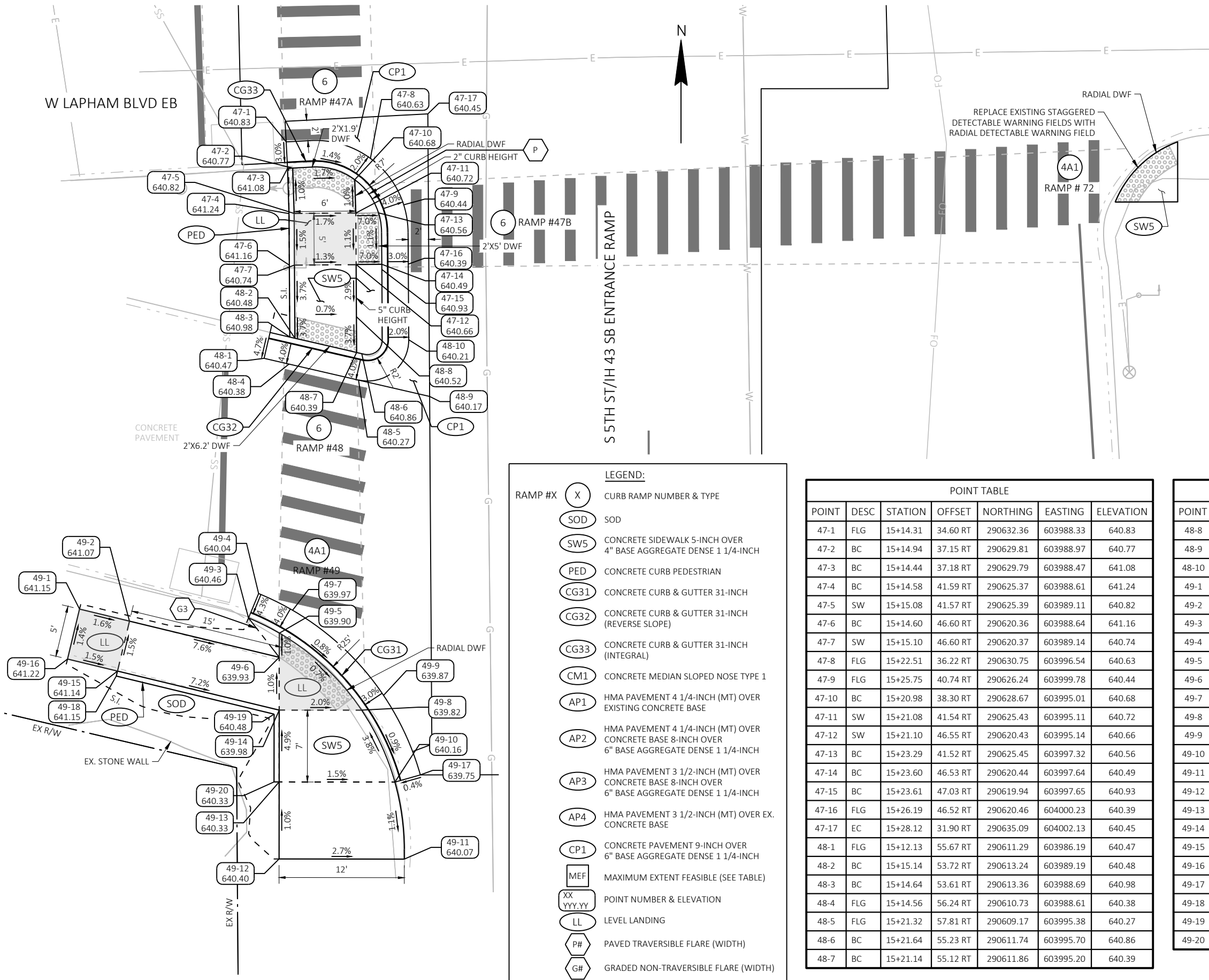
(G#) GRADED NON-TRAVERSIBLE FLARE (WIDTH)

| RADIAL DWF LAYOUT TABLE |                          |                          |                                |                        |
|-------------------------|--------------------------|--------------------------|--------------------------------|------------------------|
| RAMP                    | BACK OF CURB RADIUS (FT) | LANDING LENGTH 'XR' (FT) | RADIAL WARNING FIELD AREA (SF) | RADIAL LONG CHORD (FT) |
| 46                      | 14.42                    | 2.00                     | 25.6                           | 13.41                  |
| 71                      | 6.50                     | 4.87                     | 12.5                           | 6.94                   |

| MAXIMUM EXTENT FEASIBLE (MEF) ELEMENTS |                                           |
|----------------------------------------|-------------------------------------------|
| RAMP                                   | MEF ELEMENT                               |
| #46                                    | NO LANDING AT TOP OF WEST TRANSITION RAMP |

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| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 46-1        | FLG  | 15+00.24 | 31.50 LT | 290698.44 | 603974.16 | 641.17    |
| 46-2        | FLG  | 15+10.43 | 31.50 LT | 290698.46 | 603984.35 | 640.85    |
| 46-3        | FLG  | 15+13.39 | 31.76 LT | 290698.72 | 603987.30 | 640.78    |
| 46-4        | FLG  | 15+25.89 | 41.43 LT | 290708.41 | 603999.79 | 640.36    |
| 46-5        | FLG  | 15+27.43 | 48.60 LT | 290715.59 | 604001.32 | 640.23    |
| 46-6        | FLG  | 15+27.37 | 57.32 LT | 290724.30 | 604001.25 | 640.09    |
| 46-7        | BC   | 15+00.24 | 34.08 LT | 290701.02 | 603974.16 | 641.27    |
| 46-8        | BC   | 15+09.44 | 34.08 LT | 290701.04 | 603983.36 | 641.31    |
| 46-9        | BC   | 15+12.94 | 34.30 LT | 290701.26 | 603986.85 | 640.72    |
| 46-10       | BC   | 15+23.54 | 42.50 LT | 290709.48 | 603997.44 | 640.34    |
| 46-11       | BC   | 15+24.50 | 45.34 LT | 290712.32 | 603998.40 | 640.76    |
| 46-12       | BC   | 15+24.79 | 57.30 LT | 290724.28 | 603998.67 | 640.53    |
| 46-13       | SW   | 14+91.37 | 37.50 LT | 290704.43 | 603965.28 | 641.94    |
| 46-14       | SW   | 14+91.37 | 42.50 LT | 290709.43 | 603965.27 | 642.19    |
| 46-15       | SW   | 15+08.37 | 42.50 LT | 290709.45 | 603982.27 | 640.82    |
| 46-16       | SW   | 15+10.87 | 42.50 LT | 290709.46 | 603984.77 | 640.78    |
| 46-17       | SW   | 15+12.87 | 44.51 LT | 290711.47 | 603986.77 | 640.63    |
| 46-18       | SW   | 15+12.87 | 45.51 LT | 290712.47 | 603986.76 | 640.65    |
| 46-19       | SW   | 15+12.79 | 57.51 LT | 290724.47 | 603986.67 | 641.12    |
| 46-20       | SW   | 15+18.79 | 57.55 LT | 290724.52 | 603992.67 | 640.96    |
| 46-21       | SW   | 15+18.87 | 45.55 LT | 290712.52 | 603992.76 | 640.57    |
| 46-22       | SW   | 15+18.65 | 43.66 LT | 290710.63 | 603992.55 | 640.54    |
| 46-23       | SW   | 15+12.32 | 37.63 LT | 290704.59 | 603986.23 | 640.85    |
| 46-24       | SW   | 15+08.37 | 37.50 LT | 290704.45 | 603982.28 | 640.89    |
| 69-1        | FLG  | 15+08.79 | 6.21 LT  | 290673.17 | 603982.74 | 641.30    |
| 69-2        | BC   | 15+08.84 | 3.64 LT  | 290670.59 | 603982.80 | 641.64    |
| 69-3        | BC   | 15+13.17 | 3.73 LT  | 290670.69 | 603987.13 | 641.58    |
| 69-4        | BC   | 15+13.67 | 3.74 LT  | 290670.70 | 603987.63 | 641.17    |
| 69-5        | FLG  | 15+13.62 | 6.32 LT  | 290673.28 | 603987.57 | 641.12    |
| 69-6        | FLG  | 15+19.62 | 6.45 LT  | 290673.42 | 603993.57 | 640.98    |
| 69-7        | BC   | 15+19.67 | 3.87 LT  | 290670.84 | 603993.63 | 641.05    |
| 69-8        | BC   | 15+20.17 | 3.88 LT  | 290670.85 | 603994.13 | 641.54    |
| 69-9        | FLG  | 15+27.25 | 6.61 LT  | 290673.59 | 604001.21 | 640.66    |
| 69-10       | FLG  | 15+27.40 | 0.39 RT  | 290666.59 | 604001.37 | 640.66    |
| 70-1        | FLG  | 15+27.50 | 4.89 RT  | 290662.09 | 604001.47 | 640.66    |
| 70-2        | FLG  | 15+27.65 | 11.89 RT | 290655.10 | 604001.63 | 640.67    |
| 70-3        | BC   | 15+20.59 | 9.46 RT  | 290657.52 | 603994.57 | 641.41    |
| 70-4        | BC   | 15+20.09 | 9.47 RT  | 290657.50 | 603994.07 | 640.92    |
| 70-5        | FLG  | 15+20.14 | 12.05 RT | 290654.92 | 603994.13 | 640.89    |
| 70-6        | FLG  | 15+14.14 | 12.18 RT | 290654.79 | 603988.13 | 641.01    |
| 70-7        | BC   | 15+14.09 | 9.60 RT  | 290657.37 | 603988.07 | 641.04    |
| 70-8        | FLG  | 15+09.49 | 12.27 RT | 290654.68 | 603983.47 | 641.13    |
| 70-9        | BC   | 15+09.43 | 9.69 RT  | 290657.26 | 603983.42 | 641.50    |
| 70-10       | BC   | 15+13.59 | 9.61 RT  | 290657.36 | 603987.57 | 641.45    |



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RADIAL DWF LAYOUT TABLE

| RAMP | BACK OF CURB RADIUS (FT) | LANDING LENGTH 'XR' (FT) | RADIAL WARNING FIELD AREA (SF) | RADIAL LONG CHORD (FT) |
|------|--------------------------|--------------------------|--------------------------------|------------------------|
| 72   | 10.5                     | 6.09                     | 13.2                           | 7.59                   |
| 47A  | 6.4                      | 4.44                     | 9.3                            | 4.32                   |
| 49   | 24.4                     | 7.47                     | 17.2                           | 9.5                    |

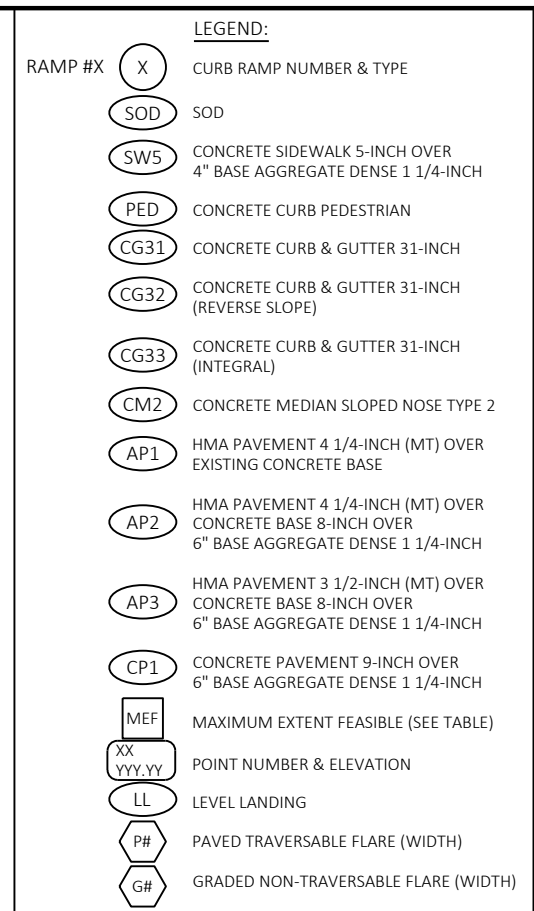
POINT TABLE

| POINT | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
|-------|------|----------|----------|-----------|-----------|-----------|
| 47-1  | FLG  | 15+14.31 | 34.60 RT | 290632.36 | 603988.33 | 640.83    |
| 47-2  | BC   | 15+14.94 | 37.15 RT | 290629.81 | 603988.97 | 640.77    |
| 47-3  | BC   | 15+14.44 | 37.18 RT | 290629.79 | 603988.47 | 641.08    |
| 47-4  | BC   | 15+14.58 | 41.59 RT | 290625.37 | 603988.61 | 641.24    |
| 47-5  | SW   | 15+15.08 | 41.57 RT | 290625.39 | 603989.11 | 640.82    |
| 47-6  | BC   | 15+14.60 | 46.60 RT | 290620.36 | 603988.64 | 641.16    |
| 47-7  | SW   | 15+15.10 | 46.60 RT | 290620.37 | 603989.14 | 640.74    |
| 47-8  | FLG  | 15+22.51 | 36.22 RT | 290630.75 | 603996.54 | 640.63    |
| 47-9  | FLG  | 15+25.75 | 40.74 RT | 290626.24 | 603999.78 | 640.44    |
| 47-10 | BC   | 15+20.98 | 38.30 RT | 290628.67 | 603995.01 | 640.68    |
| 47-11 | SW   | 15+21.08 | 41.54 RT | 290625.43 | 603995.11 | 640.72    |
| 47-12 | SW   | 15+21.10 | 46.55 RT | 290620.43 | 603995.14 | 640.66    |
| 47-13 | BC   | 15+23.29 | 41.52 RT | 290625.45 | 603997.32 | 640.56    |
| 47-14 | BC   | 15+23.60 | 46.53 RT | 290620.44 | 603997.64 | 640.49    |
| 47-15 | BC   | 15+23.61 | 47.03 RT | 290619.94 | 603997.65 | 640.93    |
| 47-16 | FLG  | 15+26.19 | 46.52 RT | 290620.46 | 604000.23 | 640.39    |
| 47-17 | EC   | 15+28.12 | 31.90 RT | 290635.09 | 604002.13 | 640.45    |
| 48-1  | FLG  | 15+12.13 | 55.67 RT | 290611.29 | 603986.19 | 640.47    |
| 48-2  | BC   | 15+15.14 | 53.72 RT | 290613.24 | 603989.19 | 640.48    |
| 48-3  | BC   | 15+14.64 | 53.61 RT | 290613.36 | 603988.69 | 640.98    |
| 48-4  | FLG  | 15+14.56 | 56.24 RT | 290610.73 | 603988.61 | 640.38    |
| 48-5  | FLG  | 15+21.32 | 57.81 RT | 290609.17 | 603995.38 | 640.27    |
| 48-6  | BC   | 15+21.64 | 55.23 RT | 290611.74 | 603995.70 | 640.86    |
| 48-7  | BC   | 15+21.14 | 55.12 RT | 290611.86 | 603995.20 | 640.39    |

POINT TABLE

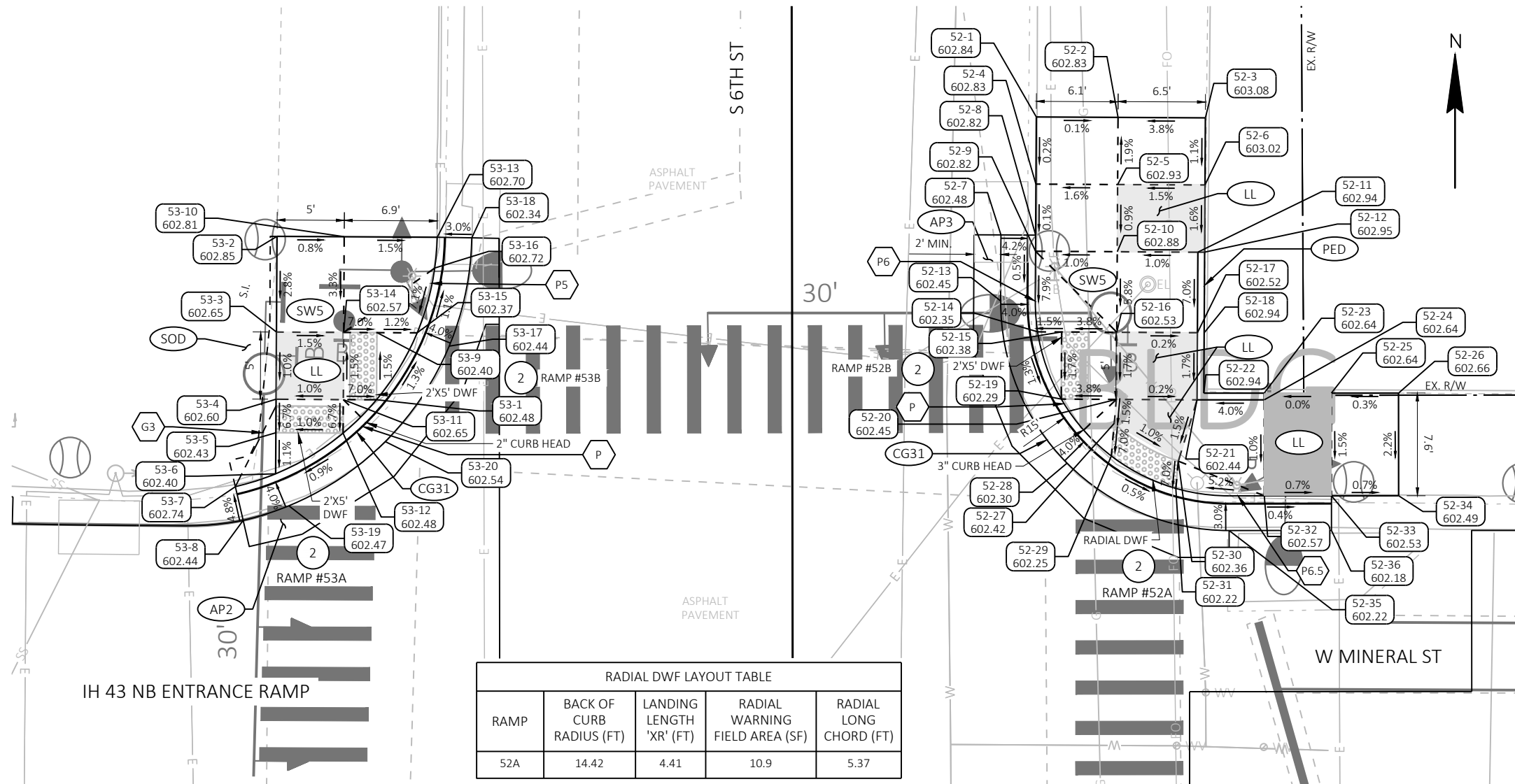
| POINT | DESC | STATION  | OFFSET    | NORTHING  | EASTING   | ELEVATION |
|-------|------|----------|-----------|-----------|-----------|-----------|
| 48-8  | SW   | 15+21.13 | 51.64 RT  | 290615.34 | 603995.18 | 640.52    |
| 48-9  | EC   | 15+28.25 | 59.41 RT  | 290607.57 | 604002.30 | 640.17    |
| 48-10 | FLG  | 15+26.22 | 53.89 RT  | 290613.09 | 604000.27 | 640.21    |
| 49-1  | SW   | 14+94.13 | 80.06 RT  | 290586.87 | 603968.22 | 641.15    |
| 49-2  | SW   | 14+98.99 | 81.24 RT  | 290585.70 | 603973.08 | 641.07    |
| 49-3  | BC   | 15+10.58 | 80.96 RT  | 290586.00 | 603984.67 | 640.46    |
| 49-4  | FLG  | 15+11.56 | 78.57 RT  | 290588.39 | 603985.65 | 640.04    |
| 49-5  | BC   | 15+13.57 | 82.44 RT  | 290584.53 | 603987.67 | 639.90    |
| 49-6  | SW   | 15+13.56 | 84.78 RT  | 290582.18 | 603987.66 | 639.93    |
| 49-7  | FLG  | 15+14.87 | 80.21 RT  | 290586.76 | 603988.96 | 639.97    |
| 49-8  | BC   | 15+21.57 | 89.94 RT  | 290577.03 | 603995.67 | 639.82    |
| 49-9  | FLG  | 15+23.71 | 88.51 RT  | 290578.47 | 603997.81 | 639.87    |
| 49-10 | BC   | 15+24.80 | 96.95 RT  | 290570.03 | 603998.92 | 640.16    |
| 49-11 | SW   | 15+25.71 | 104.45 RT | 290562.53 | 603999.83 | 640.07    |
| 49-12 | SW   | 15+13.54 | 104.40 RT | 290562.56 | 603987.67 | 640.40    |
| 49-13 | SW   | 15+13.54 | 96.92 RT  | 290570.04 | 603987.65 | 640.33    |
| 49-14 | SW   | 15+13.55 | 89.93 RT  | 290577.04 | 603987.66 | 639.98    |
| 49-15 | SW   | 14+97.81 | 86.10 RT  | 290580.83 | 603971.91 | 641.14    |
| 49-16 | SW   | 14+92.95 | 84.92 RT  | 290582.01 | 603967.05 | 641.22    |
| 49-17 | FLG  | 15+27.28 | 96.25 RT  | 290570.73 | 604001.40 | 639.75    |
| 49-18 | BC   | 14+97.69 | 86.59 RT  | 290580.35 | 603971.79 | 641.15    |
| 49-19 | BC   | 15+13.05 | 90.32 RT  | 290576.64 | 603987.16 | 640.48    |
| 49-20 | BC   | 15+13.04 | 96.92 RT  | 290570.04 | 603987.15 | 640.33    |





1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4. SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
6. ALL STATION AND OFFSET INFORMATION REFERENCES S 6TH ST.
7. POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
8. ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 51-22       | SW   | 24+81.81 | 42.38 RT | 293174.00 | 603677.99 | 602.64    |
| 51-23       | SW   | 24+75.48 | 42.35 RT | 293167.66 | 603677.97 | 602.73    |
| 51-24       | SW   | 24+74.65 | 23.45 RT | 293166.81 | 603659.07 | 602.72    |
| 51-25       | SW   | 24+74.65 | 28.45 RT | 293166.82 | 603664.07 | 602.64    |
| 51-26       | SW   | 24+71.13 | 32.00 RT | 293163.30 | 603667.62 | 602.71    |
| 51-27       | BC   | 24+74.98 | 42.35 RT | 293167.16 | 603677.97 | 602.73    |
| 51-28       | BC   | 24+75.00 | 36.56 RT | 293167.18 | 603672.18 | 603.24    |
| 51-29       | BC   | 24+70.78 | 32.35 RT | 293162.95 | 603667.98 | 603.21    |
| 51-30       | BC   | 24+65.52 | 27.13 RT | 293157.68 | 603662.76 | 603.36    |
| 51-31       | BC   | 24+57.72 | 27.21 RT | 293149.88 | 603662.86 | 603.92    |
| 51-32       | BC   | 24+52.72 | 27.26 RT | 293144.88 | 603662.91 | 603.51    |
| 51-33       | SW   | 24+52.71 | 26.76 RT | 293144.88 | 603662.41 | 603.50    |
| 51-34       | SW   | 24+52.65 | 20.76 RT | 293144.81 | 603656.41 | 603.41    |
| 51-35       | SW   | 24+47.65 | 20.81 RT | 293139.81 | 603656.47 | 603.48    |
| 51-36       | SW   | 24+47.72 | 26.81 RT | 293139.88 | 603662.47 | 603.65    |



LEGEND:

RAMP #X

X

CURB RAMP NUMBER & TYPE

SOD

SOD

SOD

SW5

CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH

PED

CONCRETE CURB PEDESTRIAN

CG31

CONCRETE CURB & GUTTER 31-INCH

CG32

CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)

CG33

CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)

CM2

CONCRETE MEDIAN SLOPED NOSE TYPE 2

AP1

HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE

AP2

HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

AP3

HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

CP1

CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH

MEF

MAXIMUM EXTENT FEASIBLE (SEE TABLE)

XX  
YYY.YY

POINT NUMBER & ELEVATION

LL

LEVEL LANDING

P#

PAVED TRAVERSABLE FLARE (WIDTH)

G#

GRADED NON-TRAVERSABLE FLARE (WIDTH)

- NOTES:
1.

CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4.

SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5.

SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
6.

ALL STATION AND OFFSET INFORMATION REFERENCES S 6TH ST.
7.

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FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
8.

ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 53-19       | FLG  | 25+42.52 | 37.48 LT | 293234.59 | 603598.04 | 602.47    |
| 53-20       | FLG  | 25+47.30 | 30.30 LT | 293239.38 | 603605.22 | 602.54    |

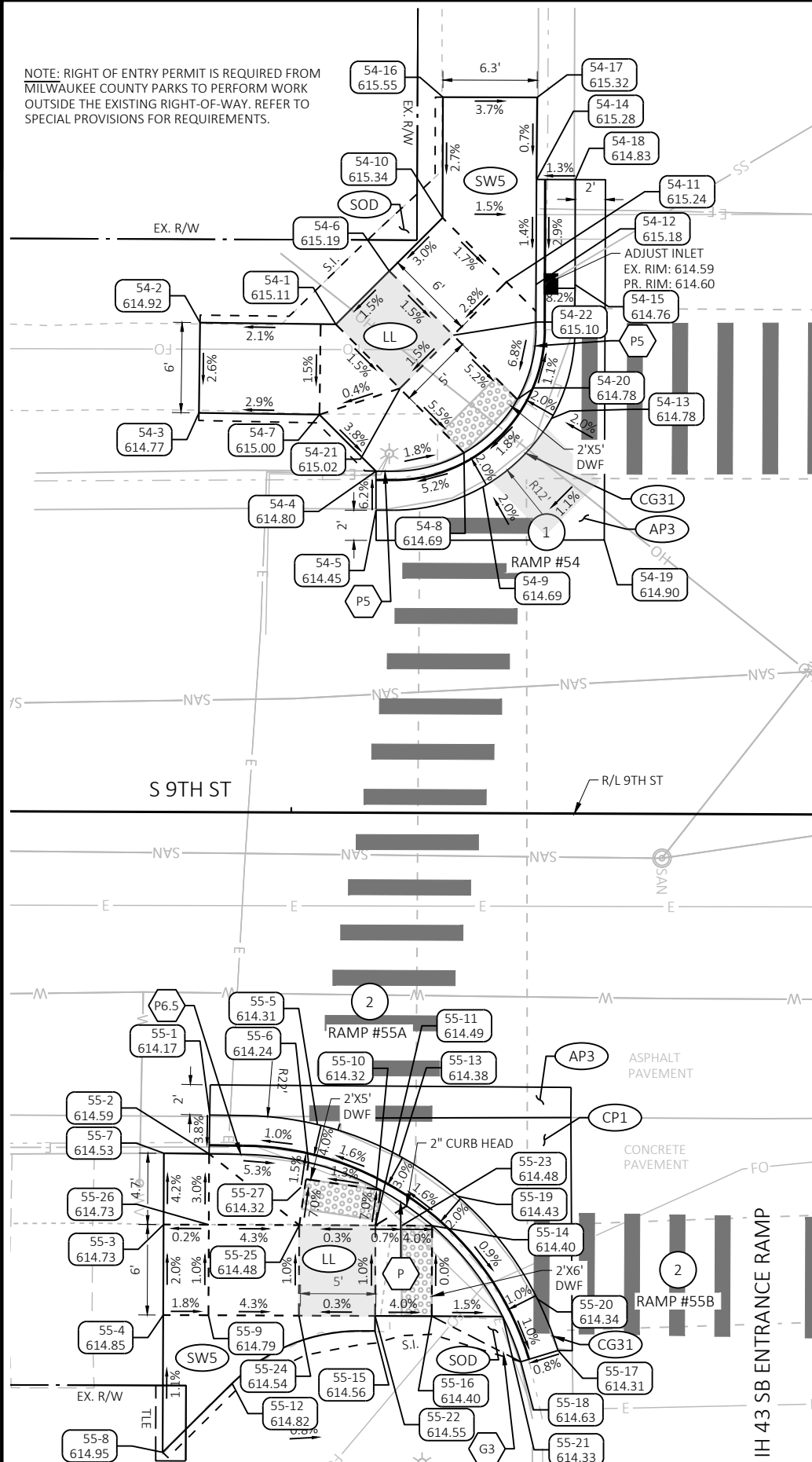
| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 52-1        | SW   | 25+71.40 | 18.19 RT | 293263.55 | 603653.67 | 602.84    |
| 52-2        | SW   | 25+71.36 | 24.27 RT | 293263.51 | 603659.76 | 602.83    |
| 52-3        | SW   | 25+71.31 | 30.77 RT | 293263.48 | 603666.26 | 603.08    |
| 52-4        | BC   | 25+66.40 | 18.15 RT | 293258.55 | 603653.64 | 602.83    |
| 52-5        | SW   | 25+66.36 | 24.24 RT | 293258.51 | 603659.73 | 602.93    |
| 52-6        | SW   | 25+66.31 | 30.74 RT | 293258.48 | 603666.23 | 603.02    |
| 52-7        | FLG  | 25+62.62 | 15.55 RT | 293254.77 | 603651.04 | 602.48    |
| 52-8        | BC   | 25+62.60 | 18.13 RT | 293254.75 | 603653.62 | 602.82    |
| 52-9        | BC   | 25+61.40 | 18.12 RT | 293253.55 | 603653.62 | 602.82    |
| 52-10       | SW   | 25+61.36 | 24.20 RT | 293253.51 | 603659.70 | 602.88    |
| 52-11       | SW   | 25+61.31 | 30.20 RT | 293253.48 | 603665.70 | 602.94    |
| 52-12       | BC   | 25+61.31 | 30.70 RT | 293253.48 | 603666.20 | 602.95    |
| 52-13       | FLG  | 25+57.70 | 15.51 RT | 293249.85 | 603651.02 | 602.45    |
| 52-14       | BC   | 25+55.40 | 18.26 RT | 293247.55 | 603653.76 | 602.35    |
| 52-15       | SW   | 25+55.39 | 20.05 RT | 293247.54 | 603655.56 | 602.38    |
| 52-16       | SW   | 25+55.36 | 24.16 RT | 293247.51 | 603659.67 | 602.53    |
| 52-17       | SW   | 25+55.31 | 30.16 RT | 293247.48 | 603665.67 | 602.52    |
| 52-18       | BC   | 25+55.31 | 30.66 RT | 293247.48 | 603666.17 | 602.94    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 52-19       | BC   | 25+50.39 | 20.02 RT | 293242.54 | 603655.53 | 602.29    |
| 52-20       | SW   | 25+50.36 | 24.12 RT | 293242.51 | 603659.64 | 602.45    |
| 52-21       | SW   | 25+50.31 | 30.12 RT | 293242.48 | 603665.64 | 602.44    |
| 52-22       | BC   | 25+50.81 | 30.63 RT | 293242.98 | 603666.14 | 602.94    |
| 52-23       | SW   | 25+50.81 | 35.12 RT | 293242.98 | 603670.64 | 602.64    |
| 52-24       | SW   | 25+50.31 | 35.12 RT | 293242.48 | 603670.64 | 602.64    |
| 52-25       | BC   | 25+50.80 | 40.12 RT | 293242.98 | 603675.64 | 602.64    |
| 52-26       | SW   | 25+50.80 | 45.12 RT | 293242.99 | 603680.64 | 602.66    |
| 52-27       | SW   | 25+48.58 | 23.96 RT | 293240.73 | 603659.48 | 602.42    |
| 52-28       | FLG  | 25+45.61 | 20.44 RT | 293237.76 | 603655.96 | 602.30    |
| 52-29       | BC   | 25+46.14 | 23.74 RT | 293238.30 | 603659.26 | 602.25    |
| 52-30       | SW   | 25+45.75 | 28.72 RT | 293237.92 | 603664.24 | 602.36    |
| 52-31       | BC   | 25+43.72 | 28.54 RT | 293235.89 | 603664.06 | 602.22    |
| 52-32       | BC   | 25+43.16 | 35.12 RT | 293235.33 | 603670.64 | 602.57    |
| 52-33       | BC   | 25+43.15 | 40.12 RT | 293235.34 | 603675.64 | 602.53    |
| 52-34       | SW   | 25+43.15 | 45.12 RT | 293235.34 | 603680.64 | 602.49    |
| 52-35       | FLG  | 25+40.58 | 32.50 RT | 293232.75 | 603668.02 | 602.22    |
| 52-36       | SW   | 25+40.57 | 40.11 RT | 293232.76 | 603675.64 | 602.18    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 53-1        | BC   | 25+50.41 | 30.94 LT | 293242.49 | 603604.57 | 602.48    |
| 53-2        | SW   | 25+62.59 | 38.33 LT | 293254.66 | 603597.16 | 602.85    |
| 53-3        | SW   | 25+55.46 | 38.38 LT | 293247.53 | 603597.12 | 602.65    |
| 53-4        | SW   | 25+50.46 | 38.42 LT | 293242.53 | 603597.09 | 602.60    |
| 53-5        | SW   | 25+47.96 | 38.44 LT | 293240.03 | 603597.08 | 602.43    |
| 53-6        | BC   | 25+44.91 | 38.46 LT | 293236.98 | 603597.06 | 602.40    |
| 53-7        | BC   | 25+43.95 | 41.47 LT | 293236.02 | 603594.06 | 602.74    |
| 53-8        | FLG  | 25+41.44 | 40.89 LT | 293233.50 | 603594.64 | 602.44    |
| 53-9        | SW   | 25+55.41 | 30.91 LT | 293247.49 | 603604.60 | 602.40    |
| 53-10       | SW   | 25+62.55 | 33.33 LT | 293254.63 | 603602.16 | 602.81    |
| 53-11       | SW   | 25+50.43 | 33.42 LT | 293242.50 | 603602.09 | 602.65    |
| 53-12       | BC   | 25+47.93 | 33.44 LT | 293240.00 | 603602.08 | 602.48    |
| 53-13       | BC   | 25+62.50 | 26.42 LT | 293254.59 | 603609.08 | 602.70    |
| 53-14       | SW   | 25+55.43 | 33.38 LT | 293247.50 | 603602.12 | 602.57    |
| 53-15       | BC   | 25+55.39 | 27.91 LT | 293247.47 | 603607.59 | 602.37    |
| 53-16       | BC   | 25+60.21 | 26.60 LT | 293252.30 | 603608.90 | 602.72    |
| 53-17       | FLG  | 25+54.39 | 25.53 LT | 293246.48 | 603609.97 | 602.44    |
| 53-18       | FLG  | 25+62.46 | 23.84 LT | 293254.54 | 603611.66 | 602.34    |



NOTE: RIGHT OF ENTRY PERMIT IS REQUIRED FROM MILWAUKEE COUNTY PARKS TO PERFORM WORK OUTSIDE THE EXISTING RIGHT-OF-WAY. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS.

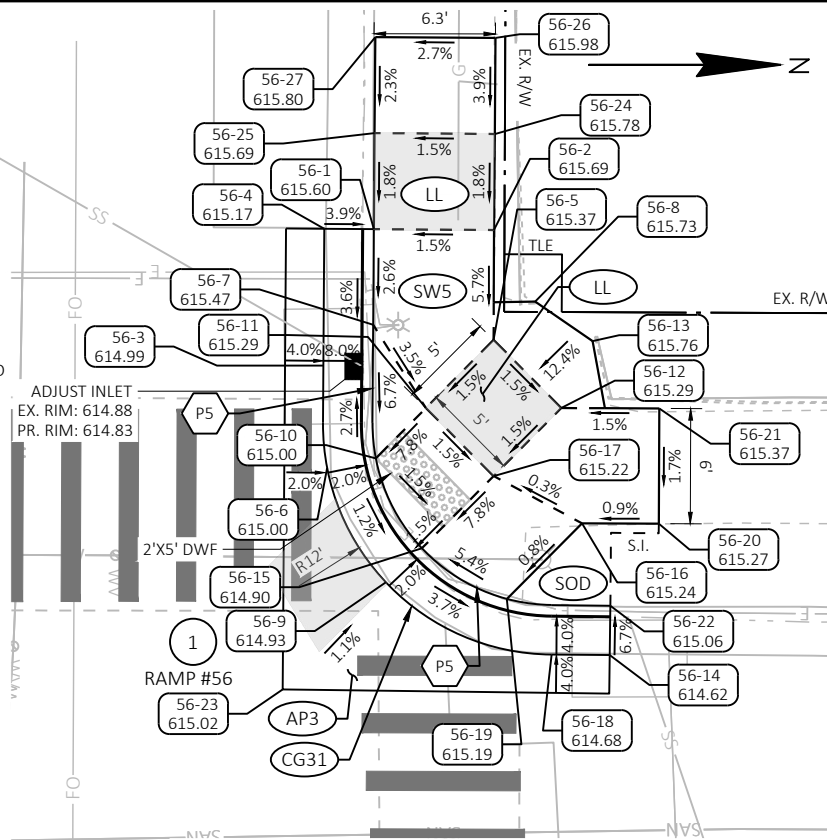
**NOTES:**

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- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
- ALL STATION AND OFFSET INFORMATION REFERENCES S 9TH ST.
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EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
SWG = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
- ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

**LEGEND:**

- RAMP #X (X) CURB RAMP NUMBER & TYPE
- (SOD) SOD
- (SW5) CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
- (PED) CONCRETE CURB PEDESTRIAN
- (CG31) CONCRETE CURB & GUTTER 31-INCH
- (CG32) CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)
- (CG33) CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)
- (CM2) CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (AP1) HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE
- (AP2) HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (AP3) HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (CP1) CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
- (MEF) MAXIMUM EXTENT FEASIBLE (SEE TABLE)
- (XX YYY.YY) POINT NUMBER & ELEVATION
- (LL) LEVEL LANDING
- (P#) PAVED TRAVERSABLE FLARE (WIDTH)
- (G#) GRADED NON-TRAVERSABLE FLARE (WIDTH)

W MINERAL ST

**POINT TABLE**

| POINT | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
|-------|------|----------|----------|-----------|-----------|-----------|
| 56-2  | SW   | 14+83.64 | 42.21 LT | 293250.33 | 602452.64 | 615.69    |
| 56-3  | FLG  | 14+74.78 | 35.11 LT | 293241.45 | 602459.70 | 614.99    |
| 56-4  | BC   | 14+74.80 | 42.24 LT | 293241.50 | 602452.58 | 615.17    |
| 56-5  | SW   | 14+83.65 | 36.48 LT | 293250.32 | 602458.36 | 615.37    |
| 56-6  | FLG  | 14+75.00 | 29.79 LT | 293241.65 | 602465.03 | 615.00    |
| 56-7  | BC   | 14+77.37 | 37.24 LT | 293244.05 | 602457.58 | 615.47    |
| 56-8  | SW   | 14+85.80 | 38.49 LT | 293252.48 | 602456.37 | 615.73    |
| 56-9  | FLG  | 14+78.08 | 23.84 LT | 293244.70 | 602470.99 | 614.93    |
| 56-10 | BC   | 14+77.53 | 30.28 LT | 293244.18 | 602464.54 | 615.00    |
| 56-11 | SW   | 14+80.13 | 32.92 LT | 293246.79 | 602461.91 | 615.29    |
| 56-12 | SW   | 14+87.18 | 32.95 LT | 293253.84 | 602461.91 | 615.29    |
| 56-13 | SW   | 14+88.80 | 36.44 LT | 293255.47 | 602458.43 | 615.76    |
| 56-14 | FLG  | 14+89.76 | 20.09 LT | 293256.37 | 602474.78 | 614.62    |
| 56-15 | BC   | 14+79.95 | 25.61 LT | 293246.58 | 602469.22 | 614.90    |
| 56-16 | SW   | 14+88.28 | 26.95 LT | 293254.92 | 602467.92 | 615.24    |
| 56-17 | SW   | 14+83.67 | 29.39 LT | 293250.31 | 602465.46 | 615.22    |
| 56-18 | FLG  | 14+86.73 | 20.10 LT | 293253.34 | 602474.76 | 614.68    |
| 56-19 | BC   | 14+84.38 | 22.99 LT | 293251.00 | 602471.86 | 615.19    |
| 56-20 | SW   | 14+92.28 | 26.95 LT | 293258.92 | 602467.93 | 615.27    |
| 56-21 | SW   | 14+92.29 | 32.95 LT | 293258.94 | 602461.93 | 615.37    |
| 56-22 | BC   | 14+89.78 | 22.66 LT | 293256.40 | 602472.21 | 615.06    |
| 56-23 | EA   | 14+72.73 | 18.24 LT | 293239.33 | 602476.57 | 615.02    |
| 56-24 | SW   | 14+83.66 | 47.21 LT | 293250.38 | 602447.64 | 615.78    |
| 56-25 | SW   | 14+77.40 | 47.23 LT | 293244.12 | 602447.60 | 615.69    |
| 56-26 | SW   | 14+83.68 | 52.21 LT | 293250.41 | 602442.64 | 615.98    |
| 56-27 | SW   | 14+77.42 | 52.23 LT | 293244.15 | 602442.60 | 615.80    |

**POINT TABLE**

| POINT | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
|-------|------|----------|----------|-----------|-----------|-----------|
| 54-1  | SW   | 14+02.83 | 32.37 LT | 293169.49 | 602462.17 | 615.11    |
| 54-2  | SW   | 13+93.83 | 32.45 LT | 293160.48 | 602462.05 | 614.92    |
| 54-3  | SW   | 13+93.77 | 26.46 LT | 293160.41 | 602468.04 | 614.77    |
| 54-4  | BC   | 14+05.53 | 22.64 LT | 293172.15 | 602471.90 | 614.80    |
| 54-5  | FLG  | 14+05.54 | 20.06 LT | 293172.15 | 602474.48 | 614.45    |
| 54-6  | SW   | 14+06.36 | 35.92 LT | 293173.03 | 602458.63 | 615.19    |
| 54-7  | SW   | 14+01.77 | 26.38 LT | 293168.40 | 602468.15 | 615.00    |
| 54-8  | BC   | 14+11.35 | 23.89 LT | 293177.98 | 602470.68 | 614.69    |
| 54-9  | FLG  | 14+12.63 | 21.65 LT | 293179.25 | 602472.93 | 614.69    |
| 54-10 | SW   | 14+09.88 | 39.46 LT | 293176.57 | 602455.10 | 615.34    |
| 54-11 | SW   | 14+14.14 | 35.23 LT | 293180.81 | 602459.35 | 615.24    |
| 54-12 | BC   | 14+16.11 | 35.07 LT | 293182.77 | 602459.52 | 615.18    |
| 54-13 | FLG  | 14+17.14 | 26.18 LT | 293183.77 | 602468.41 | 614.78    |
| 54-14 | BC   | 14+16.12 | 42.03 LT | 293182.81 | 602452.56 | 615.28    |
| 54-15 | FLG  | 14+18.68 | 35.07 LT | 293185.35 | 602459.53 | 614.76    |
| 54-16 | SW   | 14+09.87 | 47.46 LT | 293176.59 | 602447.10 | 615.55    |
| 54-17 | SW   | 14+16.13 | 47.47 LT | 293182.84 | 602447.12 | 615.32    |
| 54-18 | FLG  | 14+18.68 | 42.03 LT | 293185.37 | 602452.57 | 614.83    |
| 54-19 | EA   | 14+20.69 | 18.15 LT | 293187.29 | 602476.46 | 614.90    |
| 54-20 | BC   | 14+14.89 | 27.45 LT | 293181.53 | 602467.14 | 614.78    |
| 54-21 | SW   | 14+07.10 | 28.13 LT | 293173.74 | 602466.43 | 615.02    |
| 54-22 | SW   | 14+10.63 | 31.68 LT | 293177.28 | 602462.89 | 615.10    |
| 55-1  | FLG  | 13+94.67 | 20.08 RT | 293161.12 | 602514.58 | 614.17    |
| 55-2  | BC   | 13+94.64 | 22.66 RT | 293161.08 | 602517.16 | 614.59    |
| 55-3  | SW   | 13+91.64 | 27.35 RT | 293158.06 | 602521.84 | 614.73    |
| 55-4  | SW   | 13+91.63 | 33.35 RT | 293158.04 | 602527.84 | 614.85    |
| 55-5  | FLG  | 14+01.82 | 20.68 RT | 293168.27 | 602515.21 | 614.31    |
| 55-6  | BC   | 14+01.23 | 23.19 RT | 293167.67 | 602517.72 | 614.24    |
| 55-7  | SW   | 13+91.64 | 22.62 RT | 293158.08 | 602517.11 | 614.53    |
| 55-8  | SW   | 13+91.63 | 42.45 RT | 293158.00 | 602536.94 | 614.95    |
| 55-9  | SW   | 13+94.63 | 33.35 RT | 293161.04 | 602527.86 | 614.79    |
| 55-10 | BC   | 14+05.74 | 24.86 RT | 293172.17 | 602519.40 | 614.32    |
| 55-11 | SW   | 14+05.69 | 27.36 RT | 293172.11 | 602521.90 | 614.49    |
| 55-12 | SW   | 13+96.22 | 37.87 RT | 293162.60 | 602532.38 | 614.82    |
| 55-13 | FLG  | 14+07.24 | 22.73 RT | 293173.69 | 602517.29 | 614.38    |
| 55-14 | BC   | 14+09.45 | 27.36 RT | 293175.87 | 602521.92 | 614.40    |
| 55-15 | SW   | 14+05.68 | 34.36 RT | 293172.08 | 602528.90 | 614.56    |
| 55-16 | SW   | 14+09.45 | 33.36 RT | 293175.85 | 602527.92 | 614.40    |
| 55-17 | FLG  | 14+17.83 | 35.60 RT | 293184.22 | 602530.19 | 614.31    |
| 55-18 | BC   | 14+15.36 | 36.36 RT | 293181.75 | 602530.94 | 614.63    |
| 55-19 | FLG  | 14+11.13 | 25.40 RT | 293177.56 | 602519.97 | 614.43    |
| 55-20 | FLG  | 14+16.45 | 32.20 RT | 293182.86 | 602526.79 | 614.34    |
| 55-21 | BC   | 14+14.15 | 33.36 RT | 293180.55 | 602527.94 | 614.33    |
| 55-22 | SW   | 14+05.68 | 33.36 RT | 293172.09 | 602527.90 | 614.55    |
| 55-23 | SW   | 14+07.45 | 27.36 RT | 293173.87 | 602521.91 | 614.48    |
| 55-24 | SW   | 14+00.63 | 33.35 RT | 293167.04 | 602527.88 | 614.54    |
| 55-25 | SW   | 14+00.64 | 27.35 RT | 293167.06 | 602521.88 | 614.48    |
| 55-26 | SW   | 13+94.64 | 27.35 RT | 293161.06 | 602521.86 | 614.73    |
| 55-27 | SW   | 14+00.74 | 24.85 RT | 293167.17 | 602519.38 | 614.32    |
| 56-1  | BC   | 14+77.39 | 42.23 LT | 293244.08 | 602452.60 | 615.60    |

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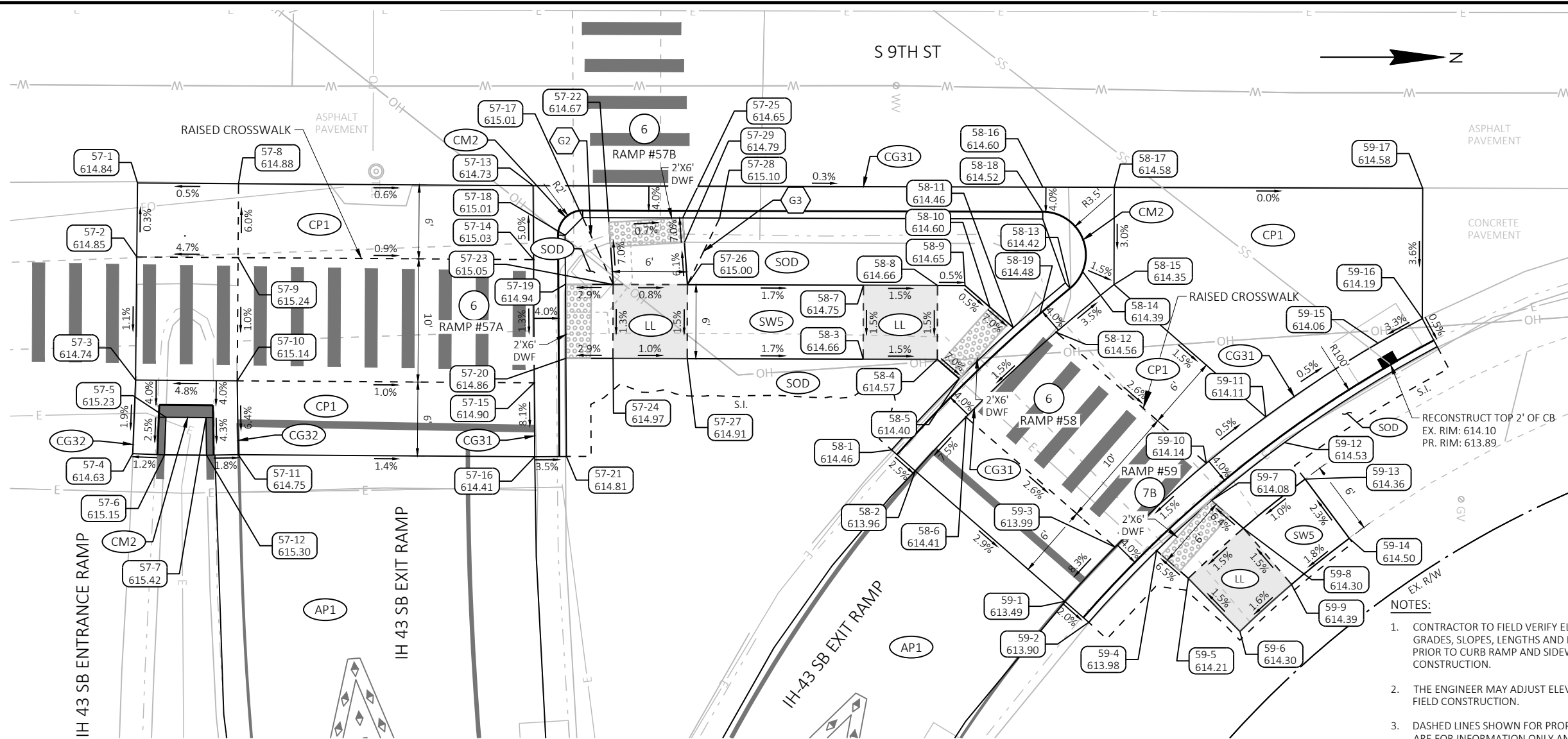
COUNTY: MILWAUKEE

CURB RAMP DETAILS

SHEET

33

E



| LEGEND:  |                                                                                                |
|----------|------------------------------------------------------------------------------------------------|
| RAMP #X  | X CURB RAMP NUMBER & TYPE                                                                      |
| SOD      | SOD                                                                                            |
| SW5      | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| PED      | CONCRETE CURB PEDESTRIAN                                                                       |
| CG31     | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| CG32     | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| CG33     | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| CM2      | CONCRETE MEDIAN SLOPED NOSE TYPE 2                                                             |
| AP1      | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| AP2      | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| AP3      | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| CP1      | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| MEF      | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| XX YY.YY | POINT NUMBER & ELEVATION                                                                       |
| LL       | LEVEL LANDING                                                                                  |
| PH       | PAVED TRAVERSABLE FLARE (WIDTH)                                                                |
| GH       | GRADED NON-TRAVERSABLE FLARE (WIDTH)                                                           |

## NOTES:

- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- SLOPE INTERCEPT IS SHOWN BASED ON 4:1 SLOPE UNLESS NOTED OTHERWISE.
- ALL STATION AND OFFSET INFORMATION REFERENCES S 9TH ST.
- POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION
- ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 57-1        | EC   | 14+42.71 | 20.19 RT | 293209.16 | 602514.88 | 614.84    |
| 57-2        | EC   | 14+42.67 | 26.19 RT | 293209.10 | 602520.88 | 614.85    |
| 57-3        | FLG  | 14+42.61 | 36.19 RT | 293209.00 | 602530.88 | 614.74    |
| 57-4        | FLG  | 14+42.40 | 42.17 RT | 293208.77 | 602536.85 | 614.63    |
| 57-5        | BC   | 14+45.09 | 39.20 RT | 293211.47 | 602533.90 | 615.23    |
| 57-6        | BC   | 14+44.98 | 42.25 RT | 293211.35 | 602536.95 | 615.15    |
| 57-7        | BC   | 14+48.34 | 39.21 RT | 293214.72 | 602533.92 | 615.42    |
| 57-8        | EC   | 14+50.91 | 20.22 RT | 293217.36 | 602514.94 | 614.88    |
| 57-9        | Z    | 14+50.89 | 26.22 RT | 293217.32 | 602520.94 | 615.24    |
| 57-10       | FLG  | 14+50.86 | 36.22 RT | 293217.26 | 602530.94 | 615.14    |
| 57-11       | FLG  | 14+50.97 | 42.22 RT | 293217.34 | 602536.94 | 614.75    |
| 57-12       | BC   | 14+48.39 | 42.27 RT | 293214.76 | 602536.98 | 615.30    |
| 57-13       | FLG  | 14+74.81 | 20.29 RT | 293241.26 | 602515.10 | 614.73    |
| 57-14       | FLG  | 14+74.87 | 26.29 RT | 293241.30 | 602521.10 | 615.03    |
| 57-15       | FLG  | 14+74.97 | 36.29 RT | 293241.36 | 602531.10 | 614.90    |
| 57-16       | FLG  | 14+75.02 | 42.29 RT | 293241.39 | 602537.10 | 614.41    |
| 57-17       | BC   | 14+78.85 | 22.86 RT | 293245.29 | 602517.69 | 615.01    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 57-18       | BC   | 14+77.43 | 24.30 RT | 293243.87 | 602519.12 | 615.01    |
| 57-19       | BC   | 14+77.47 | 28.29 RT | 293243.89 | 602523.11 | 614.94    |
| 57-20       | BC   | 14+77.53 | 34.29 RT | 293243.93 | 602529.11 | 614.86    |
| 57-21       | BC   | 14+77.60 | 42.26 RT | 293243.97 | 602537.09 | 614.81    |
| 57-22       | BC   | 14+80.95 | 22.86 RT | 293247.39 | 602517.70 | 614.67    |
| 57-23       | SW   | 14+81.35 | 28.28 RT | 293247.77 | 602523.12 | 615.05    |
| 57-24       | SW   | 14+81.35 | 34.28 RT | 293247.75 | 602529.12 | 614.97    |
| 57-25       | BC   | 14+86.96 | 22.86 RT | 293253.41 | 602517.72 | 614.65    |
| 57-26       | SW   | 14+87.36 | 28.28 RT | 293253.79 | 602523.14 | 615.00    |
| 57-27       | SW   | 14+87.37 | 34.28 RT | 293253.77 | 602529.14 | 614.91    |
| 57-28       | BC   | 14+89.96 | 22.85 RT | 293256.41 | 602517.72 | 615.10    |
| 57-29       | SW   | 14+87.11 | 24.85 RT | 293253.55 | 602519.71 | 614.79    |
| 58-1        | BC   | 15+03.98 | 41.62 RT | 293270.35 | 602536.55 | 614.46    |
| 58-2        | FLG  | 15+05.92 | 43.33 RT | 293272.28 | 602538.26 | 613.96    |
| 58-3        | SW   | 15+01.66 | 34.26 RT | 293268.05 | 602529.18 | 614.66    |
| 58-4        | SW   | 15+07.66 | 34.26 RT | 293274.06 | 602529.20 | 614.57    |
| 58-5        | BC   | 15+09.45 | 35.81 RT | 293275.85 | 602530.75 | 614.40    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 58-6        | FLG  | 15+10.00 | 38.93 RT | 293276.38 | 602533.87 | 614.41    |
| 58-7        | SW   | 15+01.65 | 28.26 RT | 293268.07 | 602523.18 | 614.75    |
| 58-8        | SW   | 15+07.66 | 28.26 RT | 293274.08 | 602523.20 | 614.66    |
| 58-9        | SW   | 15+09.89 | 28.26 RT | 293276.32 | 602523.20 | 614.65    |
| 58-10       | SW   | 15+11.91 | 30.00 RT | 293278.33 | 602524.96 | 614.60    |
| 58-11       | BC   | 15+13.82 | 31.66 RT | 293280.23 | 602526.62 | 614.46    |
| 58-12       | FLG  | 15+17.30 | 32.02 RT | 293283.71 | 602526.99 | 614.56    |
| 58-13       | FL   | 15+18.41 | 28.45 RT | 293284.83 | 602523.43 | 614.42    |
| 58-14       | FL   | 15+19.42 | 27.08 RT | 293285.84 | 602522.07 | 614.39    |
| 58-15       | FLG  | 15+21.98 | 28.14 RT | 293288.40 | 602523.13 | 614.35    |
| 58-16       | FLG  | 15+16.17 | 20.25 RT | 293282.63 | 602515.22 | 614.60    |
| 58-17       | FLG  | 15+21.97 | 20.25 RT | 293288.43 | 602515.24 | 614.58    |
| 58-18       | FL   | 15+16.18 | 22.25 RT | 293282.62 | 602517.22 | 614.52    |
| 58-19       | FL   | 15+15.98 | 30.51 RT | 293282.40 | 602525.48 | 614.48    |
| 59-1        | FLG  | 15+18.09 | 53.86 RT | 293284.41 | 602548.84 | 613.49    |
| 59-2        | BC   | 15+20.03 | 55.55 RT | 293286.35 | 602550.54 | 613.90    |
| 59-3        | FLG  | 15+22.15 | 49.45 RT | 293288.50 | 602544.44 | 613.99    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 59-4        | BC   | 15+25.53 | 49.72 RT | 293291.87 | 602544.73 | 613.98    |
| 59-5        | SW   | 15+28.11 | 51.96 RT | 293294.44 | 602546.98 | 614.21    |
| 59-6        | SW   | 15+32.30 | 56.25 RT | 293298.62 | 602551.28 | 614.30    |
| 59-7        | BC   | 15+29.97 | 45.63 RT | 293296.32 | 602540.65 | 614.08    |
| 59-8        | SW   | 15+32.56 | 47.88 RT | 293298.91 | 602542.91 | 614.30    |
| 59-9        | SW   | 15+36.48 | 52.42 RT | 293302.81 | 602547.47 | 614.39    |
| 59-10       | FLG  | 15+29.53 | 42.61 RT | 293295.90 | 602537.63 | 614.14    |
| 59-11       | FLG  | 15+34.33 | 38.82 RT | 293300.71 | 602533.87 | 614.11    |
| 59-12       | BC   | 15+35.86 | 40.90 RT | 293302.23 | 602535.95 | 614.53    |
| 59-13       | SW   | 15+37.55 | 43.86 RT | 293303.91 | 602538.92 | 614.36    |
| 59-14       | SW   | 15+41.15 | 48.66 RT | 293307.49 | 602543.73 | 614.50    |
| 59-15       | FLG  | 15+43.38 | 32.77 RT | 293309.78 | 602527.85 | 614.06    |
| 59-16       | FLG  | 15+47.01 | 30.79 RT | 293313.42 | 602525.88 | 614.19    |
| 59-17       | EC   | 15+47.00 | 30.79 RT | 293313.45 | 602525.84 | 614.58    |

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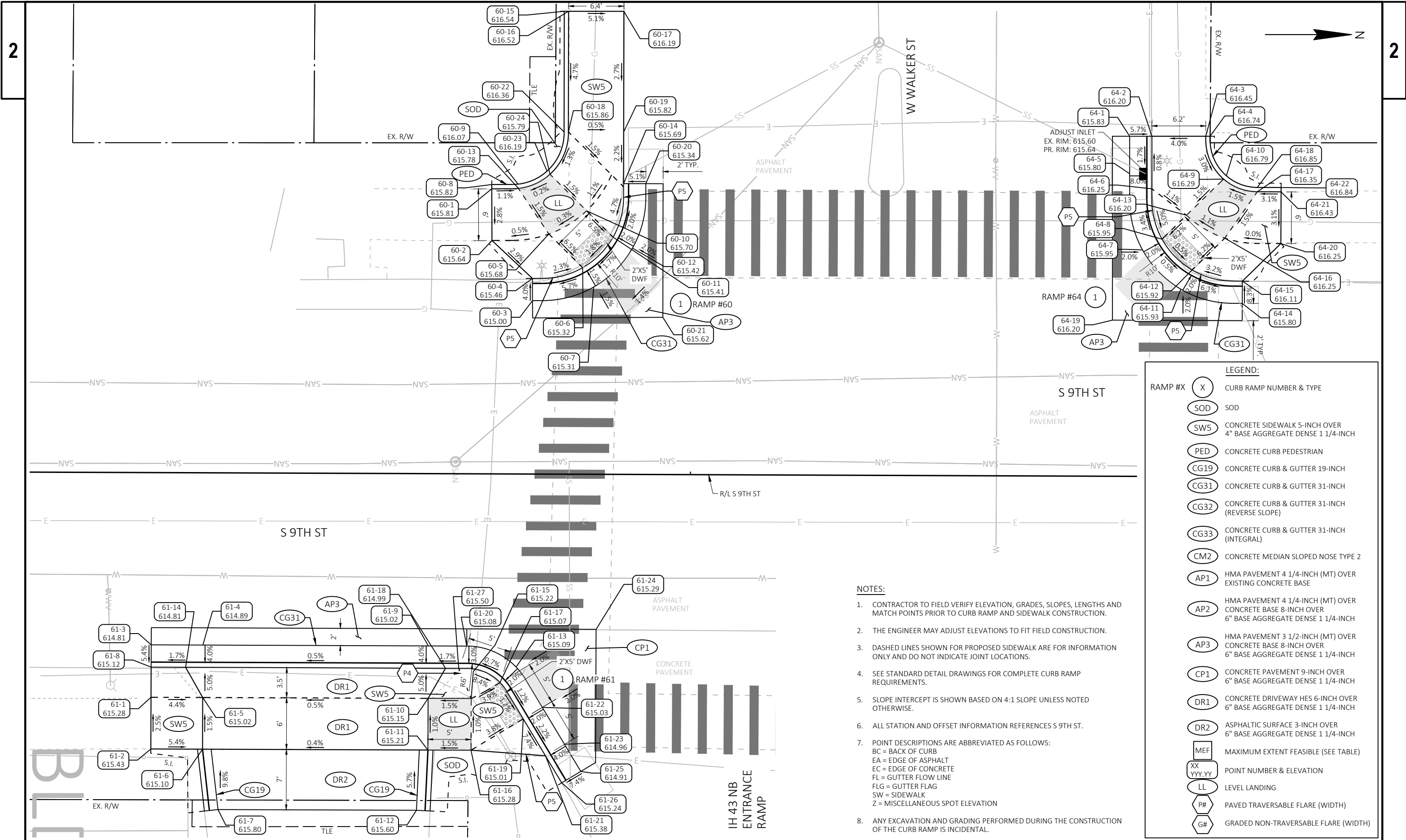
HWY: IH 43

COUNTY: MILWAUKEE

CURB RAMP DETAILS

SHEET





| LEGEND:     |                                                                                                |
|-------------|------------------------------------------------------------------------------------------------|
| RAMP #X     | X CURB RAMP NUMBER & TYPE                                                                      |
| (SOD)       | SOD                                                                                            |
| (SW5)       | CONCRETE SIDEWALK 5-INCH OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (PED)       | CONCRETE CURB PEDESTRIAN                                                                       |
| (CG19)      | CONCRETE CURB & GUTTER 19-INCH                                                                 |
| (CG31)      | CONCRETE CURB & GUTTER 31-INCH                                                                 |
| (CG32)      | CONCRETE CURB & GUTTER 31-INCH (REVERSE SLOPE)                                                 |
| (CG33)      | CONCRETE CURB & GUTTER 31-INCH (INTEGRAL)                                                      |
| (CM2)       | CONCRETE MEDIAN SLOPED NOSE TYPE 2                                                             |
| (AP1)       | HMA PAVEMENT 4 1/4-INCH (MT) OVER EXISTING CONCRETE BASE                                       |
| (AP2)       | HMA PAVEMENT 4 1/4-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (AP3)       | HMA PAVEMENT 3 1/2-INCH (MT) OVER CONCRETE BASE 8-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH |
| (CP1)       | CONCRETE PAVEMENT 9-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (DR1)       | CONCRETE DRIVEWAY HES 6-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                           |
| (DR2)       | ASPHALTIC SURFACE 3-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH                               |
| (MEF)       | MAXIMUM EXTENT FEASIBLE (SEE TABLE)                                                            |
| (XX YYY.YY) | POINT NUMBER & ELEVATION                                                                       |
| (LL)        | LEVEL LANDING                                                                                  |
| (P#)        | PAVED TRAVERSABLE FLARE (WIDTH)                                                                |
| (G#)        | GRADED NON-TRAVERSABLE FLARE (WIDTH)                                                           |

- NOTES:**
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FLG = GUTTER FLAG  
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Z = MISCELLANEOUS SPOT ELEVATION
  - ANY EXCAVATION AND GRADING PERFORMED DURING THE CONSTRUCTION OF THE CURB RAMP IS INCIDENTAL.

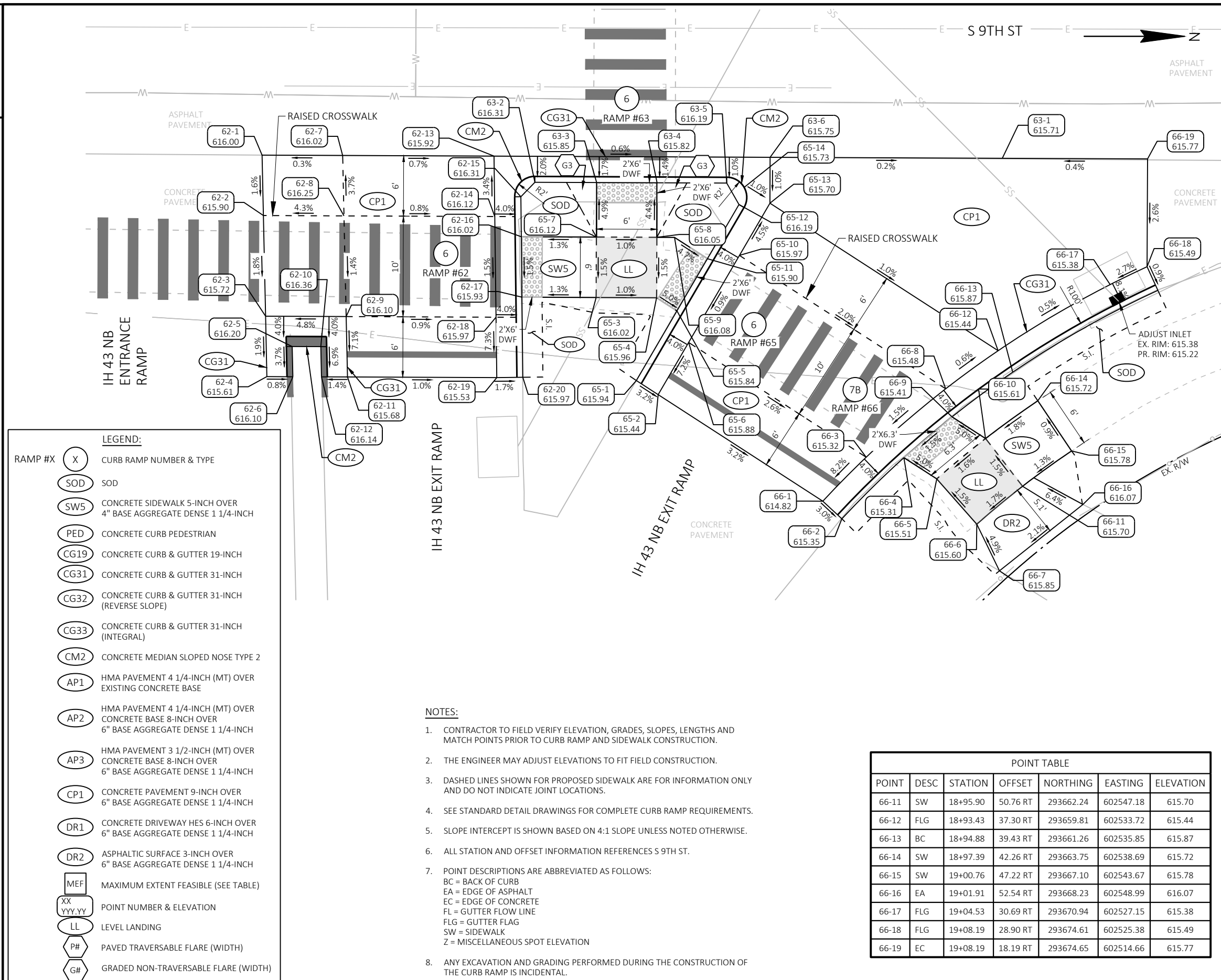
| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 60-1        | SW   | 17+76.81 | 33.08 LT | 293543.47 | 602462.89 | 615.81    |
| 60-2        | SW   | 17+76.86 | 27.08 LT | 293543.49 | 602468.89 | 615.64    |
| 60-3        | FLG  | 17+81.59 | 20.12 LT | 293548.19 | 602475.87 | 615.00    |
| 60-4        | BC   | 17+81.57 | 22.70 LT | 293548.18 | 602473.29 | 615.46    |
| 60-5        | SW   | 17+83.46 | 27.86 LT | 293550.10 | 602468.14 | 615.68    |
| 60-6        | BC   | 17+87.40 | 23.97 LT | 293554.02 | 602472.04 | 615.32    |
| 60-7        | FLG  | 17+88.68 | 21.73 LT | 293555.30 | 602474.28 | 615.31    |
| 60-8        | BC   | 17+76.81 | 33.58 LT | 293543.46 | 602462.39 | 615.82    |
| 60-9        | BC   | 17+79.85 | 33.64 LT | 293546.51 | 602462.34 | 616.07    |
| 60-10       | SW   | 17+87.82 | 30.58 LT | 293554.47 | 602465.44 | 615.70    |
| 60-11       | BC   | 17+90.91 | 27.53 LT | 293557.55 | 602468.50 | 615.41    |
| 60-12       | FLG  | 17+93.16 | 26.26 LT | 293559.79 | 602469.77 | 615.42    |
| 60-13       | SW   | 17+79.91 | 33.14 LT | 293546.57 | 602462.84 | 615.78    |
| 60-14       | BC   | 17+92.11 | 33.74 LT | 293558.77 | 602462.29 | 615.69    |
| 60-15       | BC   | 17+85.15 | 53.73 LT | 293551.89 | 602442.28 | 616.54    |
| 60-16       | SW   | 17+85.65 | 53.73 LT | 293552.39 | 602442.28 | 616.52    |
| 60-17       | SW   | 17+92.06 | 53.74 LT | 293558.80 | 602442.29 | 616.19    |
| 60-18       | SW   | 17+85.68 | 39.73 LT | 293552.36 | 602456.28 | 615.86    |
| 60-19       | SW   | 17+92.10 | 39.74 LT | 293558.78 | 602456.29 | 615.82    |
| 60-20       | FLG  | 17+94.69 | 33.75 LT | 293561.35 | 602462.29 | 615.34    |
| 60-21       | EA   | 17+96.73 | 18.25 LT | 293563.32 | 602477.80 | 615.62    |
| 60-22       | BC   | 17+85.18 | 39.73 LT | 293551.86 | 602456.28 | 616.36    |
| 60-23       | BC   | 17+83.22 | 35.17 LT | 293549.88 | 602460.83 | 616.19    |
| 60-24       | SW   | 17+83.55 | 34.80 LT | 293550.22 | 602461.20 | 615.79    |
| 61-1        | SW   | 17+37.49 | 26.08 RT | 293503.92 | 602521.90 | 615.28    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 61-2        | SW   | 17+37.49 | 32.08 RT | 293503.90 | 602527.90 | 615.43    |
| 61-3        | FLG  | 17+37.49 | 20.00 RT | 293503.95 | 602515.82 | 614.81    |
| 61-4        | FLG  | 17+43.49 | 20.00 RT | 293509.95 | 602515.84 | 614.89    |
| 61-5        | SW   | 17+43.49 | 26.08 RT | 293509.92 | 602521.93 | 615.02    |
| 61-6        | SW   | 17+43.49 | 32.08 RT | 293509.90 | 602527.93 | 615.10    |
| 61-7        | FLG  | 17+45.31 | 39.08 RT | 293511.69 | 602534.93 | 615.80    |
| 61-8        | BC   | 17+37.49 | 22.58 RT | 293503.94 | 602518.40 | 615.12    |
| 61-9        | FLG  | 17+69.66 | 20.00 RT | 293536.11 | 602515.94 | 615.02    |
| 61-10       | SW   | 17+69.66 | 26.08 RT | 293536.09 | 602522.03 | 615.15    |
| 61-11       | SW   | 17+69.66 | 32.08 RT | 293536.06 | 602528.03 | 615.21    |
| 61-12       | FLG  | 17+68.35 | 39.08 RT | 293534.73 | 602535.02 | 615.60    |
| 61-13       | FLG  | 17+79.84 | 22.41 RT | 293546.28 | 602518.40 | 615.09    |
| 61-14       | BC   | 17+41.49 | 22.58 RT | 293507.94 | 602518.42 | 614.81    |
| 61-15       | SW   | 17+74.66 | 26.08 RT | 293541.09 | 602522.05 | 615.22    |
| 61-16       | SW   | 17+74.66 | 32.08 RT | 293541.06 | 602528.05 | 615.28    |
| 61-17       | BC   | 17+77.99 | 24.22 RT | 293544.43 | 602520.19 | 615.07    |
| 61-18       | BC   | 17+71.66 | 22.58 RT | 293538.10 | 602518.53 | 614.99    |
| 61-19       | BC   | 17+80.70 | 28.42 RT | 293547.12 | 602524.41 | 615.01    |
| 61-20       | FLG  | 17+74.11 | 20.00 RT | 293540.57 | 602515.96 | 615.08    |
| 61-21       | BC   | 17+83.29 | 32.70 RT | 293549.70 | 602528.69 | 615.38    |
| 61-22       | FLG  | 17+82.91 | 27.08 RT | 293549.34 | 602523.08 | 615.03    |
| 61-23       | FLG  | 17+85.50 | 31.36 RT | 293551.91 | 602527.36 | 614.96    |
| 61-24       | EC   | 17+89.11 | 18.00 RT | 293555.57 | 602514.02 | 615.29    |
| 61-25       | FLG  | 17+87.40 | 34.50 RT | 293553.80 | 602530.51 | 614.91    |
| 61-26       | BC   | 17+85.19 | 35.83 RT | 293551.59 | 602531.84 | 615.24    |

| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 61-27       | BC   | 17+73.19 | 22.58 RT | 293539.63 | 602518.54 | 615.50    |
| 64-1        | FLG  | 18+50.82 | 39.47 LT | 293617.50 | 602456.79 | 615.83    |
| 64-2        | BC   | 18+53.40 | 39.47 LT | 293620.08 | 602456.79 | 616.20    |
| 64-3        | SW   | 18+59.65 | 39.50 LT | 293626.33 | 602456.79 | 616.45    |
| 64-4        | BC   | 18+60.15 | 39.50 LT | 293626.83 | 602456.79 | 616.74    |
| 64-5        | FLG  | 18+50.84 | 35.12 LT | 293617.50 | 602461.14 | 615.80    |
| 64-6        | BC   | 18+53.42 | 33.37 LT | 293620.08 | 602462.89 | 616.25    |
| 64-7        | FLG  | 18+52.36 | 26.28 LT | 293618.99 | 602469.98 | 615.95    |
| 64-8        | BC   | 18+54.62 | 27.54 LT | 293621.25 | 602468.73 | 615.95    |
| 64-9        | SW   | 18+61.74 | 34.54 LT | 293628.40 | 602461.76 | 616.29    |
| 64-10       | BC   | 18+62.06 | 34.92 LT | 293628.72 | 602461.38 | 616.79    |
| 64-11       | FLG  | 18+56.83 | 21.74 LT | 293623.44 | 602474.54 | 615.93    |
| 64-12       | BC   | 18+58.12 | 23.97 LT | 293624.74 | 602472.31 | 615.92    |
| 64-13       | SW   | 18+57.45 | 30.32 LT | 293624.09 | 602465.96 | 616.20    |
| 64-14       | FLG  | 18+63.96 | 20.12 LT | 293630.57 | 602476.19 | 615.80    |
| 64-15       | BC   | 18+63.96 | 22.70 LT | 293630.58 | 602473.61 | 616.11    |
| 64-16       | SW   | 18+61.90 | 27.68 LT | 293628.53 | 602468.61 | 616.25    |
| 64-17       | SW   | 18+65.65 | 33.08 LT | 293632.31 | 602463.23 | 616.35    |
| 64-18       | BC   | 18+65.65 | 33.58 LT | 293632.31 | 602462.73 | 616.85    |
| 64-19       | EA   | 18+48.90 | 18.12 LT | 293615.50 | 602478.13 | 616.20    |
| 64-20       | SW   | 18+68.42 | 27.08 LT | 293635.05 | 602469.24 | 616.25    |
| 64-21       | SW   | 18+68.42 | 33.08 LT | 293635.07 | 602463.24 | 616.43    |
| 64-22       | BC   | 18+68.42 | 33.58 LT | 293635.08 | 602462.74 | 616.84    |

- NOTES:
- 1. ALL STATION AND OFFSET INFORMATION REFERENCES S 9TH ST.
  - 2. POINT DESCRIPTIONS ARE ABBREVIATED AS FOLLOWS:  
BC = BACK OF CURB  
EA = EDGE OF ASPHALT  
EC = EDGE OF CONCRETE  
FL = GUTTER FLOW LINE  
FLG = GUTTER FLAG  
SW = SIDEWALK  
Z = MISCELLANEOUS SPOT ELEVATION





| POINT TABLE |      |          |          |           |           |           |
|-------------|------|----------|----------|-----------|-----------|-----------|
| POINT       | DESC | STATION  | OFFSET   | NORTHING  | EASTING   | ELEVATION |
| 62-1        | EC   | 18+20.27 | 18.15 RT | 293586.73 | 602514.29 | 616.00    |
| 62-2        | EC   | 18+20.42 | 24.15 RT | 293586.86 | 602520.29 | 615.90    |
| 62-3        | FLG  | 18+20.68 | 34.15 RT | 293587.07 | 602530.29 | 615.72    |
| 62-4        | FLG  | 18+20.83 | 40.15 RT | 293587.20 | 602536.29 | 615.61    |
| 62-5        | BC   | 18+23.33 | 37.15 RT | 293589.72 | 602533.30 | 616.20    |
| 62-6        | BC   | 18+23.41 | 40.15 RT | 293589.78 | 602536.31 | 616.10    |
| 62-7        | EC   | 18+28.27 | 18.16 RT | 293594.73 | 602514.33 | 616.02    |
| 62-8        | Z    | 18+28.42 | 24.16 RT | 293594.86 | 602520.33 | 616.25    |
| 62-9        | FLG  | 18+28.68 | 34.16 RT | 293595.08 | 602530.33 | 616.10    |
| 62-10       | BC   | 18+26.17 | 37.16 RT | 293592.56 | 602533.32 | 616.36    |
| 62-11       | FLG  | 18+28.83 | 40.16 RT | 293595.21 | 602536.33 | 615.68    |
| 62-12       | BC   | 18+26.25 | 40.16 RT | 293592.63 | 602536.32 | 616.14    |
| 62-13       | FLG  | 18+43.30 | 18.16 RT | 293609.76 | 602514.39 | 615.92    |
| 62-14       | FLG  | 18+43.40 | 24.16 RT | 293609.83 | 602520.39 | 616.12    |
| 62-15       | BC   | 18+45.98 | 22.19 RT | 293612.42 | 602518.43 | 616.31    |
| 62-16       | BC   | 18+46.04 | 26.16 RT | 293612.47 | 602522.40 | 616.02    |
| 62-17       | BC   | 18+46.12 | 32.16 RT | 293612.53 | 602528.40 | 615.93    |
| 62-18       | FLG  | 18+43.56 | 34.16 RT | 293609.96 | 602530.39 | 615.97    |
| 62-19       | FLG  | 18+43.66 | 40.16 RT | 293610.04 | 602536.39 | 615.53    |
| 62-20       | BC   | 18+46.24 | 40.12 RT | 293612.62 | 602536.36 | 615.97    |
| 63-1        | EC   | 18+93.77 | 18.18 RT | 293660.23 | 602514.60 | 615.71    |
| 63-2        | BC   | 18+47.37 | 20.74 RT | 293613.82 | 602516.99 | 616.31    |
| 63-3        | BC   | 18+53.50 | 20.75 RT | 293619.95 | 602517.01 | 615.85    |
| 63-4        | BC   | 18+59.50 | 20.75 RT | 293625.95 | 602517.04 | 615.82    |
| 63-5        | BC   | 18+66.41 | 20.75 RT | 293632.86 | 602517.07 | 616.19    |
| 63-6        | FLG  | 18+70.71 | 18.17 RT | 293637.17 | 602514.51 | 615.75    |
| 65-1        | BC   | 18+57.51 | 40.40 RT | 293623.89 | 602536.68 | 615.94    |
| 65-2        | FLG  | 18+59.69 | 41.79 RT | 293626.06 | 602538.08 | 615.44    |
| 65-3        | SW   | 18+53.49 | 32.17 RT | 293619.90 | 602528.43 | 616.02    |
| 65-4        | SW   | 18+59.49 | 32.17 RT | 293625.90 | 602528.46 | 615.96    |
| 65-5        | BC   | 18+61.52 | 33.47 RT | 293627.92 | 602529.77 | 615.84    |
| 65-6        | FLG  | 18+62.69 | 36.60 RT | 293629.08 | 602532.90 | 615.88    |
| 65-7        | SW   | 18+53.50 | 26.17 RT | 293619.93 | 602522.43 | 616.12    |
| 65-8        | SW   | 18+59.50 | 26.17 RT | 293625.93 | 602522.46 | 616.05    |
| 65-9        | SW   | 18+61.25 | 26.17 RT | 293627.68 | 602522.47 | 616.08    |
| 65-10       | FLG  | 18+67.70 | 27.93 RT | 293634.13 | 602524.25 | 615.97    |
| 65-11       | BC   | 18+64.53 | 28.27 RT | 293630.95 | 602524.58 | 615.90    |
| 65-12       | BC   | 18+67.64 | 22.88 RT | 293634.08 | 602519.20 | 616.19    |
| 65-13       | FLG  | 18+70.71 | 22.73 RT | 293637.15 | 602519.06 | 615.70    |
| 65-14       | FL   | 18+68.15 | 21.17 RT | 293634.59 | 602517.49 | 615.73    |
| 66-1        | FLG  | 18+76.08 | 52.31 RT | 293642.41 | 602548.66 | 614.82    |
| 66-2        | BC   | 18+77.98 | 54.06 RT | 293644.30 | 602550.42 | 615.35    |
| 66-3        | FLG  | 18+80.37 | 47.93 RT | 293646.71 | 602544.30 | 615.32    |
| 66-4        | BC   | 18+84.11 | 47.96 RT | 293650.46 | 602544.34 | 615.31    |
| 66-5        | SW   | 18+87.38 | 50.06 RT | 293653.72 | 602546.45 | 615.51    |
| 66-6        | SW   | 18+91.38 | 54.53 RT | 293657.70 | 602550.95 | 615.60    |
| 66-7        | EA   | 18+93.64 | 59.16 RT | 293659.94 | 602555.58 | 615.85    |
| 66-8        | FLG  | 18+88.24 | 41.10 RT | 293654.61 | 602537.50 | 615.48    |
| 66-9        | BC   | 18+88.88 | 43.89 RT | 293655.24 | 602540.29 | 615.41    |
| 66-10       | SW   | 18+92.21 | 46.03 RT | 293658.56 | 602542.44 | 615.61    |

| LEGEND                                      |       |
|---------------------------------------------|-------|
| FTMS CONVENTIONAL SYMBOLS                   |       |
| POLE MOUNTED CABINET                        | _____ |
| METER BREAKER PEDESTAL                      | _____ |
| CSCP PULL BOX                               | _____ |
| FTMS (ITS) CONDUIT                          | _____ |
| BREAKER DISCONNECT BOX                      | _____ |
| COMMUNICATIONS VAULT, TYPE 1                | _____ |
| CONCRETE BASE, POLE, AND MICROWAVE DETECTOR | _____ |
| CCTV BASE, POLE, AND CAMERA                 | _____ |
| ITS FIELD CABINET AND CONCRETE BASE         | _____ |
| WIRELESS TRAFFIC SENSOR                     | _____ |
| RAMP METER SIGNAL ASSEMBLY                  | _____ |

PROPOSED

EXISTING



FTMS STANDARD ABBREVIATIONS

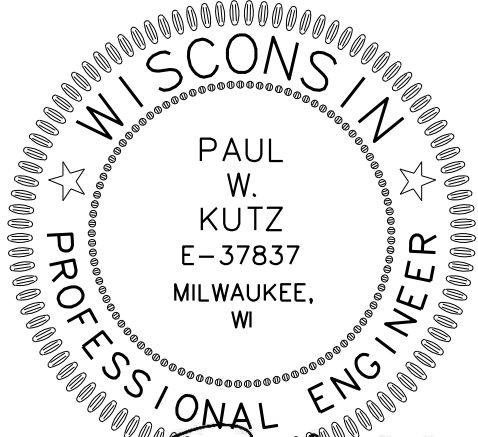
WTS \_\_\_\_\_ WIRELESS TRAFFIC SENSOR  
RPT \_\_\_\_\_ REPEATER

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414)227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

ORIGINAL PLANS PREPARED BY

HNTB

11414 WEST PARK PLACE  
MILWAUKEE, WI 53224  
(414) 359-2300



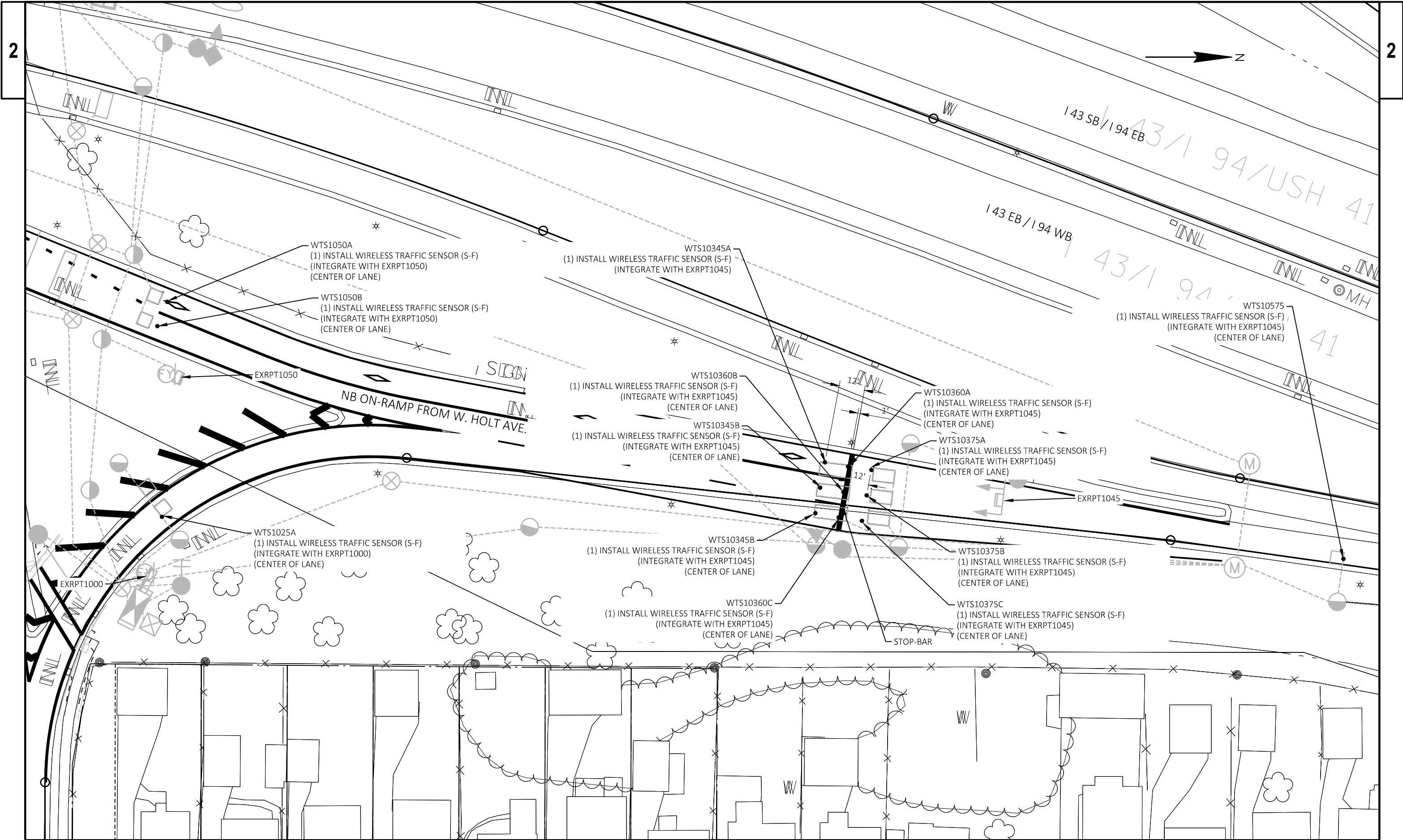
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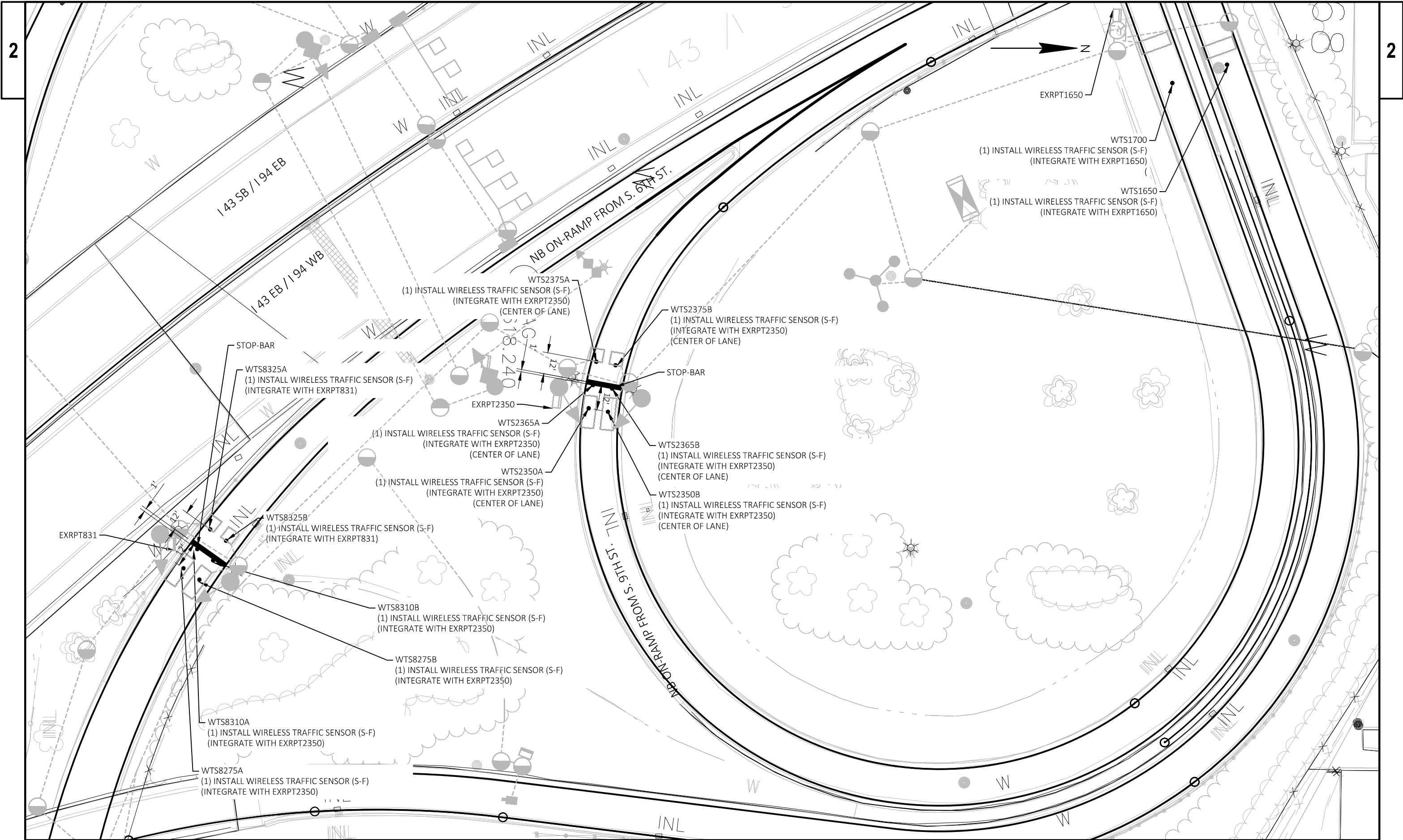
(Date)

Paul Kutz

(Signature)



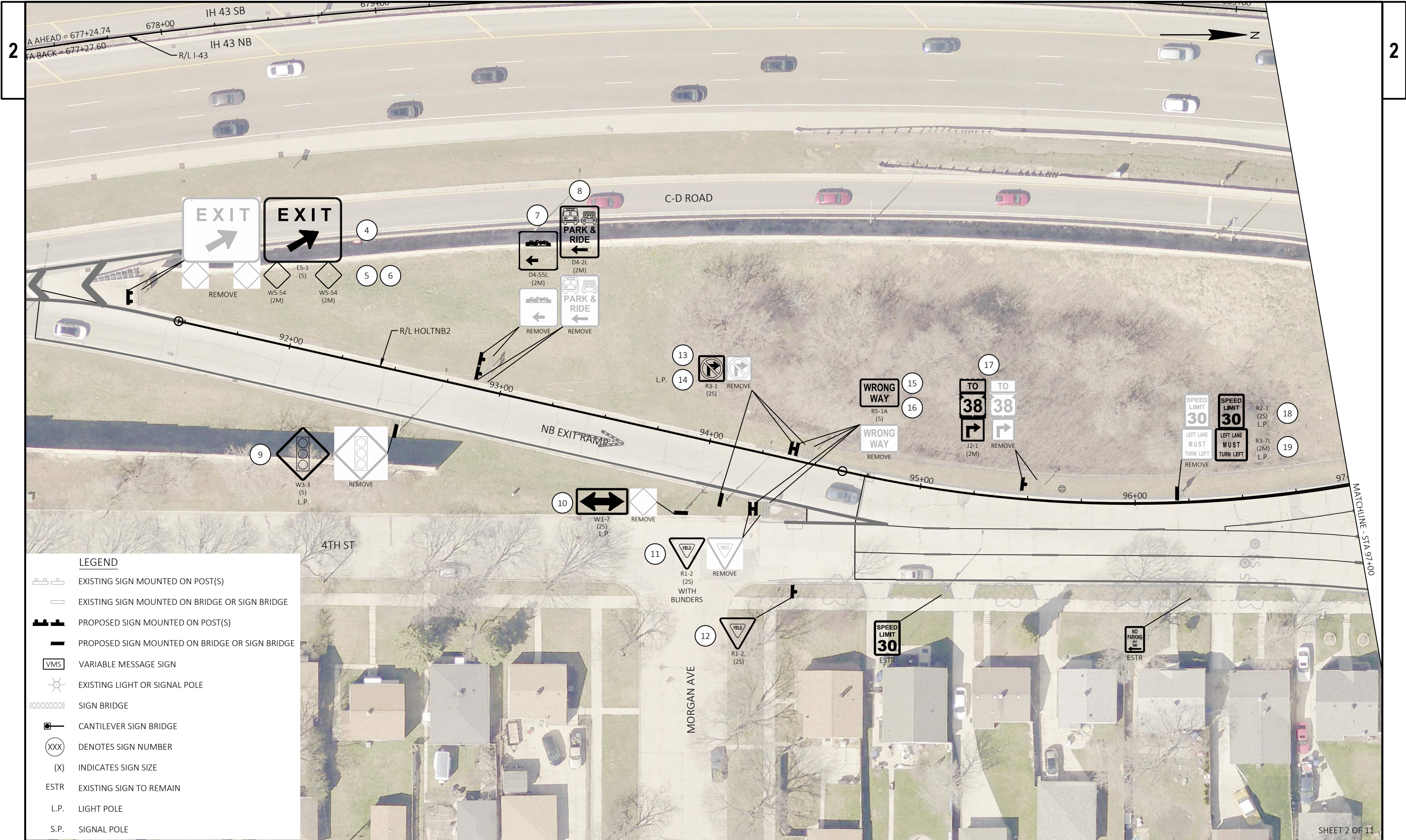








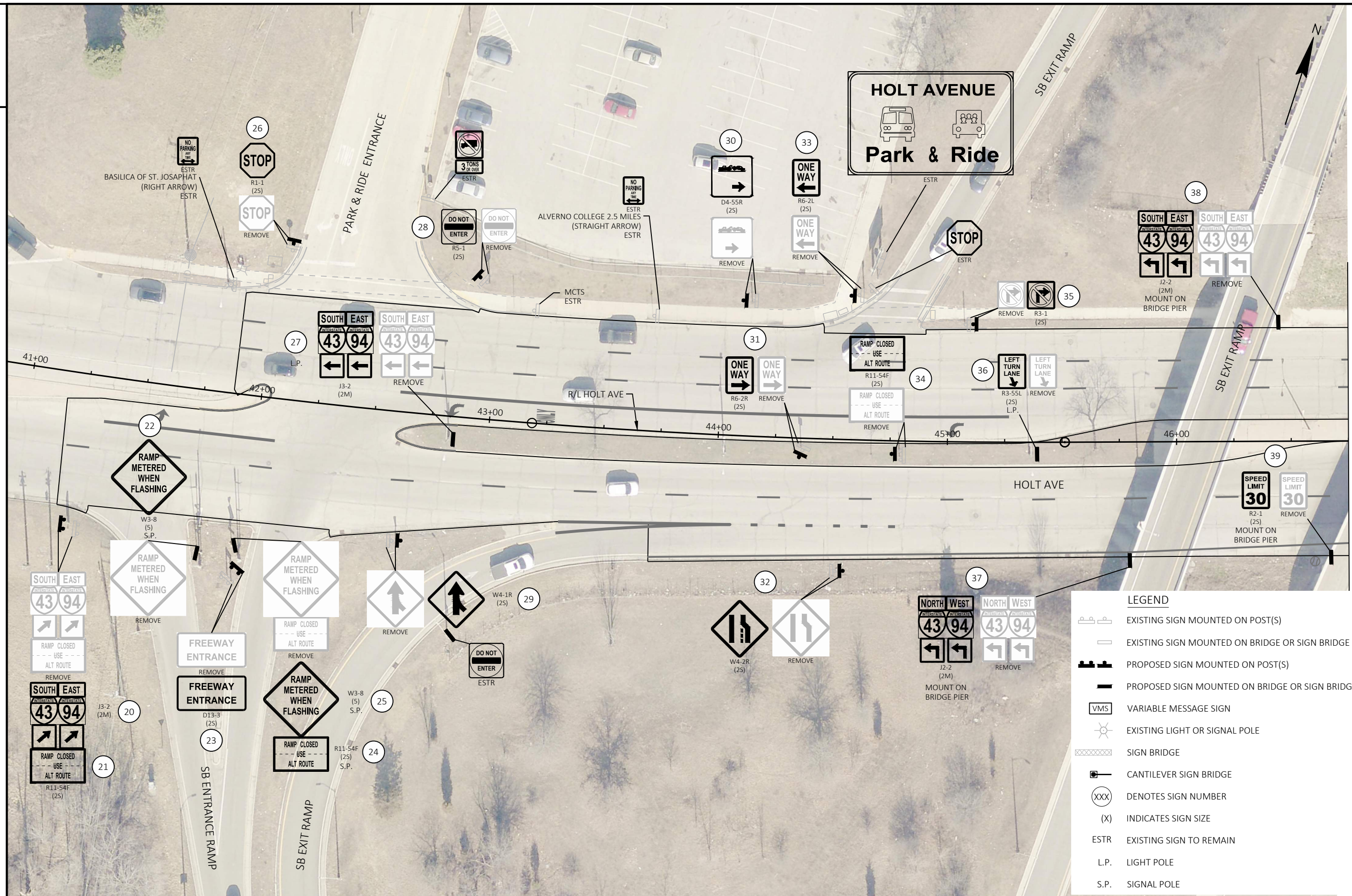




LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- EXISTING SIGN TO REMAIN
- LIGHT POLE
- SIGNAL POLE



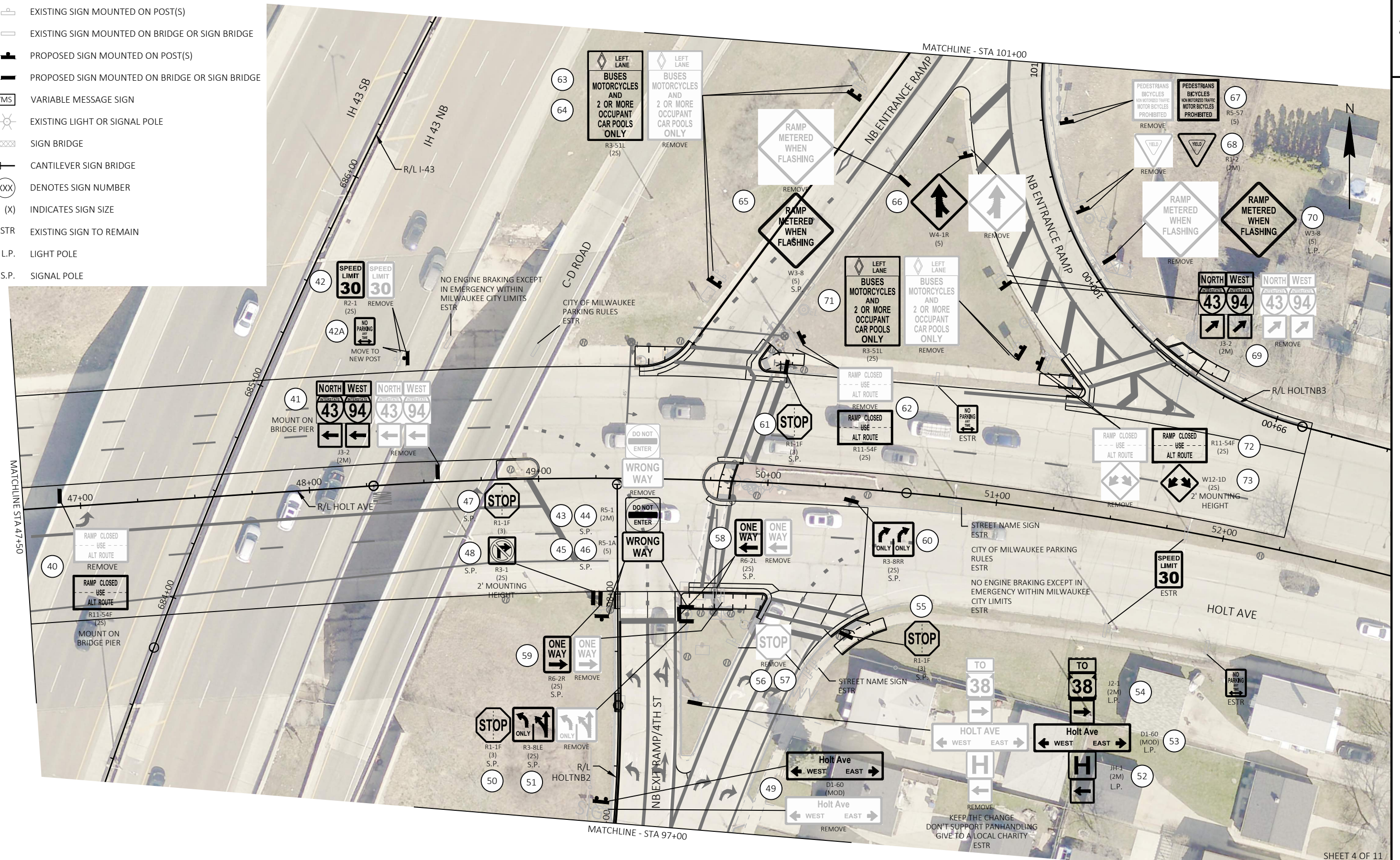


**LEGEND**

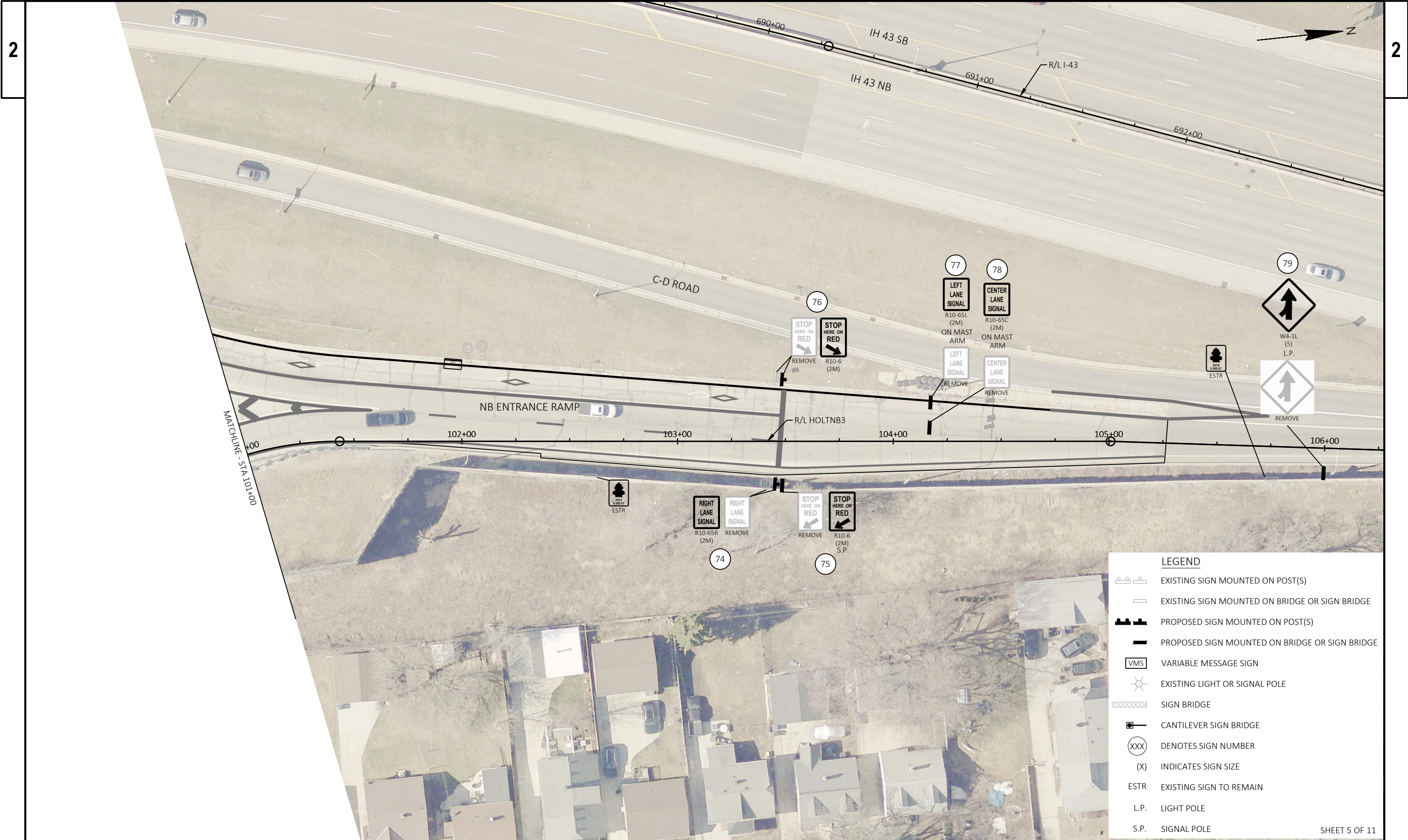
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- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- L.P. LIGHT POLE
- S.P. SIGNAL POLE



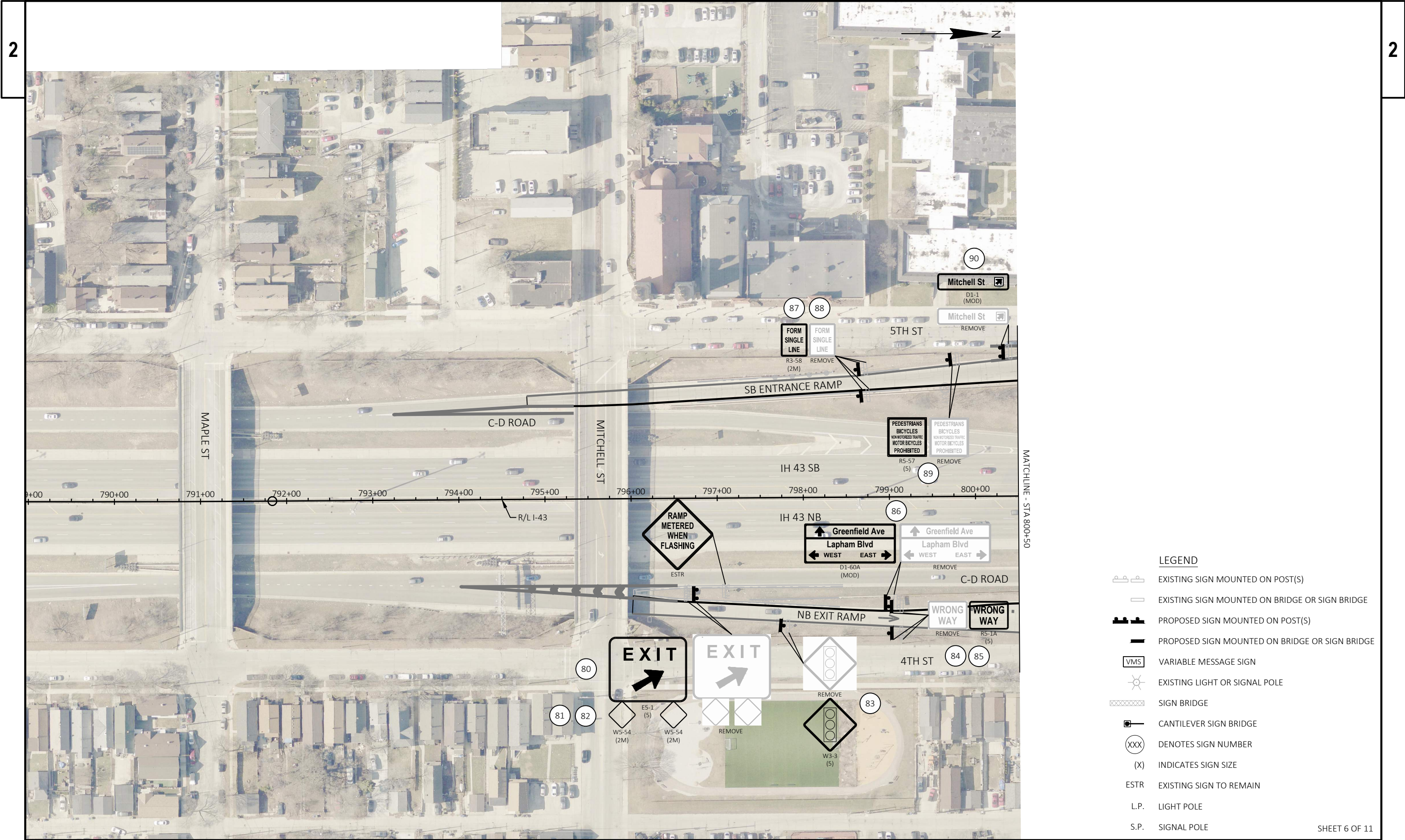
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|  | EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE |
|  | PROPOSED SIGN MOUNTED ON POST(S)               |
|  | PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE |
|  | VARIABLE MESSAGE SIGN                          |
|  | EXISTING LIGHT OR SIGNAL POLE                  |
|  | SIGN BRIDGE                                    |
|  | CANTILEVER SIGN BRIDGE                         |
|  | DENOTES SIGN NUMBER                            |
| (X)                                                                               | INDICATES SIGN SIZE                            |
| ESTR                                                                              | EXISTING SIGN TO REMAIN                        |
| L.P.                                                                              | LIGHT POLE                                     |
| S.P.                                                                              | SIGNAL POLE                                    |



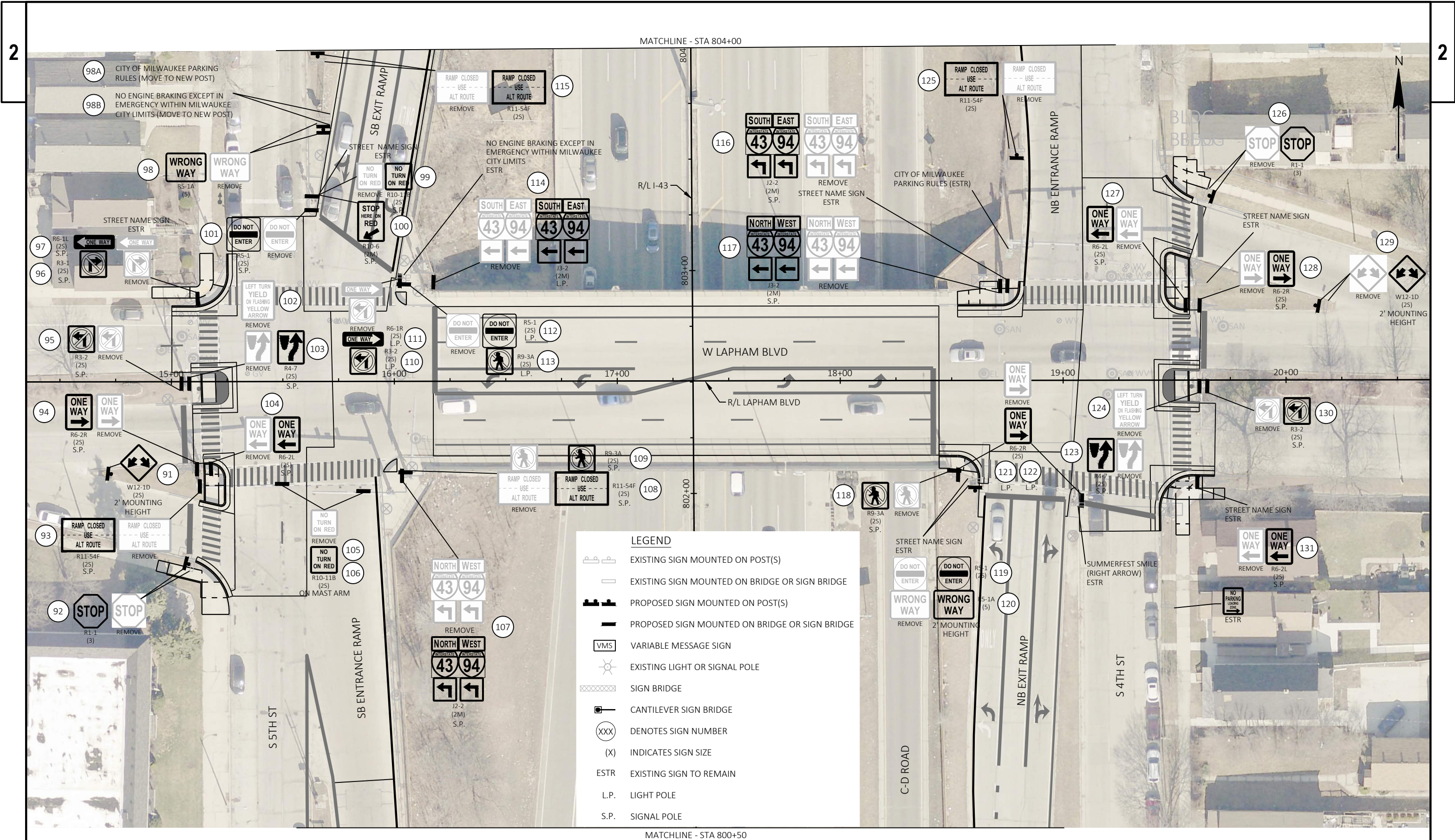




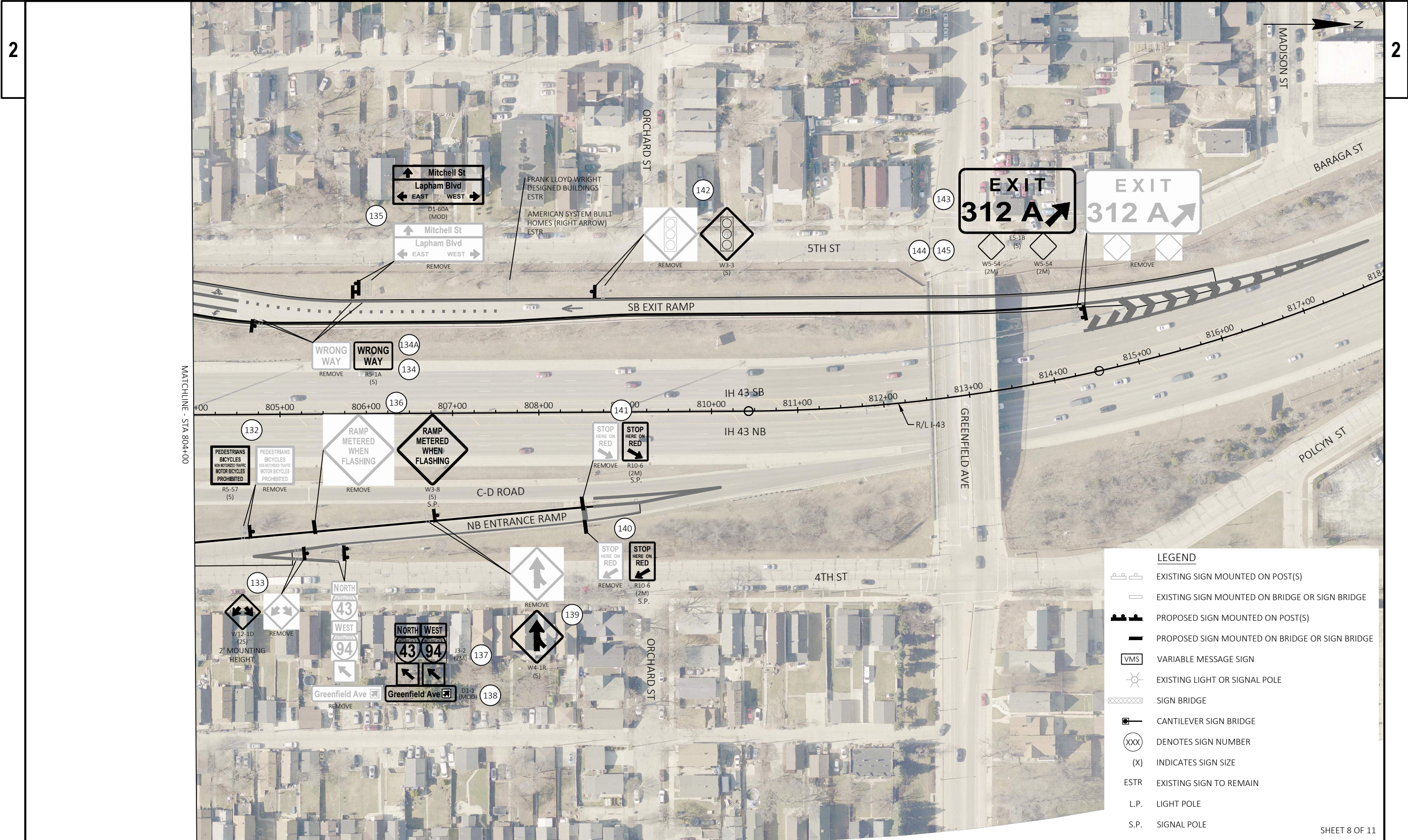




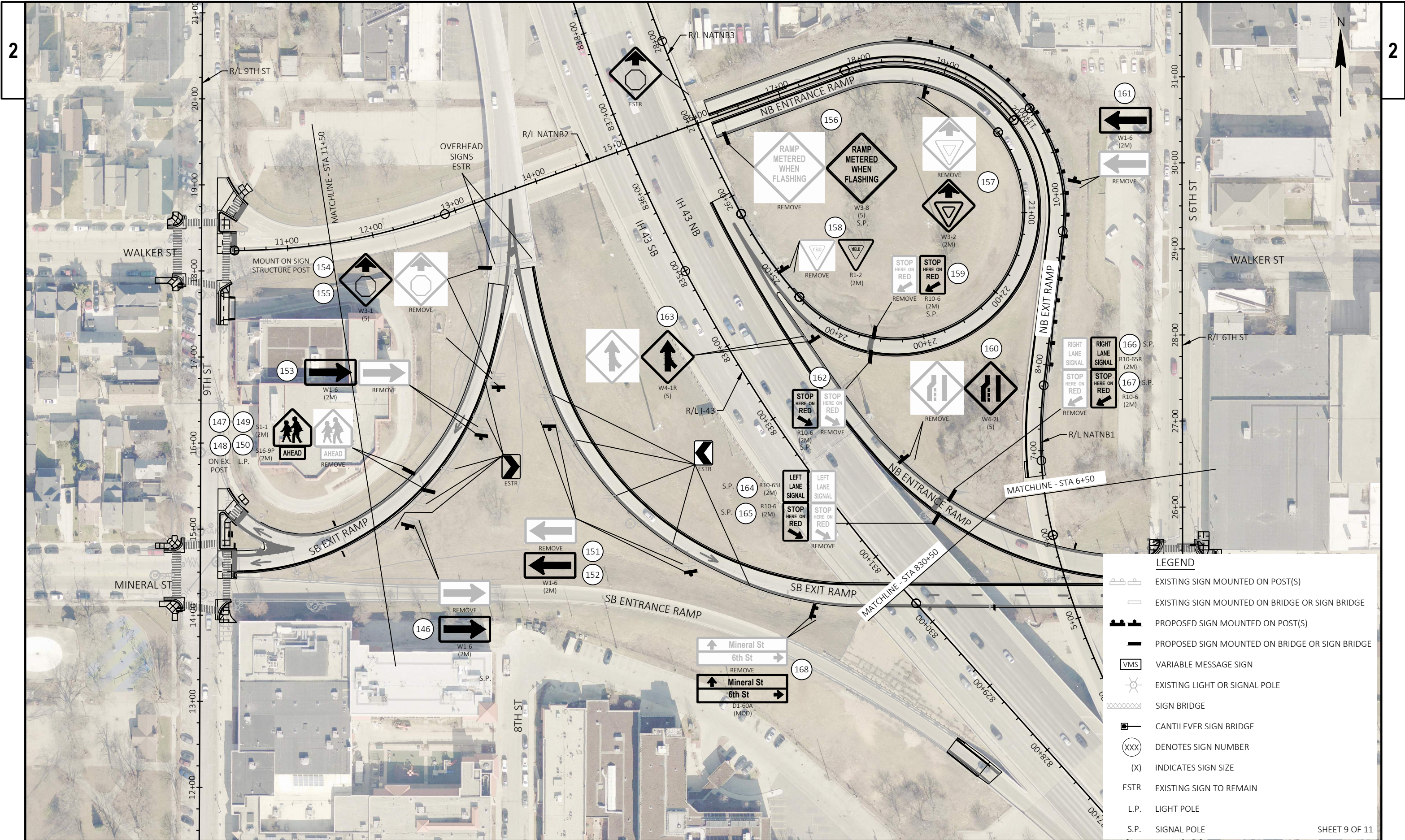












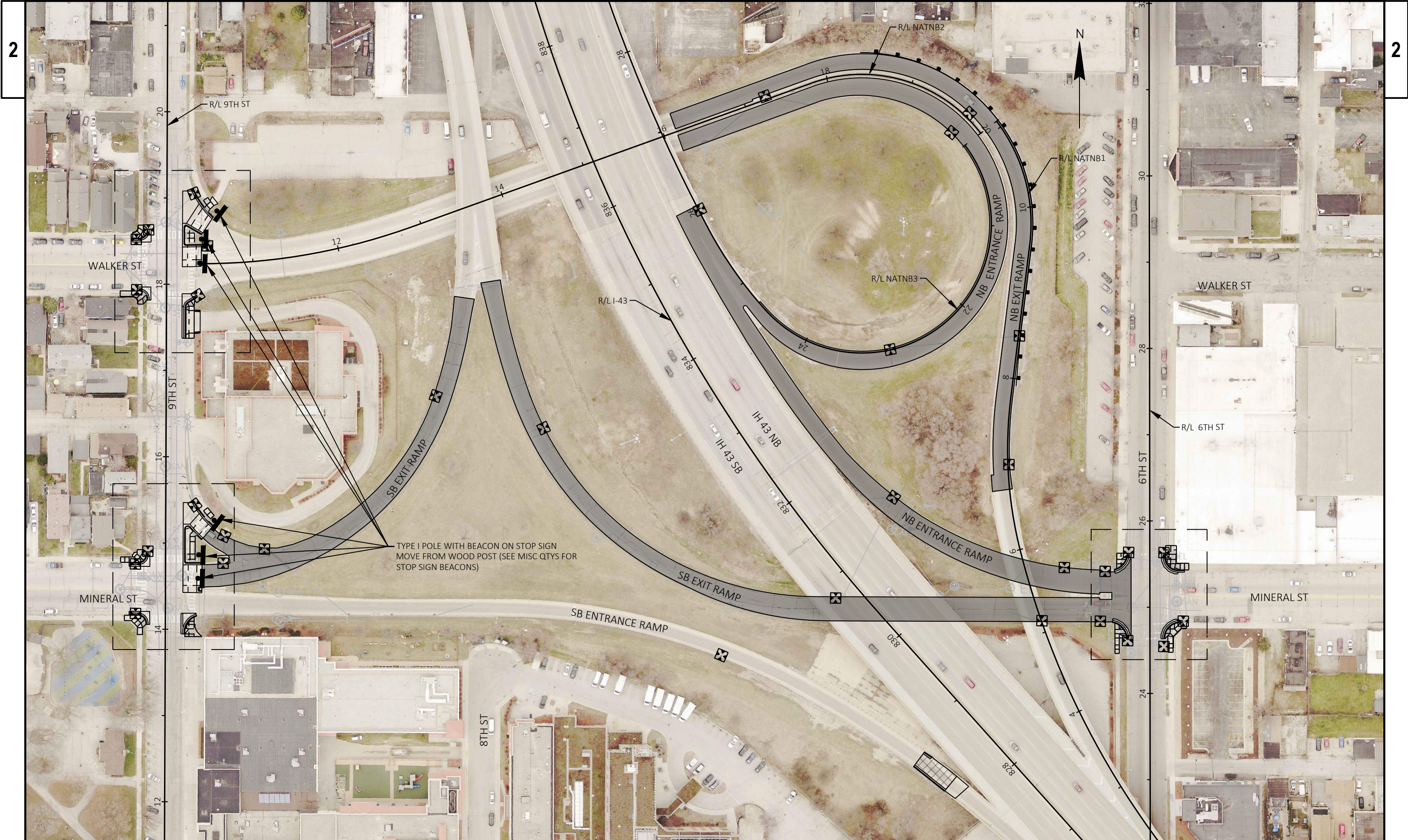




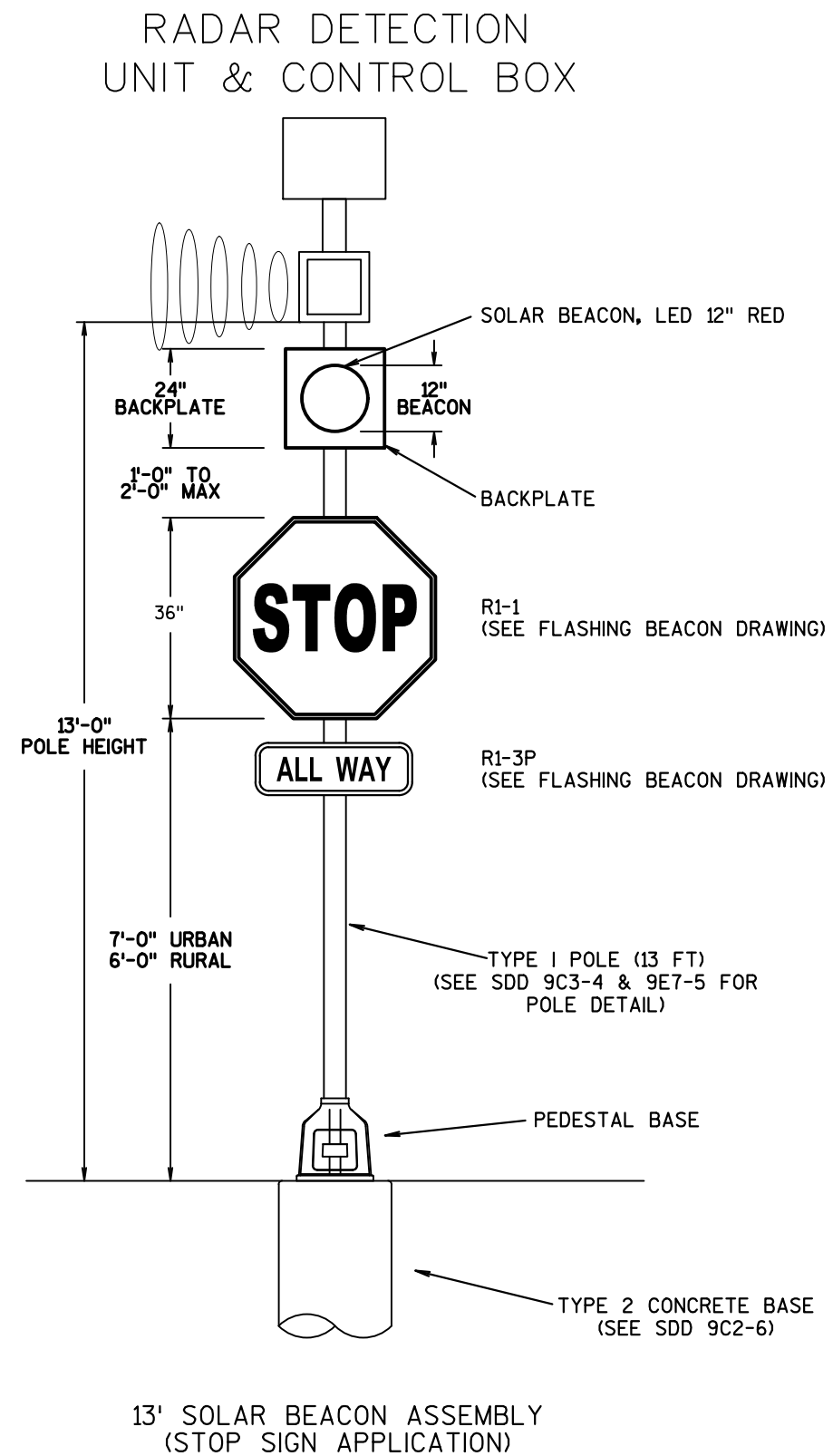




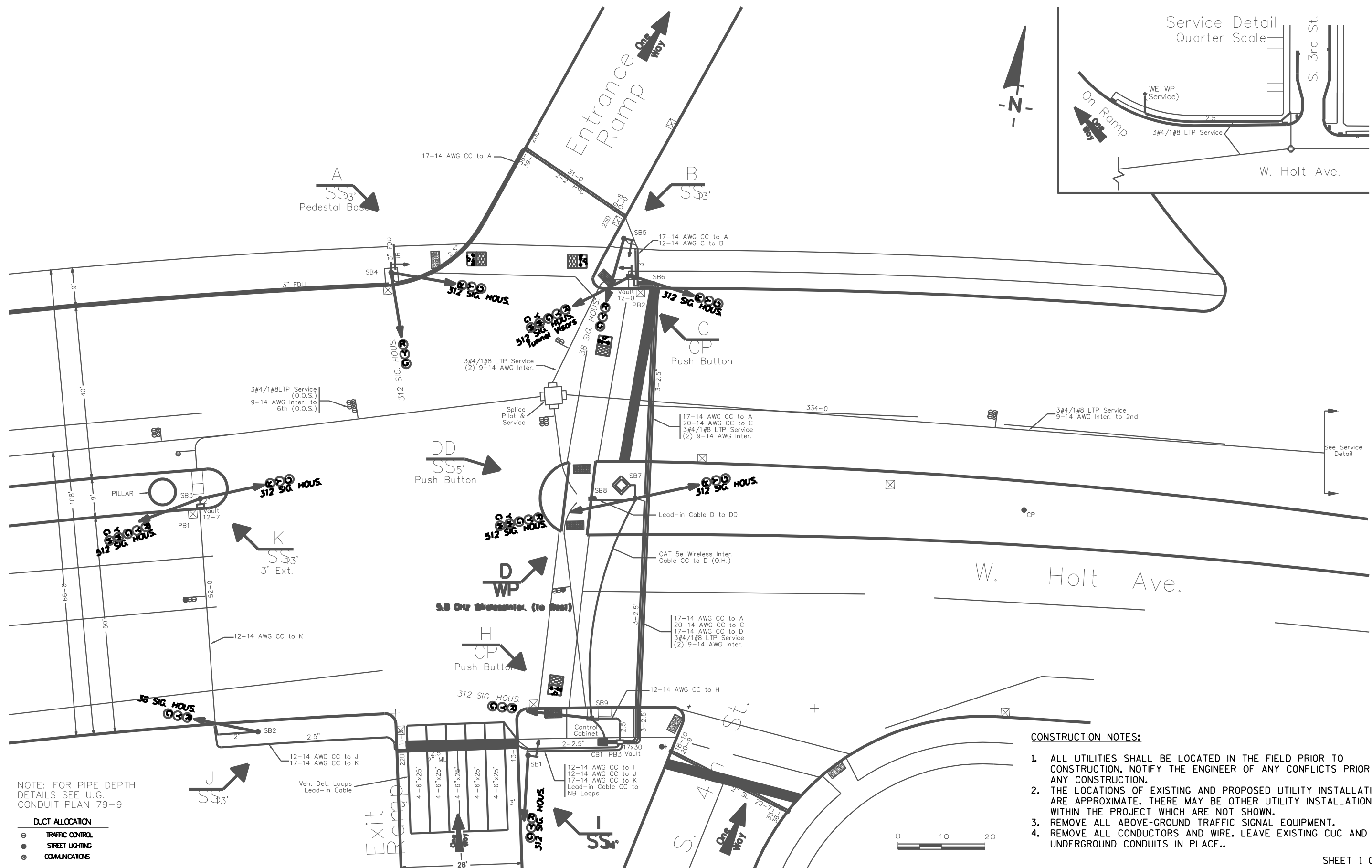














## LEGEND

- ☒ CONTROL CABINET  
— OVERHEAD SPAN WIRE  
← SIGNAL HEAD, SPAN WIRE MOUNTED  
● CLASS 4 WOOD POLE  
☒ SIGNAL HEAD NUMBER  
Ⓡ RED CIRCULAR INDICATOR  
Ⓢ YELLOW CIRCULAR INDICATOR  
Ⓣ GREEN CIRCULAR INDICATOR  
Ⓡ RED ARROW  
Ⓢ YELLOW ARROW  
Ⓣ GREEN ARROW  
Ⓢ WALK/DON'T WALK INDICATOR 12" COUNTDOWN TIMER

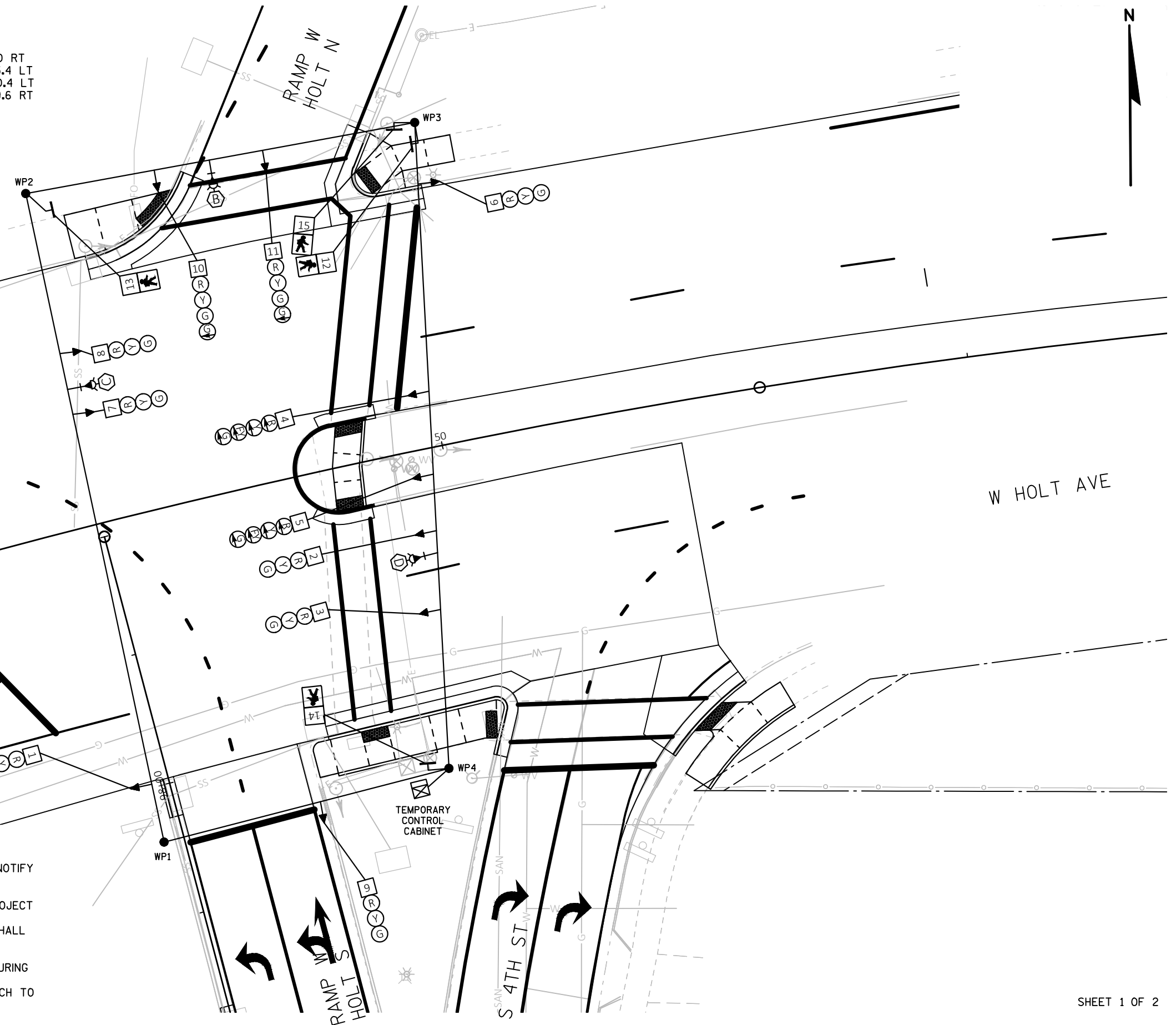
NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

## WOOD POLES

WP1: STA 49+31.0 61.0 RT  
WP2: STA 49+35.7 63.4 LT  
WP3: STA 50+06.8 60.4 LT  
WP4: STA 49+88.6 59.6 RT

## CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
4. ADJUST THE LOCATIONS OF THE SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
5. CITY OF MILWAUKEE SHALL BE NOTIFIED 5 WORKING DAYS BEFORE THE SWITCH TO TEMPORARY TRAFFIC SIGNALS.

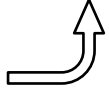
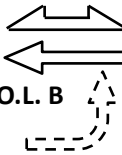




|     | HEAD NUMBERS | F L A S H |
|-----|--------------|-----------|
| Ø1  |              |           |
| Ø2  |              |           |
| Ø3  | 4,5          | R         |
| Ø4  | 6,7,8        | R         |
| Ø5  |              |           |
| Ø6  | 9,10,11      | R         |
| Ø7  |              |           |
| Ø8  | 1,2,3        | R         |
| Ø2P |              |           |
| Ø4P | 12,13        |           |
| Ø6P | 14,15        |           |
| Ø8P |              |           |
| OLA |              |           |
| OLB | 4,5          | -         |
| OLC |              |           |
| OLD |              |           |

RING 1

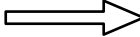
|          |          |
|----------|----------|
| NOT USED | NOT USED |
| Ø1       | Ø2       |

|                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
| Ø3                                                                                  | Ø4                                                                                  |

N

RING 2

|          |                                                                                   |
|----------|-----------------------------------------------------------------------------------|
| NOT USED |  |
| Ø5       | Ø6                                                                                |

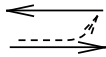
|          |                                                                                     |
|----------|-------------------------------------------------------------------------------------|
| NOT USED |  |
| Ø7       | Ø8                                                                                  |

BARRIER

CONTROLLER LOGIC

| PHASE NUMBER | PHASE LOCKING | DUAL ENTRY W / Ø | PHASE RECALL | PHASE ACTIVE |
|--------------|---------------|------------------|--------------|--------------|
| 1            |               |                  |              |              |
| 2            |               |                  |              |              |
| 3            | X             | 8                | MAX          | X            |
| 4            | X             | 8                | PED/MAX      | X            |
| 5            |               |                  |              |              |
| 6            | X             |                  | PED/MAX      | X            |
| 7            |               |                  |              |              |
| 8            | X             | 4                | MAX          | X            |

EMERGENCY VEHICLE PREEMPTION SEQUENCE

| EMERGENCY VEHICLE PREEMPTOR | B                                                                                   | C                                                                                   | D                                                                                   |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| MOVEMENT                    |  |  |  |
| PHASE                       | 6                                                                                   | 4+8                                                                                 | 8+3                                                                                 |

AFTER PREEMPTION SEQUENCE 6, CONTROLLER SHALL RETURN TO PHASE 6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

| TYPE OF INTERCONNECT/COMMUNICATION |   |
|------------------------------------|---|
| NONE                               | X |
| CLOSED LOOP                        |   |
| TWISTED PAIR                       |   |
| FIBER OPTIC*                       |   |
| FIBER OPTIC (ETHERNET)             |   |
| RADIO                              |   |
| CELL MODEM                         |   |

| TYPE OF COORDINATION                  |   |
|---------------------------------------|---|
| NONE                                  | X |
| TBC                                   |   |
| TRAFFIC RESPONSIVE                    |   |
| ADAPTIVE                              |   |
| *LOCATION OF MASTER CONTROLLER NO: S- |   |
| SIGNAL SYSTEM NO: SS-                 |   |

| TYPE OF LIGHTING                 |   |
|----------------------------------|---|
| BY OTHER AGENCY                  | X |
| IN TRAFFIC CABINET               |   |
| IN SEPARATE DOT LIGHTING CABINET |   |

| TYPE OF PRE-EMPT    |   |
|---------------------|---|
| NONE                |   |
| RAILROAD            |   |
| EMERGENCY VEHICLE   | X |
| GTT                 |   |
| TOMAR               |   |
| HARDWIRE            |   |
| OTHER               |   |
| CONFIRMATION LIGHTS | X |
| LIFT BRIDGE         |   |
| QUEUE DETECTION     |   |

|                                 |                     |
|---------------------------------|---------------------|
| W HOLT AVE & S 4TH ST/FWY RAMPS |                     |
| CITY OF MILWAUKEE               |                     |
| MILWAUKEE COUNTY                |                     |
| SIGNAL NO:                      | CABINET TYPE: TEMP  |
| CONTROLLER TYPE: TEMP           |                     |
| DATE: 1/25                      | PAGE NUMBER: 2 OF 2 |



## LEGEND

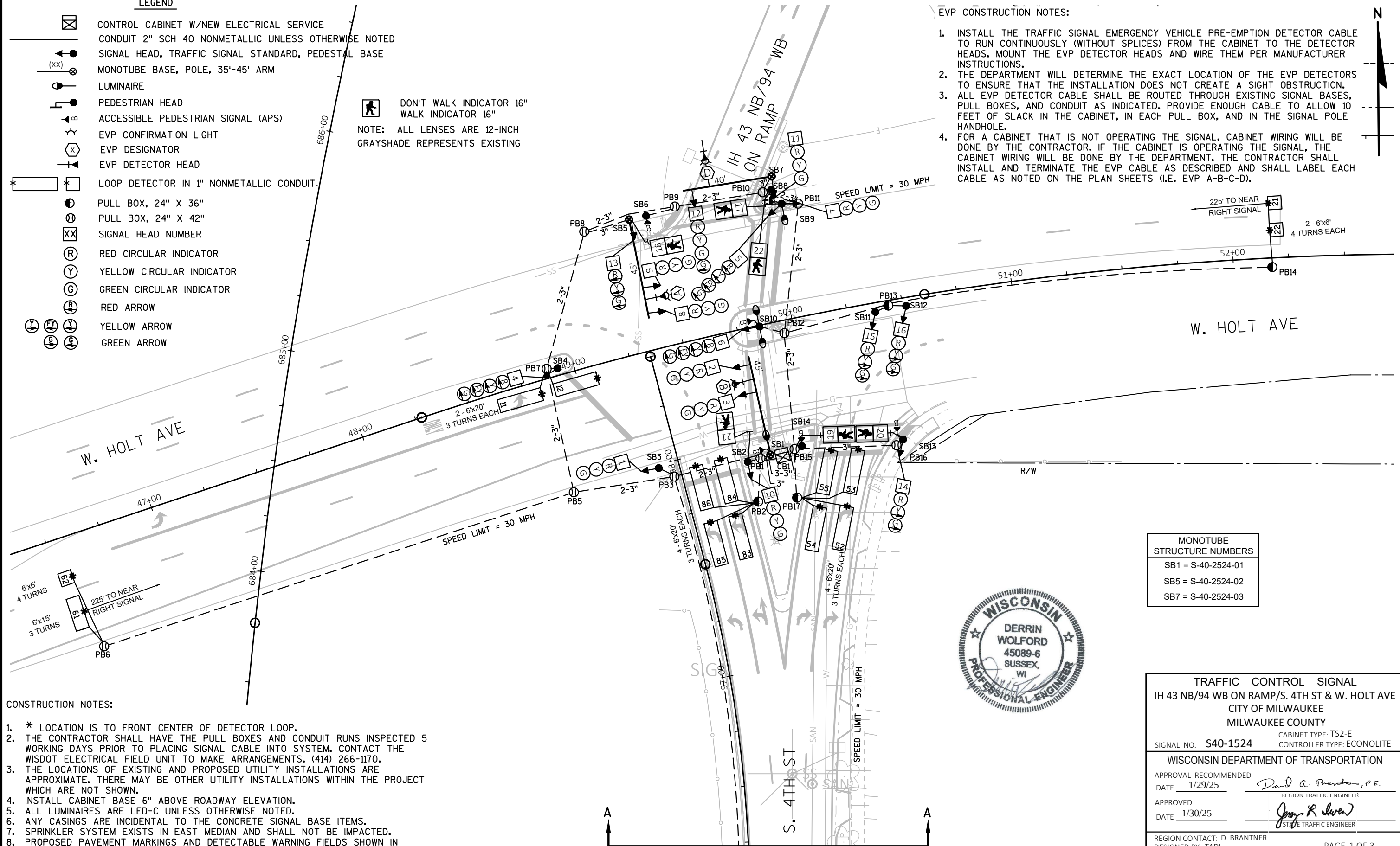
- ☒ CONTROL CABINET W/NEW ELECTRICAL SERVICE  
CONDUIT 2" SCH 40 NONMETALLIC UNLESS OTHERWISE NOTED  
(XX) SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE  
● MONOTUBE BASE, POLE, 35'-45' ARM  
● LUMINAIRE  
● PEDESTRIAN HEAD  
● ACCESSIBLE PEDESTRIAN SIGNAL (APS)  
★ EVP CONFIRMATION LIGHT  
⊗ EVP DESIGNATOR  
⊕ EVP DETECTOR HEAD  
\* □ \* LOOP DETECTOR IN 1" NONMETALLIC CONDUIT  
● PULL BOX, 24" X 36"  
○ PULL BOX, 24" X 42"  
XX SIGNAL HEAD NUMBER  
R RED CIRCULAR INDICATOR  
Y YELLOW CIRCULAR INDICATOR  
G GREEN CIRCULAR INDICATOR  
R RED ARROW  
Y YELLOW ARROW  
G GREEN ARROW

☒ DON'T WALK INDICATOR 16"  
WALK INDICATOR 16"

NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

## EVP CONSTRUCTION NOTES:

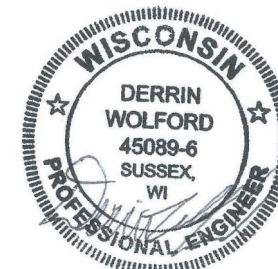
1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING WILL BE DONE BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE DONE BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE PLAN SHEETS (I.E. EVP A-B-C-D).



## CONSTRUCTION NOTES:

1. \* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
6. ANY CASINGS ARE INCIDENTAL TO THE CONCRETE SIGNAL BASE ITEMS.
7. SPRINKLER SYSTEM EXISTS IN EAST MEDIAN AND SHALL NOT BE IMPACTED.
8. PROPOSED PAVEMENT MARKINGS AND DETECTABLE WARNING FIELDS SHOWN IN GRAYSHADE FOR PLAN CLARITY.

| MONOTUBE<br>STRUCTURE NUMBERS |
|-------------------------------|
| SB1 = S-40-2524-01            |
| SB5 = S-40-2524-02            |
| SB7 = S-40-2524-03            |



|                                                |                                                      |
|------------------------------------------------|------------------------------------------------------|
| TRAFFIC CONTROL SIGNAL                         |                                                      |
| IH 43 NB/94 WB ON RAMP/S. 4TH ST & W. HOLT AVE |                                                      |
| CITY OF MILWAUKEE                              |                                                      |
| MILWAUKEE COUNTY                               |                                                      |
| SIGNAL NO. S40-1524                            | CABINET TYPE: TS2-E<br>CONTROLLER TYPE: ECONOLITE    |
| WISCONSIN DEPARTMENT OF TRANSPORTATION         |                                                      |
| APPROVAL RECOMMENDED<br>DATE 1/29/25           | David A. Brantner, P.E.<br>REGIONAL TRAFFIC ENGINEER |
| APPROVED<br>DATE 1/30/25                       | James R. Loran<br>STATE TRAFFIC ENGINEER             |
| REGION CONTACT: D. BRANTNER                    |                                                      |
| DESIGNED BY: TADI                              | REVISOR BY:                                          |
| PAGE 1 OF 3                                    |                                                      |

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

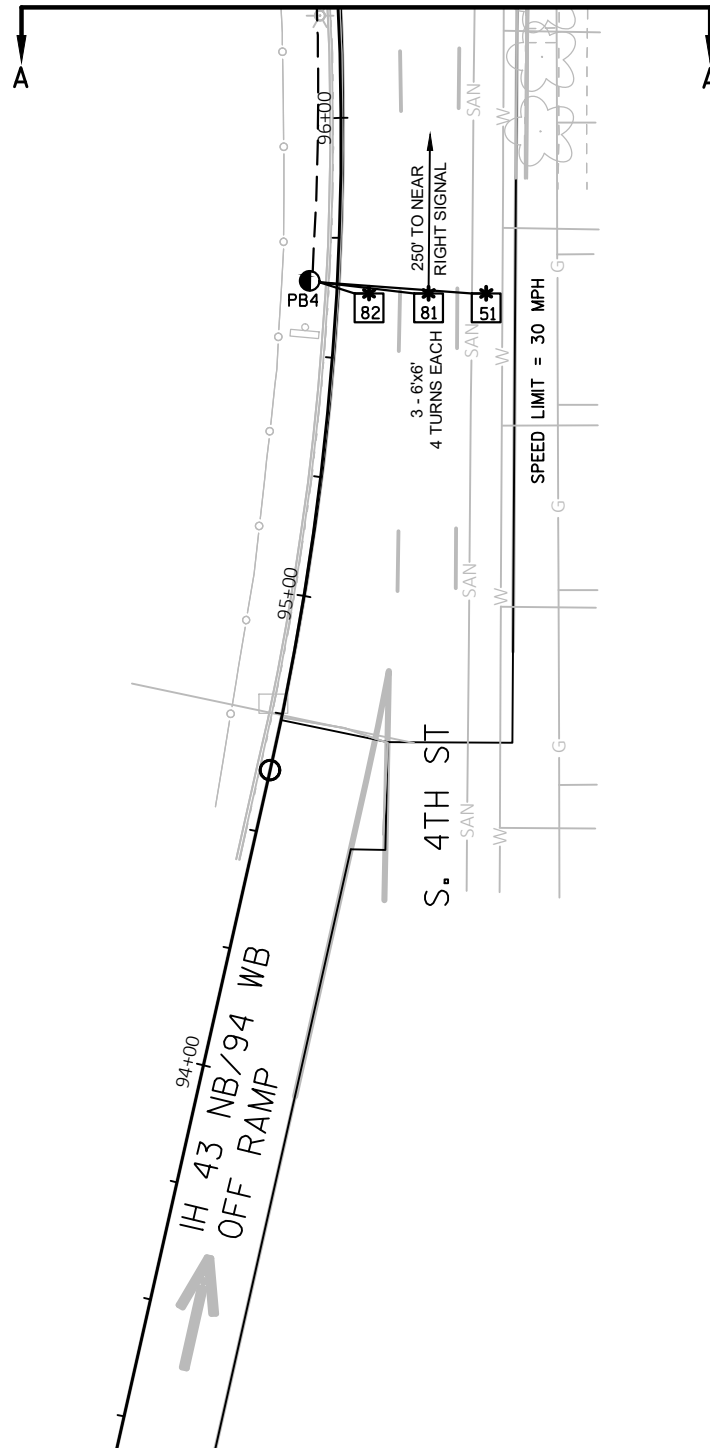
TRAFFIC SIGNAL PLAN

SHEET

57

E





|                                                                                                                   |             |
|-------------------------------------------------------------------------------------------------------------------|-------------|
| TRAFFIC CONTROL SIGNAL<br>IH 43 NB/94 WB ON RAMP/S. 4TH ST & W. HOLT AVE<br>CITY OF MILWAUKEE<br>MILWAUKEE COUNTY |             |
| SIGNAL NO. S40-1524                                                                                               |             |
| REGION CONTACT: D. BRANTNER<br>DESIGNED BY: TADI<br>REVISED BY:                                                   | PAGE 2 OF 3 |

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

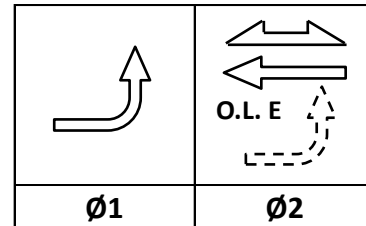
58

E

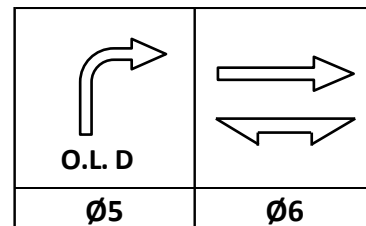


|     | HEAD NUMBERS | FLASH |
|-----|--------------|-------|
| Ø1  | 4,5,6        | R     |
| Ø2  | 7,8,9        | R     |
| Ø3  |              |       |
| Ø4  |              |       |
| Ø5  |              |       |
| Ø6  | 1,2,3        | R     |
| Ø7  |              |       |
| Ø8  | 10,11,12,13  | R, R  |
| Ø2P | 17,18        |       |
| Ø4P |              |       |
| Ø6P | 19,20        |       |
| Ø8P | 21,22        |       |
| OLD | 14,15,16     | R     |
| OLE | 4,5,6        | -     |
| OLF |              |       |
| OLG |              |       |
| OLH |              |       |

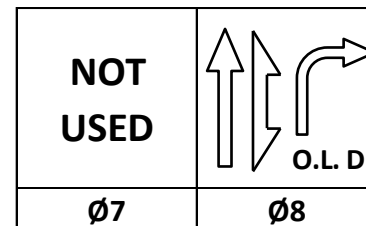
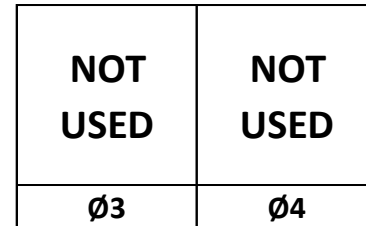
RING 1



RING 2



BARRIER



N

## CONTROLLER LOGIC

| PHASE NUMBER | PHASE LOCKING | DUAL ENTRY W / Ø | PHASE RECALL | PHASE ACTIVE |
|--------------|---------------|------------------|--------------|--------------|
| 1            |               | 6                |              | X            |
| 2            | X             | 6                | MIN          | X            |
| 3            |               |                  |              |              |
| 4            |               |                  |              |              |
| 5            |               | 2                |              | X            |
| 6            | X             | 2                | MIN          | X            |
| 7            |               |                  |              |              |
| 8            |               |                  |              | X            |

## EMERGENCY VEHICLE PREEMPTION SEQUENCE

| EMERGENCY VEHICLE PREEMPTOR | A   | B   | D |
|-----------------------------|-----|-----|---|
| MOVEMENT                    |     |     |   |
| PHASE                       | 2+6 | 6+1 | 8 |

AFTER PREEMPTION SEQUENCE 2+6 + 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

## DETECTOR LOGIC

|                        |    |    |    |    |    |    |    |    |
|------------------------|----|----|----|----|----|----|----|----|
| DETECTOR INPUT         | 3  | 1  | 7  | 5  | 11 | 9  | 15 | 13 |
| PLAN LOOP DETECTOR*(S) | 11 | 21 | 51 | 53 | 55 | 62 | 82 | 84 |
| CALLED PHASE           | 1  | 2  | 5  | 5  | 5  | 6  | 8  | 8  |
| CALL OPTION            | X  | X  |    | X  | X  | X  |    | X  |
| DELAY TIME             |    |    |    | X  | X  |    |    |    |
| EXTENTION OPTION       | X  | X  | X  | X  | X  | X  | X  | X  |
| EXTEND TIME            |    |    | X  |    |    |    | X  |    |
| USE ADDED INITIAL      |    | X  |    |    |    | X  |    |    |
| CROSS SWITCH PHASE     | 2  |    |    |    |    |    |    |    |

|                        |    |    |    |    |    |    |    |    |
|------------------------|----|----|----|----|----|----|----|----|
| DETECTOR INPUT         | 4  | 2  | 8  | 6  | 12 | 10 | 16 | 14 |
| PLAN LOOP DETECTOR*(S) | 12 | 22 | 52 | 54 | 61 | 81 | 83 | 85 |
| CALLED PHASE           | 1  | 2  | 5  | 5  | 6  | 8  | 8  | 8  |
| CALL OPTION            | X  | X  | X  | X  | X  |    | X  | X  |
| DELAY TIME             |    |    | X  | X  |    |    |    |    |
| EXTENTION OPTION       | X  | X  | X  | X  | X  | X  | X  | X  |
| EXTEND TIME            |    |    |    |    |    | X  |    |    |
| USE ADDED INITIAL      |    | X  |    |    | X  |    |    |    |
| CROSS SWITCH PHASE     | 2  |    |    |    |    |    |    |    |

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 19 | 17 | 23 | 21 | 27 | 25 | 31 | 29 |
| 86 |    |    |    |    |    |    |    |
| 8  |    |    |    |    |    |    |    |
| X  |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
| X  |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 20 | 18 | 24 | 22 | 28 | 26 | 32 | 30 |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |
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|    |    |    |    |    |    |    |    |
|    |    |    |    |    |    |    |    |

|                        |    |    |    |    |    |    |    |    |
|------------------------|----|----|----|----|----|----|----|----|
| DETECTOR INPUT         | 19 | 17 | 23 | 21 | 27 | 25 | 31 | 29 |
| PLAN LOOP DETECTOR*(S) | 86 |    |    |    |    |    |    |    |
| CALLED PHASE           | 8  |    |    |    |    |    |    |    |
| CALL OPTION            | X  |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       | X  |    |    |    |    |    |    |    |
| EXTEND TIME            |    |    |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

|                        |    |    |    |    |    |    |    |    |
|------------------------|----|----|----|----|----|----|----|----|
| DETECTOR INPUT         | 20 | 18 | 24 | 22 | 28 | 26 | 32 | 30 |
| PLAN LOOP DETECTOR*(S) |    |    |    |    |    |    |    |    |
| CALLED PHASE           |    |    |    |    |    |    |    |    |
| CALL OPTION            |    |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       |    |    |    |    |    |    |    |    |
| EXTEND TIME            |    |    |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

## TYPE OF INTERCONNECT/COMMUNICATION

|                        |   |
|------------------------|---|
| NONE                   |   |
| CLOSED LOOP            |   |
| TWISTED PAIR           |   |
| FIBER OPTIC*           |   |
| FIBER OPTIC (ETHERNET) |   |
| RADIO                  |   |
| CELL MODEM             | X |

## TYPE OF COORDINATION

|                                    |     |
|------------------------------------|-----|
| NONE                               | X   |
| TBC                                |     |
| TRAFFIC RESPONSIVE                 |     |
| ADAPTIVE                           |     |
| *LOCATION OF MASTER CONTROLLER NO: | S-  |
| SIGNAL SYSTEM NO:                  | SS- |

## TYPE OF LIGHTING

|                                  |   |
|----------------------------------|---|
| BY OTHER AGENCY                  |   |
| IN TRAFFIC CABINET               | X |
| IN SEPARATE DOT LIGHTING CABINET |   |

## TYPE OF PRE-EMPT

|                     |   |
|---------------------|---|
| NONE                |   |
| RAILROAD            |   |
| EMERGENCY VEHICLE   | X |
| GTT                 |   |
| TOMAR               | X |
| HARDWIRE            |   |
| OTHER               |   |
| CONFIRMATION LIGHTS | X |
| LIFT BRIDGE         |   |
| QUEUE DETECTION     |   |

IH 43 NB/94 WB ON RAMP/S. 4TH ST &amp; W. HOLT AVE

CITY OF MILWAUKEE

MILWAUKEE COUNTY

SIGNAL NO: S40-1524 CABINET TYPE: TS2-E

CONTROLLER TYPE: ECONOLITE

DATE: 1/25 PAGE NUMBER: 3 OF 3



|               |                                                |
|---------------|------------------------------------------------|
| PROJECT ID:   | 1228-09-76                                     |
| INTERSECTION: | IH 43 NB/94 WB ON RAMP/S. 4TH ST & W. HOLT AVE |

|                          |           |          |            |
|--------------------------|-----------|----------|------------|
| SIGNAL WIRE COLOR CODING | BLK-BLACK | RED-RED  | GRN-GREEN  |
|                          | WHT-WHITE | BLU-BLUE | ORG-ORANGE |

| CB1 TO | JUMPER | # OF COND. AWG 14 | HEAD NO. | SIGNAL INDICATION WIRE COLOR |         |         |      |          |             |         |        | PED NEUTRAL | PED INPUT |
|--------|--------|-------------------|----------|------------------------------|---------|---------|------|----------|-------------|---------|--------|-------------|-----------|
|        |        |                   |          | RED                          | YELLOW  | GREEN   | <RED | <YELLOW> | <FL YELLOW> | <GREEN> | D/WALK | WALK        |           |
| SB1    |        | 12                | 2        | RED                          | ORG     | GRN     |      |          |             |         |        |             |           |
|        |        |                   | 3        | RED                          | ORG     | GRN     |      |          |             |         |        |             |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | BLU/BLK     | WHT/BLK   |
| SB2    |        | 7                 | 10       | RED                          | ORG     | GRN     |      |          |             |         |        |             |           |
|        |        |                   | 21       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
| SB3    |        | 7                 | 1        | RED                          | ORG     | GRN     |      |          |             |         |        |             |           |
| SB4    |        | 7                 | 4        |                              |         |         | RED  | ORG      | BLK         | GRN     |        |             |           |
| SB5    |        | 12                | 8        | RED/BLK                      | ORG/BLK | GRN/BLK |      |          |             |         |        |             |           |
|        |        |                   | 9        | RED/BLK                      | ORG/BLK | GRN/BLK |      |          |             |         |        |             |           |
|        |        |                   | 13       |                              |         |         | RED  | ORG      |             | GRN     |        |             |           |
|        |        |                   | 18       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
| SB6    |        | 7                 | B        |                              |         |         |      |          |             |         |        | ORG         | WHT/BLK   |
| SB7    |        | 7                 | 11       | RED                          | ORG     | GRN     |      |          |             |         |        |             |           |
|        |        |                   | 12       | RED                          | ORG     | GRN     |      |          |             | GRN     |        |             |           |
| SB8    |        | 7                 | 22       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | ORG         | WHT/BLK   |
| SB9    |        | 12                | 5        |                              |         |         | RED  | ORG      | BLK/WHT     | GRN     |        |             |           |
|        |        |                   | 7        | RED/BLK                      | ORG/BLK | GRN/BLK |      |          |             |         |        |             |           |
|        |        |                   | 17       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | BLU/BLK     | WHT/BLK   |
| SB10   |        | 12                | 6        |                              |         |         | RED  | ORG      | BLK/WHT     | GRN     |        |             |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | BLU/BLK     | WHT/BLK   |
| SB11   |        | 7                 | 15       | RED                          |         |         |      | ORG      |             | GRN     |        |             |           |
| SB12   |        | 7                 | 16       | RED                          |         |         |      | ORG      |             | GRN     |        |             |           |
| SB13   |        | 12                | 14       | RED                          |         |         |      | ORG      |             | GRN     |        |             |           |
|        |        |                   | 20       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | BLU/BLK     | WHT/BLK   |
| SB14   |        | 7                 | 19       |                              |         |         |      |          |             |         | BLK    | BLU         |           |
|        |        |                   | B        |                              |         |         |      |          |             |         |        | ORG         | WHT/BLK   |

| EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP |      |
|----------------------------------------------|------|
| FROM                                         | TO   |
| CB1                                          | SB1  |
| SB1                                          | SB2  |
| SB2                                          | SB3  |
| SB3                                          | SB4  |
| SB4                                          | SB5  |
| SB5                                          | SB6  |
| SB6                                          | SB7  |
| SB7                                          | SB8  |
| SB8                                          | SB9  |
| SB9                                          | SB10 |
| SB10                                         | SB11 |
| SB11                                         | SB12 |
| SB12                                         | SB13 |
| SB13                                         | SB14 |
| SB14                                         | CB1  |

| PULL BOX BONDING JUMPER 10 AWG GRN XLP |      |
|----------------------------------------|------|
| FROM                                   | TO   |
| CB1                                    | PB1  |
| SB3                                    | PB3  |
| SB3                                    | PB5  |
| SB4                                    | PB7  |
| SB5                                    | PB8  |
| SB6                                    | PB9  |
| SB7                                    | PB10 |
| SB9                                    | PB11 |
| SB10                                   | PB12 |
| SB11                                   | PB13 |
| CB1                                    | PB15 |
| SB13                                   | PB16 |

| LIGHTING UF 12 AWG W/GROUND |      |
|-----------------------------|------|
| FROM                        | TO   |
| CB1                         | SB1  |
| CB1                         | SB10 |
| SB10                        | SB9  |

| EMERGENCY VEHICLE PREEMPTION |              |
|------------------------------|--------------|
| FROM                         | TO           |
| CB1                          | SB5 (HEAD A) |
| CB1                          | SB1 (HEAD B) |
| CB1                          | SB7 (HEAD D) |

| CONFIRMATION BEACON CABLE TRAFFIC SIGNAL 3-14 AWG |              |
|---------------------------------------------------|--------------|
| FROM                                              | TO           |
| CB1                                               | SB5 (HEAD A) |
| CB1                                               | SB1 (HEAD B) |
| CB1                                               | SB7 (HEAD D) |





**DUCT ALLOCATION**

- ⊖ TRAFFIC CONTROL
- STREET LIGHTING
- ⊗ COMMUNICATIONS

CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. REMOVE ALL ABOVE-GROUND TRAFFIC SIGNAL EQUIPMENT.
4. REMOVE ALL CONDUCTORS AND WIRE. LEAVE EXISTING CUC AND OTHER UNDERGROUND CONDUITS IN PLACE..

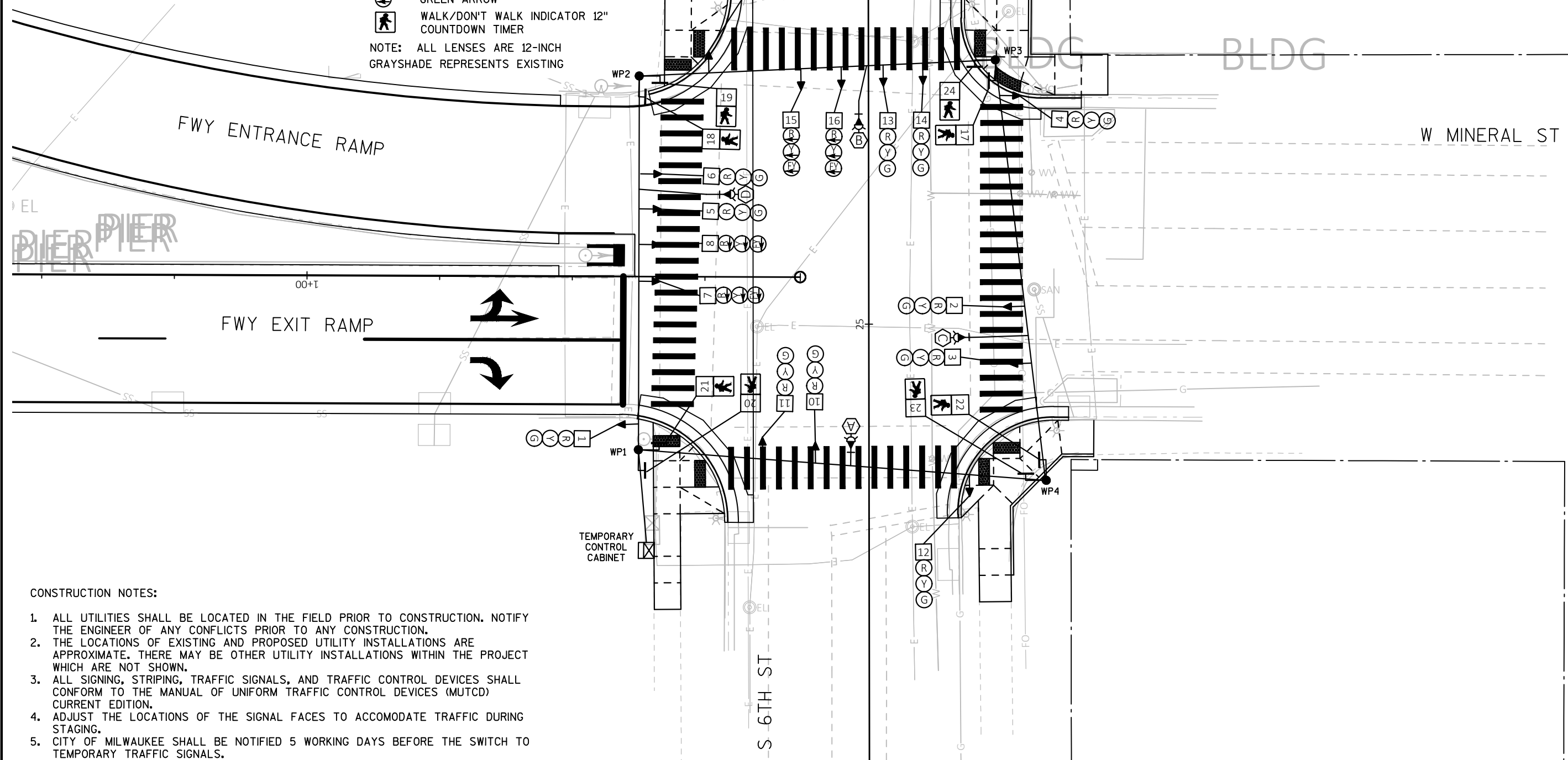
## WOOD POLES

WP1: STA 24+76.4 43.5 LT  
WP2: STA 25+46.8 43.2 LT  
WP3: STA 25+49.8 23.9 RT  
WP4: STA 24+70.5 33.4 RT

## LEGEND

- ☒ CONTROL CABINET  
— OVERHEAD SPAN WIRE  
← SIGNAL HEAD, SPAN WIRE MOUNTED  
● CLASS 4 WOOD POLE  
☒ XX SIGNAL HEAD NUMBER  
Ⓡ RED CIRCULAR INDICATOR  
Ⓢ YELLOW CIRCULAR INDICATOR  
Ⓣ GREEN CIRCULAR INDICATOR  
Ⓡ RED ARROW  
Ⓢ YELLOW ARROW  
Ⓣ GREEN ARROW  
Ⓢ WALK/DON'T WALK INDICATOR 12" COUNTDOWN TIMER

NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING



## CONSTRUCTION NOTES:

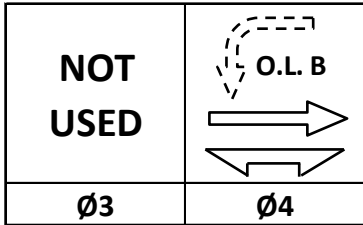
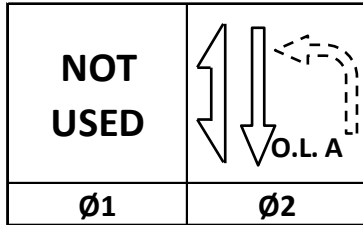
1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
4. ADJUST THE LOCATIONS OF THE SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
5. CITY OF MILWAUKEE SHALL BE NOTIFIED 5 WORKING DAYS BEFORE THE SWITCH TO TEMPORARY TRAFFIC SIGNALS.

SHEET 1 OF 2

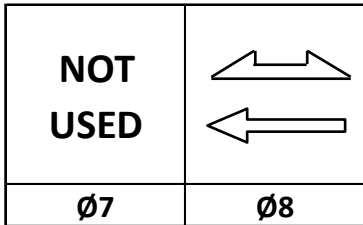
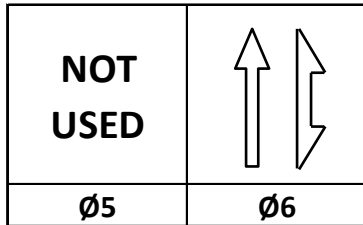


|     | HEAD NUMBERS | F L A S H |
|-----|--------------|-----------|
| Ø1  |              |           |
| Ø2  | 9,10,11      | R         |
| Ø3  |              |           |
| Ø4  | 1,2,3        | R         |
| Ø5  |              |           |
| Ø6  | 12,13,14     | R         |
| Ø7  |              |           |
| Ø8  | 4,5,6        | R         |
| Ø2P | 19,20        |           |
| Ø4P | 21,22        |           |
| Ø6P | 23,24        |           |
| Ø8P | 17,18        |           |
| OLA | 15,16        | R ←       |
| OLB | 7,8          | R ←       |
| OLC |              |           |
| OLD |              |           |

RING 1



RING 2



BARRIER

N

CONTROLLER LOGIC

| PHASE NUMBER | PHASE LOCKING | DUAL ENTRY W / Ø | PHASE RECALL | PHASE ACTIVE |
|--------------|---------------|------------------|--------------|--------------|
| 1            |               |                  |              |              |
| 2            | X             | 6                | PED/MAX      | X            |
| 3            |               |                  |              |              |
| 4            |               | 8                | PED/MAX      | X            |
| 5            |               |                  |              |              |
| 6            | X             | 2                | PED/MAX      | X            |
| 7            |               |                  |              |              |
| 8            |               | 4                | PED/MAX      | X            |

EMERGENCY VEHICLE PREEMPTION SEQUENCE

| EMERGENCY VEHICLE PREEMPTOR | A   | B   | C   | D   |
|-----------------------------|-----|-----|-----|-----|
| MOVEMENT                    |     |     |     |     |
| PHASE                       | 2+6 | 6+2 | 4+8 | 8+4 |

AFTER PREEMPTION SEQUENCE 2+6, OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

| TYPE OF INTERCONNECT/COMMUNICATION |   |
|------------------------------------|---|
| NONE                               | X |
| CLOSED LOOP                        |   |
| TWISTED PAIR                       |   |
| FIBER OPTIC*                       |   |
| FIBER OPTIC (ETHERNET)             |   |
| RADIO                              |   |
| CELL MODEM                         |   |

| TYPE OF COORDINATION                  |   |
|---------------------------------------|---|
| NONE                                  | X |
| TBC                                   |   |
| TRAFFIC RESPONSIVE                    |   |
| ADAPTIVE                              |   |
| *LOCATION OF MASTER CONTROLLER NO: S- |   |
| SIGNAL SYSTEM NO: SS-                 |   |

| TYPE OF LIGHTING                 |   |
|----------------------------------|---|
| BY OTHER AGENCY                  | X |
| IN TRAFFIC CABINET               |   |
| IN SEPARATE DOT LIGHTING CABINET |   |

| TYPE OF PRE-EMPT    |   |
|---------------------|---|
| NONE                |   |
| RAILROAD            |   |
| EMERGENCY VEHICLE   | X |
| GTT                 |   |
| TOMAR               |   |
| HARDWIRE            |   |
| OTHER               |   |
| CONFIRMATION LIGHTS | X |
| LIFT BRIDGE         |   |
| QUEUE DETECTION     |   |

W MINERAL ST & S 6TH ST  
CITY OF MILWAUKEE  
MILWAUKEE COUNTY

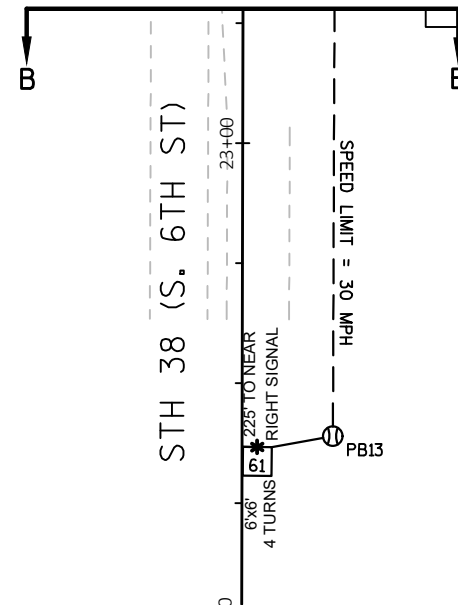
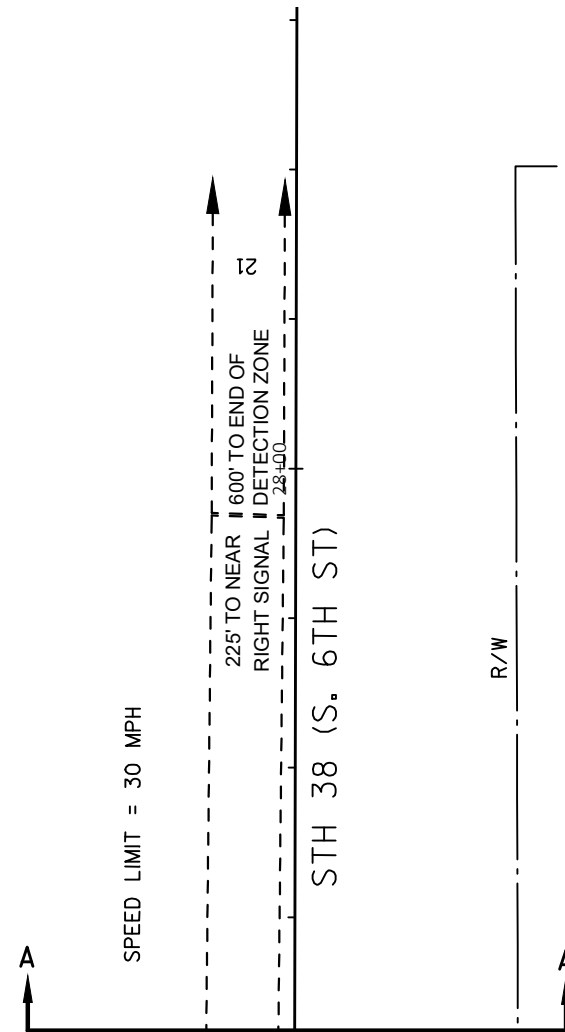
SIGNAL NO: CABINET TYPE: TEMP

CONTROLLER TYPE: TEMP

DATE: 1/25 PAGE NUMBER: 2 OF 2







|                                                                                                                      |             |
|----------------------------------------------------------------------------------------------------------------------|-------------|
| TRAFFIC CONTROL SIGNAL<br>IH 43/94 RAMPS/W. MINERAL ST & STH 38 (S. 6TH ST)<br>CITY OF MILWAUKEE<br>MILWAUKEE COUNTY |             |
| SIGNAL NO. S40-1525                                                                                                  |             |
| REGION CONTACT: D. BRANTNER<br>DESIGNED BY: TADI<br>REVISED BY:                                                      | PAGE 2 OF 3 |

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

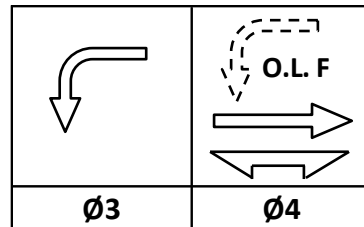
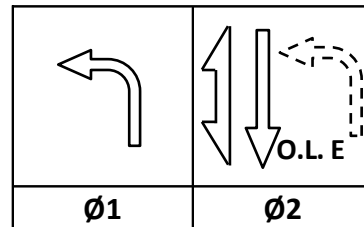
TRAFFIC SIGNAL PLAN

SHEET 65

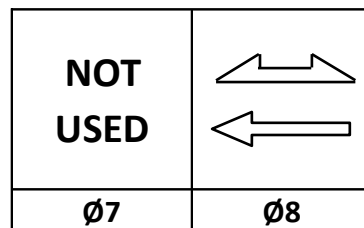
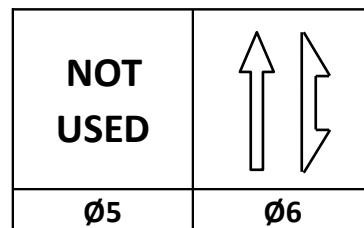
E

|     | HEAD<br>NUMBERS | F<br>L<br>A<br>S<br>H |
|-----|-----------------|-----------------------|
| Ø1  | 15,16           | R<br>←                |
| Ø2  | 9,10,11         | R                     |
| Ø3  | 7,8             | R<br>←                |
| Ø4  | 1,2,3           | R                     |
| Ø5  |                 |                       |
| Ø6  | 12,13,14        | R                     |
| Ø7  |                 |                       |
| Ø8  | 4,5,6           | R                     |
| Ø2P | 19,20           |                       |
| Ø4P | 21,22           |                       |
| Ø6P | 23,24           |                       |
| Ø8P | 17,18           |                       |
| OLE | 15,16           | -                     |
| OLF | 7,8             | -                     |
| OLG |                 |                       |
| OLH |                 |                       |

RING 1



RING 2



BARRIER

N

## CONTROLLER LOGIC

| PHASE<br>NUMBER | PHASE<br>LOCKING | DUAL<br>ENTRY<br>W / Ø | PHASE<br>RECALL | PHASE<br>ACTIVE |
|-----------------|------------------|------------------------|-----------------|-----------------|
| 1               |                  | 6                      |                 | X               |
| 2               | X                | 6                      | MIN             | X               |
| 3               |                  | 8                      |                 | X               |
| 4               |                  | 8                      |                 | X               |
| 5               |                  |                        |                 |                 |
| 6               | X                | 2                      | MIN             | X               |
| 7               |                  |                        |                 |                 |
| 8               |                  | 4                      |                 | X               |

## EMERGENCY VEHICLE PREEMPTION SEQUENCE

| EMERGENCY VEHICLE<br>PREEMPTOR | A   | B   | C   | D   |
|--------------------------------|-----|-----|-----|-----|
| MOVEMENT                       |     |     |     |     |
| PHASE                          | 2+6 | 6+2 | 4+8 | 8+4 |

AFTER PREEMPTION SEQUENCE 2+6, OR 6+2, CONTROLLER SHALL  
RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN  
TO PHASES 4+8.

## DETECTOR LOGIC

| DETECTOR INPUT         | 3  | 1  | 7  | 5  | 11 | 9  | 15 | 13 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 11 | 31 | 41 | 43 | 45 | 61 | 83 |    |
| CALLED PHASE           | 1  | 3  | 4  | 4  | 4  | 6  | 8  |    |
| CALL OPTION            | X  | X  |    | X  | X  | X  | X  |    |
| DELAY TIME             |    |    |    |    | X  |    | X  |    |
| EXTENTION OPTION       | X  | X  | X  | X  | X  | X  | X  |    |
| EXTEND TIME            |    |    | X  |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    | X  |    |    |
| CROSS SWITCH PHASE     | 2  | 4  |    |    |    |    |    |    |

| DETECTOR INPUT         | 4  | 2  | 8  | 6  | 12 | 10 | 16 | 14 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 12 | 32 | 42 | 44 | 46 | 82 |    |    |
| CALLED PHASE           | 1  | 3  | 4  | 4  | 4  | 8  |    |    |
| CALL OPTION            | X  | X  |    | X  | X  | X  |    |    |
| DELAY TIME             |    |    |    |    | X  | X  |    |    |
| EXTENTION OPTION       | X  | X  | X  | X  | X  | X  |    |    |
| EXTEND TIME            |    |    | X  |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     | 2  | 4  |    |    |    |    |    |    |

| DETECTOR INPUT         | 17 | 19 | 21 | 23 | 25 | 27 | 29 | 31 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 21 | 81 |    |    |    |    |    |    |
| CALLED PHASE           | 2  | 8  |    |    |    |    |    |    |
| CALL OPTION            | X  |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       | X  | X  |    |    |    |    |    |    |
| EXTEND TIME            |    | X  |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

| DETECTOR INPUT         | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 22 |    |    |    |    |    |    |    |
| CALLED PHASE           | 2  |    |    |    |    |    |    |    |
| CALL OPTION            | X  |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       | X  |    |    |    |    |    |    |    |
| EXTEND TIME            |    |    |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

| DETECTOR INPUT         | 17 | 19 | 21 | 23 | 25 | 27 | 29 | 31 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 21 | 81 |    |    |    |    |    |    |
| CALLED PHASE           | 2  | 8  |    |    |    |    |    |    |
| CALL OPTION            | X  |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       | X  | X  |    |    |    |    |    |    |
| EXTEND TIME            |    | X  |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

| DETECTOR INPUT         | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
|------------------------|----|----|----|----|----|----|----|----|
| PLAN LOOP DETECTOR*(S) | 22 |    |    |    |    |    |    |    |
| CALLED PHASE           | 2  |    |    |    |    |    |    |    |
| CALL OPTION            | X  |    |    |    |    |    |    |    |
| DELAY TIME             |    |    |    |    |    |    |    |    |
| EXTENTION OPTION       | X  |    |    |    |    |    |    |    |
| EXTEND TIME            |    |    |    |    |    |    |    |    |
| USE ADDED INITIAL      |    |    |    |    |    |    |    |    |
| CROSS SWITCH PHASE     |    |    |    |    |    |    |    |    |

| TYPE OF INTERCONNECT/COMMUNICATION |   |
|------------------------------------|---|
| NONE                               |   |
| CLOSED LOOP                        |   |
| TWISTED PAIR                       |   |
| FIBER OPTIC*                       |   |
| FIBER OPTIC (ETHERNET)             |   |
| RADIO                              |   |
| CELL MODEM                         | X |

| TYPE OF COORDINATION                     |   |
|------------------------------------------|---|
| NONE                                     | X |
| TBC                                      |   |
| TRAFFIC RESPONSIVE                       |   |
| ADAPTIVE                                 |   |
| *LOCATION OF MASTER<br>CONTROLLER NO: S- |   |
| SIGNAL SYSTEM NO: SS-                    |   |

| TYPE OF LIGHTING                 |   |
|----------------------------------|---|
| BY OTHER AGENCY                  |   |
| IN TRAFFIC CABINET               | X |
| IN SEPARATE DOT LIGHTING CABINET |   |

| TYPE OF PRE-EMPT    |   |
|---------------------|---|
| NONE                |   |
| RAILROAD            |   |
| EMERGENCY VEHICLE   | X |
| GTT                 |   |
| TOMAR               | X |
| HARDWIRE            |   |
| OTHER               |   |
| CONFIRMATION LIGHTS | X |
| LIFT BRIDGE         |   |
| QUEUE DETECTION     |   |

IH 43/94 RAMPS/W. MINERAL ST & STH 38 (S. 6TH ST)  
CITY OF MILWAUKEE  
MILWAUKEE COUNTY

SIGNAL NO: S40-1525 CABINET TYPE: TS2-E

CONTROLLER TYPE: ECONOLITE

DATE: 1/25 PAGE NUMBER: 3 OF 3

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

SHEET NO: 66

E



|               |                          |
|---------------|--------------------------|
| PROJECT ID:   | 1228-09-76               |
| INTERSECTION: | W MINERAL ST AT S 6TH ST |

|                          |           |          |            |
|--------------------------|-----------|----------|------------|
| SIGNAL WIRE COLOR CODING | BLK-BLACK | RED-RED  | GRN-GREEN  |
|                          | WHT-WHITE | BLU-BLUE | ORG-ORANGE |

| CONTROL CABINET TO | JUMPER | # OF COND.<br>AWG 14 | HEAD NO. | SIGNAL INDICATION WIRE COLOR |         |         |         |          |             |         |        | PED<br>NEUTRAL | PED<br>INPUT |         |
|--------------------|--------|----------------------|----------|------------------------------|---------|---------|---------|----------|-------------|---------|--------|----------------|--------------|---------|
|                    |        |                      |          | RED                          | YELLOW  | GREEN   | <RED    | <YELLOW> | <FL YELLOW> | <GREEN> | D/WALK |                |              | WALK    |
| SB1                |        | 7                    | 21       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | ORG          | WHT/BLK |
| SB2                |        | 12                   | 1        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 7        |                              |         |         | RED/BLK | ORG/BLK  | BLK/WHT     | GRN/BLK |        |                |              |         |
| SB3                |        | 12                   | 8        |                              |         |         | RED     | ORG      | BLK/WHT     | GRN     |        |                |              |         |
| SB4                |        | 12                   | 5        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 6        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 18       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |
| SB5                |        | 7                    | B        |                              |         |         |         |          |             |         |        |                | ORG          | WHT/BLK |
| SB6                |        | 12                   | 15       |                              |         |         | RED     | ORG      | BLK/WHT     | GRN     |        |                |              |         |
|                    |        |                      | 9        | RED/BLK                      | ORG/BLK | GRN/BLK |         |          |             |         |        |                |              |         |
|                    |        |                      | 19       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
| SB7                |        | 12                   | 13       | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 14       | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 16       |                              |         |         | RED/BLK | ORG/BLK  | BLK/WHT     | GRN/BLK |        |                |              |         |
|                    |        |                      | 24       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |
| SB8                |        | 12                   | 4        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 17       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |
| SB9                |        | 12                   | 2        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 3        | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 22       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |
| SB10               |        | 12                   | 12       | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 23       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |
| SB11               |        | 12                   | 10       | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 11       | RED                          | ORG     | GRN     |         |          |             |         |        |                |              |         |
|                    |        |                      | 20       |                              |         |         |         |          |             |         | BLK    | BLU            |              |         |
|                    |        |                      | B        |                              |         |         |         |          |             |         |        |                | BLU/BLK      | WHT/BLK |

| EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP |      |
|----------------------------------------------|------|
| FROM                                         | TO   |
| CB1                                          | SB1  |
| SB1                                          | SB2  |
| SB2                                          | SB3  |
| SB3                                          | SB4  |
| SB4                                          | SB5  |
| SB5                                          | SB6  |
| SB6                                          | SB7  |
| SB7                                          | SB8  |
| SB8                                          | SB9  |
| SB9                                          | SB10 |
| SB10                                         | SB11 |
| SB11                                         | CB1  |

| PULL BOX BONDING JUMPER 10 AWG GRN XLP |      |
|----------------------------------------|------|
| FROM                                   | TO   |
| CB1                                    | PB1  |
| SB3                                    | PB4  |
| SB4                                    | PB5  |
| SB5                                    | PB6  |
| SB7                                    | PB7  |
| SB8                                    | PB8  |
| SB9                                    | PB10 |
| SB10                                   | PB11 |
| CB1                                    | PB14 |

| LIGHTING UF 12 AWG W/GROUND |      |
|-----------------------------|------|
| FROM                        | TO   |
| CB1                         | SB6  |
| SB6                         | SB7  |
| SB7                         | SB8  |
| CB1                         | SB11 |
| SB11                        | SB10 |
| SB10                        | SB9  |

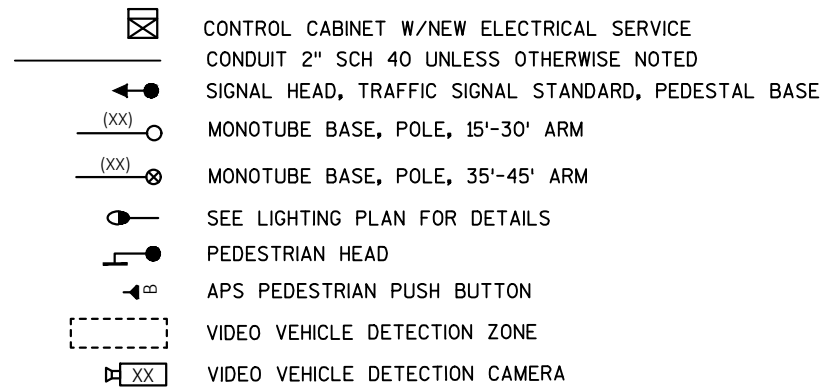
| RADAR DETECTION CABLE |            |
|-----------------------|------------|
| FROM                  | TO         |
| CB1                   | SB11 (RA1) |
| CB1                   | SB4 (RA2)  |

| EMERGENCY VEHICLE PREEMPTION |               |
|------------------------------|---------------|
| FROM                         | TO            |
| CB1                          | SB11 (HEAD A) |
| CB1                          | SB7 (HEAD B)  |
| CB1                          | SB9 (HEAD C)  |
| CB1                          | SB4 (HEAD D)  |

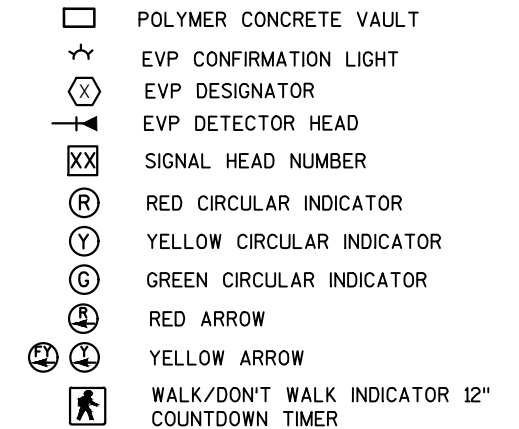
| CONFIRMATION BEACON CABLE TRAFFIC SIGNAL 3-14 AWG |               |
|---------------------------------------------------|---------------|
| FROM                                              | TO            |
| CB1                                               | SB11 (HEAD A) |
| CB1                                               | SB7 (HEAD B)  |
| CB1                                               | SB9 (HEAD C)  |
| CB1                                               | SB4 (HEAD D)  |

- NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
  2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
  3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.  
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

### LEGEND



LEGEND CONTINUED



NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

W LAPHAM BLVD

W LAPHAM BLVD

CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. REFER TO THE EXISTING TRAFFIC SIGNAL PLANS FOR MORE DETAILS OF EXISTING SIGNAL INSTALLATION AND WIRING.
4. REFER TO STREET LIGHTING PLANS TO COORDINATE INSTALLATION.

SHEET 1 OF 1

|                        |
|------------------------|
| PROJECT NO: 1228-09-76 |
|------------------------|

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN - W LAPHAM BLVD & S 4TH ST

SHEET 68

FILE NAME : Z:\SHARED\WI\2729-8 IH-43 AT HOLT 6TH AT MINERAL\CAD\12280976 SIGNALS - WISDOT STDS.DWG  
LAYOUT NAME - 024201.sp

PLOT DATE : 1/27/2025 11:09 AM

PLOT BY : DERRIN WOLFORD

PLOT NAME :

PLOT SCALE : 1:20

WISDOT/CADDS SHEET 42



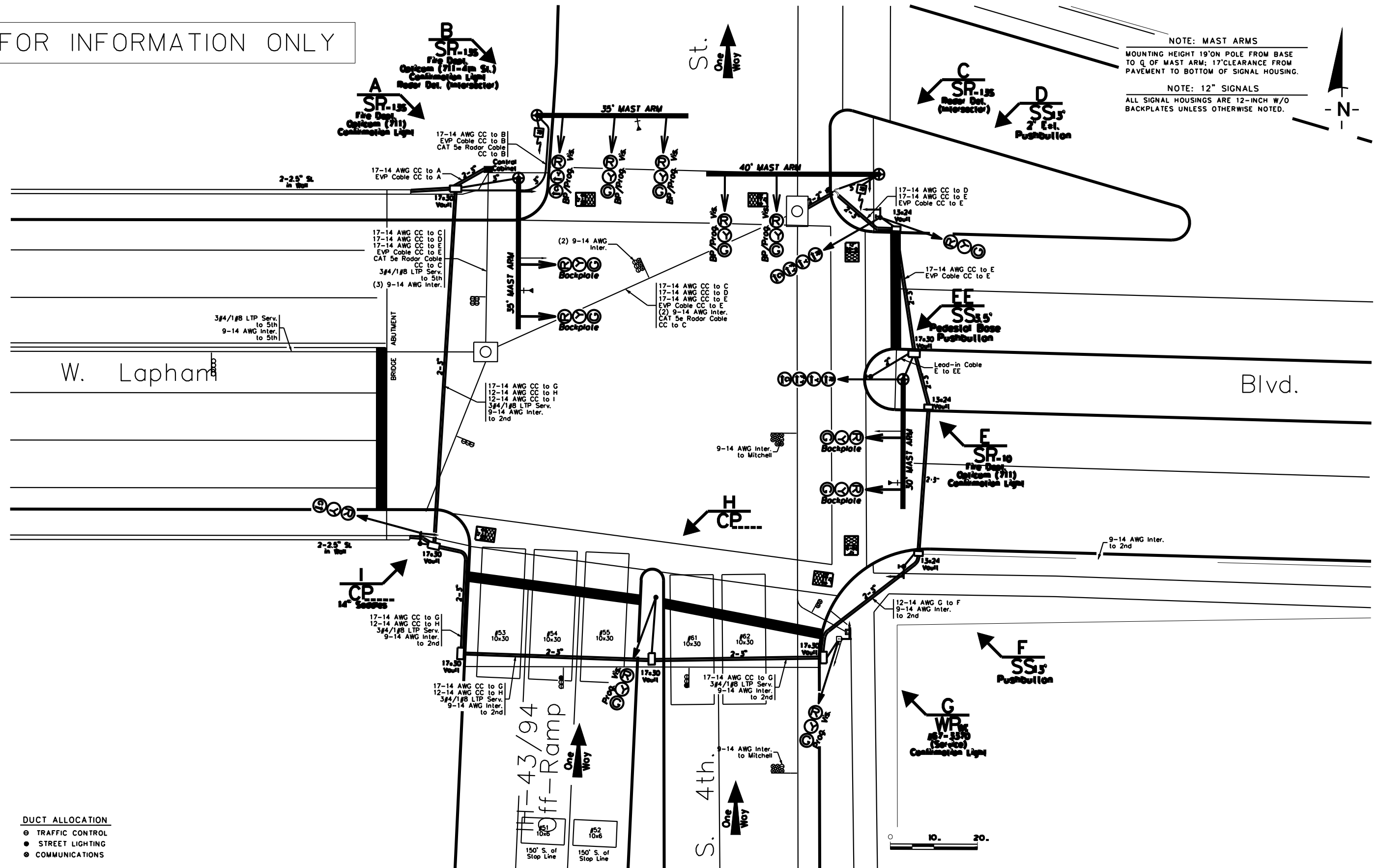
FOR INFORMATION ONLY

**NOTE: MAST ARMS**

MOUNTING HEIGHT 19' ON POLE FROM BASE  
TO Q OF MAST ARM; 17' CLEARANCE FROM  
PAVEMENT TO BOTTOM OF SIGNAL HOUSING.

**NOTE: 12" SIGNALS**

ALL SIGNAL HOUSINGS ARE 12-INCH W/O  
BACKPLATES UNLESS OTHERWISE NOTED.



SHEET 1 OF 1

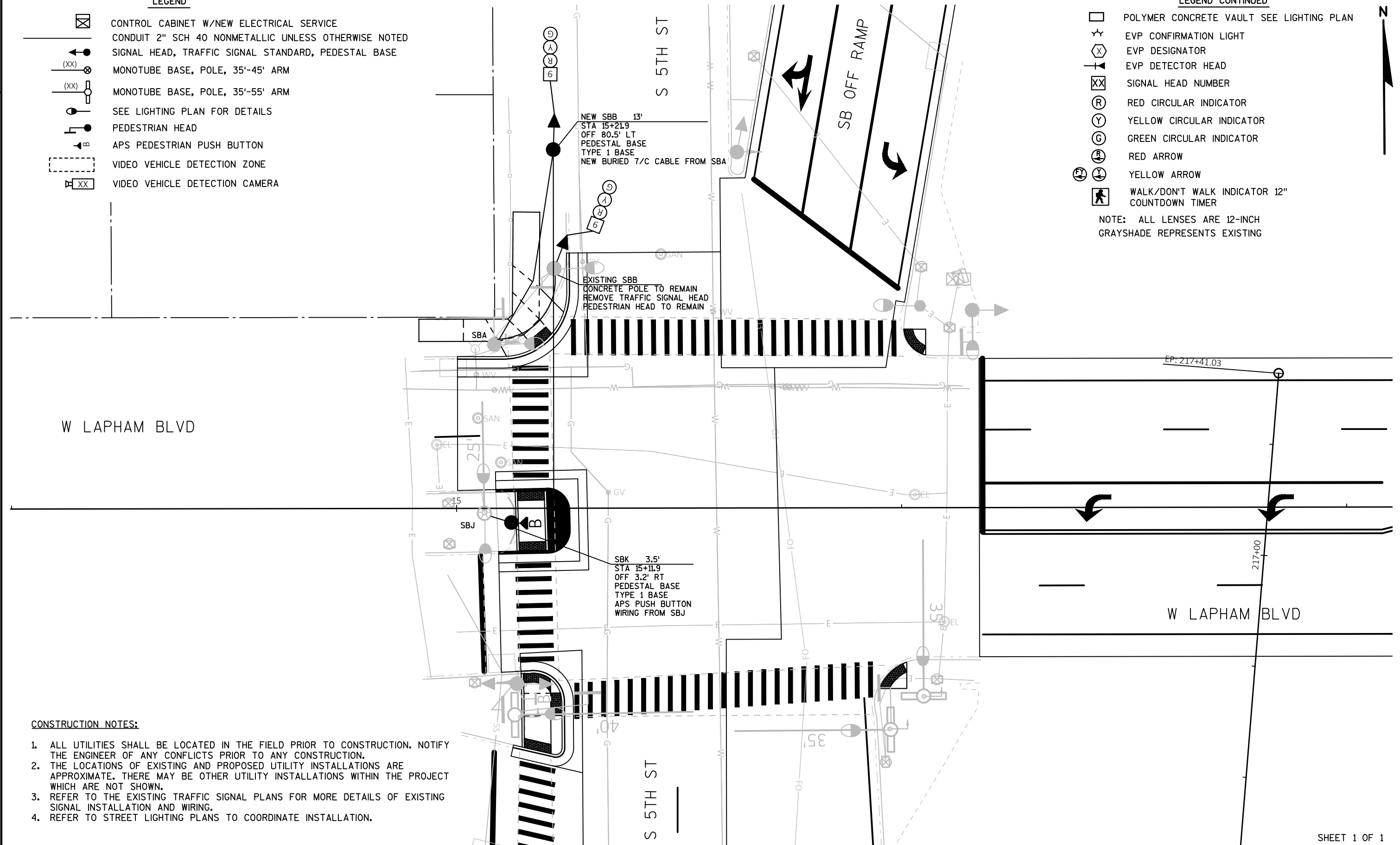
## LEGEND

- CONTROL CABINET W/NEW ELECTRICAL SERVICE  
CONDUIT 2" SCH 40 NONMETALLIC UNLESS OTHERWISE NOTED  
SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE  
MONOTUBE BASE, POLE, 35'-45' ARM  
MONOTUBE BASE, POLE, 35'-55' ARM  
SEE LIGHTING PLAN FOR DETAILS  
PEDESTRIAN HEAD  
APS PEDESTRIAN PUSH BUTTON  
VIDEO VEHICLE DETECTION ZONE  
VIDEO VEHICLE DETECTION CAMERA

## LEGEND CONTINUED

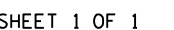
- POLYMER CONCRETE VAULT SEE LIGHTING PLAN  
EVP CONFIRMATION LIGHT  
EVP DESIGNATOR  
EVP DETECTOR HEAD  
SIGNAL HEAD NUMBER  
RED CIRCULAR INDICATOR  
YELLOW CIRCULAR INDICATOR  
GREEN CIRCULAR INDICATOR  
RED ARROW  
YELLOW ARROW  
WALK/DON'T WALK INDICATOR 12"  
COUNTDOWN TIMER

NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

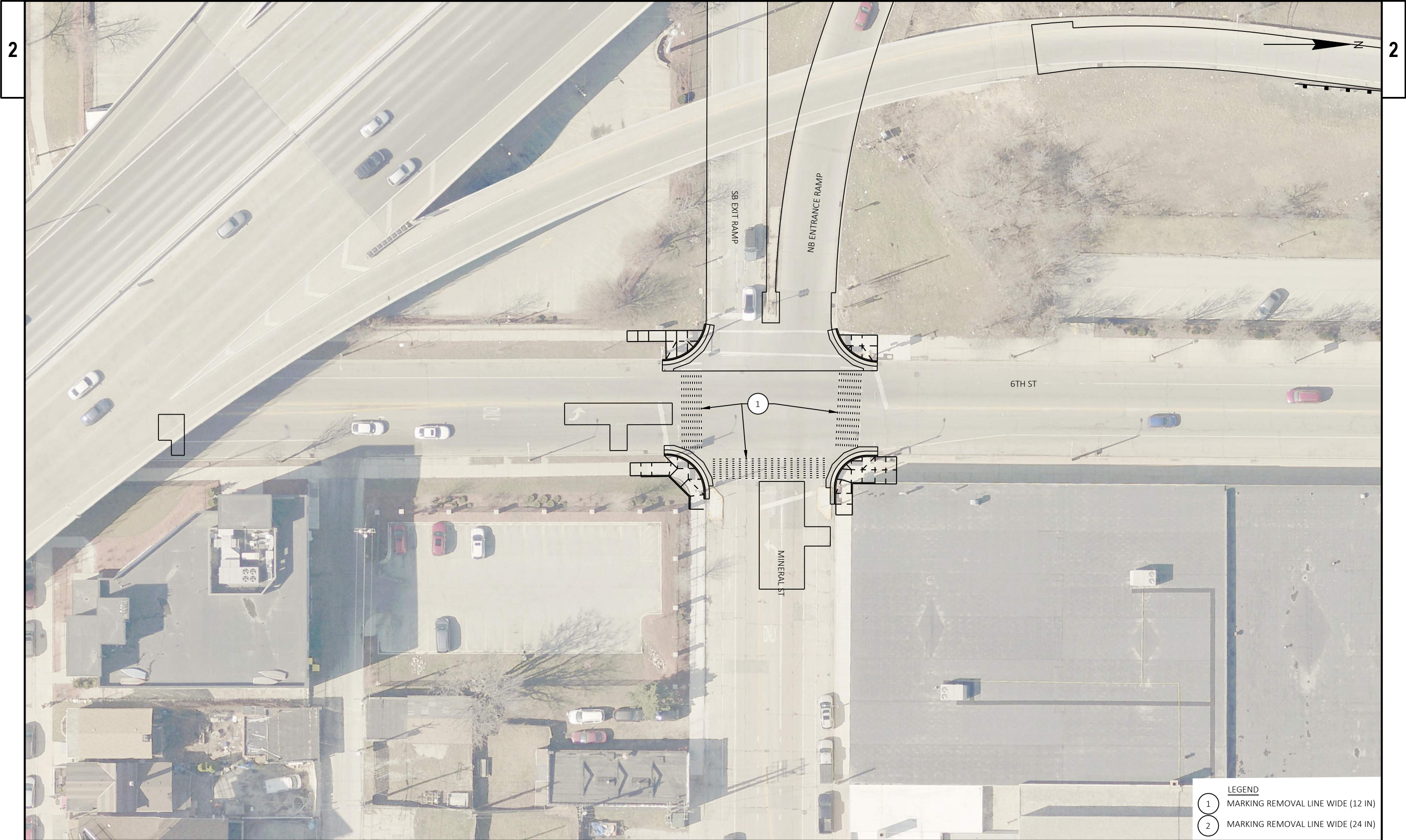


SHEET 1 OF 1

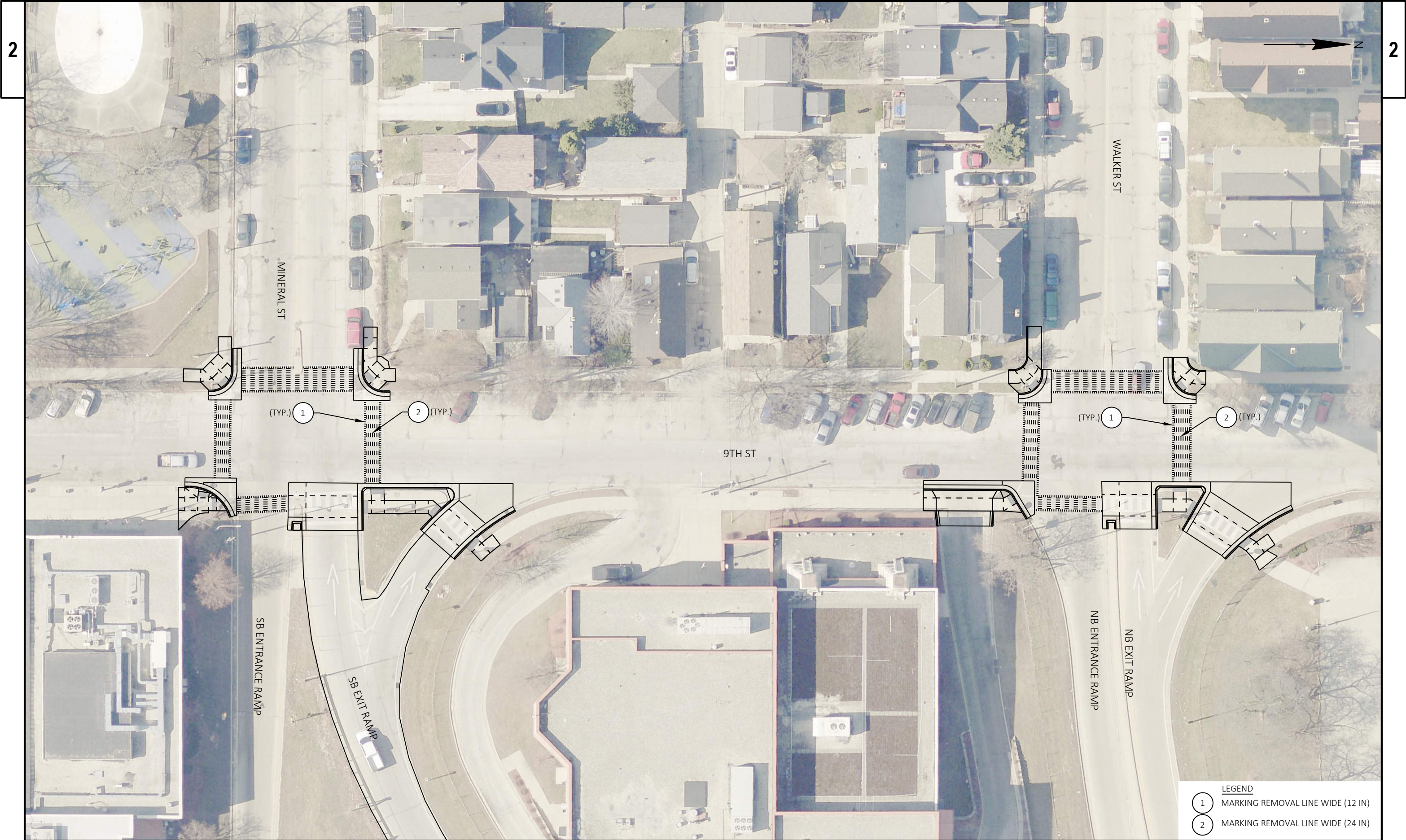














LEGEND

|  |    |                                                                                                                                                      |
|--|----|------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 1  | MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)                                                                                                    |
|  | 2  | MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)                                                                                                   |
|  | 3  | MARKING LINE GROOVED PERMANENT TAPE 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP) & MARKING LINE GROOVED BLACK EPOXY 6-INCH (12.5 FT LINE 37.5 FT SKIP) |
|  | 4  | MARKING ARROW EPOXY (TYPE 1)                                                                                                                         |
|  | 5  | MARKING ARROW EPOXY (TYPE 2)                                                                                                                         |
|  | 6  | MARKING ARROW EPOXY (TYPE 3)                                                                                                                         |
|  | 7  | MARKING ARROW EPOXY (TYPE 4)                                                                                                                         |
|  | 8  | MARKING WORD EPOXY                                                                                                                                   |
|  | 9  | MARKING CHEVRON EPOXY 24-INCH                                                                                                                        |
|  | 10 | MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE) (3 FT LINE 9 FT SKIP) & MARKING LINE GROOVED BLACK EPOXY 10-INCH (3 FT LINE 9 FT SKIP)           |
|  | 11 | MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)                                                                                              |
|  | 12 | MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE) (2 FT LINE 6 FT SKIP) & MARKING LINE GROOVED BLACK EPOXY 10-INCH (2 FT LINE 6 FT SKIP)     |
|  | 13 | MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)                                                                                            |
|  | 14 | MARKING LINE EPOXY 4-INCH (WHITE)                                                                                                                    |
|  | 15 | MARKING LINE EPOXY 4-INCH (YELLOW)                                                                                                                   |
|  | 16 | MARKING LINE EPOXY 4-INCH (WHITE) (10 FT LINE 30 FT SKIP)                                                                                            |
|  | 17 | MARKING SYMBOL EPOXY                                                                                                                                 |
|  | 18 | MARKING CROSSWALK EPOXY 12-INCH (WHITE) (TRANSVERSE LINE )                                                                                           |
|  | 19 | MARKING CROSSWALK EPOXY 12-INCH (WHITE) (BLOCK STYLE)                                                                                                |
|  | 20 | MARKING STOP LINE EPOXY 18-INCH (WHITE)                                                                                                              |
|  | 21 | MARKING LINE EPOXY 8-INCH (WHITE)                                                                                                                    |
|  | 22 | MARKING CURB EPOXY                                                                                                                                   |
|  | 23 | MARKING ISLAND NOSE EPOXY                                                                                                                            |

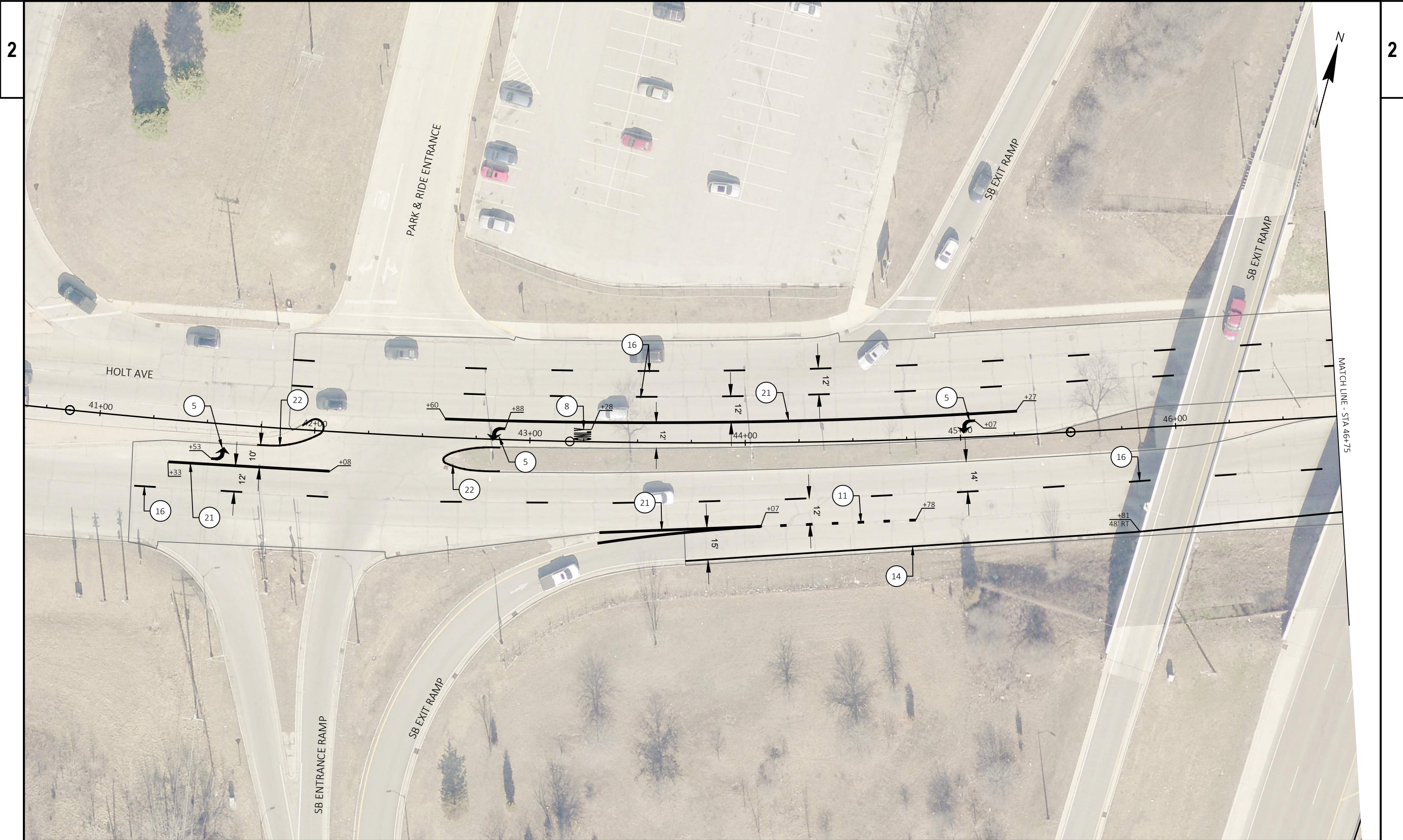




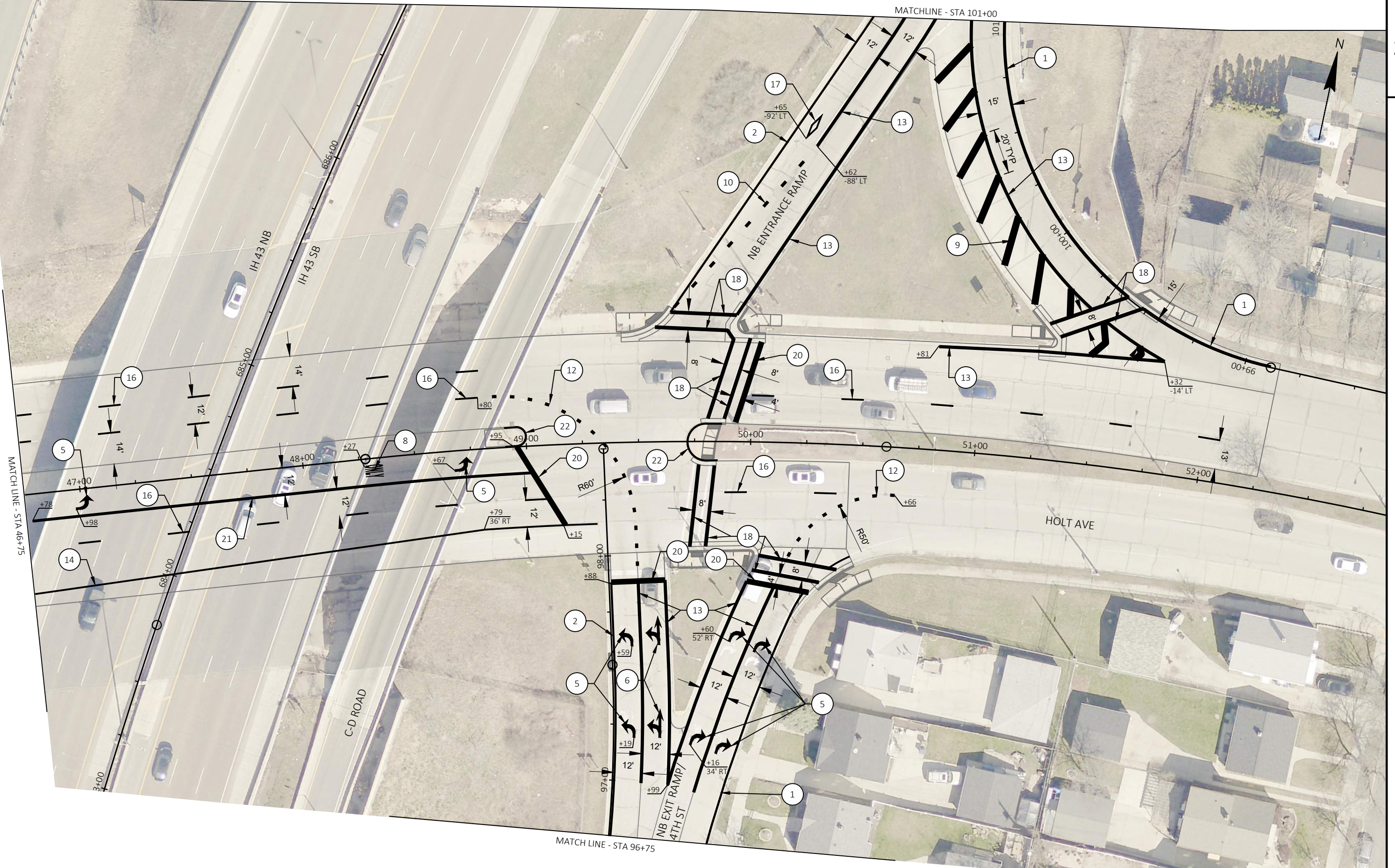




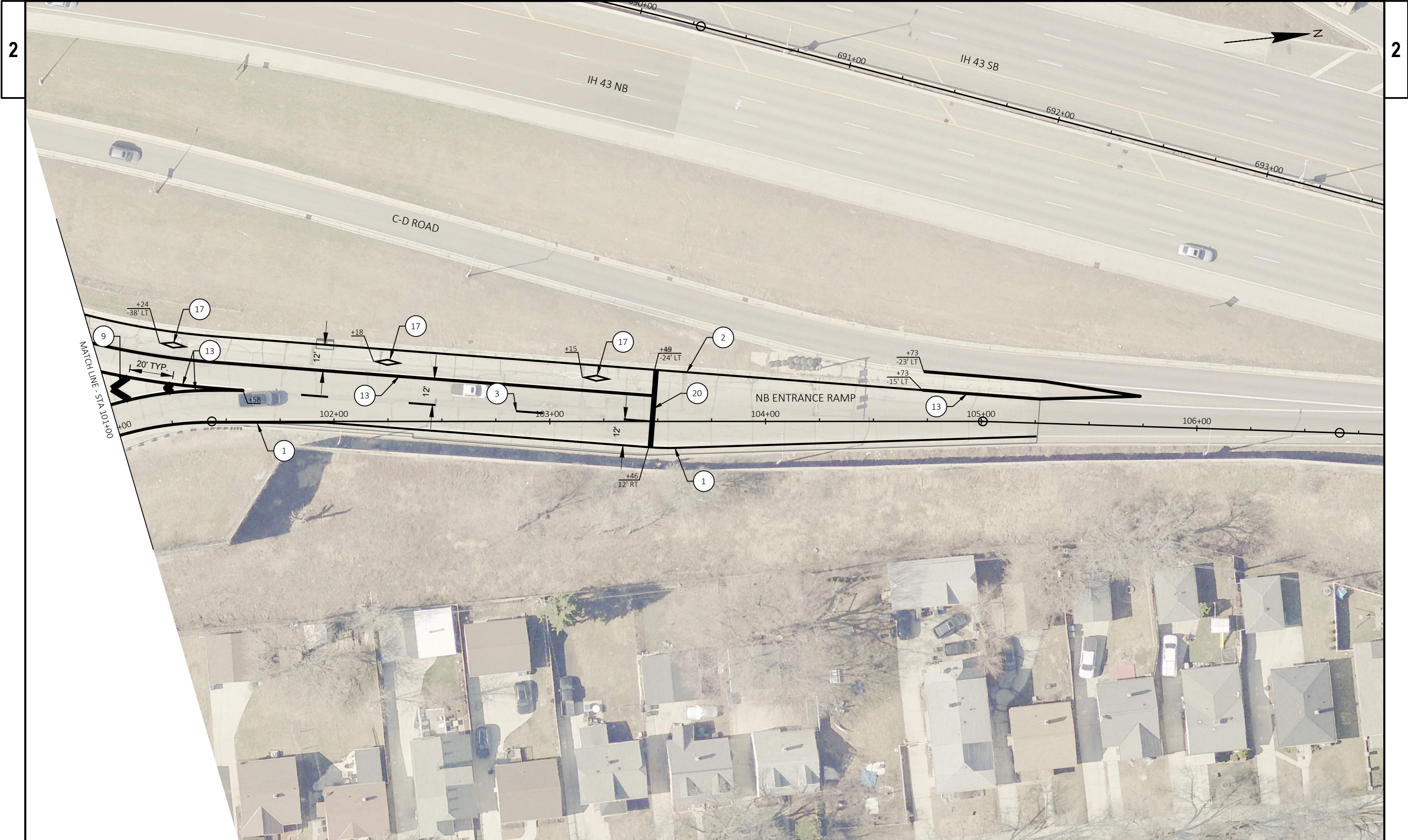






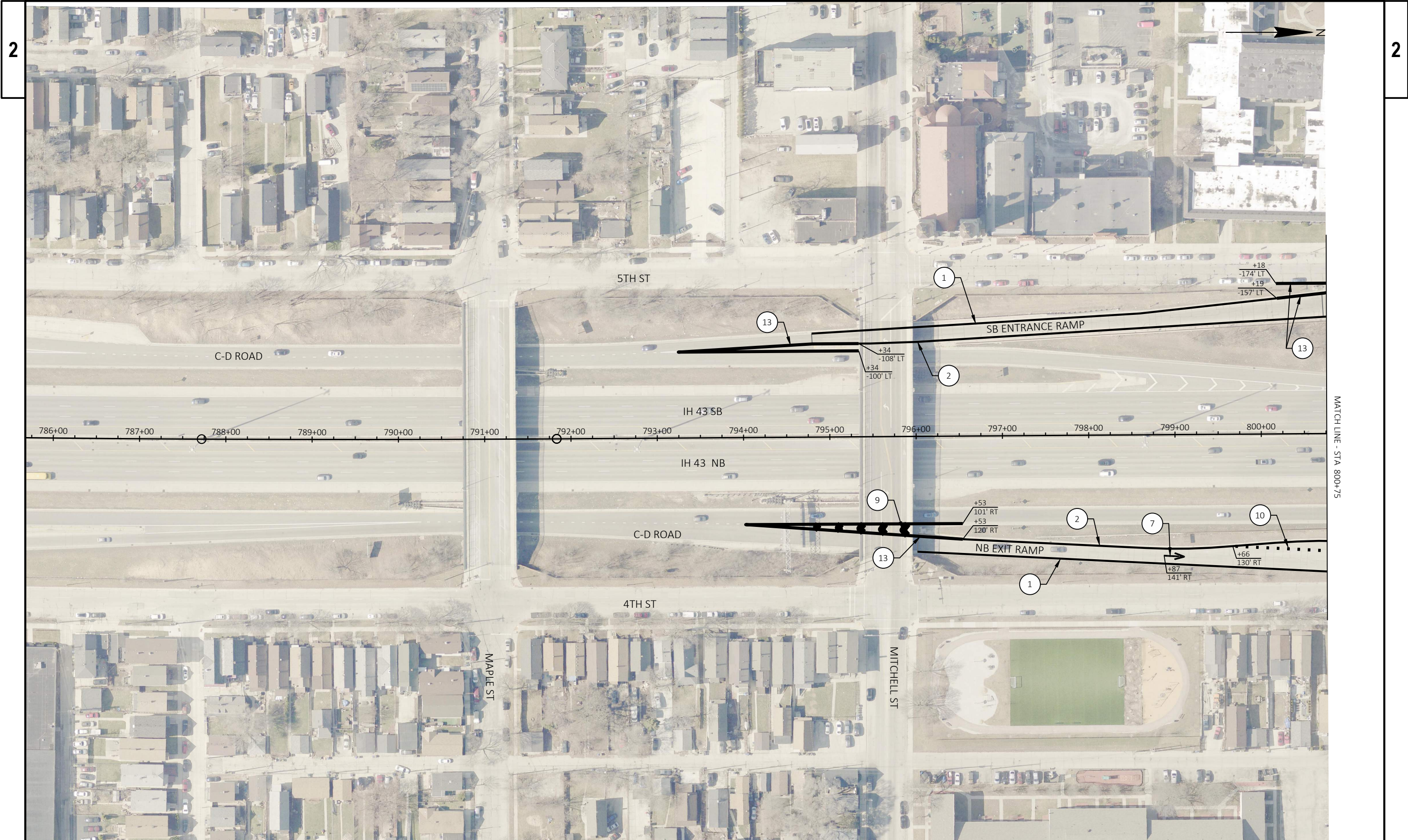






|                        |            |                   |                  |          |   |
|------------------------|------------|-------------------|------------------|----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | PAVEMENT MARKING | SHEET 79 | E |
|------------------------|------------|-------------------|------------------|----------|---|



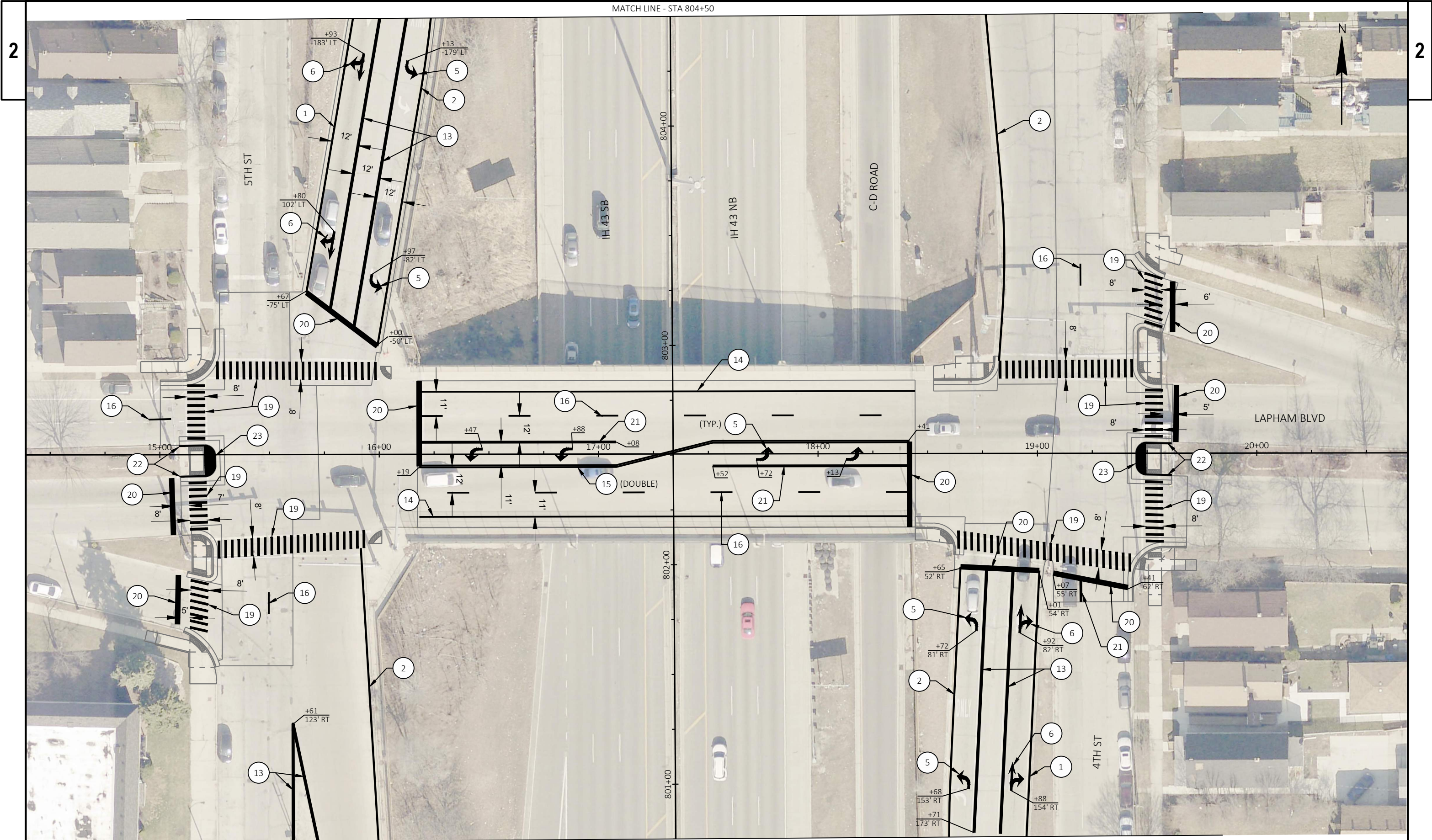


2

2

|                        |            |                   |                  |          |   |
|------------------------|------------|-------------------|------------------|----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | PAVEMENT MARKING | SHEET 80 | E |
|------------------------|------------|-------------------|------------------|----------|---|





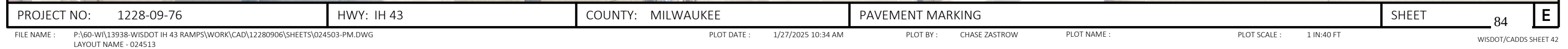




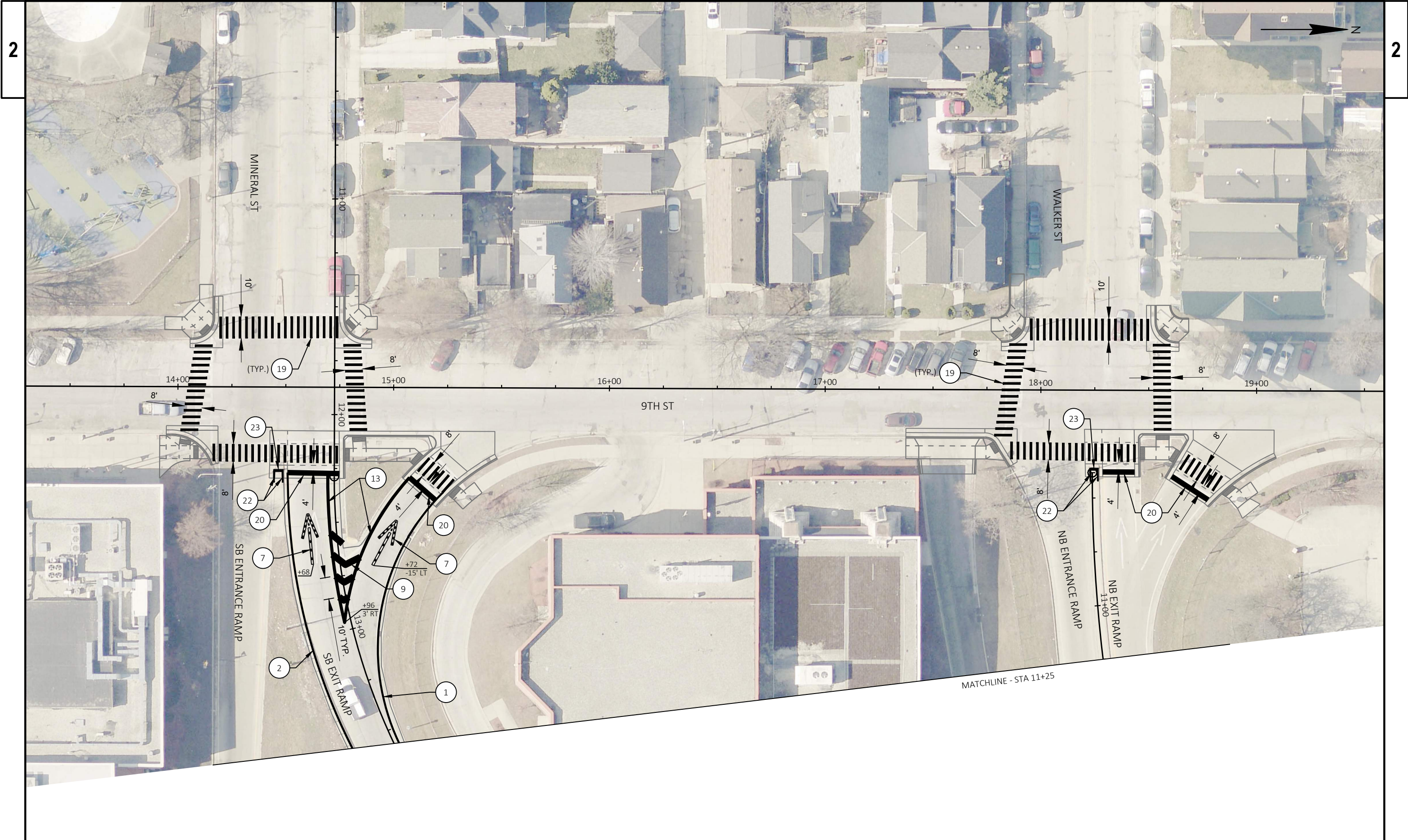














TRAFFIC CONTROL LEGEND

|  |                                                                     |
|--|---------------------------------------------------------------------|
|  | TYPE III BARRICADE WITH TWO TYPE A WARNING LIGHTS                   |
|  | TYPE III BARRICADE WTH ATTACHED SIGN WITH TWO TYPE A WARNING LIGHTS |
|  | TRAFFIC CONTROL DRUM                                                |
|  | TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT                  |
|  | FLASHING ARROW BOARD                                                |
|  | SIGN ON PERMANENT SUPPORT                                           |
|  | SIGN ON TEMPORARY SUPPORT                                           |
|  | TRAFFIC CONTROL 42-INCH CONE                                        |
|  | CONCRETE BARRIER TEMPORARY PRECAST                                  |
|  | TEMPORARY PEDESTRIAN BARRICADE                                      |
|  | TEMPORARY AUDIBLE MESSAGE DEVICE                                    |
|  | WORK AREA                                                           |
|  | DIRECTION OF TRAFFIC                                                |
|  | PORTABLE CHANGEABLE MESSAGE BOARD                                   |
|  | TEMPORARY MARKING LINE REMOVABLE TAPE, 6-INCH (WHITE)               |
|  | TEMPORARY MARKING REMOVABLE MASK OUT TAPE, 6-INCH (BLACK)           |
|  | TEMPORARY MARKING REMOVABLE MASK OUT TAPE, WORDS AND ARROWS (BLACK) |
|  | TEMPORARY MARKING ARROW REMOVABLE TAPE                              |
|  | TEMPORARY DETECTABLE WARNING FIELD (YELLOW)                         |
|  | TEMPORARY CURB RAMP                                                 |

STAGING NOTES

STAGE 1A:

CONSTRUCTION:

- HOLT AVE NORTH SIDE CURB RAMPS
- HOLT AVE & 4TH ST/NB RAMPS TRAFFIC SIGNALS
- LAPHAM BLVD SOUTH SIDE CURB RAMPS
- 6TH ST & MINERAL ST WEST SIDE CURB RAMPS
- 6TH ST & MINERAL ST TRAFFIC SIGNALS
- 9TH ST EAST SIDE CURB RAMPS & RAISED CROSSWALKS

TRAFFIC:

- HOLT AVE WB CONTINUOUS CURB LANE CLOSURE WITH PED ACCOMMODATION
- HOLT AVE NB ENTRANCE RAMPS CONTINOUS SHOULDER CLOSURES
- LAPHAM BLVD EB DAILY OFF-PEAK OUTSIDE LANE CLOSURES
- MINERAL ST SB CONTINUOUS PARKING LANE CLOSURE
- 6TH ST & MINERAL ST NIGHTTIME FULL CLOSURE(S) FOR LOOP DETECTOR INSTALLATION
- 9TH ST CONTINUOUS PARKING LANE CLOSURES
- 9TH ST NB/SB EXIT RAMP ALTERNATING CONTINUOUS CLOSURES BETWEEN SLIP LANES & THRU LANES

STAGE 1B:

CONSTRUCTION:

- HOLT AVE SOUTH SIDE & MEDIAN CURB RAMPS
- HOLT AVE & 4TH ST/NB RAMPS TRAFFIC SIGNALS
- LAPHAM BLVD NORTH SIDE CURB RAMPS
- 6TH ST & MINERAL ST EAST SIDE CURB RAMPS
- 6TH ST & MINERAL ST TRAFFIC SIGNALS
- 9TH ST WEST SIDE CURB RAMPS

TRAFFIC:

- HOLT AVE EB/WB DAILY OFF-PEAK INSIDE LANE CLOSURES
- HOLT AVE EB CONTINOUS CURB LANE CLOSURE
- LAPHAM BLVD WB DAILY OFF-PEAK OUTSIDE LANE CLOSURES
- 6TH ST EB/WB & MINERAL ST NB CONTINUOUS PARKING LANE CLOSURES
- 6TH ST & MINERAL ST NIGHTTIME FULL CLOSURE(S) FOR LOOP DETECTOR INSTALLATION
- 9TH ST CONTINUOS PARKING LANE CLOSURES

STAGE 1C:

CONSTRUCTION:

- LAPHAM BLVD MEDIAN CURB RAMPS
- LAPHAM BLVD & 4TH ST/5TH ST TRAFFIC SIGNALS

TRAFFIC:

- LAPHAM BLVD EB/WB CONTINUOUS INSIDE LANE CLOSURES

STAGE 2:

CONSTRUCTION:

- ENTRANCE/EXIT RAMP HMA OVERLAYS
- HOLT AVE NB EXIT RAMP PAVEMENT REPLACEMENT
- STH 59 SB ENTRANCE RAMP PAVEMENT REPLACEMENT
- HOLT AVE HMA OVERLAY
- LAPHAM BLVD HMA OVERLAY
- B-40-171 THIN POLYMER OVERLAY
- STH 59 NB EXIT RAMP GUARDRAIL REPLACEMENT

TRAFFIC:

- ENTRANCE/EXIT RAMP NIGHTLY OFF-PEAK RAMP CLOSURES
- HOLT AVE NB EXIT RAMP CONTINUOUS RAMP CLOSURE WITH SIGNED DETOUR
- STH 59 SB ENTRANCE RAMP CONTINUOUS RAMP CLOSURE WITH SIGNED DETOUR
- HOLT AVE DAILY OFF-PEAK LANE & RAMP CLOSURES
- LAPHAM BLVD DAILY OFF-PEAK FULL CLOSURE & RAMP CLOSURES

STAGE 3A:

CONSTRUCTION:

- B-40-265 GIRDER REPLACEMENT

TRAFFIC:

- HOWARD AVE EB CONTINUOUS OUTSIDE LANE CLOSURE
- IH 43 NB NIGHTLY FULL FREEWAY CLOSURES
- HOWARD AVE NIGHTLY FULL CLOSURES DURING IH 43 NB FULL FREEWAY CLOSURES

STAGE 3B:

CONSTRUCTION:

- B-40-265 THIN POLYMER OVERLAY

TRAFFIC:

- HOWARD AVE SINGLE-DAY OFF-PEAK FULL CLOSURE

GENERAL TRAFFIC CONTROL NOTES

SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.

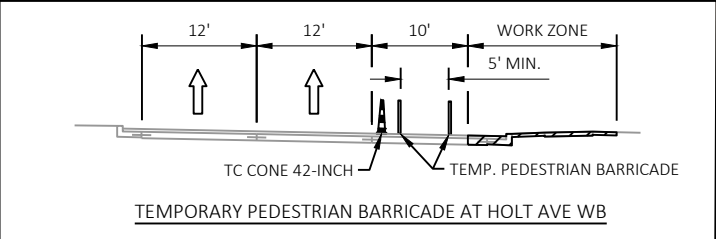
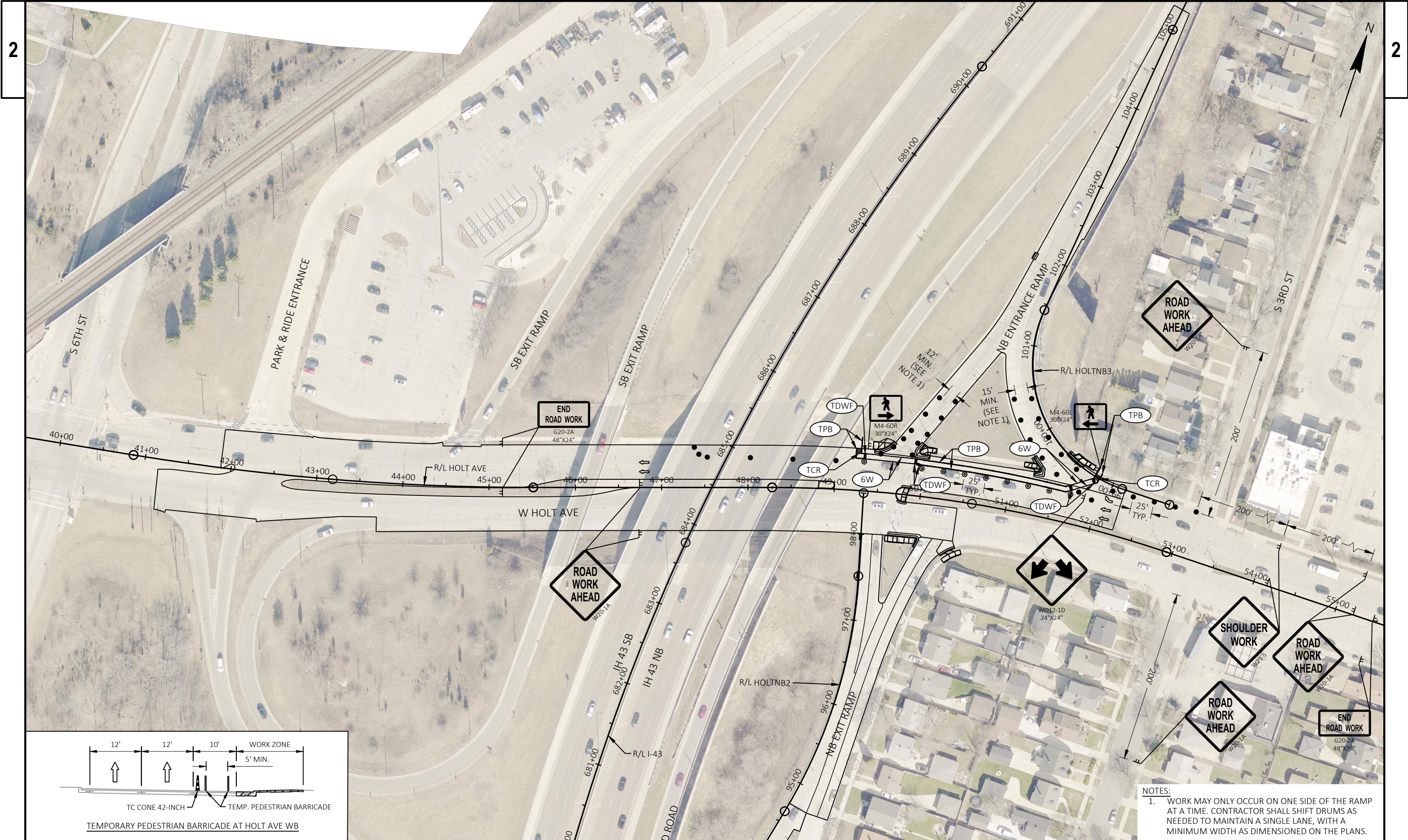
ALL SIGNS, TEMPORARY OR EXISTING, IN CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL TRAFFIC CONTROL SIGNS SHALL BE 48"X48" UNLESS NOTED OTHERWISE.

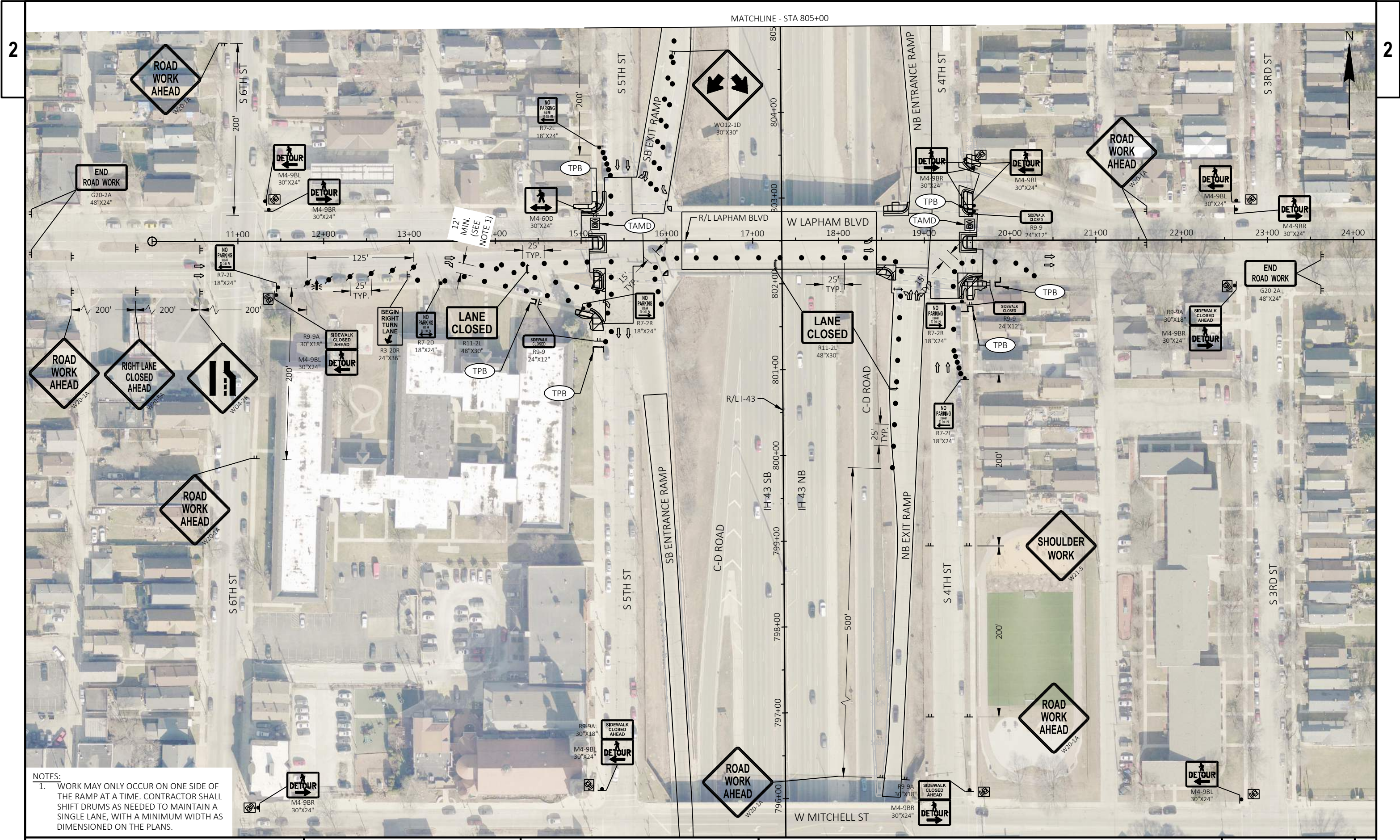
ALL SIGNS IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS SHALL BE INSTALLED ON PERMANENT SUPPORTS.





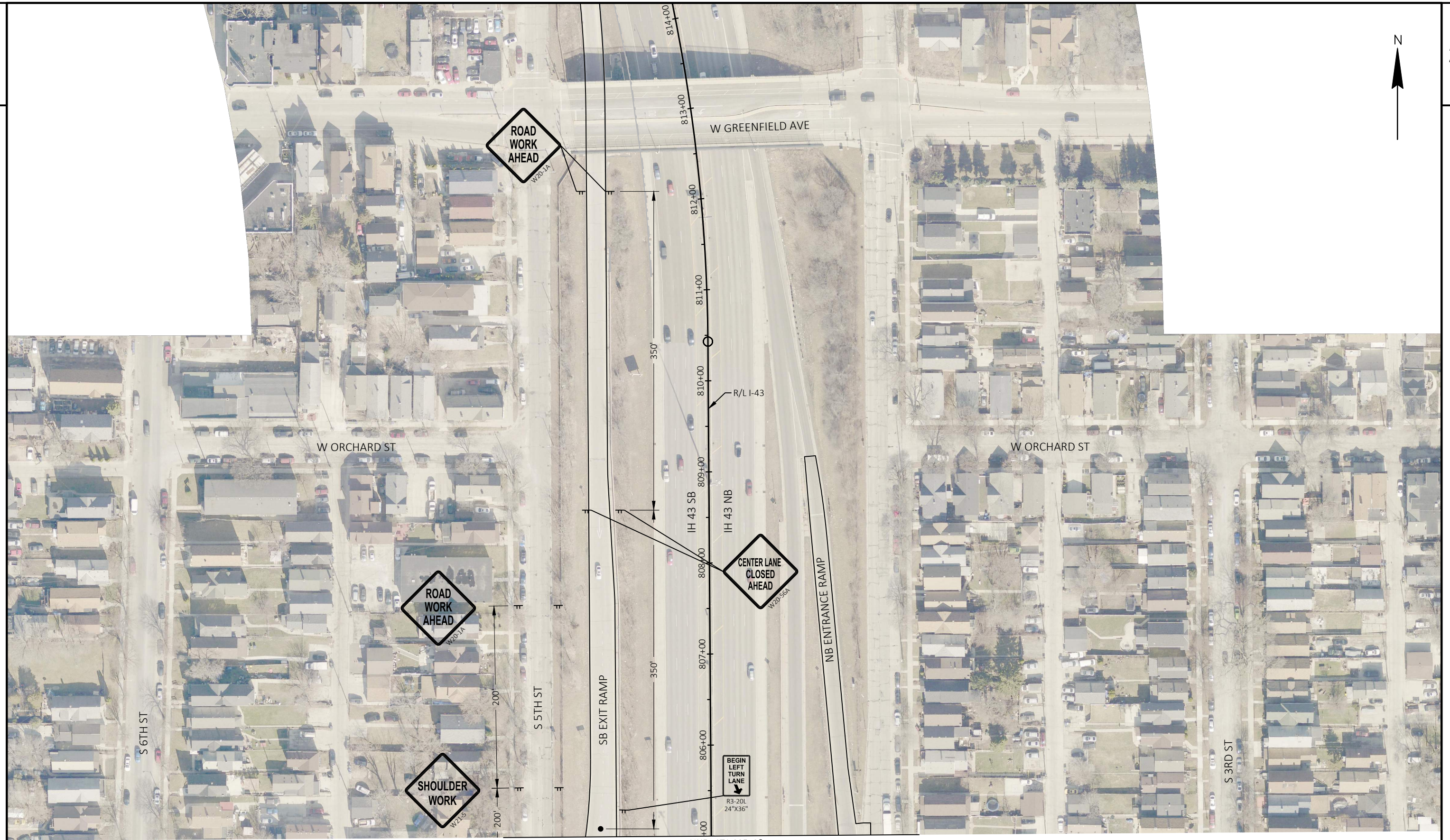
NOTES:  
1. WORK MAY ONLY OCCUR ON ONE SIDE OF THE RAMP AT A TIME. CONTRACTOR SHALL SHIFT DRUMS AS NEEDED TO MAINTAIN A SINGLE LANE, WITH A MINIMUM WIDTH AS DIMENSIONED ON THE PLANS.





NOTES:  
1. WORK MAY ONLY OCCUR ON ONE SIDE OF THE RAMP AT A TIME. CONTRACTOR SHALL SHIFT DRUMS AS NEEDED TO MAINTAIN A SINGLE LANE, WITH A MINIMUM WIDTH AS DIMENSIONED ON THE PLANS.





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 1A - LAPHAM BLVD

SHEET

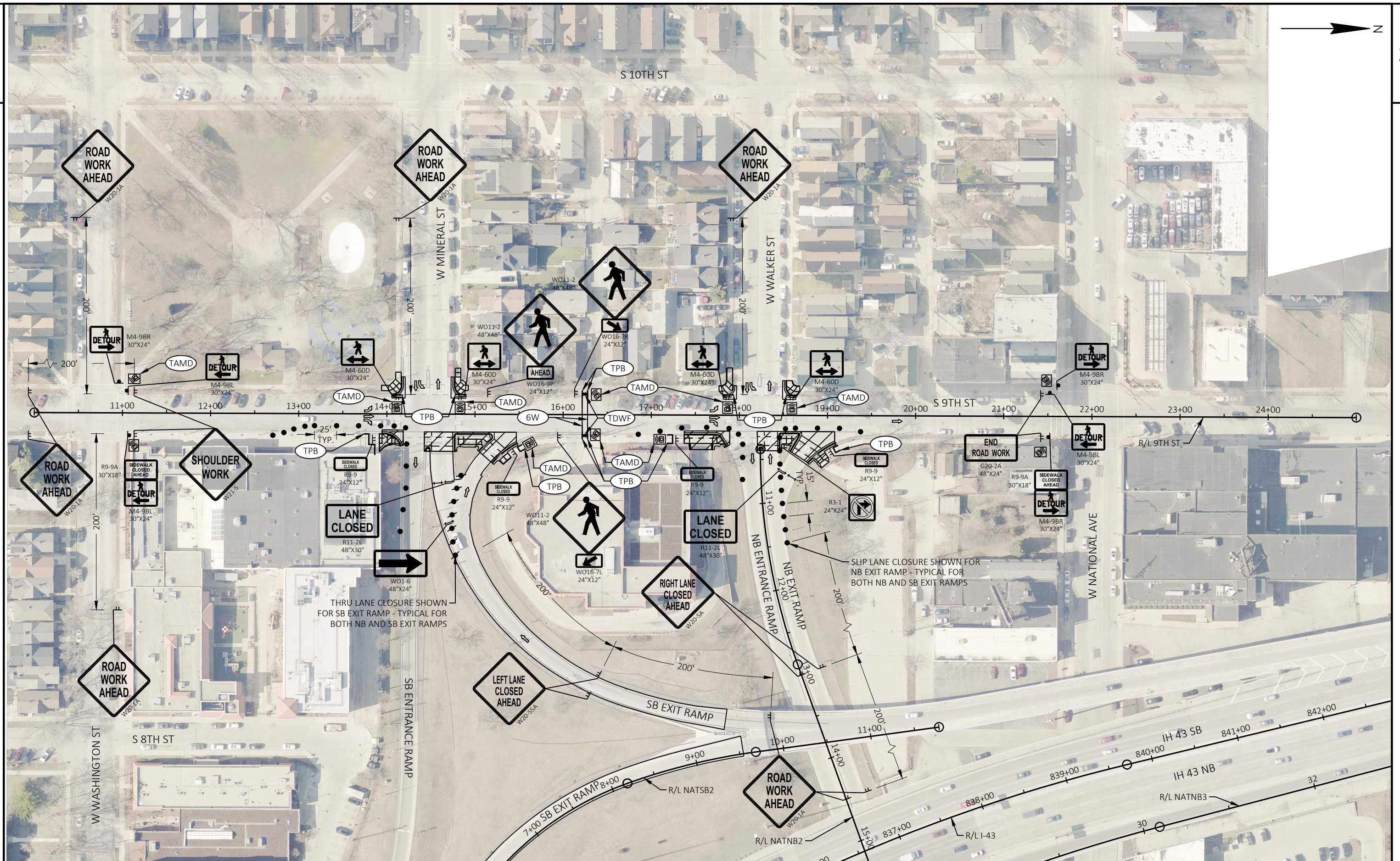
89

E









PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 1A - 9TH ST

SHEET

91

E

FILE NAME: P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025101-TC CURB RAMPS.DWG  
LAYOUT NAME: 025105 - 1A 9TH

PLOT DATE: 1/24/2025 2:26 PM

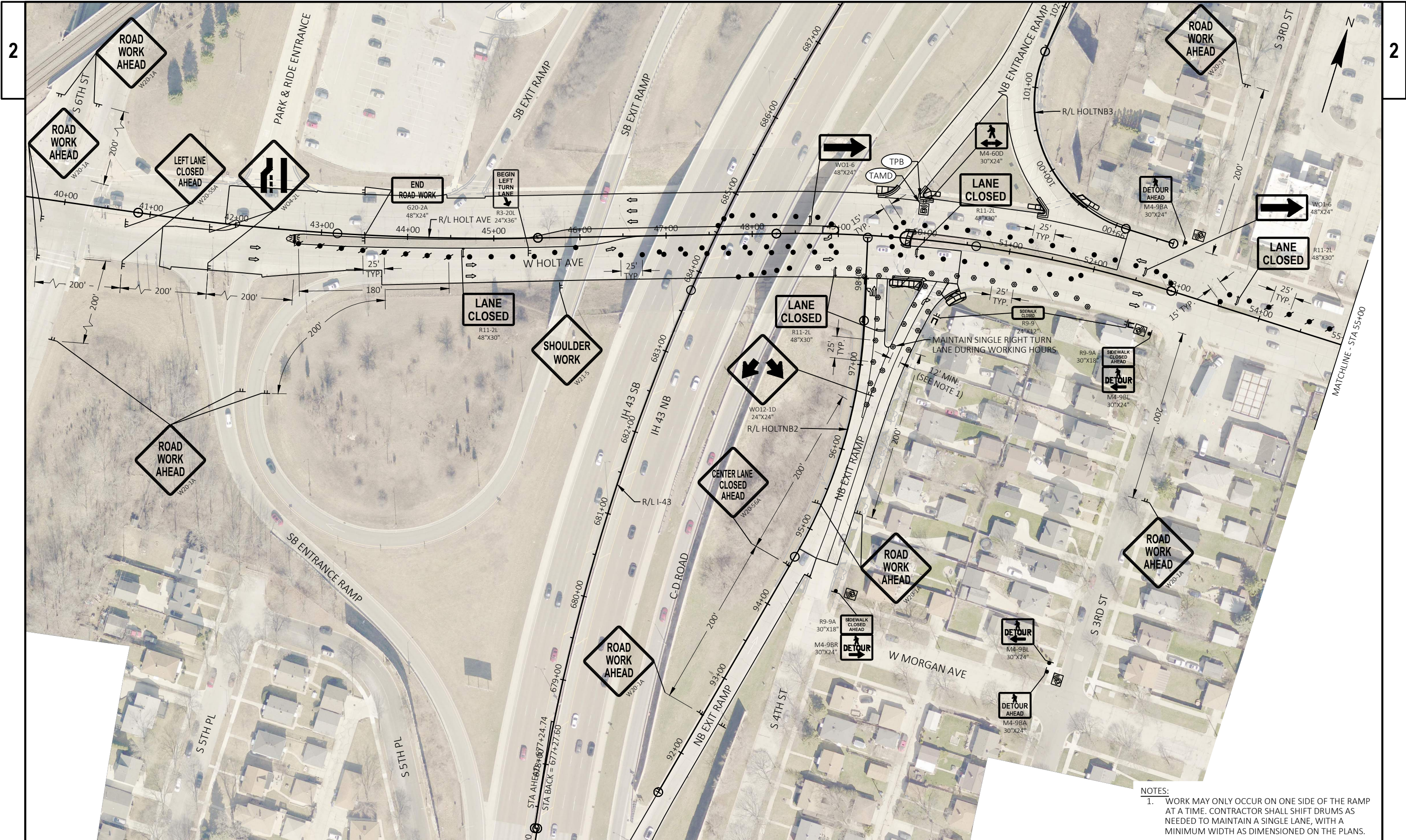
PLOT BY: CHASE ZASTROW

PLOT NAME:

PLOT SCALE: 1 IN:100 FT

WISDOT/CADDs SHEET 42

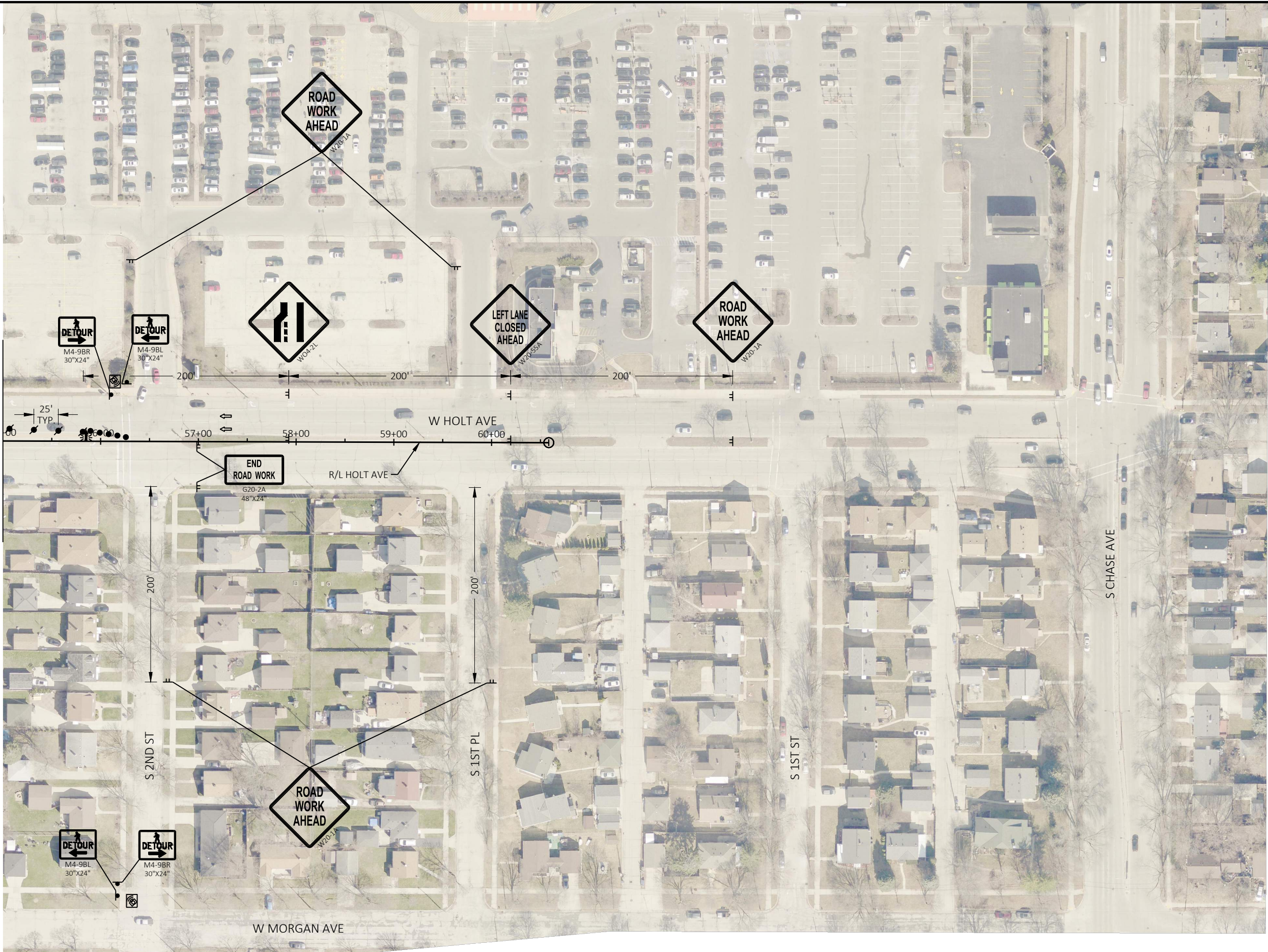




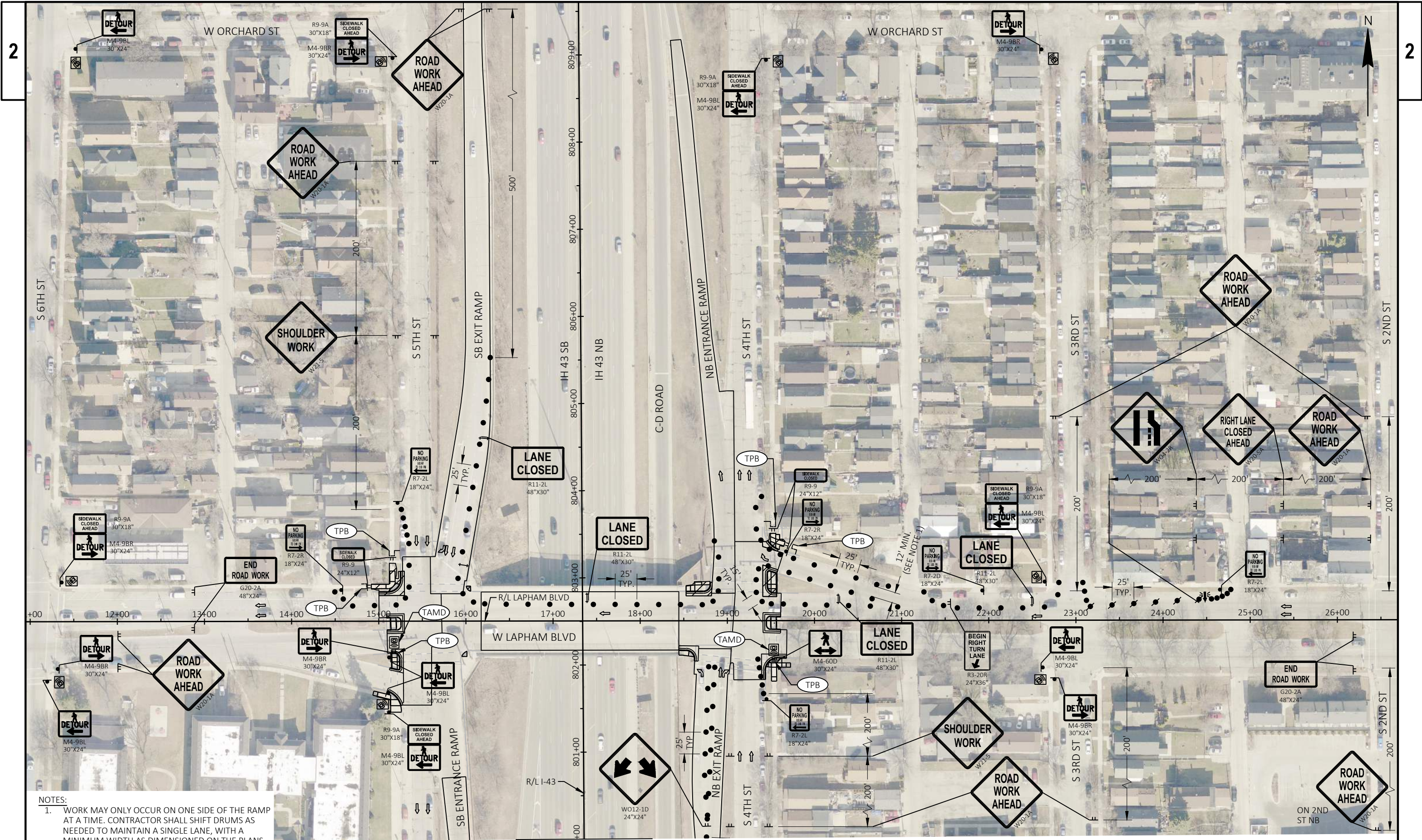
NOTES:  
1. WORK MAY ONLY OCCUR ON ONE SIDE OF THE RAMP AT A TIME. CONTRACTOR SHALL SHIFT DRUMS AS NEEDED TO MAINTAIN A SINGLE LANE, WITH A MINIMUM WIDTH AS DIMENSIONED ON THE PLANS.



MATCHLINE - STA 55+00





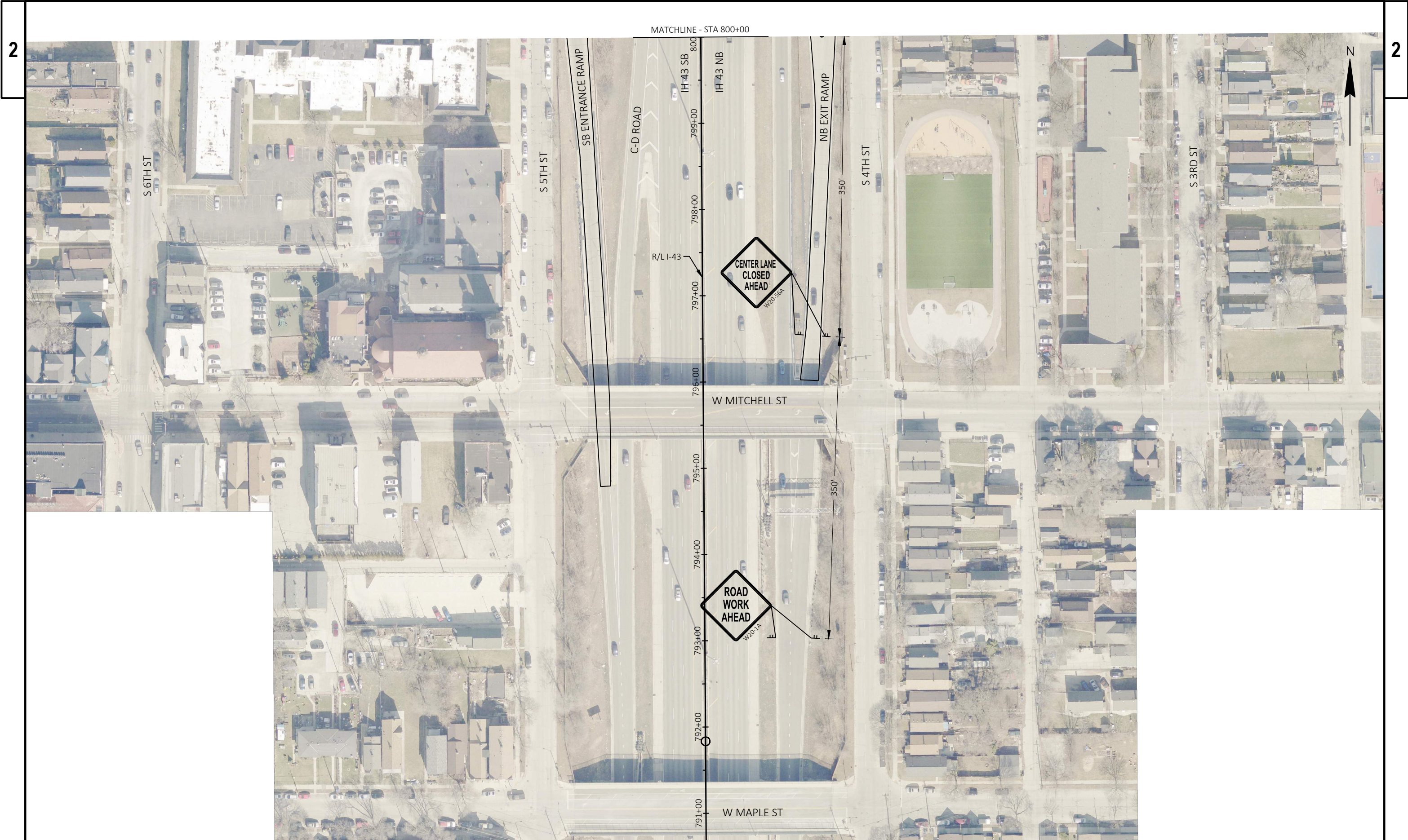


NOTES:  
1. WORK MAY ONLY OCCUR ON ONE SIDE OF THE RAMP AT A TIME. CONTRACTOR SHALL SHIFT DRUMS AS NEEDED TO MAINTAIN A SINGLE LANE, WITH A MINIMUM WIDTH AS DIMENSIONED ON THE PLANS.

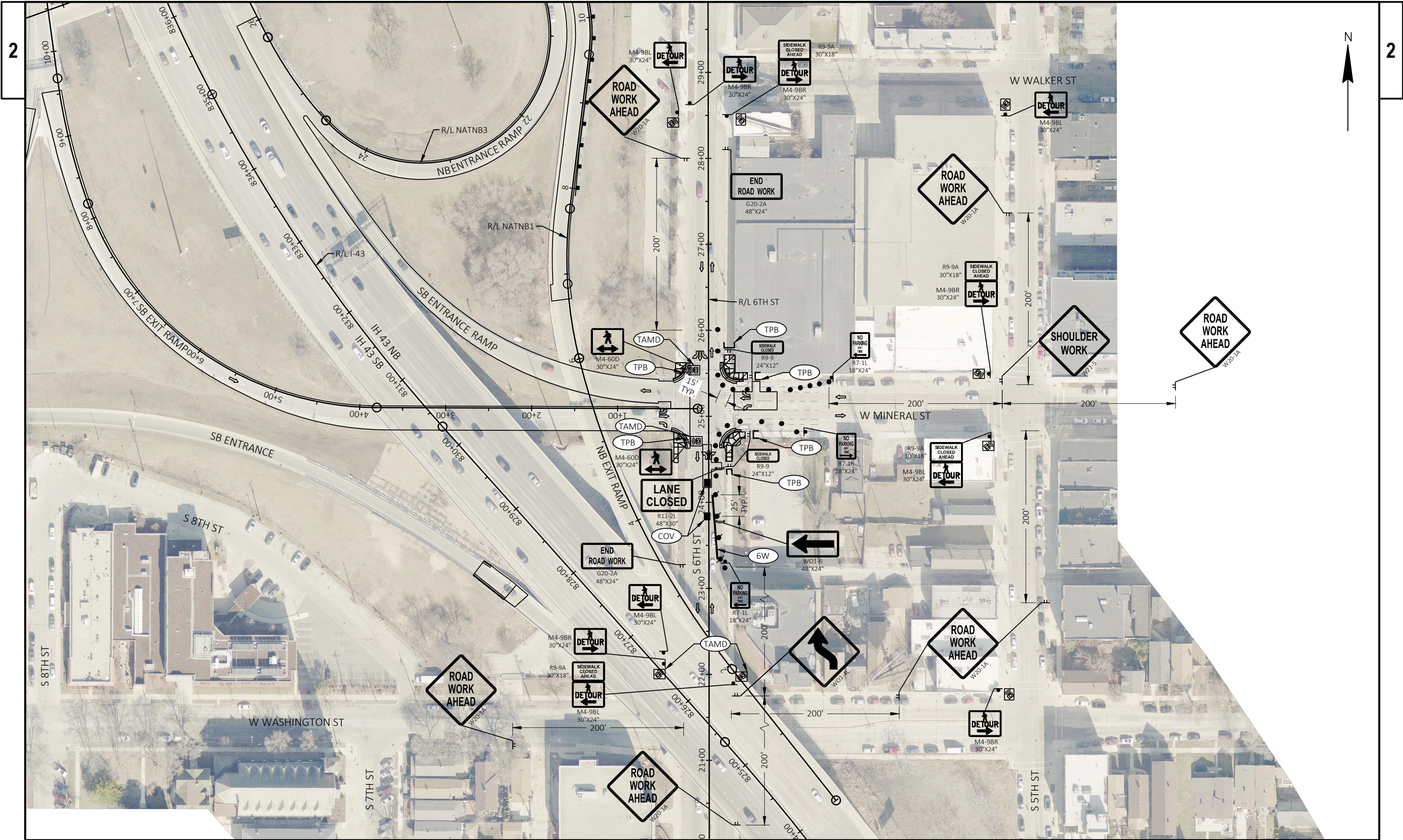
MATCHLINE - STA 800+00

|                        |            |                   |                                          |          |
|------------------------|------------|-------------------|------------------------------------------|----------|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 1B - LAPHAM BLVD | SHEET 94 |
|------------------------|------------|-------------------|------------------------------------------|----------|





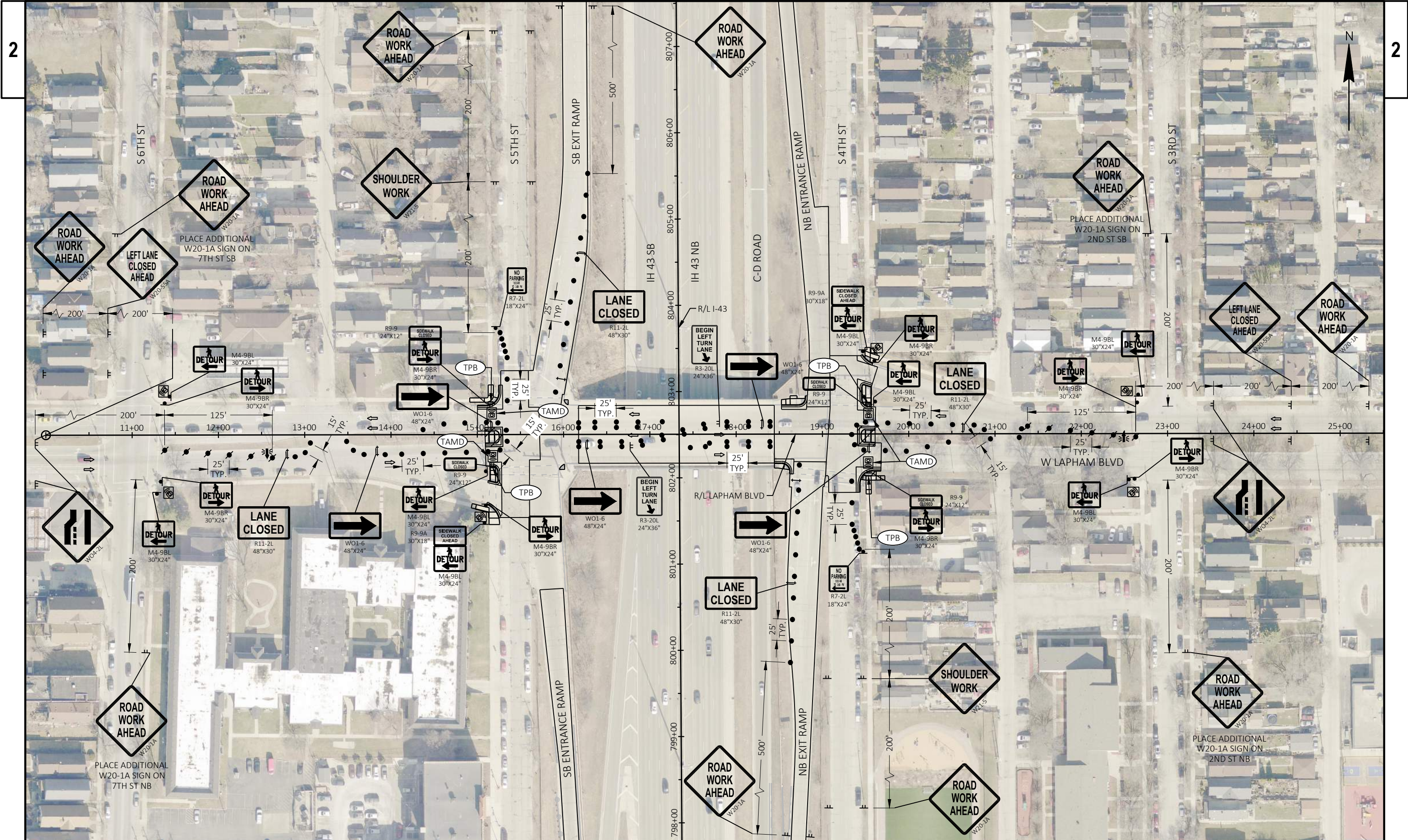




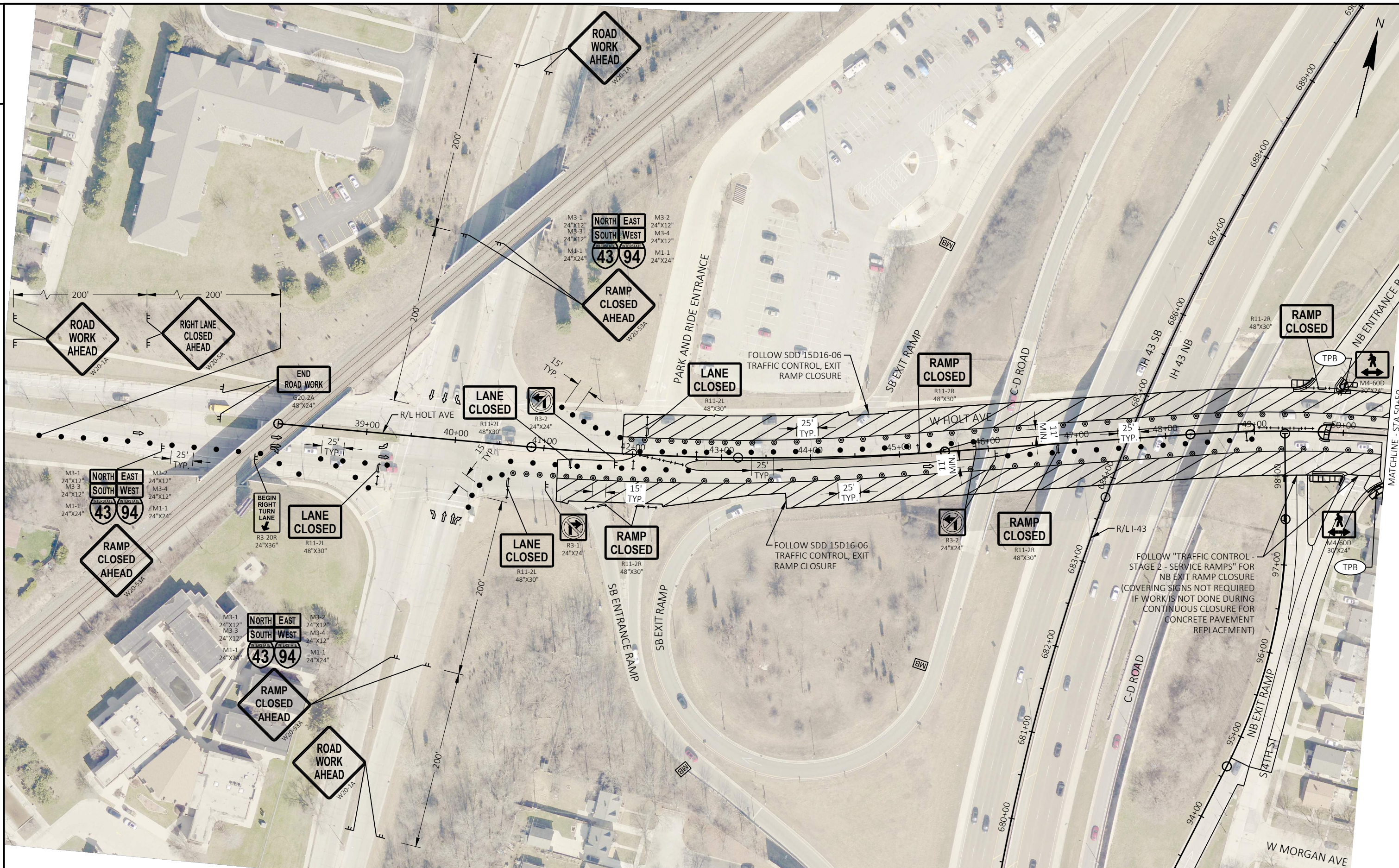












PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 2 - HOLT AVE OUTSIDE LANES

SHEET

99

E

FILE NAME: P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025200-TC-LOCAL OVERLAYS.DWG  
LAYOUT NAME - 025200 - 2A HOLT

PLOT DATE: 1/24/2025 2:29 PM

PLOT BY: CHASE ZASTROW

PLOT NAME:

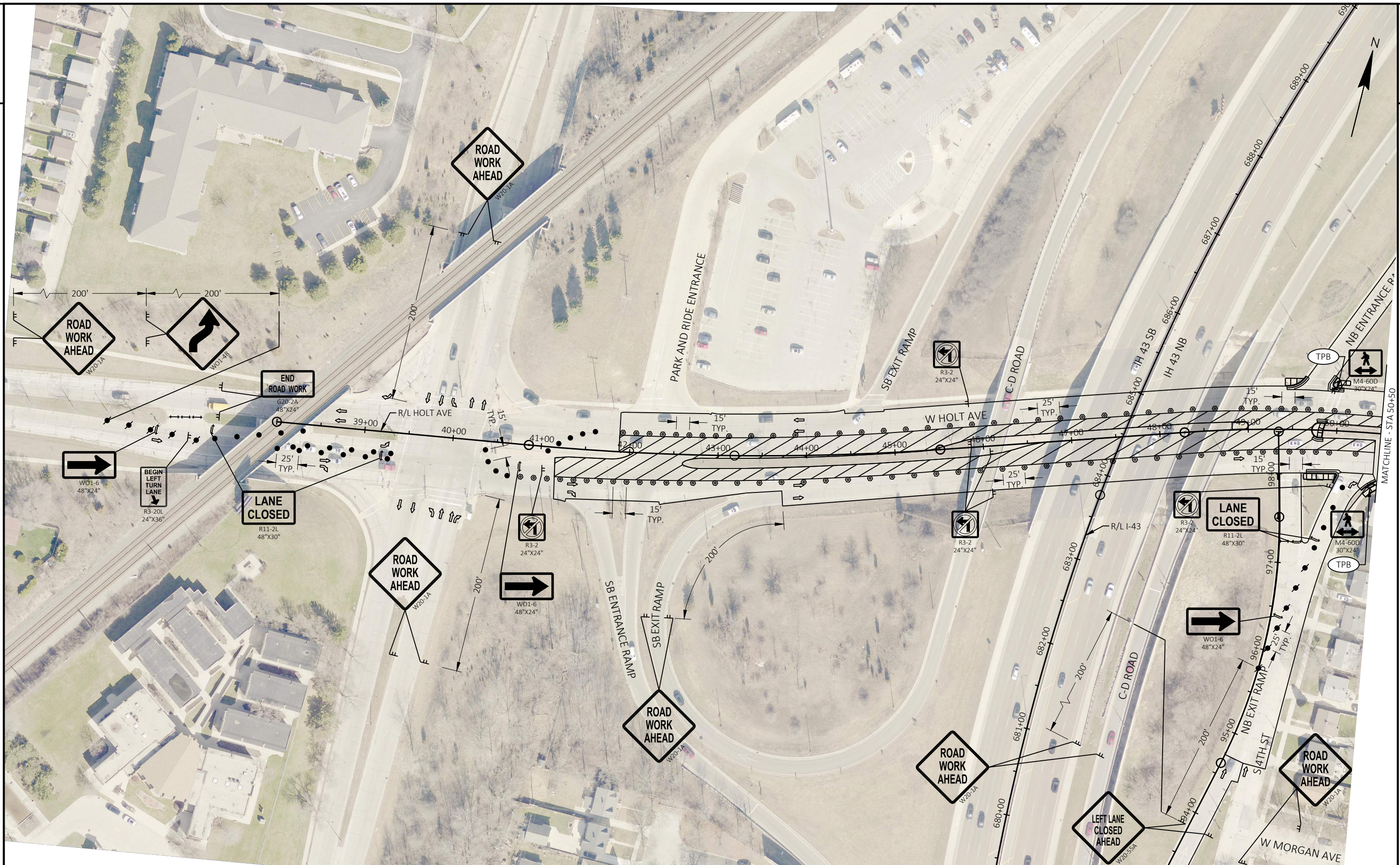
PLOT SCALE: 1 IN:100 FT

WISDOT/CADDs SHEET 42



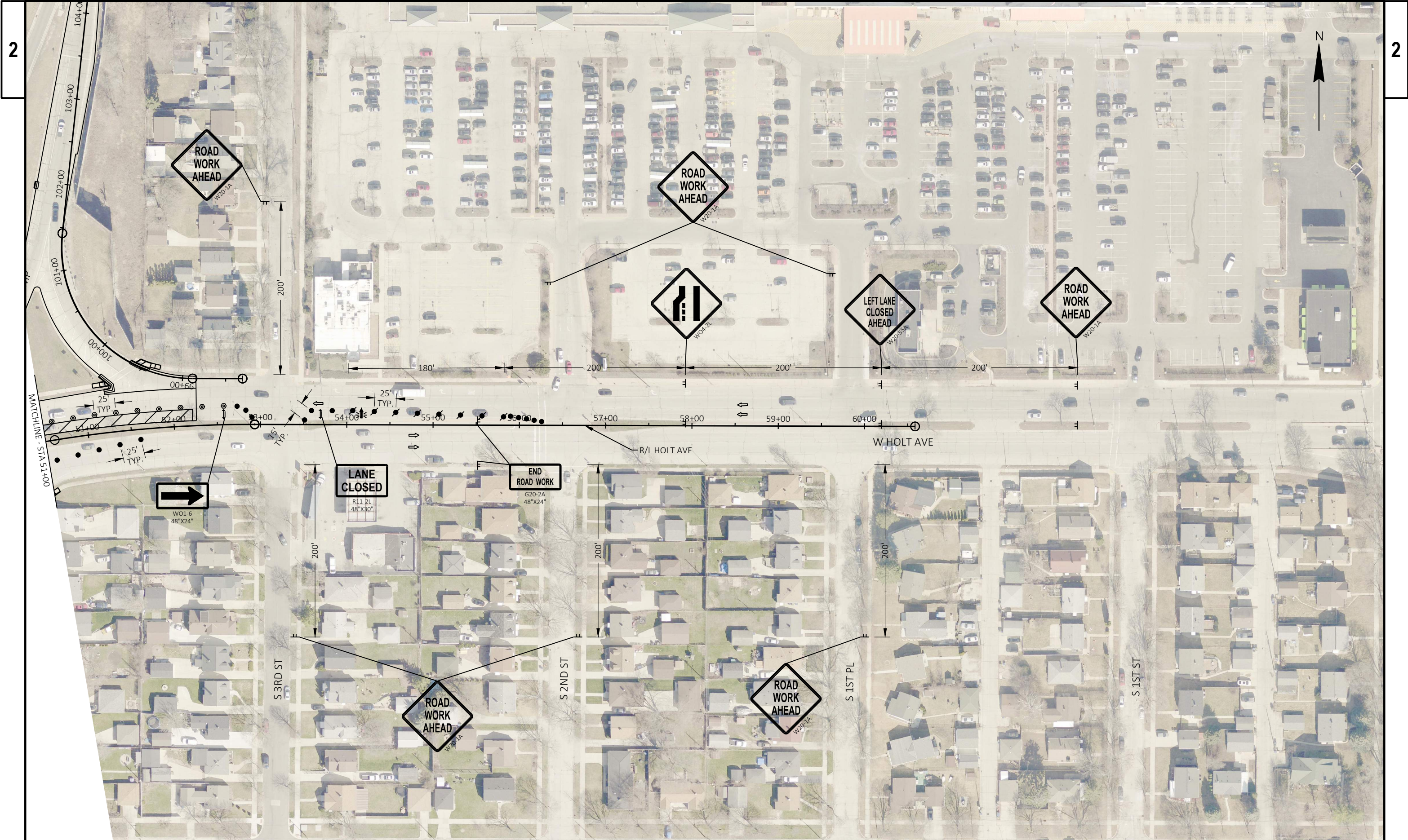




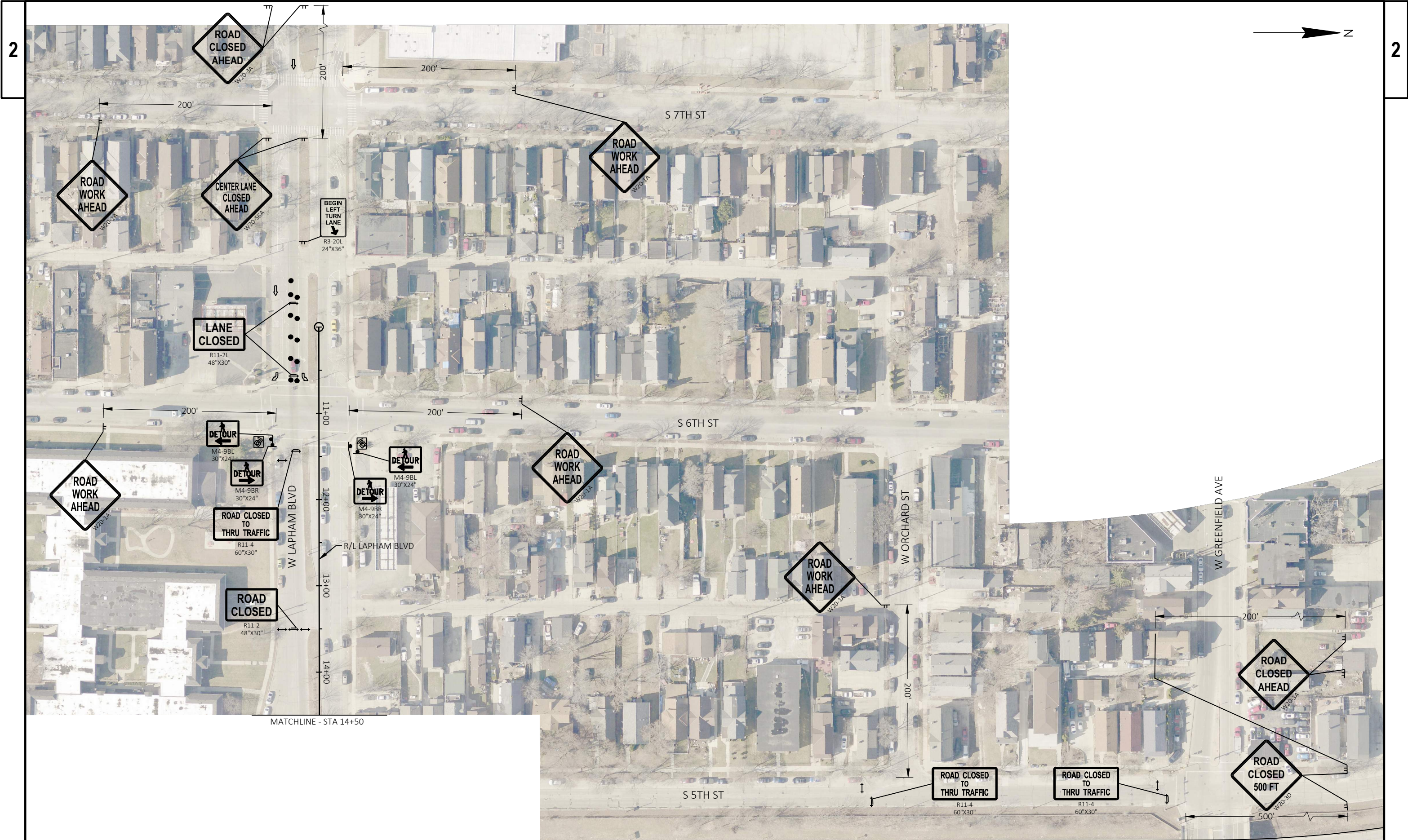


|                        |            |                   |                                                   |           |
|------------------------|------------|-------------------|---------------------------------------------------|-----------|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 2 - HOLT AVE INSIDE LANES | SHEET 101 |
|------------------------|------------|-------------------|---------------------------------------------------|-----------|

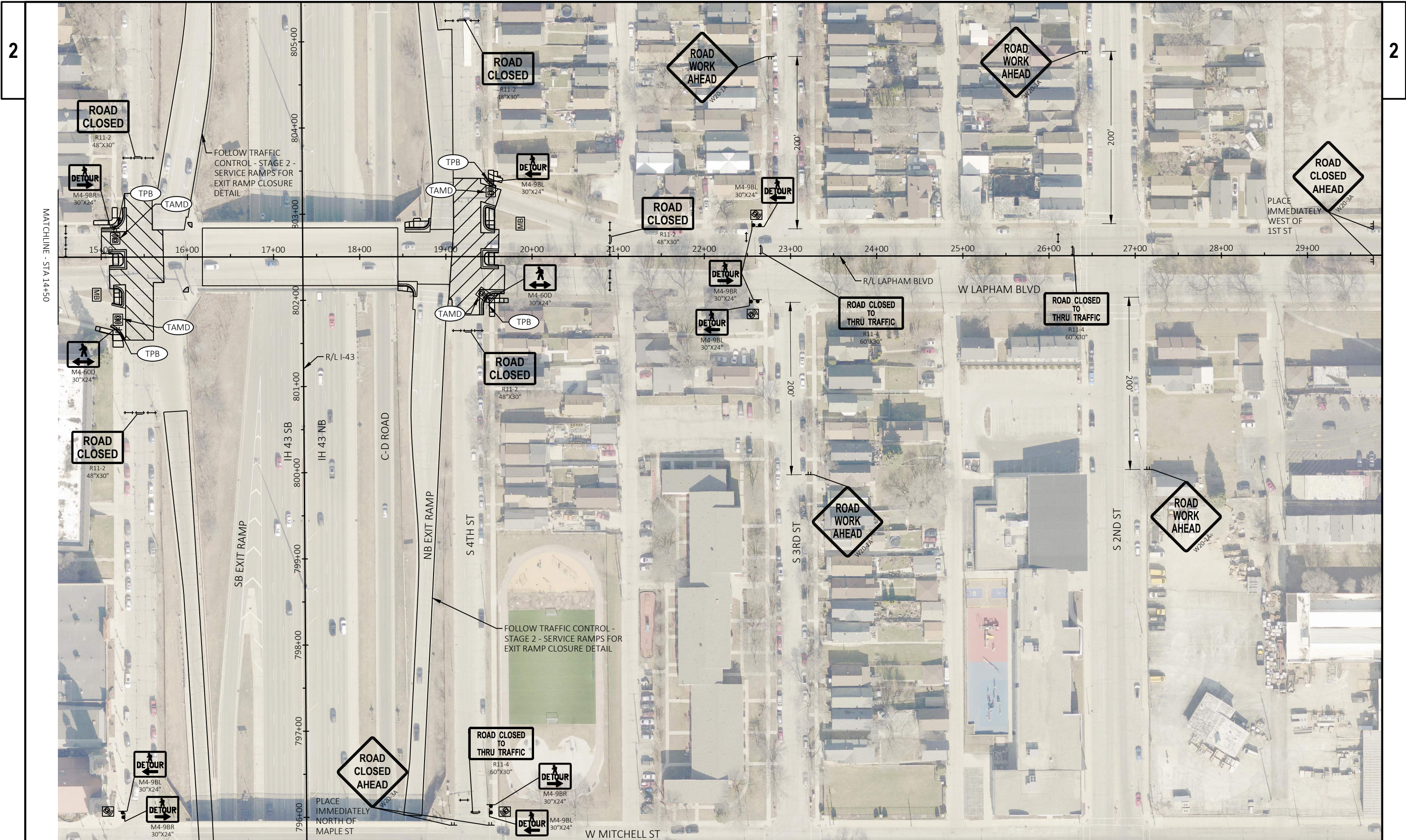




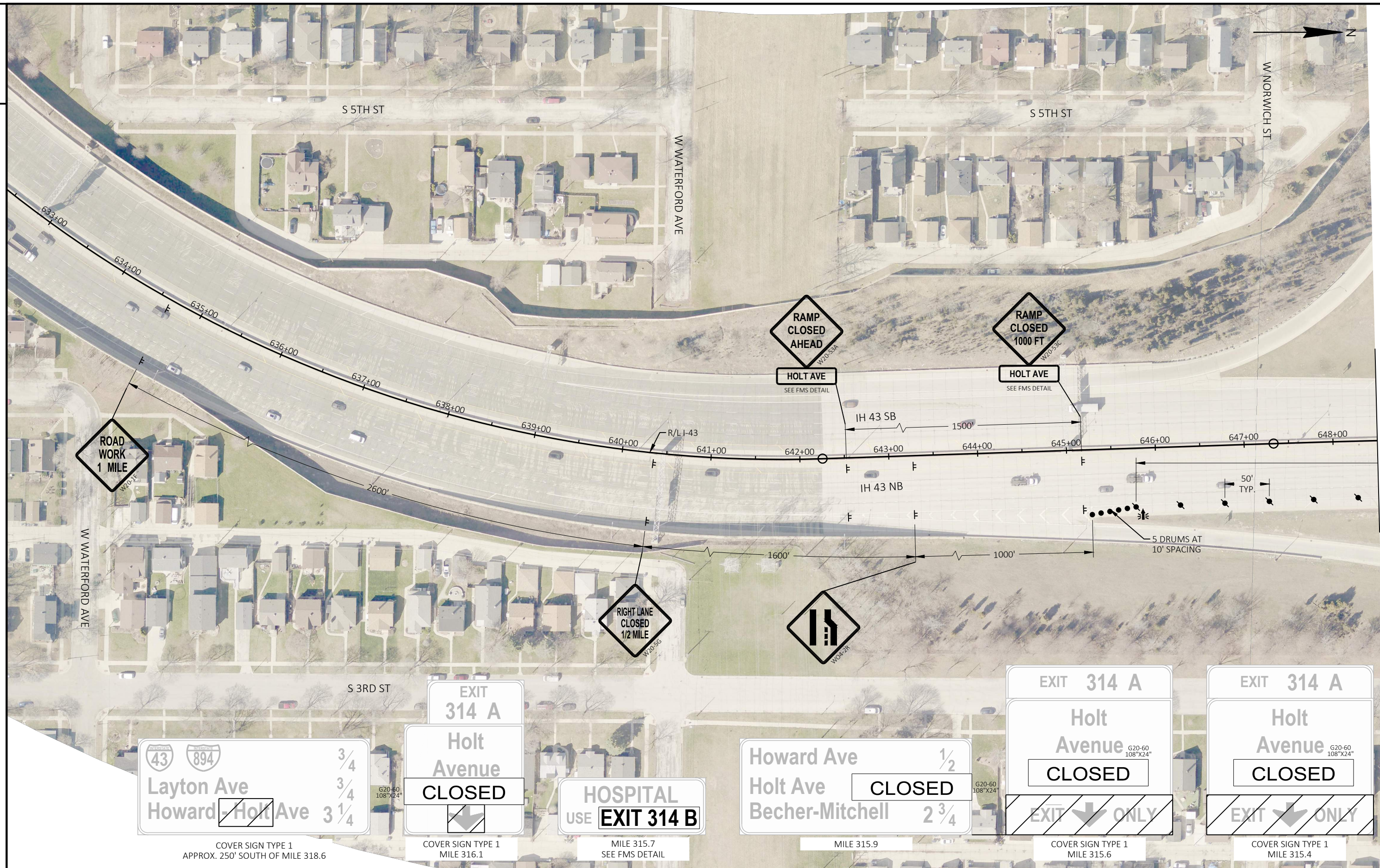




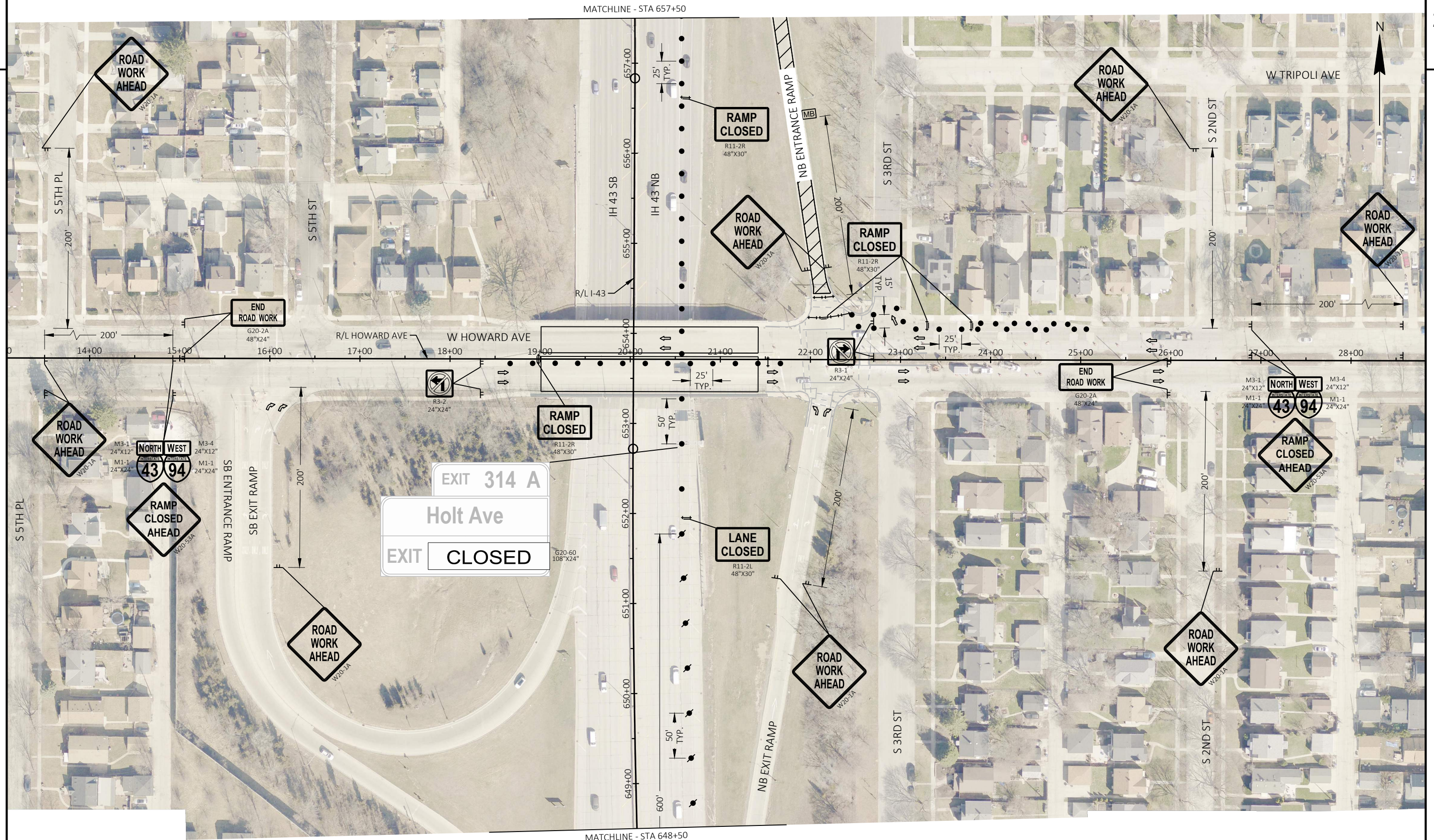












PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP

SHEET

106

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025210-TC RAMP OVERLAYS.DWG  
LAYOUT NAME - 025211

PLOT DATE : 1/24/2025 2:32 PM

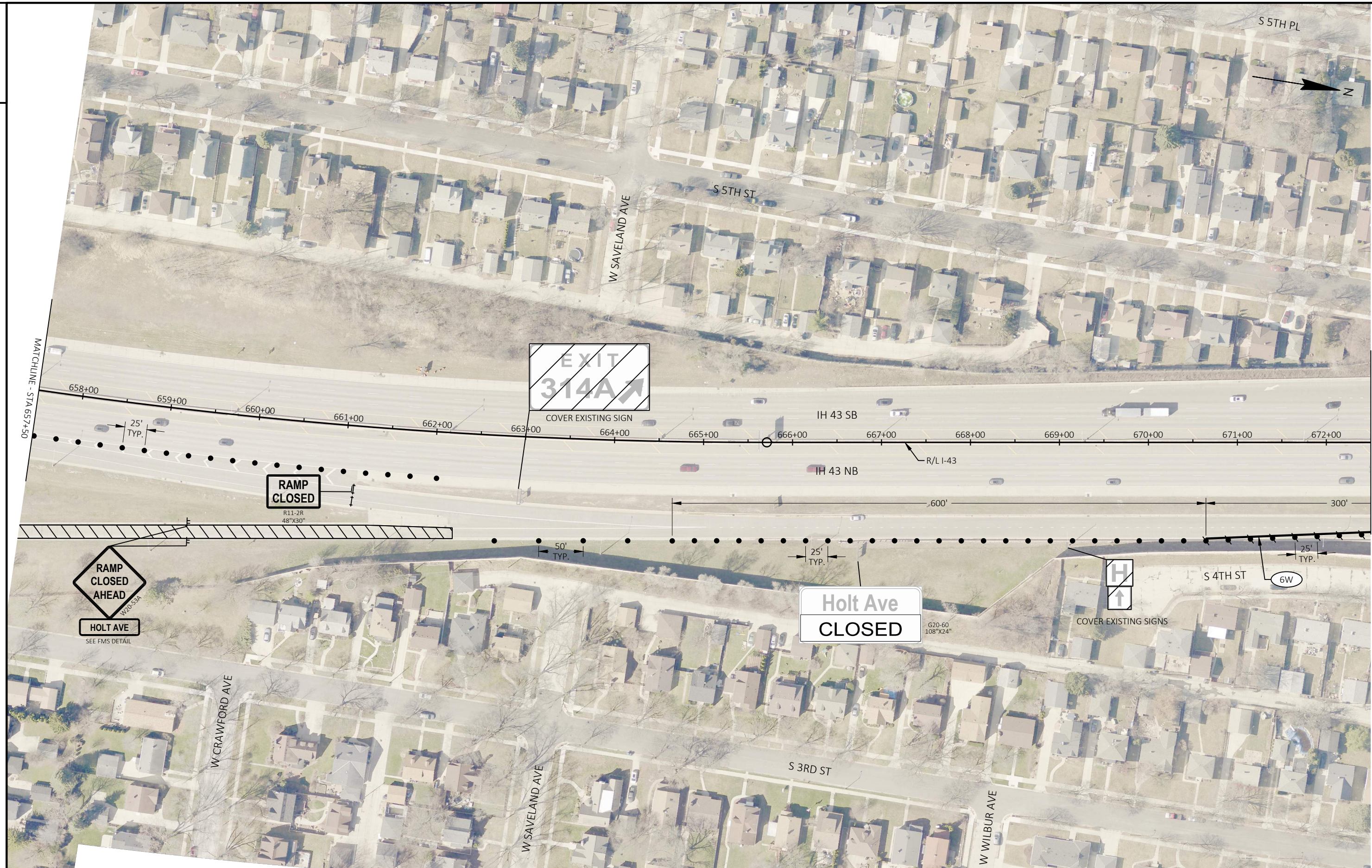
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADD'S SHEET 42

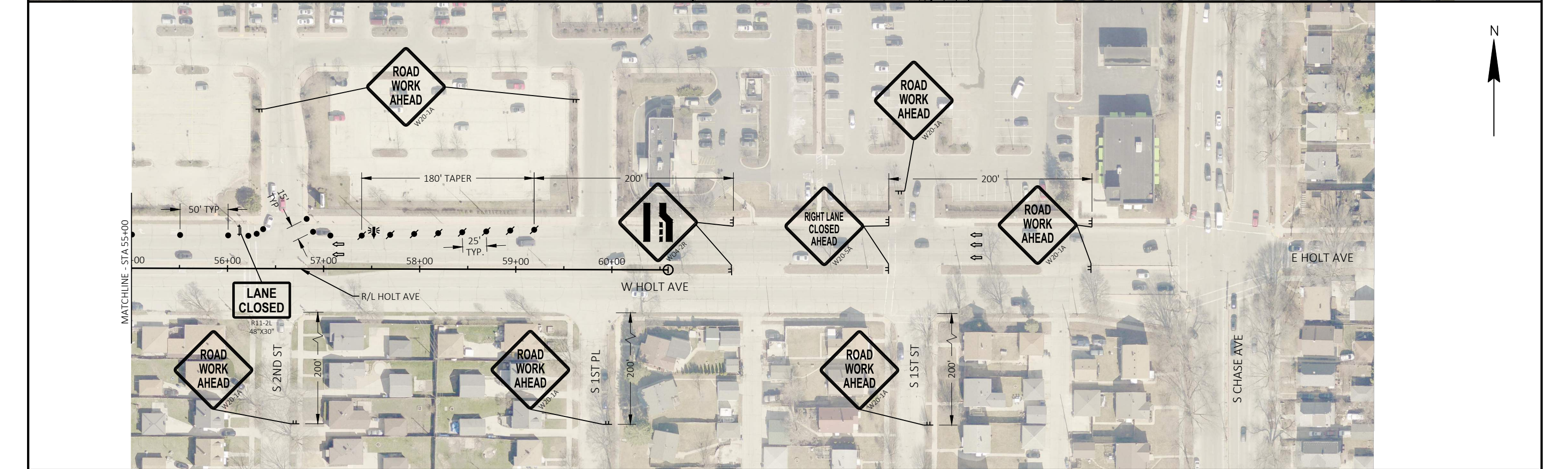
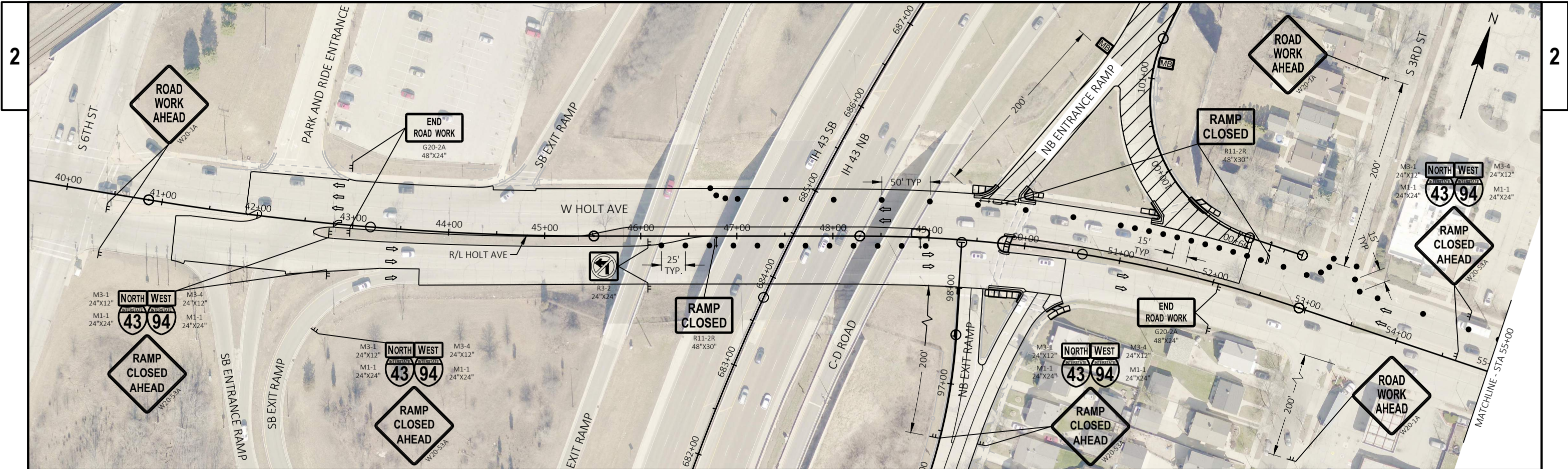












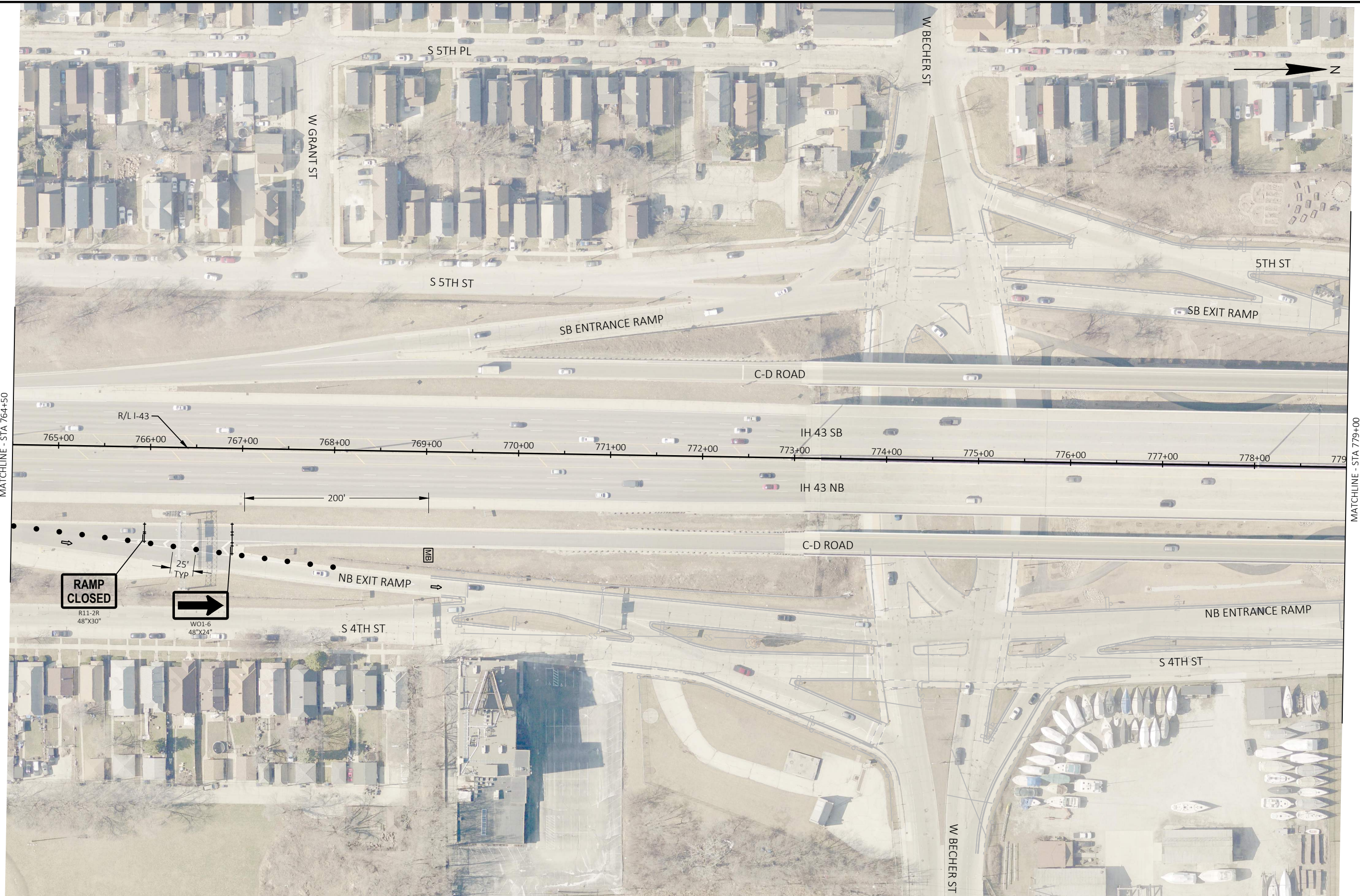






MATCHLINE - STA 764+50

MATCHLINE - STA 779+00



PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP

SHEET

111

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025210-TC RAMP OVERLAYS.DWG  
LAYOUT NAME - 025216

PLOT DATE : 1/24/2025 2:34 PM

PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

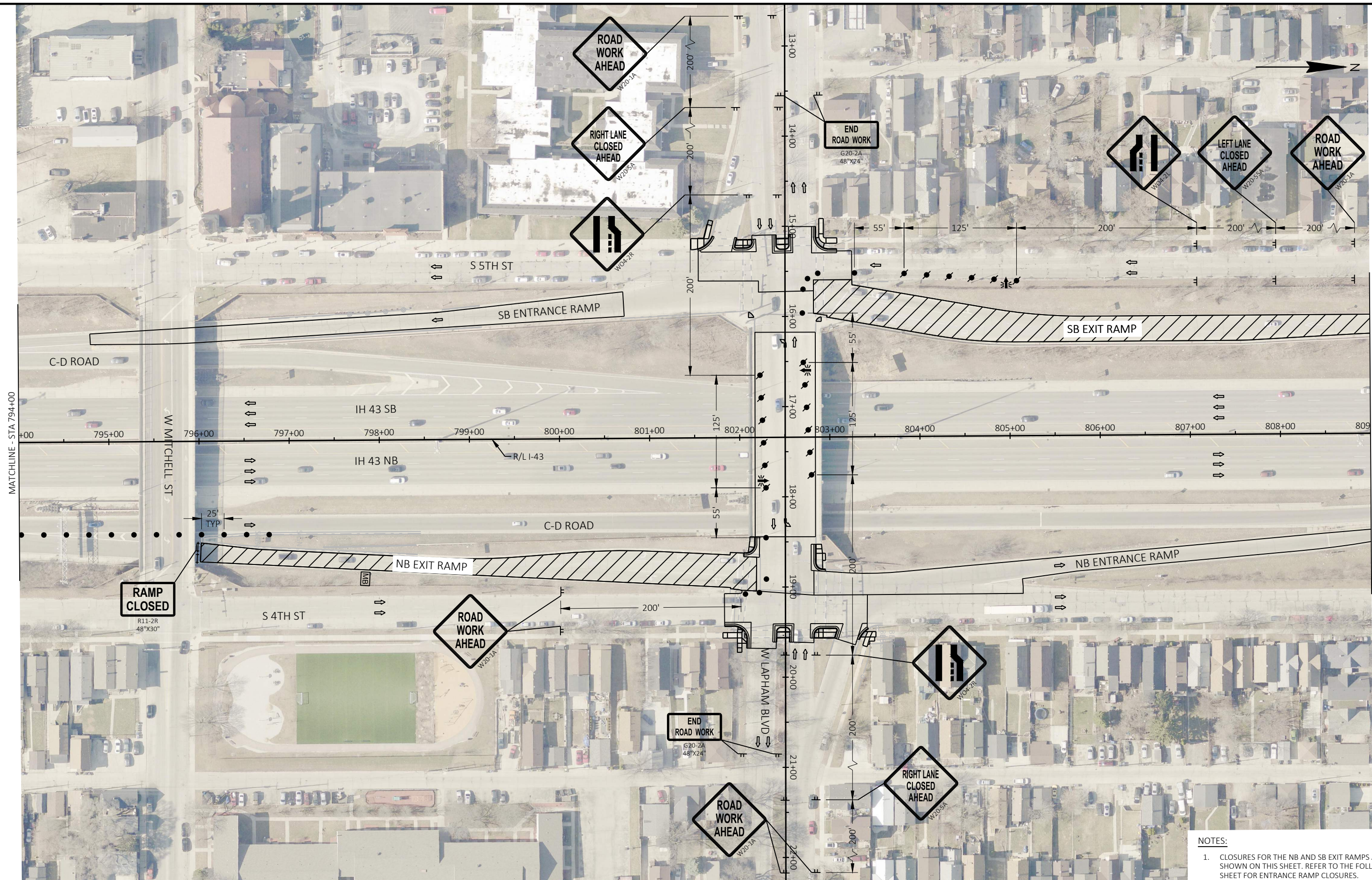
WISDOT/CADD SHEET 42





|                        |            |                   |                                           |           |   |
|------------------------|------------|-------------------|-------------------------------------------|-----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 2 - SERVICE RAMPs | SHEET 112 | E |
|------------------------|------------|-------------------|-------------------------------------------|-----------|---|





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

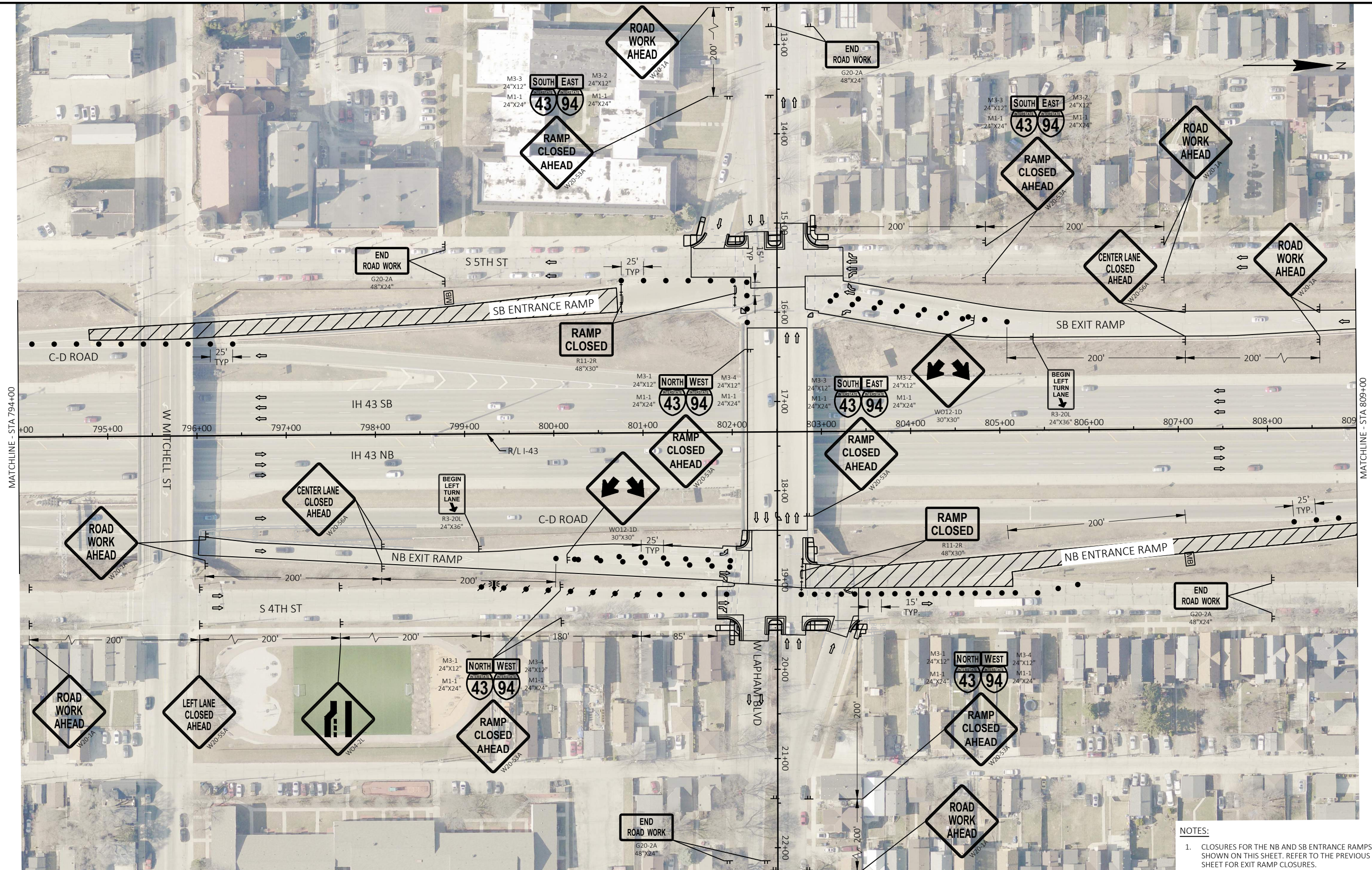
TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP

SHEET

113

E





## NOTES:

1. CLOSURES FOR THE NB AND SB ENTRANCE RAMP ARE SHOWN ON THIS SHEET. REFER TO THE PREVIOUS SHEET FOR EXIT RAMP CLOSURES.

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP

SHEET

114

E

FILE NAME: P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025210-TC RAMP OVERLAYS.DWG  
LAYOUT NAME: 025219

PLOT DATE: 1/24/2025 2:35 PM

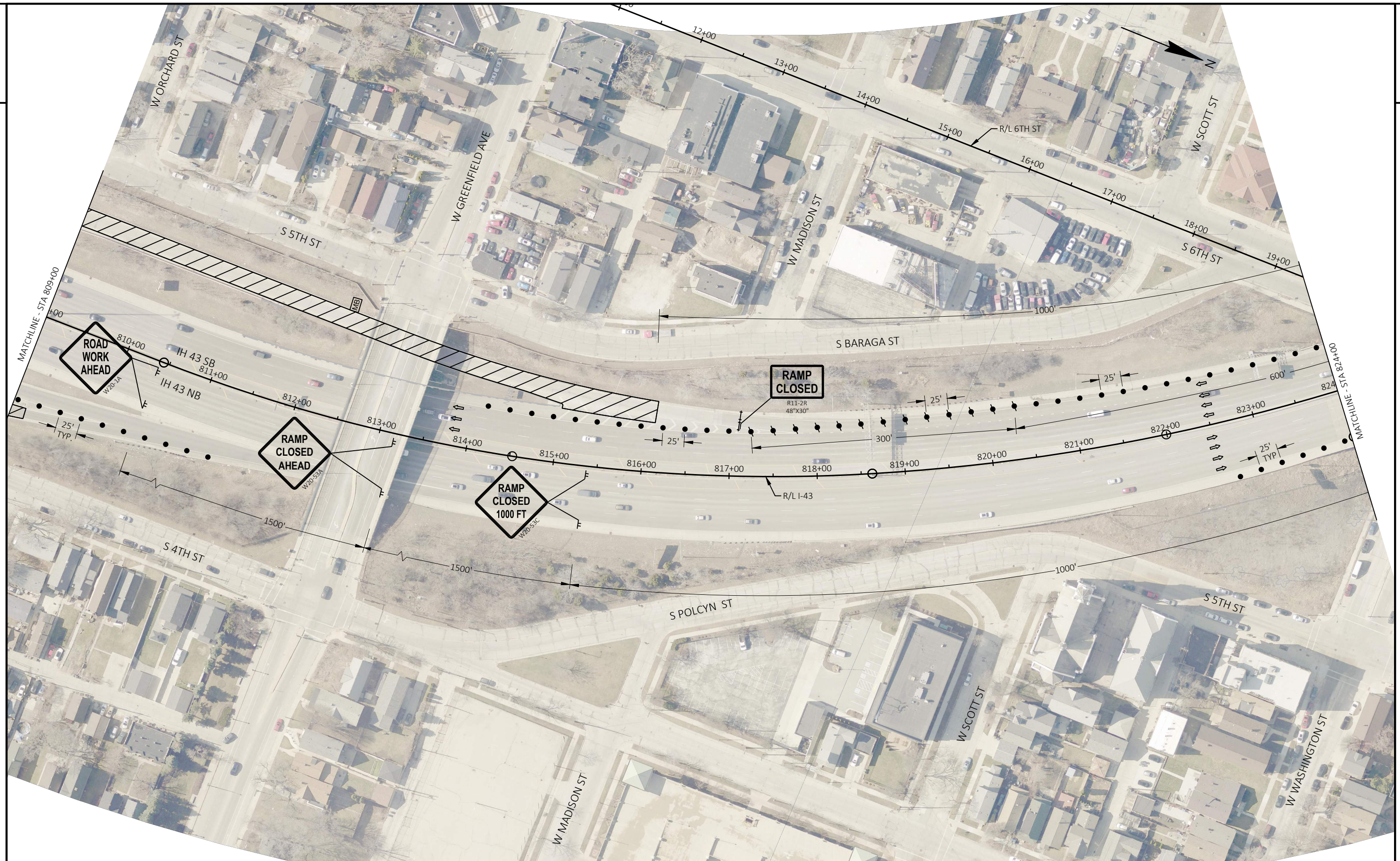
PLOT BY: CHASE ZASTROW

PLOT NAME:

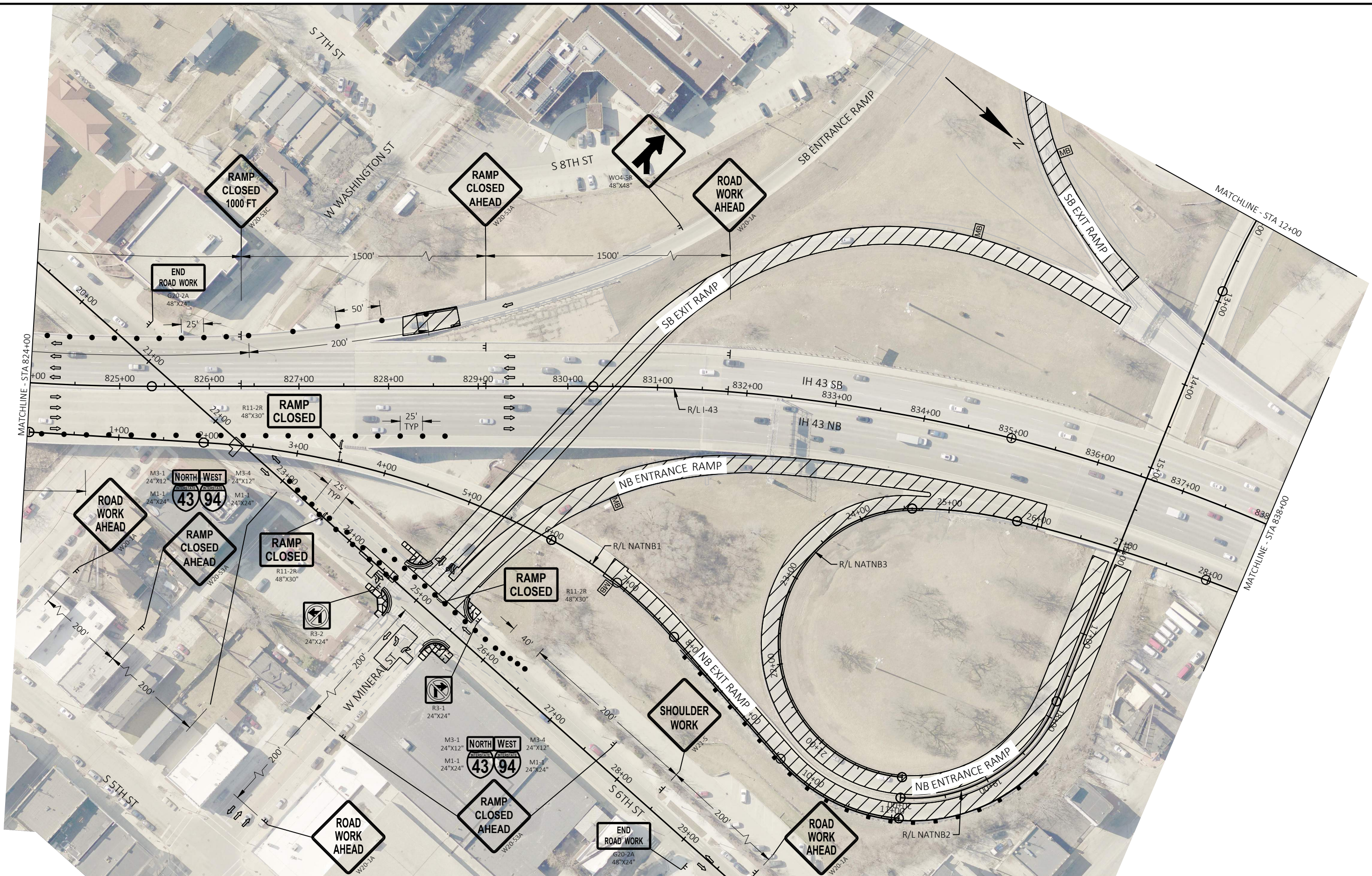
PLOT SCALE: 1 IN:100 FT

WISDOT/CADD SHEET 42





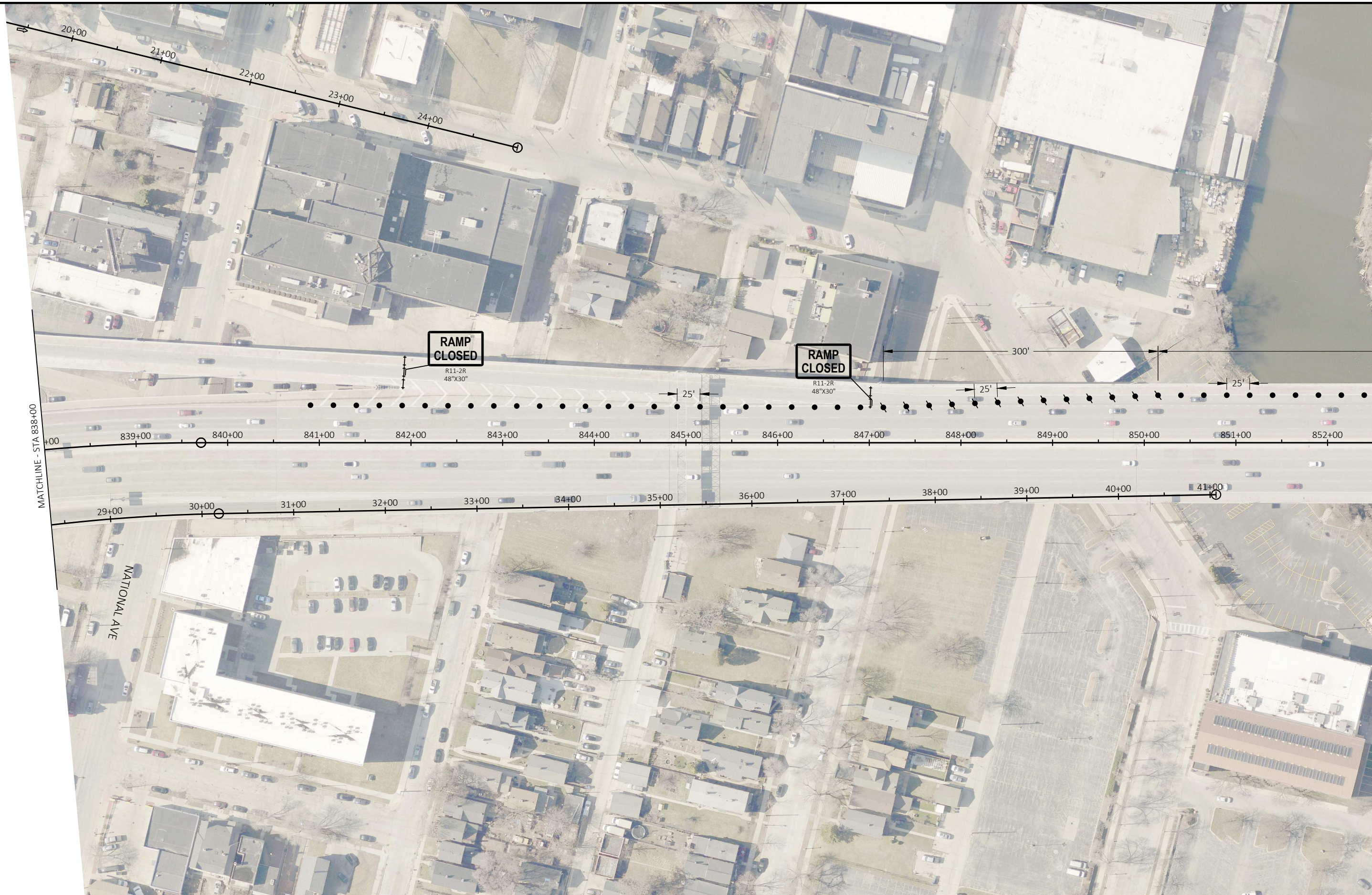






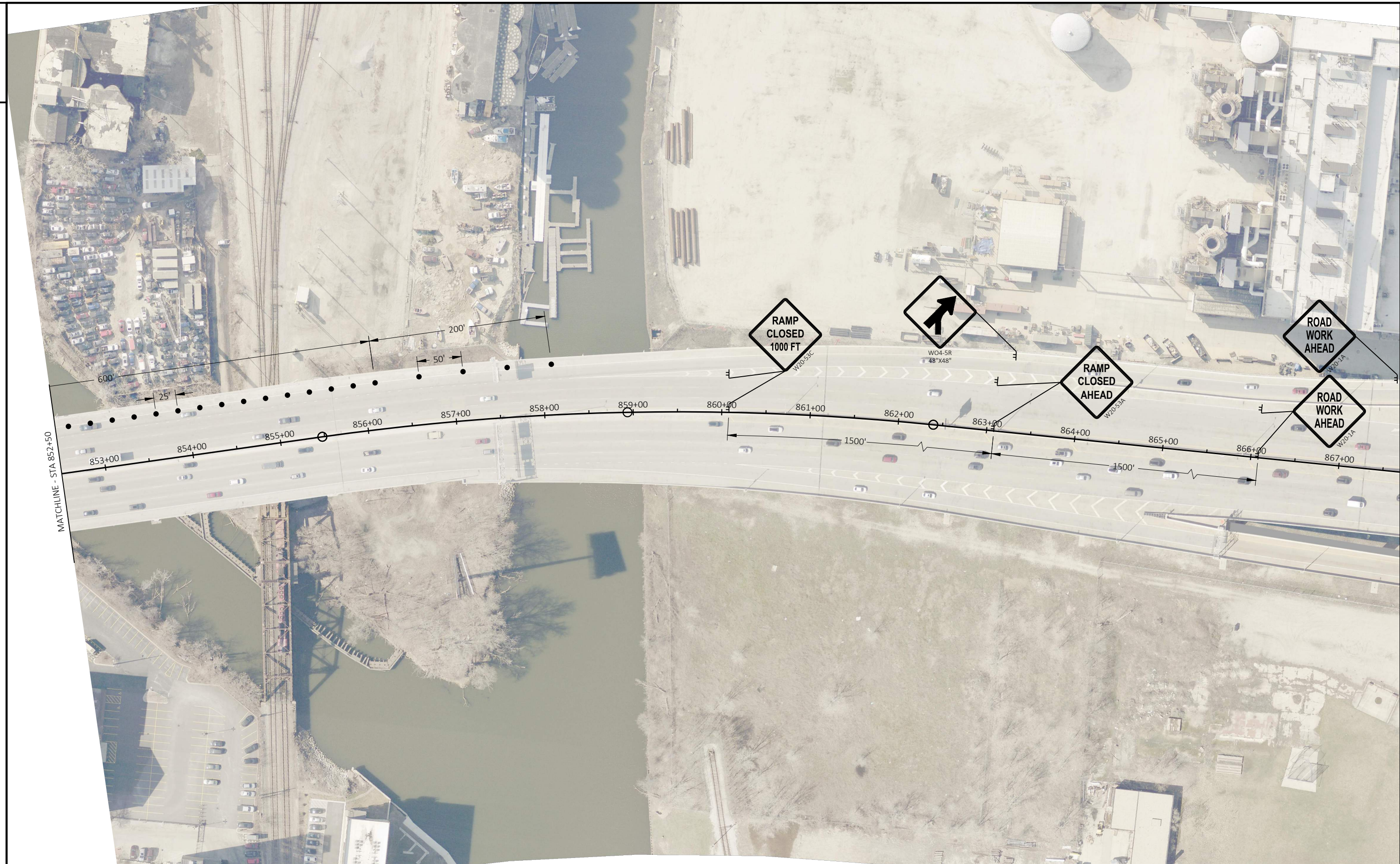






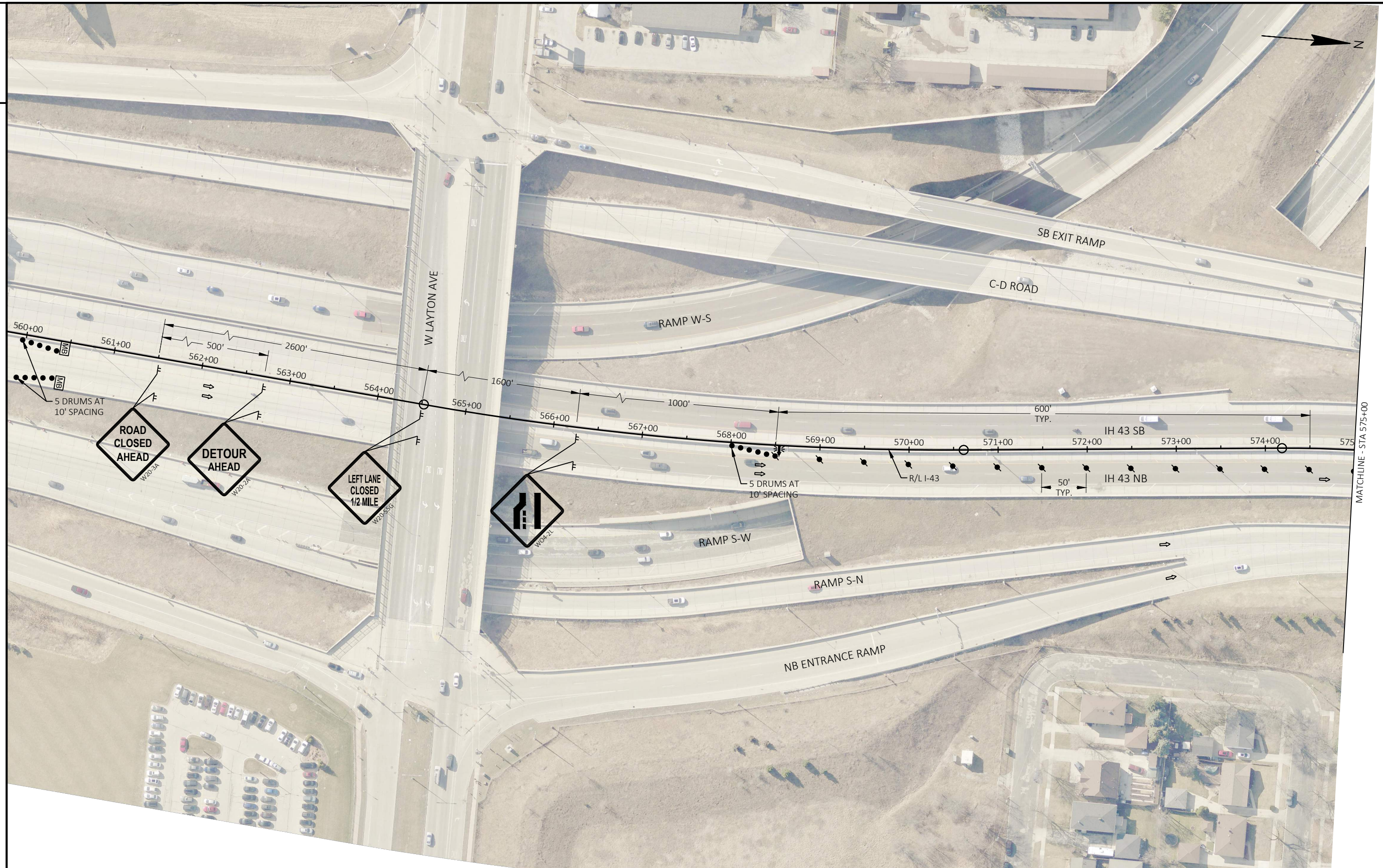
|                        |            |                   |                                          |           |   |
|------------------------|------------|-------------------|------------------------------------------|-----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP | SHEET 118 | E |
|------------------------|------------|-------------------|------------------------------------------|-----------|---|





|                        |            |                   |                                          |           |   |
|------------------------|------------|-------------------|------------------------------------------|-----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 2 - SERVICE RAMP | SHEET 119 | E |
|------------------------|------------|-------------------|------------------------------------------|-----------|---|





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 3A - IH 43

SHEET

120

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025300-TC-B-40-265-IH-43.DWG  
LAYOUT NAME - 025300

PLOT DATE : 1/24/2025 2:38 PM

PLOT BY : CHASE ZASTROW

PLOT NAME :

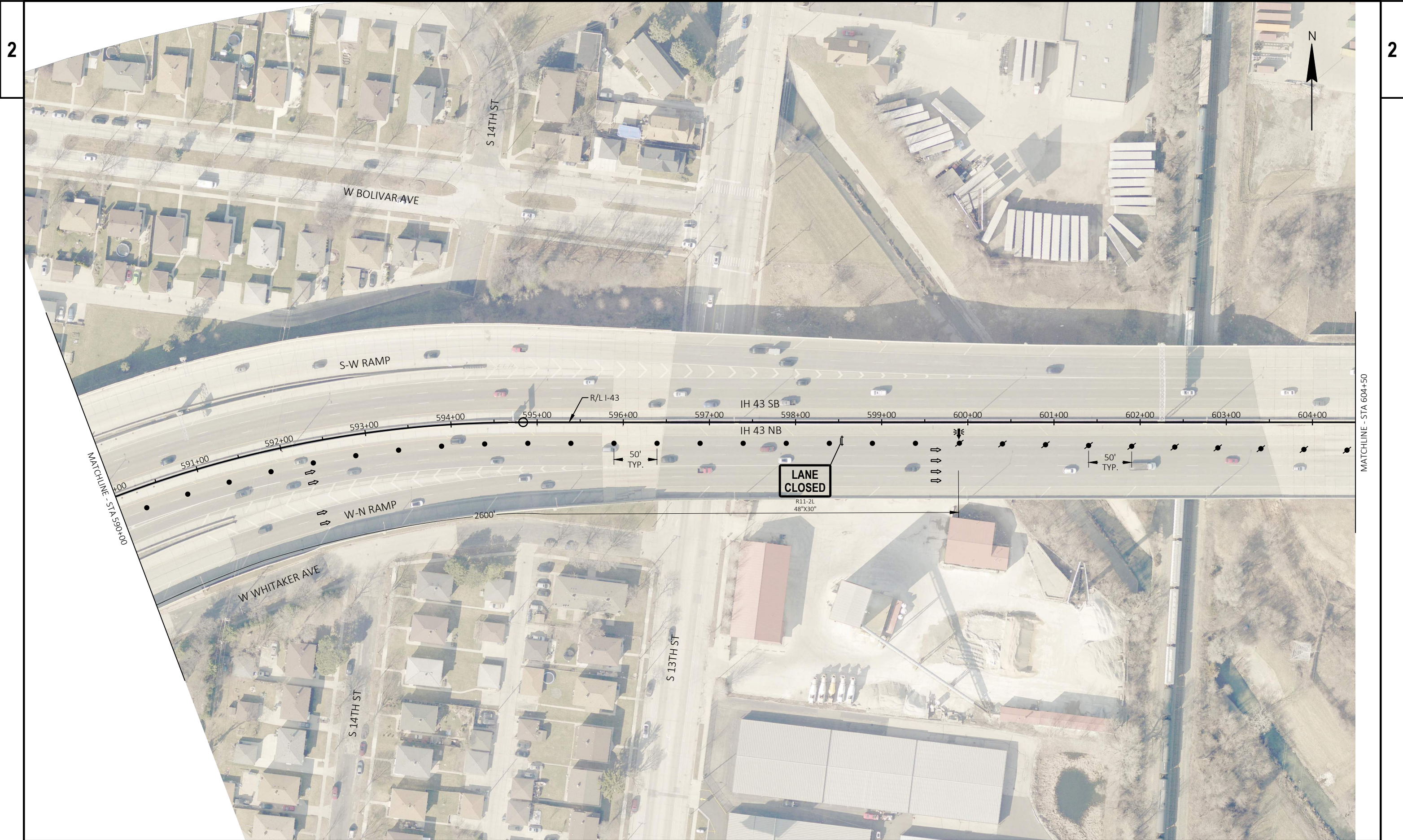
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

















PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 3A - IH 43

SHEET

124

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025300-TC-B-40-265-IH-43.DWG  
LAYOUT NAME - 025304

PLOT DATE : 1/24/2025 2:40 PM

PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 3A - IH 43

SHEET

125

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025300-TC-B-40-265-IH-43.DWG  
LAYOUT NAME - 025305

PLOT DATE : 1/24/2025 2:41 PM

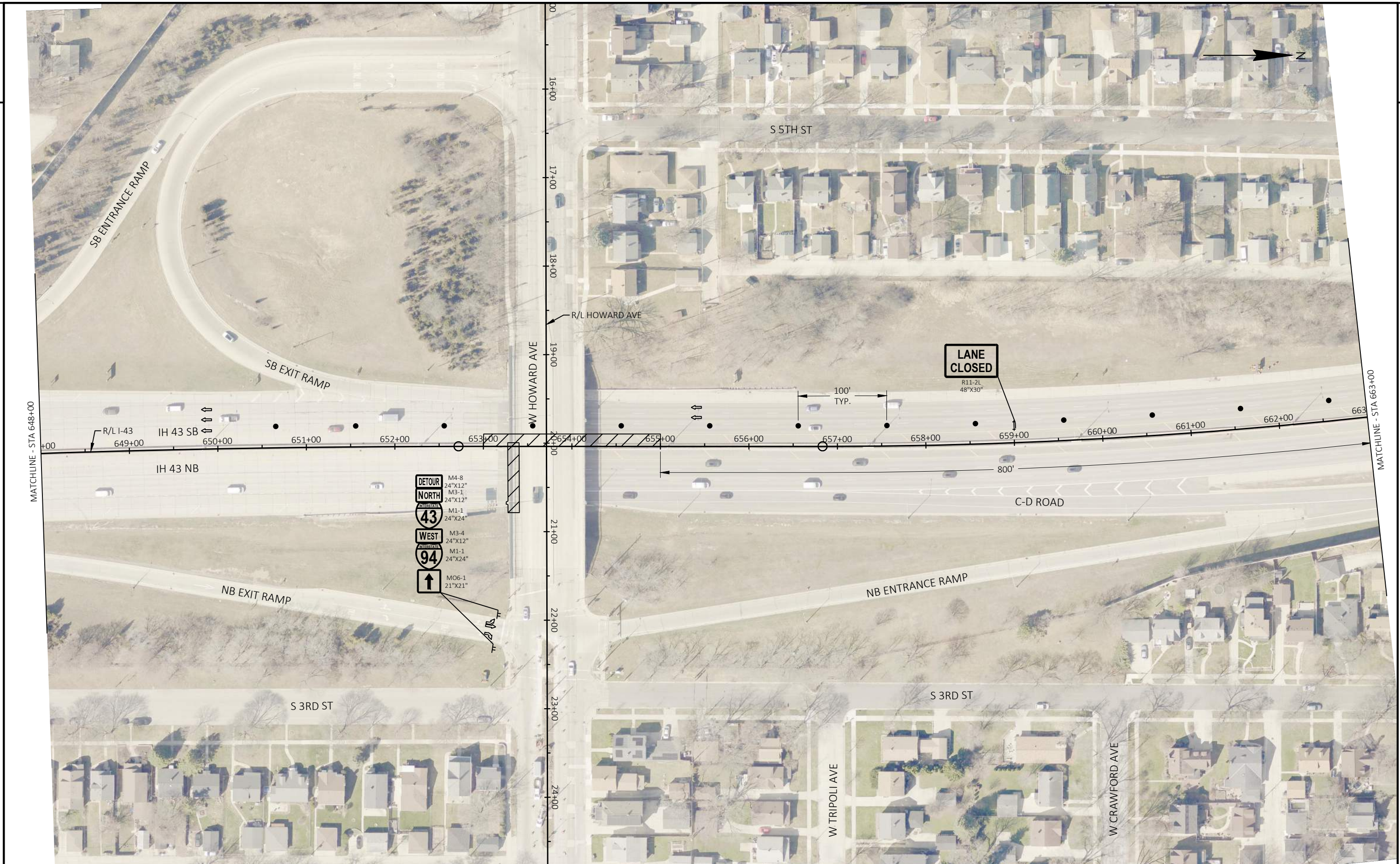
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

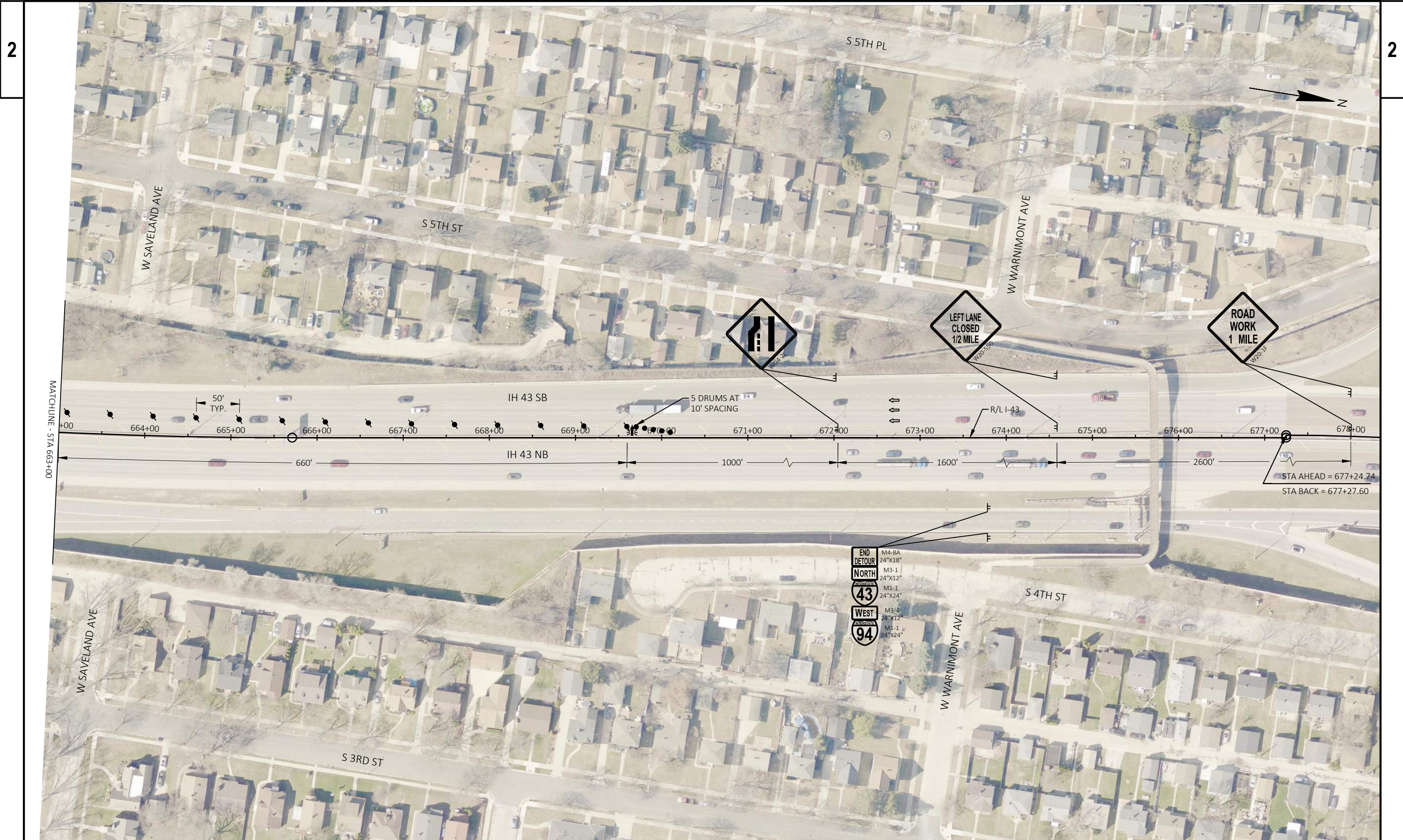
WISDOT/CADDs SHEET 42



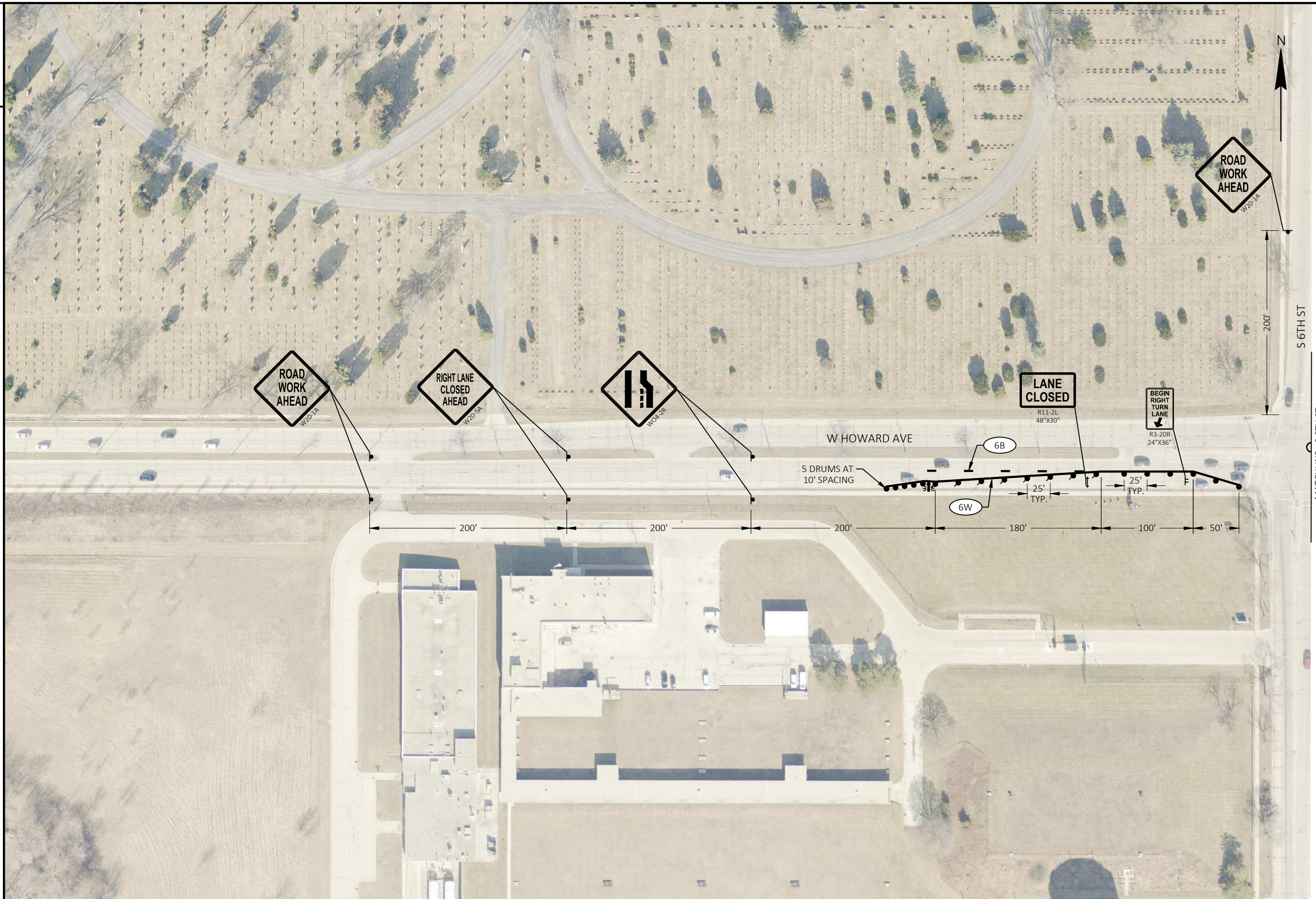


|                        |            |                   |                                    |           |   |
|------------------------|------------|-------------------|------------------------------------|-----------|---|
| PROJECT NO: 1228-09-76 | HWY: IH 43 | COUNTY: MILWAUKEE | TRAFFIC CONTROL - STAGE 3A - IH 43 | SHEET 126 | E |
|------------------------|------------|-------------------|------------------------------------|-----------|---|









PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

TRAFFIC CONTROL - STAGE 3A - HOWARD AVE (CONTINUOUS)

SHEET

128

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\025310-TC-B-40-265-HOWARD AVE.DWG  
LAYOUT NAME - 025310

PLOT DATE : 3/19/2025 9:11 AM

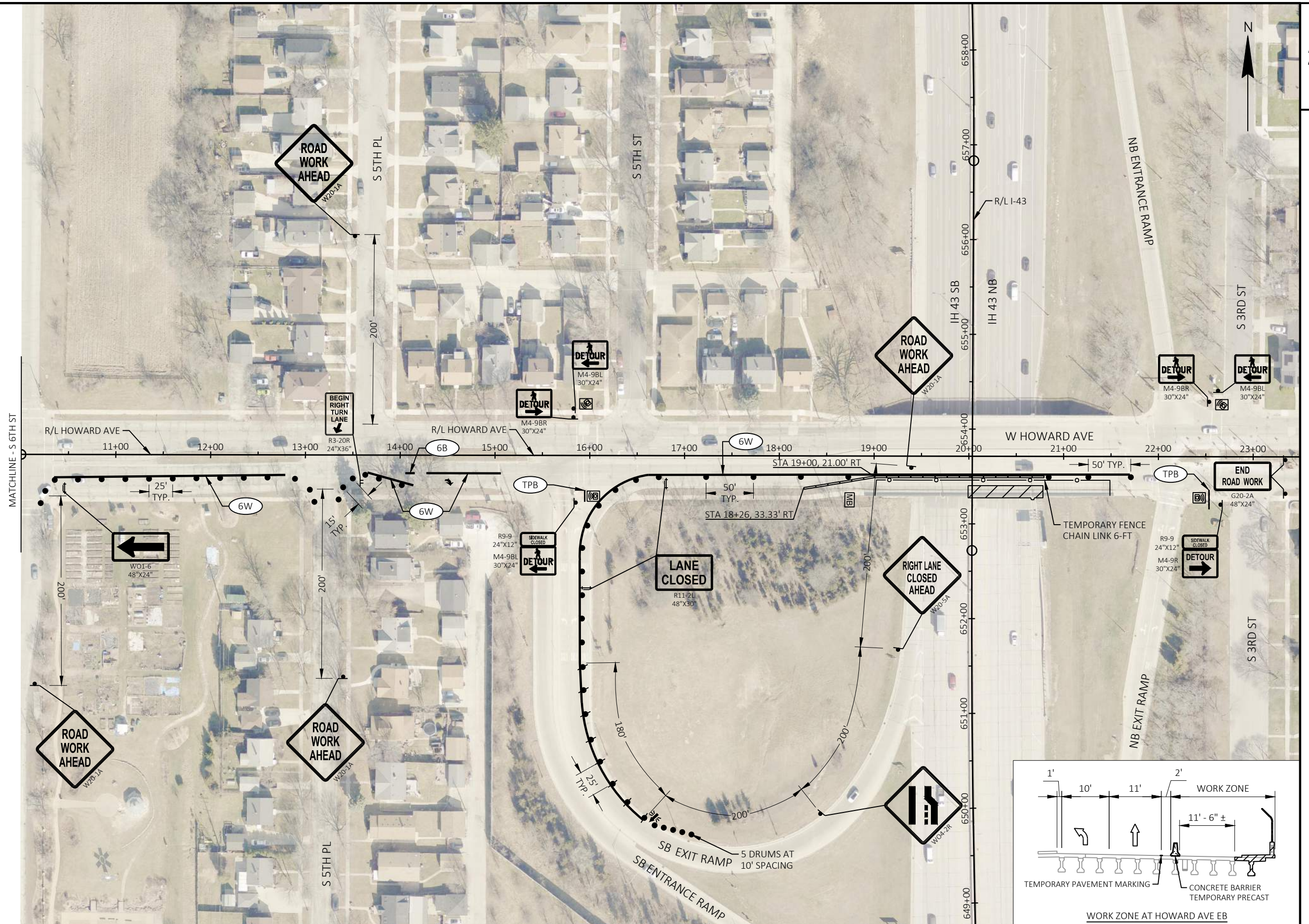
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



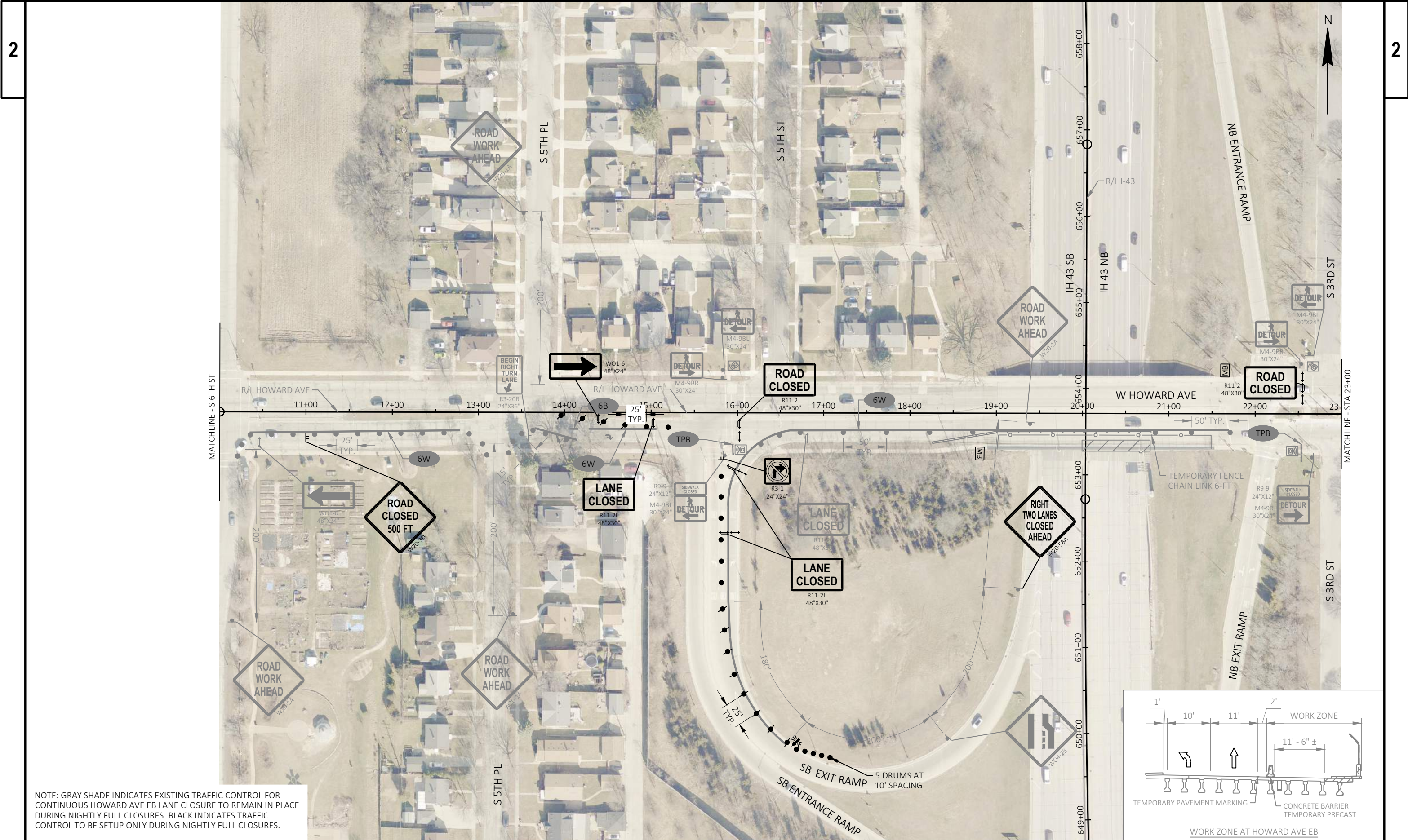






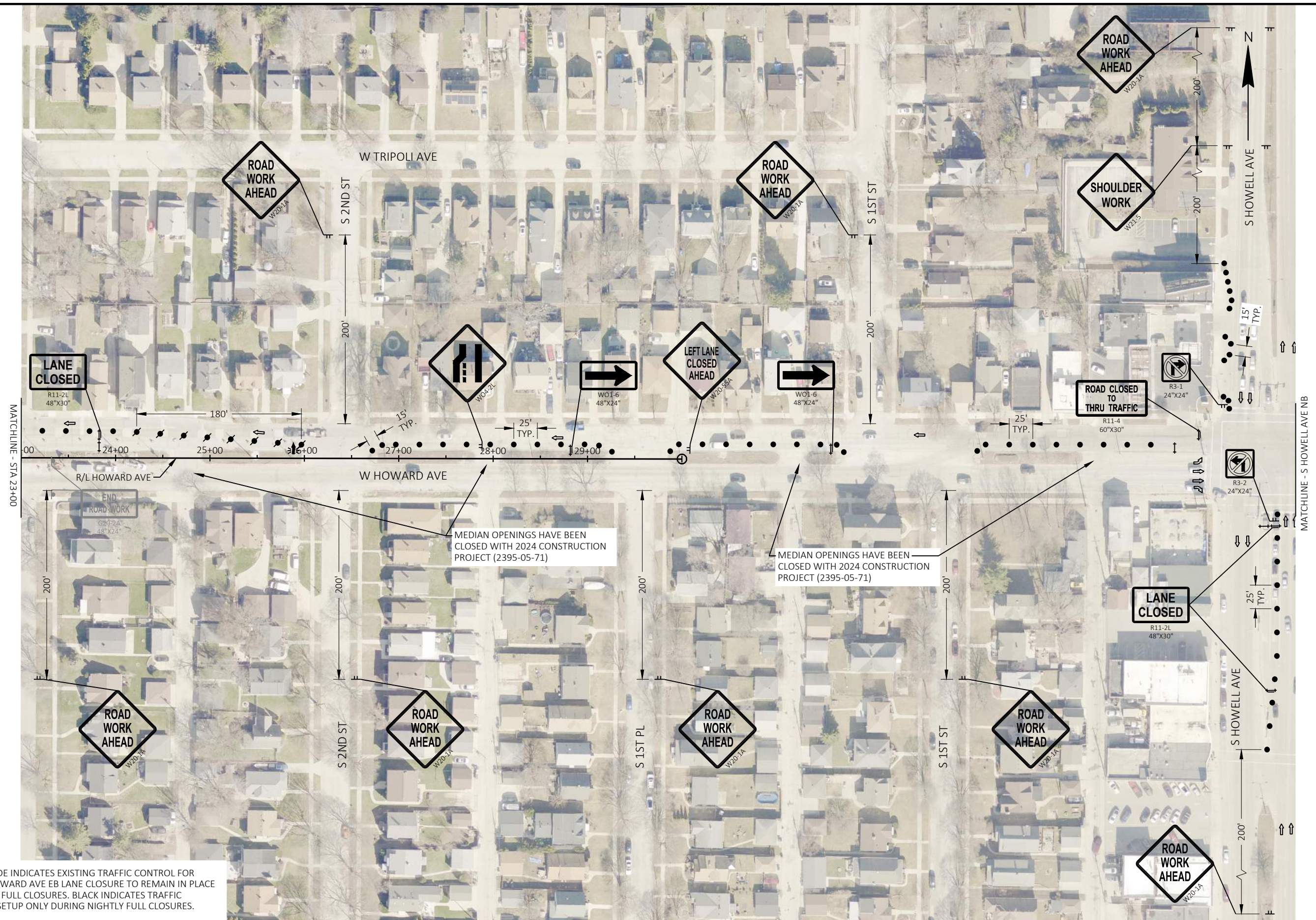
NOTE: GRAY SHADE INDICATES EXISTING TRAFFIC CONTROL FOR CONTINUOUS HOWARD AVE EB LANE CLOSURE TO REMAIN IN PLACE DURING NIGHTLY FULL CLOSURES. BLACK INDICATES TRAFFIC CONTROL TO BE SETUP ONLY DURING NIGHTLY FULL CLOSURES.





NOTE: GRAY SHADE INDICATES EXISTING TRAFFIC CONTROL FOR CONTINUOUS HOWARD AVE EB LANE CLOSURE TO REMAIN IN PLACE DURING NIGHTLY FULL CLOSURES. BLACK INDICATES TRAFFIC CONTROL TO BE SETUP ONLY DURING NIGHTLY FULL CLOSURES.





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

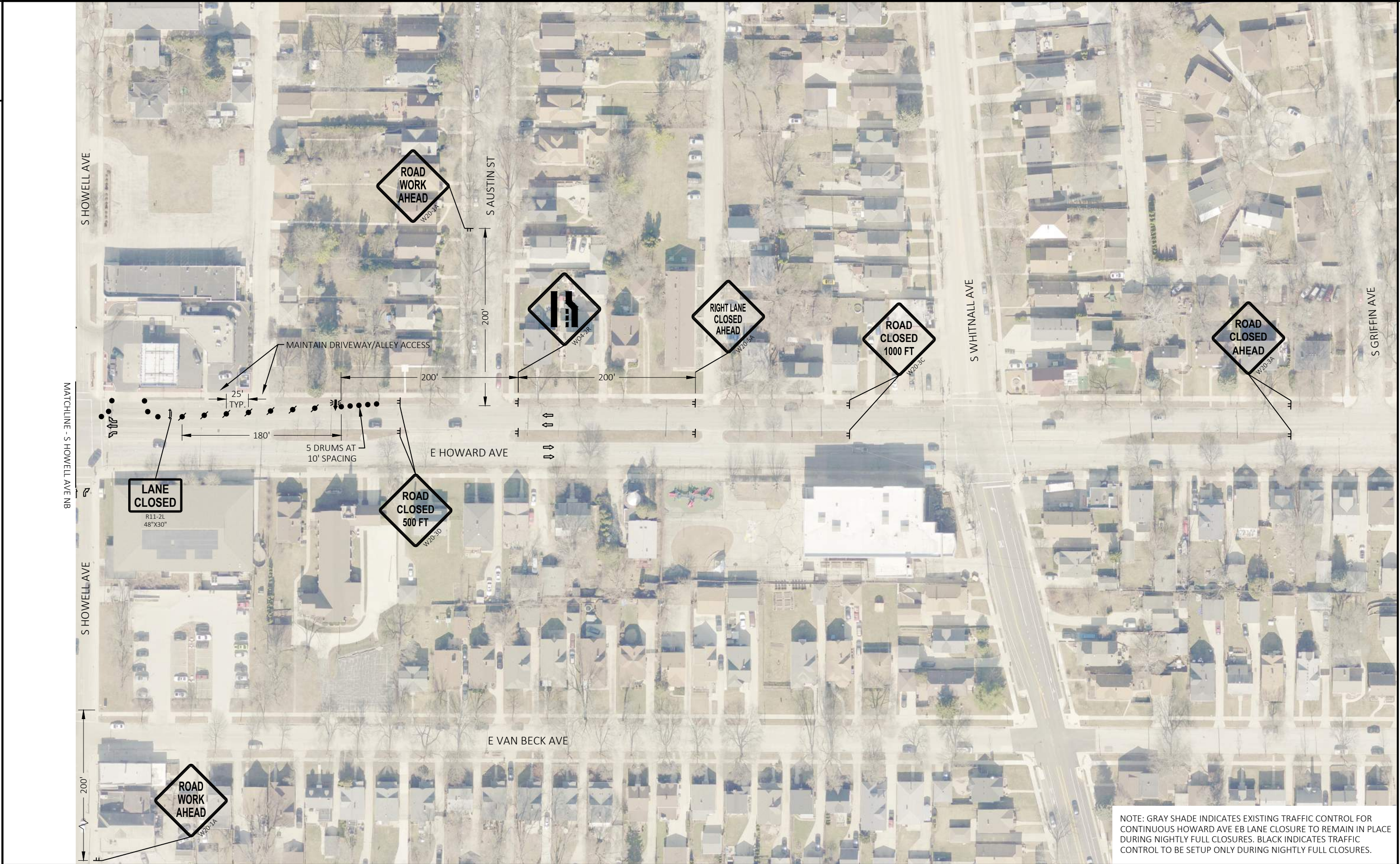
TRAFFIC CONTROL - STAGE 3A - HOWARD AVE (DURING IH 43 NB CLOSURES)

SHEET

132

E



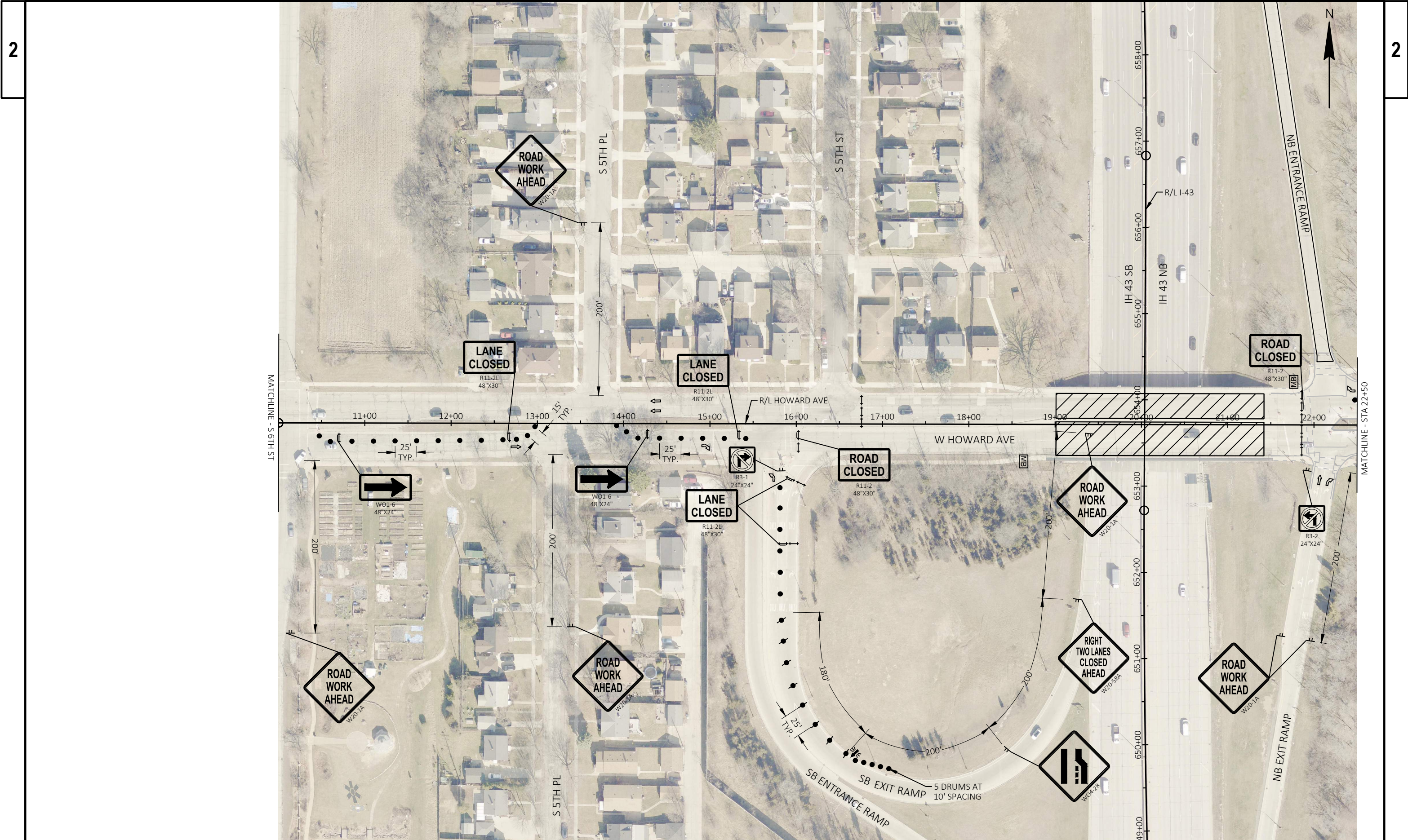


NOTE: GRAY SHADE INDICATES EXISTING TRAFFIC CONTROL FOR CONTINUOUS HOWARD AVE EB LANE CLOSURE TO REMAIN IN PLACE DURING NIGHTLY FULL CLOSURES. BLACK INDICATES TRAFFIC CONTROL TO BE SETUP ONLY DURING NIGHTLY FULL CLOSURES.

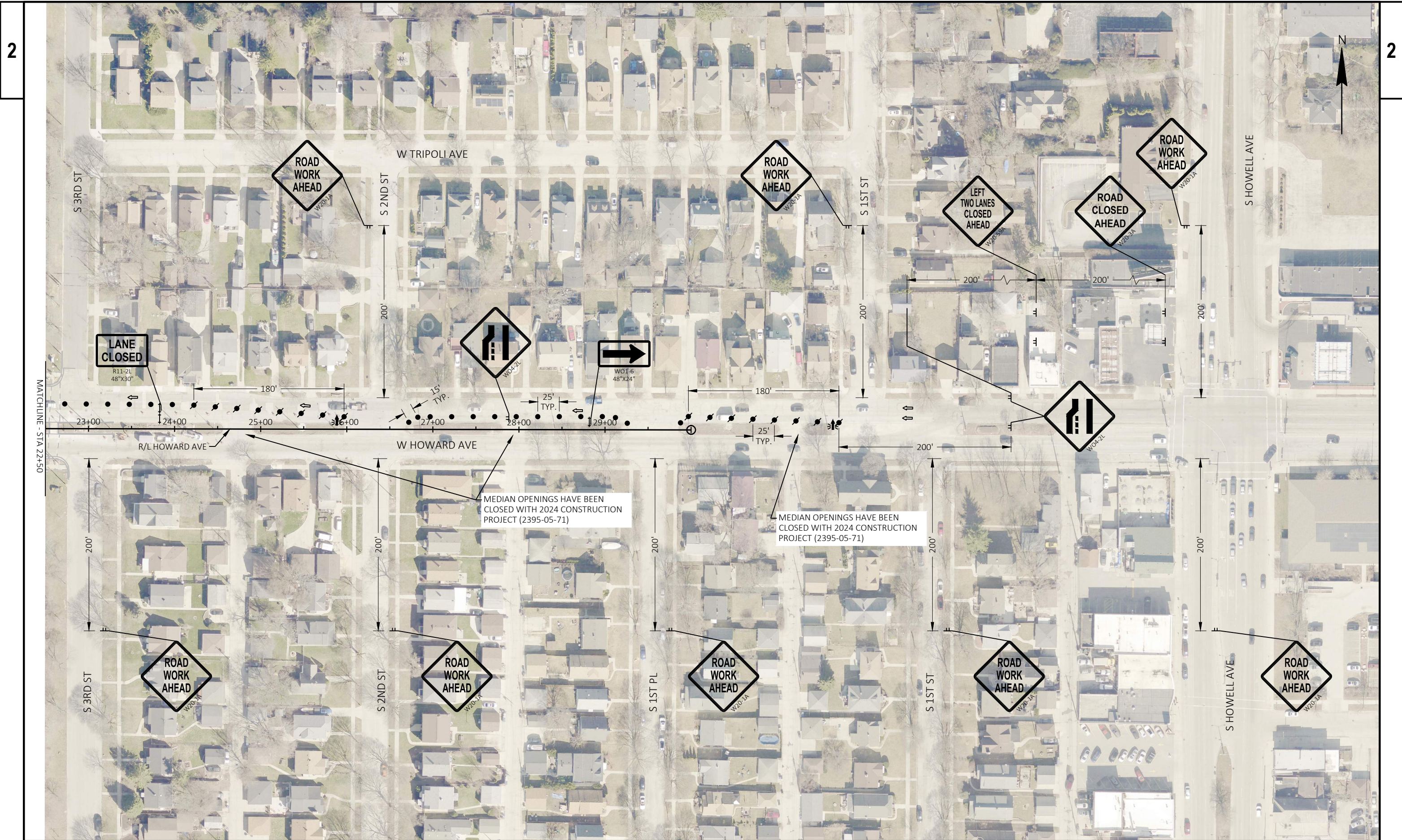




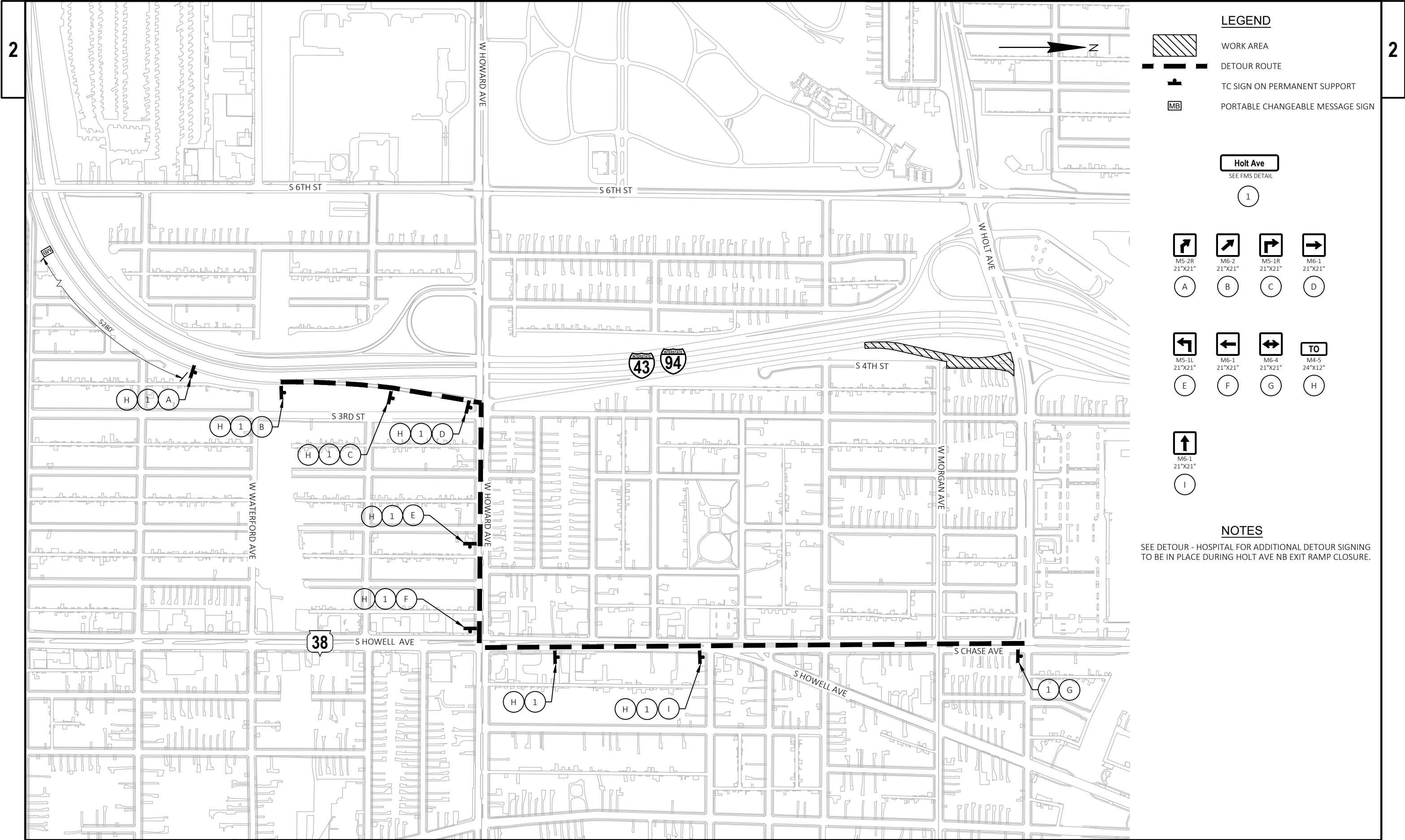












LEGEND



WORK AREA



DETOUR ROUTE



TC SIGN ON PERMANENT SUPPORT



PORTABLE CHANGEABLE MESSAGE SIGN

Holt Ave

SEE FMS DETAIL

1



A



B



C



D



E



F



G



H



I

NOTES

SEE DETOUR - HOSPITAL FOR ADDITIONAL DETOUR SIGNING TO BE IN PLACE DURING HOLT AVE NB EXIT RAMP CLOSURE.

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

DETOUR - HOLT AVE NB EXIT RAMP

SHEET

137

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\027001-DT.DWG  
LAYOUT NAME - 027001

PLOT DATE : 1/24/2025 2:45 PM

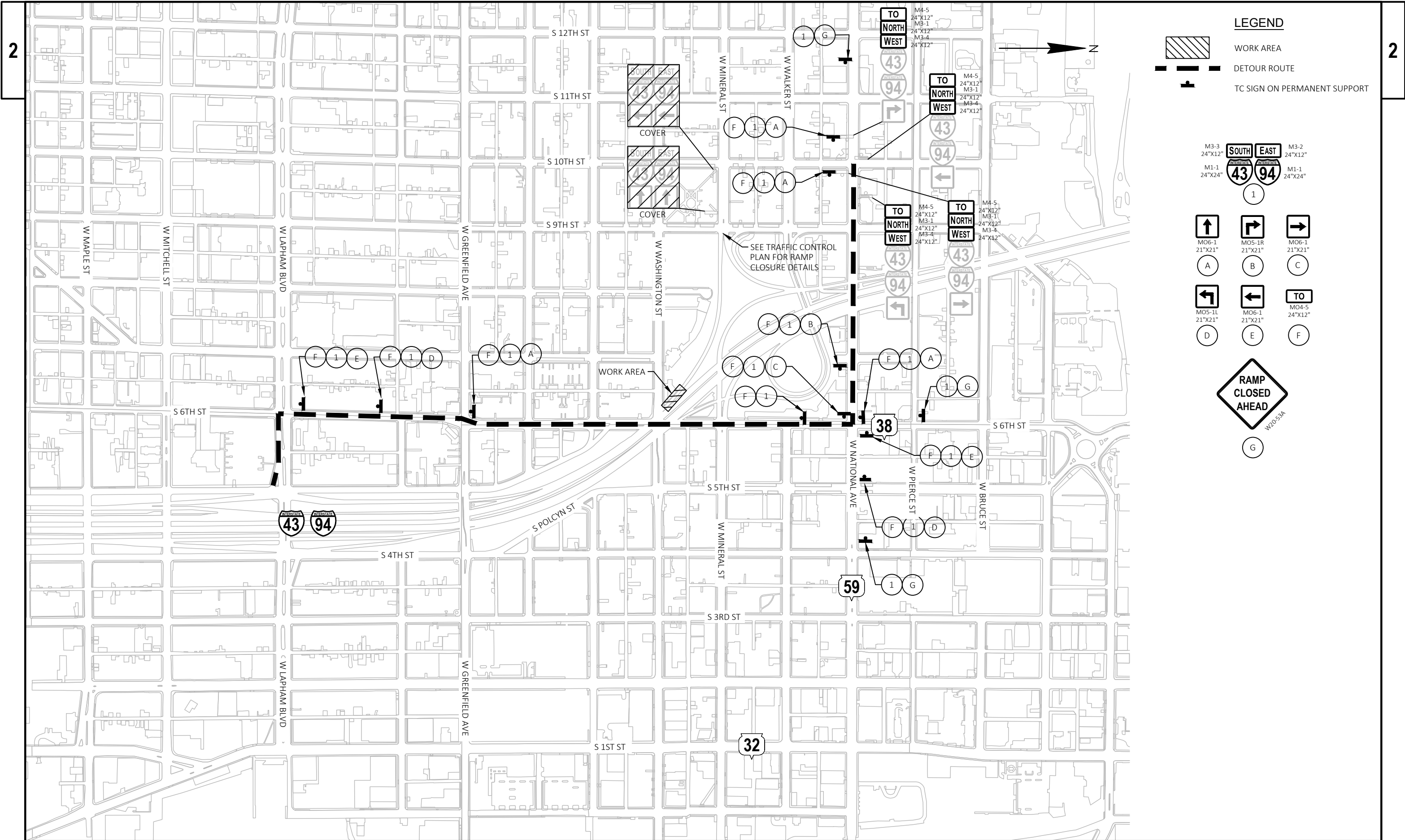
PLOT BY : CHASE ZASTROW

PLOT NAME :

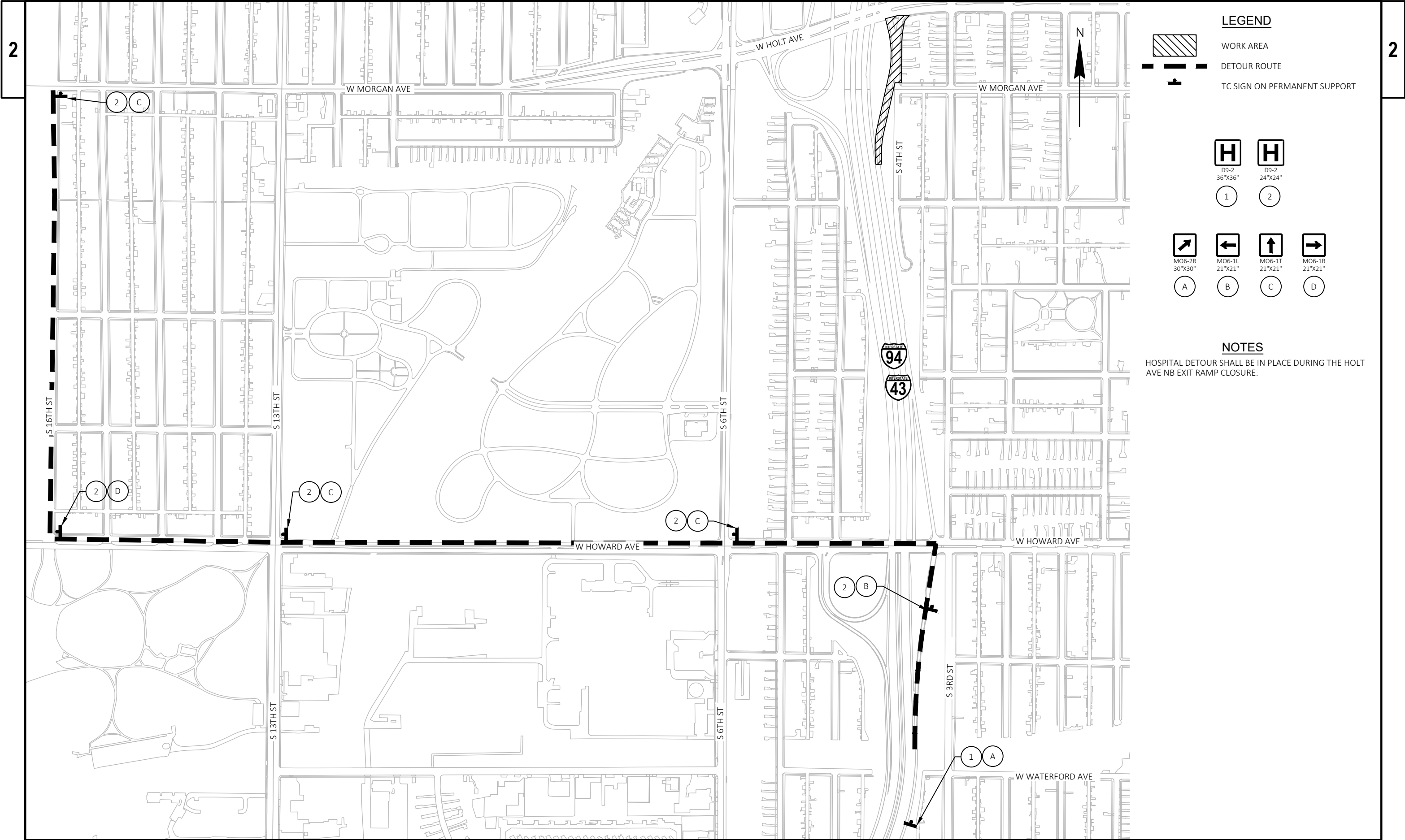
PLOT SCALE : 1 IN:500 FT

WISDOT/CADDs SHEET 42









LEGEND



WORK AREA



DETOUR ROUTE



TC SIGN ON PERMANENT SUPPORT



D9-2  
36"X36"



D9-2  
24"X24"



MO6-2R  
30"X30"



MO6-1L  
21"X21"



MO6-1T  
21"X21"



MO6-1R  
21"X21"



NOTES

HOSPITAL DETOUR SHALL BE IN PLACE DURING THE HOLT AVE NB EXIT RAMP CLOSURE.

PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

DETOUR - HOSPITAL

SHEET

139

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\027001-DT.DWG  
LAYOUT NAME - 027003

PLOT DATE : 1/24/2025 2:45 PM

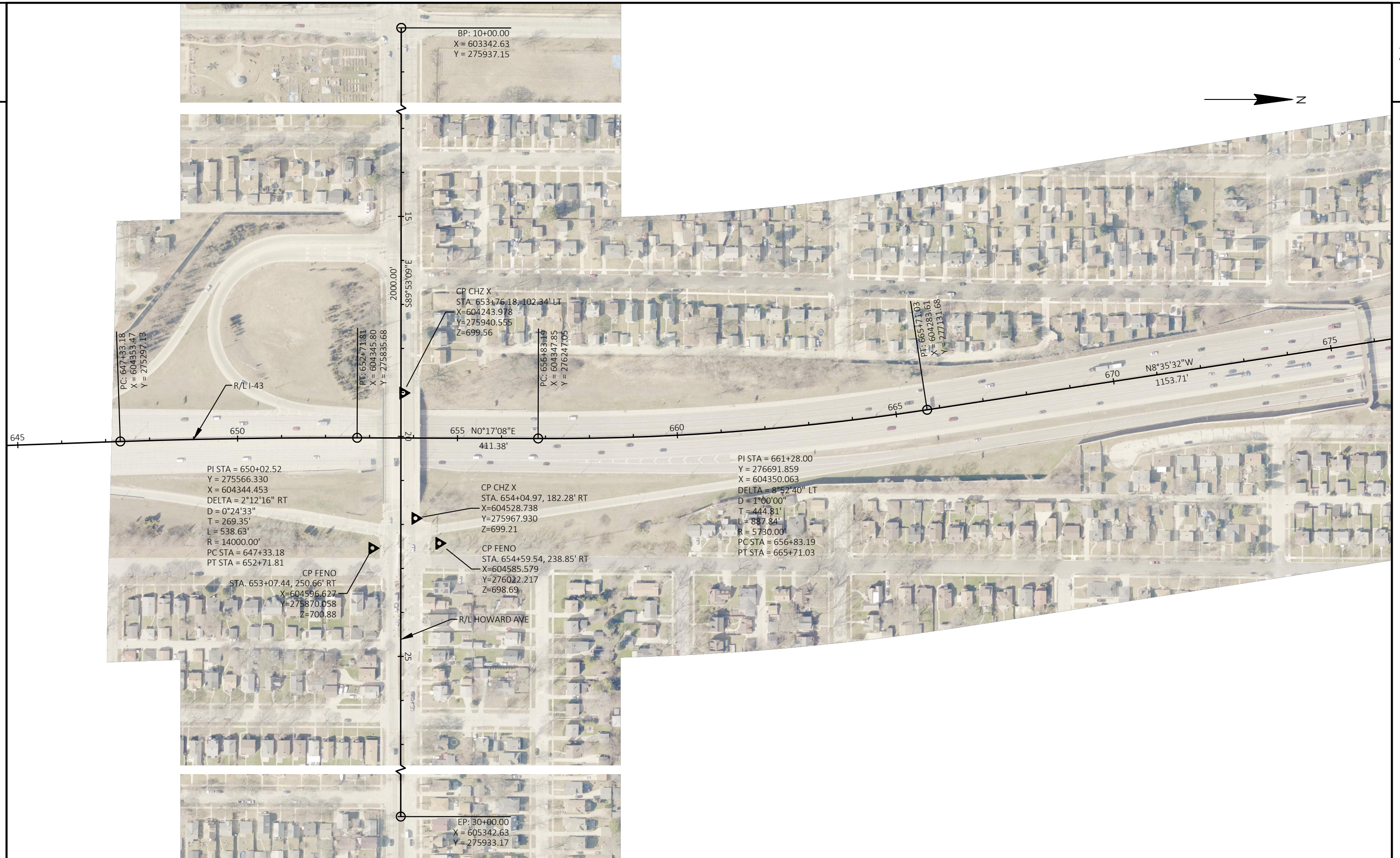
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:500 FT

WISDOT/CADDs SHEET 42





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

ALIGNMENT DETAILS

SHEET

140

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\027201-AD.DWG  
LAYOUT NAME - 027201

PLOT DATE : 1/24/2025 2:48 PM

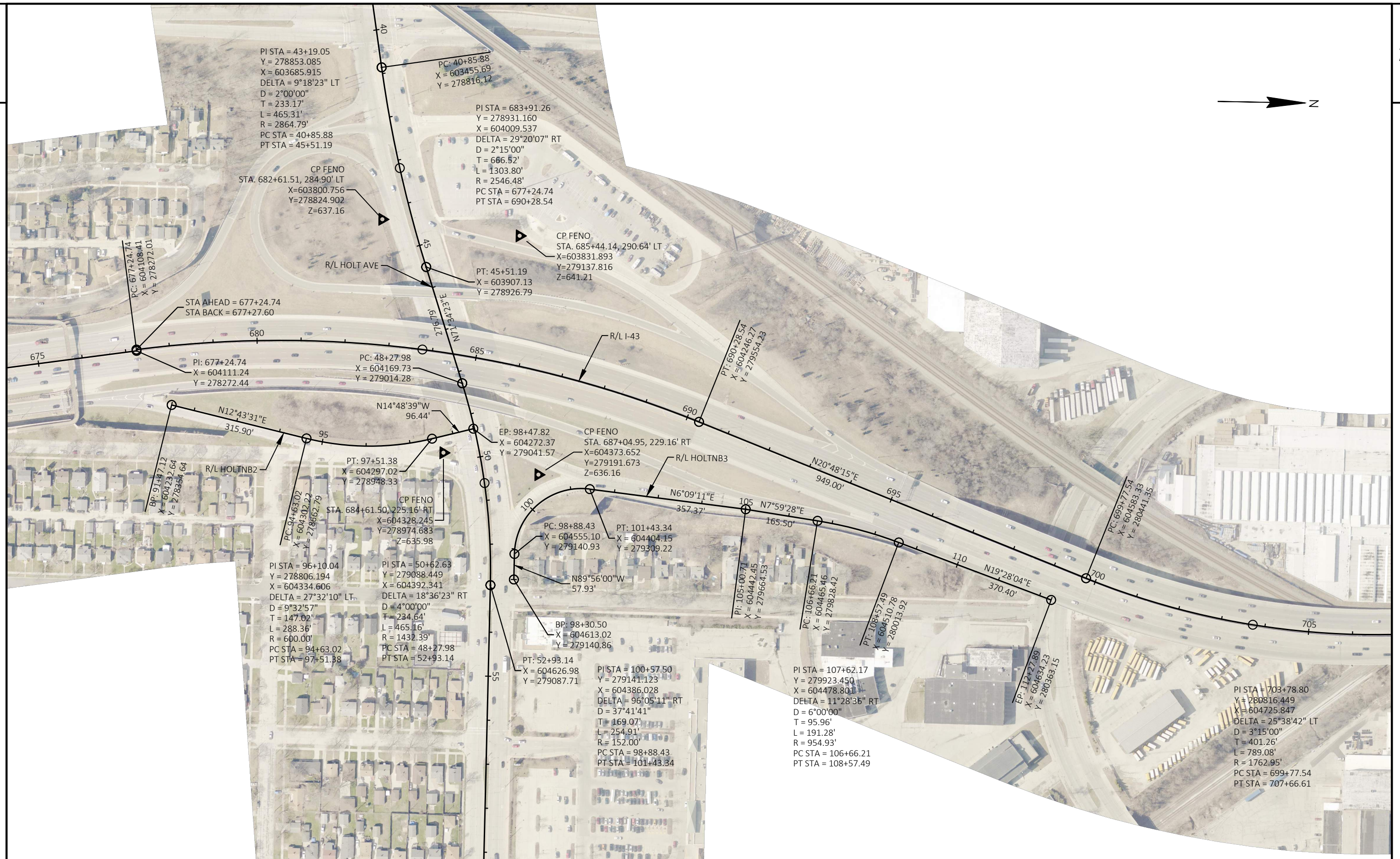
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:200 FT

WISDOT/CADDs SHEET 42





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

ALIGNMENT DETAILS

SHEET

141

E

FILE NAME : P:\60-W\13938-WISDOT IH 43 RAMPS\WORK\CAD\12280906\SHEETS\027201-AD.DWG  
LAYOUT NAME - 027202

PLOT DATE : 1/24/2025 2:49 PM

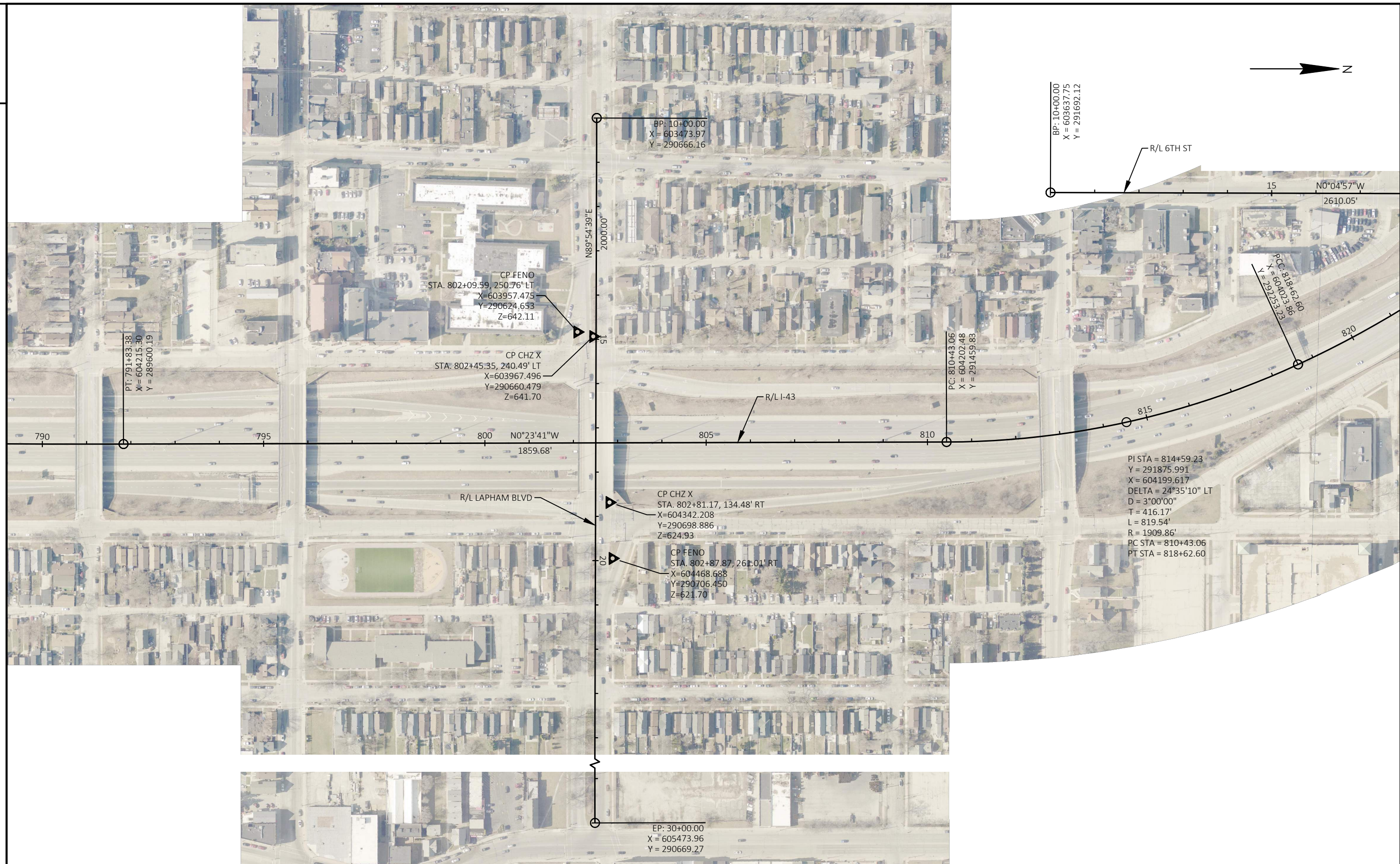
PLOT BY : CHASE ZASTROW

PLOT NAME :

PLOT SCALE : 1 IN:200 FT

WISDOT/CADDs SHEET 42





PROJECT NO: 1228-09-76

HWY: IH 43

COUNTY: MILWAUKEE

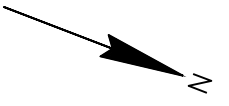
ALIGNMENT DETAILS

SHEET

142

E







Estimate Of Quantities

|      |            |                                                                                          |      |            | 1228-09-76 | 1228-09-78 |
|------|------------|------------------------------------------------------------------------------------------|------|------------|------------|------------|
| Line | Item       | Item Description                                                                         | Unit | Total      | Qty        | Qty        |
| 0002 | 203.0220   | Removing Structure (structure) 01. B-40-265                                              | EACH | 1.000      |            | 1.000      |
| 0004 | 204.0100   | Removing Concrete Pavement                                                               | SY   | 2,947.000  | 2,947.000  |            |
| 0006 | 204.0110   | Removing Asphaltic Surface                                                               | SY   | 24.000     | 24.000     |            |
| 0008 | 204.0120   | Removing Asphaltic Surface Milling                                                       | SY   | 34,020.000 | 34,020.000 |            |
| 0010 | 204.0150   | Removing Curb & Gutter                                                                   | LF   | 235.000    | 235.000    |            |
| 0012 | 204.0155   | Removing Concrete Sidewalk                                                               | SY   | 704.000    | 704.000    |            |
| 0014 | 204.0165   | Removing Guardrail                                                                       | LF   | 500.000    | 500.000    |            |
| 0016 | 204.0195   | Removing Concrete Bases                                                                  | EACH | 20.000     | 20.000     |            |
| 0018 | 204.9060.S | Removing (item description) 01. Removing Traffic Signals Street Lighting, Holt at 4th    | EACH | 1.000      | 1.000      |            |
| 0020 | 204.9060.S | Removing (item description) 02. Removing Traffic Signals Street Lighting, 6th at Mineral | EACH | 1.000      | 1.000      |            |
| 0022 | 204.9060.S | Removing (item description) 03. Removing Loop Detector Wire and Lead-In Cable            | EACH | 1.000      | 1.000      |            |
| 0024 | 205.0100   | Excavation Common                                                                        | CY   | 1,476.000  | 1,476.000  |            |
| 0026 | 213.0100   | Finishing Roadway (project) 01. 1228-09-76                                               | EACH | 1.000      | 1.000      |            |
| 0028 | 305.0120   | Base Aggregate Dense 1 1/4-Inch                                                          | TON  | 2,185.000  | 2,185.000  |            |
| 0030 | 310.0110   | Base Aggregate Open-Graded                                                               | TON  | 12.000     | 12.000     |            |
| 0032 | 312.0110   | Select Crushed Material                                                                  | TON  | 943.000    | 943.000    |            |
| 0034 | 320.0145   | Concrete Base 8-Inch                                                                     | SY   | 220.000    | 220.000    |            |
| 0036 | 390.0100   | Removing Pavement for Base Patching                                                      | CY   | 886.000    | 886.000    |            |
| 0038 | 390.0405   | Base Patching Concrete SHES                                                              | CY   | 886.000    | 886.000    |            |
| 0040 | 415.0090   | Concrete Pavement 9-Inch                                                                 | SY   | 385.000    | 385.000    |            |
| 0042 | 415.1410   | Concrete Pavement Approach Slab HES                                                      | SY   | 40.000     | 40.000     |            |
| 0044 | 416.0610   | Drilled Tie Bars                                                                         | EACH | 857.000    | 857.000    |            |
| 0046 | 416.0620   | Drilled Dowel Bars                                                                       | EACH | 3,566.000  | 3,566.000  |            |
| 0048 | 416.1725   | Concrete Pavement Replacement SHES                                                       | SY   | 315.000    | 315.000    |            |
| 0050 | 455.0605   | Tack Coat                                                                                | GAL  | 5,035.000  | 5,035.000  |            |
| 0052 | 460.2000   | Incentive Density HMA Pavement                                                           | DOL  | 5,470.000  | 5,470.000  |            |
| 0054 | 460.6623   | HMA Pavement 3 MT 58-28 V                                                                | TON  | 3,779.000  | 3,779.000  |            |
| 0056 | 460.6624   | HMA Pavement 4 MT 58-28 V                                                                | TON  | 4,753.000  | 4,753.000  |            |
| 0058 | 465.0120   | Asphaltic Surface Driveways and Field Entrances                                          | TON  | 5.000      | 5.000      |            |
| 0060 | 465.0125   | Asphaltic Surface Temporary                                                              | TON  | 44.000     | 44.000     |            |
| 0062 | 502.0100   | Concrete Masonry Bridges                                                                 | CY   | 38.000     |            | 38.000     |
| 0064 | 502.3200   | Protective Surface Treatment                                                             | SY   | 61.000     |            | 61.000     |
| 0066 | 502.3205   | Pigmented Surface Sealer Reseal                                                          | SY   | 366.000    | 366.000    |            |
| 0068 | 502.3210   | Pigmented Surface Sealer                                                                 | SY   | 34.000     |            | 34.000     |
| 0070 | 502.3215   | Protective Surface Treatment Reseal                                                      | SY   | 749.000    | 749.000    |            |
| 0072 | 503.0136   | Prestressed Girder Type I 36-Inch                                                        | LF   | 69.000     |            | 69.000     |
| 0074 | 505.0600   | Bar Steel Reinforcement HS Coated Structures                                             | LB   | 7,407.000  |            | 7,407.000  |
| 0076 | 505.0908   | Bar Couplers No. 8                                                                       | EACH | 6.000      |            | 6.000      |
| 0078 | 506.2605   | Bearing Pads Elastomeric Non-Laminated                                                   | EACH | 2.000      |            | 2.000      |
| 0080 | 509.0301   | Preparation Decks Type 1                                                                 | SY   | 1.000      | 1.000      |            |
| 0082 | 509.0310.S | Sawing Pavement Deck Preparation Areas                                                   | LF   | 10.000     | 10.000     |            |
| 0084 | 509.1200   | Curb Repair                                                                              | LF   | 4.000      | 4.000      |            |
| 0086 | 509.1500   | Concrete Surface Repair                                                                  | SF   | 41.000     | 41.000     |            |
| 0088 | 509.2100.S | Concrete Masonry Deck Repair                                                             | CY   | 1.000      | 1.000      |            |
| 0090 | 509.5100.S | Polymer Overlay                                                                          | SY   | 3,504.000  | 3,504.000  |            |
| 0092 | 509.9025.S | Epoxy Injection Crack Repair                                                             | LF   | 194.000    | 194.000    |            |
| 0094 | 509.9026.S | Cored Holes 2-Inch Diameter                                                              | EACH | 1.000      | 1.000      |            |
| 0096 | 531.8990   | Anchor Assemblies Poles on Structures                                                    | EACH | 1.000      |            | 1.000      |
| 0098 | 601.0319   | Concrete Curb & Gutter 19-Inch                                                           | LF   | 15.000     | 15.000     |            |



Estimate Of Quantities

|      |          | 1228-09-76                                                    |      | 1228-09-78 |            |
|------|----------|---------------------------------------------------------------|------|------------|------------|
| Line | Item     | Item Description                                              | Unit | Total      | Qty        |
| 0100 | 601.0331 | Concrete Curb & Gutter 31-Inch                                | LF   | 1,269.000  | 1,269.000  |
| 0102 | 601.0600 | Concrete Curb Pedestrian                                      | LF   | 301.000    | 301.000    |
| 0104 | 602.0410 | Concrete Sidewalk 5-Inch                                      | SF   | 6,152.000  | 6,152.000  |
| 0106 | 602.0505 | Curb Ramp Detectable Warning Field Yellow                     | SF   | 457.000    | 457.000    |
| 0108 | 602.0605 | Curb Ramp Detectable Warning Field Radial Yellow              | SF   | 147.000    | 147.000    |
| 0110 | 602.0860 | Concrete Driveway HES 6-Inch                                  | SY   | 29.000     | 29.000     |
| 0112 | 603.8000 | Concrete Barrier Temporary Precast Delivered                  | LF   | 250.000    | 250.000    |
| 0114 | 603.8125 | Concrete Barrier Temporary Precast Installed                  | LF   | 250.000    | 250.000    |
| 0116 | 611.0410 | Reconstructing Catch Basins                                   | EACH | 1.000      | 1.000      |
| 0118 | 611.0430 | Reconstructing Inlets                                         | EACH | 2.000      | 2.000      |
| 0120 | 611.8110 | Adjusting Manhole Covers                                      | EACH | 1.000      | 1.000      |
| 0122 | 611.8115 | Adjusting Inlet Covers                                        | EACH | 7.000      | 7.000      |
| 0124 | 612.0406 | Pipe Underdrain Wrapped 6-Inch                                | LF   | 100.000    | 100.000    |
| 0126 | 614.0800 | Crash Cushions Permanent                                      | EACH | 1.000      | 1.000      |
| 0128 | 614.2300 | MGS Guardrail 3                                               | LF   | 450.000    | 450.000    |
| 0130 | 614.2610 | MGS Guardrail Terminal EAT                                    | EACH | 1.000      | 1.000      |
| 0132 | 614.2620 | MGS Guardrail Terminal Type 2                                 | EACH | 1.000      | 1.000      |
| 0134 | 616.0206 | Fence Chain Link 6-FT                                         | LF   | 1,100.000  | 1,100.000  |
| 0136 | 616.0329 | Gates Chain Link (width) 01. 22-FT                            | EACH | 1.000      | 1.000      |
| 0138 | 616.0408 | Fence Chain Link Salvaged 8-FT                                | LF   | 88.000     | 88.000     |
| 0140 | 618.0100 | Maintenance and Repair of Haul Roads (project) 01. 1228-09-76 | EACH | 1.000      | 1.000      |
| 0142 | 619.1000 | Mobilization                                                  | EACH | 1.000      | 0.918      |
| 0144 | 620.0300 | Concrete Median Sloped Nose                                   | SF   | 158.000    | 158.000    |
| 0146 | 624.0100 | Water                                                         | MGAL | 40.000     | 40.000     |
| 0148 | 625.0100 | Topsoil                                                       | SY   | 570.000    | 570.000    |
| 0150 | 627.0200 | Mulching                                                      | SY   | 150.000    | 150.000    |
| 0152 | 628.1905 | Mobilizations Erosion Control                                 | EACH | 4.000      | 4.000      |
| 0154 | 628.1910 | Mobilizations Emergency Erosion Control                       | EACH | 2.000      | 2.000      |
| 0156 | 628.7020 | Inlet Protection Type D                                       | EACH | 100.000    | 100.000    |
| 0158 | 628.7560 | Tracking Pads                                                 | EACH | 2.000      | 2.000      |
| 0160 | 629.0210 | Fertilizer Type B                                             | CWT  | 1.000      | 1.000      |
| 0162 | 630.0200 | Seeding Temporary                                             | LB   | 4.000      | 4.000      |
| 0164 | 631.0300 | Sod Water                                                     | MGAL | 17.000     | 17.000     |
| 0166 | 631.1000 | Sod Lawn                                                      | SY   | 570.000    | 570.000    |
| 0168 | 634.0614 | Posts Wood 4x6-Inch X 14-FT                                   | EACH | 14.000     | 14.000     |
| 0170 | 634.0616 | Posts Wood 4x6-Inch X 16-FT                                   | EACH | 54.000     | 54.000     |
| 0172 | 634.0618 | Posts Wood 4x6-Inch X 18-FT                                   | EACH | 21.000     | 21.000     |
| 0174 | 634.0620 | Posts Wood 4x6-Inch X 20-FT                                   | EACH | 8.000      | 8.000      |
| 0176 | 637.2210 | Signs Type II Reflective H                                    | SF   | 1,446.730  | 1,446.730  |
| 0178 | 637.2215 | Signs Type II Reflective H Folding                            | SF   | 169.680    | 169.680    |
| 0180 | 637.2230 | Signs Type II Reflective F                                    | SF   | 409.500    | 409.500    |
| 0182 | 638.2102 | Moving Signs Type II                                          | EACH | 3.000      | 3.000      |
| 0184 | 638.2602 | Removing Signs Type II                                        | EACH | 216.000    | 216.000    |
| 0186 | 638.3000 | Removing Small Sign Supports                                  | EACH | 107.000    | 107.000    |
| 0188 | 643.0300 | Traffic Control Drums                                         | DAY  | 31,273.000 | 31,273.000 |
| 0190 | 643.0420 | Traffic Control Barricades Type III                           | DAY  | 2,642.000  | 2,642.000  |
| 0192 | 643.0705 | Traffic Control Warning Lights Type A                         | DAY  | 5,284.000  | 5,284.000  |
| 0194 | 643.0715 | Traffic Control Warning Lights Type C                         | DAY  | 5,335.000  | 5,335.000  |
| 0196 | 643.0800 | Traffic Control Arrow Boards                                  | DAY  | 453.000    | 453.000    |



Estimate Of Quantities

|      |            |                                                  |      | 1228-09-76 | 1228-09-78 |
|------|------------|--------------------------------------------------|------|------------|------------|
| Line | Item       | Item Description                                 | Unit | Total      | Qty        |
| 0198 | 643.0900   | Traffic Control Signs                            | DAY  | 18,708.000 | 18,708.000 |
| 0200 | 643.0910   | Traffic Control Covering Signs Type I            | EACH | 5.000      | 5.000      |
| 0202 | 643.0920   | Traffic Control Covering Signs Type II           | EACH | 10.000     | 10.000     |
| 0204 | 643.1000   | Traffic Control Signs Fixed Message              | SF   | 343.000    | 343.000    |
| 0206 | 643.1050   | Traffic Control Signs PCMS                       | DAY  | 453.000    | 453.000    |
| 0208 | 643.1070   | Traffic Control Cones 42-Inch                    | DAY  | 1,738.000  | 1,738.000  |
| 0210 | 643.3105   | Temporary Marking Line Paint 4-Inch              | LF   | 1,942.000  | 1,942.000  |
| 0212 | 643.3180   | Temporary Marking Line Removable Tape 6-Inch     | LF   | 2,892.000  | 2,892.000  |
| 0214 | 643.3205   | Temporary Marking Line Paint 8-Inch              | LF   | 4,922.000  | 4,922.000  |
| 0216 | 643.3550   | Temporary Marking Arrow Removable Tape           | EACH | 2.000      | 2.000      |
| 0218 | 643.3805   | Temporary Marking Stop Line Paint 18-Inch        | LF   | 717.000    | 717.000    |
| 0220 | 643.3960   | Temporary Marking Removable Mask Out Tape 6-Inch | LF   | 80.000     | 80.000     |
| 0222 | 643.4100   | Traffic Control Interim Lane Closure             | EACH | 8.000      | 8.000      |
| 0224 | 643.5000   | Traffic Control                                  | EACH | 1.000      | 0.848      |
| 0226 | 644.1601   | Temporary Pedestrian Curb Ramp                   | DAY  | 88.000     | 88.000     |
| 0228 | 644.1605   | Temporary Pedestrian Detectable Warning Field    | SF   | 70.000     | 70.000     |
| 0230 | 644.1810   | Temporary Pedestrian Barricade                   | LF   | 1,573.000  | 1,573.000  |
| 0232 | 644.1900.S | Temporary Audible Message Devices                | DAY  | 2,384.000  | 2,384.000  |
| 0234 | 645.0220   | Geogrid Type SR                                  | SY   | 1,436.000  | 1,436.000  |
| 0236 | 646.1020   | Marking Line Epoxy 4-Inch                        | LF   | 2,931.000  | 2,931.000  |
| 0238 | 646.2025   | Marking Line Grooved Black Epoxy 6-Inch          | LF   | 213.000    | 213.000    |
| 0240 | 646.2040   | Marking Line Grooved Wet Ref Epoxy 6-Inch        | LF   | 17,240.000 | 17,240.000 |
| 0242 | 646.2050   | Marking Line Grooved Permanent Tape 6-Inch       | LF   | 213.000    | 213.000    |
| 0244 | 646.3020   | Marking Line Epoxy 8-Inch                        | LF   | 1,356.000  | 1,356.000  |
| 0246 | 646.4025   | Marking Line Grooved Black Epoxy 10-Inch         | LF   | 172.000    | 172.000    |
| 0248 | 646.4040   | Marking Line Grooved Wet Ref Epoxy 10-Inch       | LF   | 6,290.000  | 6,290.000  |
| 0250 | 646.4050   | Marking Line Grooved Permanent Tape 10-Inch      | LF   | 126.000    | 126.000    |
| 0252 | 646.5020   | Marking Arrow Epoxy                              | EACH | 38.000     | 38.000     |
| 0254 | 646.5120   | Marking Word Epoxy                               | EACH | 5.000      | 5.000      |
| 0256 | 646.5220   | Marking Symbol Epoxy                             | EACH | 4.000      | 4.000      |
| 0258 | 646.6120   | Marking Stop Line Epoxy 18-Inch                  | LF   | 656.000    | 656.000    |
| 0260 | 646.7220   | Marking Chevron Epoxy 24-Inch                    | LF   | 642.000    | 642.000    |
| 0262 | 646.8120   | Marking Curb Epoxy                               | LF   | 240.000    | 240.000    |
| 0264 | 646.8220   | Marking Island Nose Epoxy                        | EACH | 5.000      | 5.000      |
| 0266 | 646.9200   | Marking Removal Line Wide                        | LF   | 1,552.000  | 1,552.000  |
| 0268 | 652.0210   | Conduit Rigid Nonmetallic Schedule 40 1-Inch     | LF   | 4.000      | 4.000      |
| 0270 | 652.0225   | Conduit Rigid Nonmetallic Schedule 40 2-Inch     | LF   | 910.000    | 910.000    |
| 0272 | 652.0230   | Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch | LF   | 251.000    | 251.000    |
| 0274 | 652.0235   | Conduit Rigid Nonmetallic Schedule 40 3-Inch     | LF   | 630.000    | 630.000    |
| 0276 | 652.0605   | Conduit Special 2-Inch                           | LF   | 425.000    | 425.000    |
| 0278 | 652.0615   | Conduit Special 3-Inch                           | LF   | 1,190.000  | 1,190.000  |
| 0280 | 652.0800   | Conduit Loop Detector                            | LF   | 2,250.000  | 2,250.000  |
| 0282 | 653.0135   | Pull Boxes Steel 24x36-Inch                      | EACH | 8.000      | 8.000      |
| 0284 | 653.0140   | Pull Boxes Steel 24x42-Inch                      | EACH | 23.000     | 23.000     |
| 0286 | 653.0222   | Junction Boxes 18x12x6-Inch                      | EACH | 1.000      | 1.000      |
| 0288 | 653.0905   | Removing Pull Boxes                              | EACH | 3.000      | 3.000      |
| 0290 | 654.0101   | Concrete Bases Type 1                            | EACH | 16.000     | 16.000     |
| 0292 | 654.0102   | Concrete Bases Type 2                            | EACH | 5.000      | 5.000      |
| 0294 | 654.0110   | Concrete Bases Type 10                           | EACH | 4.000      | 4.000      |



Estimate Of Quantities

|      |          |                                                                                                                    |      |            | 1228-09-76 | 1228-09-78 |
|------|----------|--------------------------------------------------------------------------------------------------------------------|------|------------|------------|------------|
| Line | Item     | Item Description                                                                                                   | Unit | Total      | Qty        | Qty        |
| 0296 | 654.0120 | Concrete Bases Type 10-Special                                                                                     | EACH | 3.000      | 3.000      |            |
| 0298 | 654.0217 | Concrete Control Cabinet Bases Type 9 Special                                                                      | EACH | 2.000      | 2.000      |            |
| 0300 | 655.0210 | Cable Traffic Signal 3-14 AWG                                                                                      | LF   | 1,390.000  | 1,390.000  |            |
| 0302 | 655.0230 | Cable Traffic Signal 5-14 AWG                                                                                      | LF   | 1,100.000  | 1,100.000  |            |
| 0304 | 655.0240 | Cable Traffic Signal 7-14 AWG                                                                                      | LF   | 2,425.000  | 2,425.000  |            |
| 0306 | 655.0260 | Cable Traffic Signal 12-14 AWG                                                                                     | LF   | 2,405.000  | 2,405.000  |            |
| 0308 | 655.0305 | Cable Type UF 2-12 AWG Grounded                                                                                    | LF   | 1,075.000  | 1,075.000  |            |
| 0310 | 655.0515 | Electrical Wire Traffic Signals 10 AWG                                                                             | LF   | 3,800.000  | 3,800.000  |            |
| 0312 | 655.0610 | Electrical Wire Lighting 12 AWG                                                                                    | LF   | 1,450.000  | 1,450.000  |            |
| 0314 | 655.0700 | Loop Detector Lead In Cable                                                                                        | LF   | 5,200.000  | 5,200.000  |            |
| 0316 | 655.0800 | Loop Detector Wire                                                                                                 | LF   | 7,667.000  | 7,667.000  |            |
| 0318 | 655.0900 | Traffic Signal EVP Detector Cable                                                                                  | LF   | 1,390.000  | 1,390.000  |            |
| 0320 | 656.0201 | Electrical Service Meter Breaker Pedestal (location) 01. Electrical Service Meter Breaker Pedestal, Holt at 4th    | EACH | 1.000      | 1.000      |            |
| 0322 | 656.0201 | Electrical Service Meter Breaker Pedestal (location) 02. Electrical Service Meter Breaker Pedestal, Mineral at 6th | EACH | 1.000      | 1.000      |            |
| 0324 | 657.0100 | Pedestal Bases                                                                                                     | EACH | 16.000     | 16.000     |            |
| 0326 | 657.0255 | Transformer Bases Breakaway 11 1/2-Inch Bolt Circle                                                                | EACH | 5.000      | 5.000      |            |
| 0328 | 657.0310 | Poles Type 3                                                                                                       | EACH | 5.000      | 5.000      |            |
| 0330 | 657.0405 | Traffic Signal Standards Aluminum 3.5-FT                                                                           | EACH | 5.000      | 5.000      |            |
| 0332 | 657.0420 | Traffic Signal Standards Aluminum 13-FT                                                                            | EACH | 7.000      | 7.000      |            |
| 0334 | 657.0425 | Traffic Signal Standards Aluminum 15-FT                                                                            | EACH | 3.000      | 3.000      |            |
| 0336 | 657.0430 | Traffic Signal Standards Aluminum 10-FT                                                                            | EACH | 2.000      | 2.000      |            |
| 0338 | 657.0609 | Luminaire Arms Single Member 4-Inch Clamp 6-FT                                                                     | EACH | 6.000      | 6.000      |            |
| 0340 | 658.0173 | Traffic Signal Face 3S 12-Inch                                                                                     | EACH | 25.000     | 25.000     |            |
| 0342 | 658.0174 | Traffic Signal Face 4S 12-Inch                                                                                     | EACH | 8.000      | 8.000      |            |
| 0344 | 658.0416 | Pedestrian Signal Face 16-Inch                                                                                     | EACH | 14.000     | 14.000     |            |
| 0346 | 658.5070 | Signal Mounting Hardware (location) 01. Holt at 4th                                                                | EACH | 1.000      | 1.000      |            |
| 0348 | 658.5070 | Signal Mounting Hardware (location) 02. 6th at Mineral                                                             | EACH | 1.000      | 1.000      |            |
| 0350 | 659.1125 | Luminaires Utility LED C                                                                                           | EACH | 10.000     | 10.000     |            |
| 0352 | 661.0201 | Temporary Traffic Signals for Intersections (location) 01. Holt at 4th                                             | EACH | 1.000      | 1.000      |            |
| 0354 | 661.0201 | Temporary Traffic Signals for Intersections (location) 02. 6th at Mineral                                          | EACH | 1.000      | 1.000      |            |
| 0356 | 670.0101 | Field System Integrator                                                                                            | EACH | 1.000      | 1.000      |            |
| 0358 | 690.0150 | Sawing Asphalt                                                                                                     | LF   | 1,875.000  | 1,875.000  |            |
| 0360 | 690.0250 | Sawing Concrete                                                                                                    | LF   | 10,509.000 | 10,509.000 |            |
| 0362 | 715.0502 | Incentive Strength Concrete Structures                                                                             | DOL  | 500.000    |            | 500.000    |
| 0364 | 715.0720 | Incentive Compressive Strength Concrete Pavement                                                                   | DOL  | 500.000    | 500.000    |            |
| 0366 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR                                                                        | HRS  | 1,200.000  | 1,200.000  |            |
| 0368 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR                                                                          | HRS  | 4,800.000  | 4,800.000  |            |
| 0370 | SPV.0060 | Special 01. Cleaning and Sealing Concrete Girder Ends                                                              | EACH | 11.000     | 11.000     |            |
| 0372 | SPV.0060 | Special 02. Embedded Galvanic Anodes                                                                               | EACH | 14.000     | 14.000     |            |
| 0374 | SPV.0060 | Special 03. Adjusting Water Boxes                                                                                  | EACH | 13.000     | 13.000     |            |
| 0376 | SPV.0060 | Special 05. Blinders for Type II Signs                                                                             | EACH | 1.000      | 1.000      |            |
| 0378 | SPV.0060 | Special 06. Install Wireless Traffic Sensor                                                                        | EACH | 26.000     | 26.000     |            |
| 0380 | SPV.0060 | Special 07. Remove Pole and Wire                                                                                   | EACH | 18.000     | 18.000     |            |
| 0382 | SPV.0060 | Special 08. Remove Traffic Signal Face                                                                             | EACH | 35.000     | 35.000     |            |
| 0384 | SPV.0060 | Special 09. Voice Instruction Audible Pushbutton                                                                   | EACH | 1.000      | 1.000      |            |
| 0386 | SPV.0060 | Special 10. Temporary Infrared EVP System, Holt at 4th                                                             | EACH | 1.000      | 1.000      |            |
| 0388 | SPV.0060 | Special 11. Temporary Infrared EVP System, 6th at Mineral                                                          | EACH | 1.000      | 1.000      |            |



Estimate Of Quantities

| 1228-09-76 |          |                                                                                          |      |           | 1228-09-78 |         |
|------------|----------|------------------------------------------------------------------------------------------|------|-----------|------------|---------|
| Line       | Item     | Item Description                                                                         | Unit | Total     | Qty        | Qty     |
| 0390       | SPV.0060 | Special 12. Install Type 9 Pole                                                          | EACH | 1.000     | 1.000      |         |
| 0392       | SPV.0060 | Special 13. Install Type 10 Pole                                                         | EACH | 3.000     | 3.000      |         |
| 0394       | SPV.0060 | Special 14. Install Type 9 Special Pole                                                  | EACH | 2.000     | 2.000      |         |
| 0396       | SPV.0060 | Special 15. Install Type 10 Special Pole                                                 | EACH | 1.000     | 1.000      |         |
| 0398       | SPV.0060 | Special 16. Install Monotube Arms 30-FT                                                  | EACH | 4.000     | 4.000      |         |
| 0400       | SPV.0060 | Special 17. Install Monotube Arms 40-FT Special                                          | EACH | 1.000     | 1.000      |         |
| 0402       | SPV.0060 | Special 18. Install Monotube Arms 45-FT Special                                          | EACH | 2.000     | 2.000      |         |
| 0404       | SPV.0060 | Special 19. Install Luminaire Arms Steel 15-FT                                           | EACH | 4.000     | 4.000      |         |
| 0406       | SPV.0060 | Special 20. Traffic Control Close-Open Freeway Entrance Ramp                             | EACH | 47.000    | 47.000     |         |
| 0408       | SPV.0060 | Special 21. Traffic Control Full Freeway Closure                                         | EACH | 8.000     |            | 8.000   |
| 0410       | SPV.0060 | Special 22. Traffic Control Local Road Lane Closures                                     | EACH | 99.000    | 99.000     |         |
| 0412       | SPV.0060 | Special 23. Field Facilities Office Space                                                | EACH | 1.000     | 1.000      |         |
| 0414       | SPV.0060 | Special 24. Traffic Flashing Beacon System, IH 43 exit ramp at Mineral St (rt side ahead | EACH | 1.000     | 1.000      |         |
| 0416       | SPV.0060 | Special 25. Traffic Flashing Beacon System, IH 43 exit ramp at Mineral St (rt turn bypas | EACH | 1.000     | 1.000      |         |
| 0418       | SPV.0060 | Special 26. Traffic Flashing Beacon System, IH 43 exit ramp at Mineral St (median)       | EACH | 1.000     | 1.000      |         |
| 0420       | SPV.0060 | Special 27. Traffic Flashing Beacon System, IH 43 exit ramp at Walker St (right side ahe | EACH | 1.000     | 1.000      |         |
| 0422       | SPV.0060 | Special 28. Traffic Flashing Beacon System, IH 43 exit ramp at Walker St (rt turn bypass | EACH | 1.000     | 1.000      |         |
| 0424       | SPV.0060 | Special 29. Traffic Flashing Beacon System, IH 43 exit ramp at Walker St (median)        | EACH | 1.000     | 1.000      |         |
| 0426       | SPV.0060 | Special 30. Adjusting Sanitary Manhole                                                   | EACH | 1.000     | 1.000      |         |
| 0428       | SPV.0060 | Special 31. Temporary Marking Removable Mask Out Tape, Words and Arrows                  | EACH | 3.000     | 3.000      |         |
| 0430       | SPV.0060 | Special 32. Transport and Install State Furnished EVP Detector Heads, Holt at 4th        | EACH | 3.000     | 3.000      |         |
| 0432       | SPV.0060 | Special 33. Transport and Install State Furnished EVP Detector Heads, 6th at Mineral     | EACH | 4.000     | 4.000      |         |
| 0434       | SPV.0060 | Special 34. Transport and Install State Furnished Traffic Signal Cabinet, Holt at 4th    | EACH | 1.000     | 1.000      |         |
| 0436       | SPV.0060 | Special 35. Transport and Install State Furnished Traffic Signal Cabinet, 6th at Mineral | EACH | 1.000     | 1.000      |         |
| 0438       | SPV.0060 | Special 36. Transport and Install State Furnished Radar Detection System, 6th at Mineral | EACH | 1.000     | 1.000      |         |
| 0440       | SPV.0060 | Special 37. Transport Traffic Signal and Intersection Lighting Materials, Holt at 4th    | EACH | 1.000     | 1.000      |         |
| 0442       | SPV.0060 | Special 38. Transport Traffic Signal and Intersection Lighting Materials, 6th at Mineral | EACH | 1.000     | 1.000      |         |
| 0444       | SPV.0060 | Special 39. Transport and Install State Furnished APS Buttons, Holt at 4th               | EACH | 1.000     | 1.000      |         |
| 0446       | SPV.0060 | Special 40. Transport and Install State Furnished APS Buttons, 6th at Mineral            | EACH | 1.000     | 1.000      |         |
| 0448       | SPV.0060 | Special 41. Survey Project 1228-09-76                                                    | EACH | 1.000     | 1.000      |         |
| 0450       | SPV.0075 | Special 01. Pavement Cleanup Project 1228-09-76                                          | HRS  | 20.000    | 20.000     |         |
| 0452       | SPV.0090 | Special 01. Marking Crosswalk Epoxy 12-Inch                                              | LF   | 3,371.000 | 3,371.000  |         |
| 0454       | SPV.0090 | Special 02. Temporary Fence Chain Link 6-FT                                              | LF   | 280.000   |            | 280.000 |
| 0456       | SPV.0090 | Special 03. Concrete Barrier Temporary Precast Left In Place                             | LF   | 112.500   | 112.500    |         |
| 0458       | SPV.0165 | Special 01. Removing Loose Concrete                                                      | SF   | 73.000    | 73.000     |         |



| REMOVING GUARDRAIL        |              |       |      |                       |
|---------------------------|--------------|-------|------|-----------------------|
|                           |              |       |      | 204.0165              |
| LOCATION                  | STATION FROM | TO    | SIDE | REMOVING GUARDRAIL LF |
| NATIONAL AVE NB EXIT RAMP | 7+92         | 18+41 | RT   | 500                   |
| TOTAL                     |              |       |      | 500                   |

| LOCATION                      | PAVEMENT REMOVAL ITEMS                             |                                                    |                                                               |                                                |                                                    |                                                                |
|-------------------------------|----------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
|                               | 204.0100<br>REMOVING<br>CONCRETE<br>PAVEMENT<br>SY | 204.0110<br>REMOVING<br>ASPHALTIC<br>SURFACE<br>SY | 204.0120<br>REMOVING<br>ASPHALTIC<br>SURFACE<br>MILLING<br>SY | 204.0150<br>REMOVING<br>CURB &<br>GUTTER<br>LF | 204.0155<br>REMOVING<br>CONCRETE<br>SIDEWALK<br>SY | 390.0100<br>REMOVING<br>PAVEMENT<br>FOR BASE<br>PATCHING<br>CY |
| HOWARD AVE NB ENTRANCE RAMP   | --                                                 | --                                                 | 1,317                                                         | --                                             | --                                                 | 44                                                             |
| HOLT AVE NB EXIT RAMP         | 1,650                                              | --                                                 | 889                                                           | 166                                            | 42                                                 | 30                                                             |
| HOLT AVE NB ENTRANCE RAMP     | 65                                                 | --                                                 | 2,976                                                         | --                                             | 58                                                 | 149                                                            |
| LAPHAM BLVD NB EXIT RAMP      | --                                                 | --                                                 | 1,681                                                         | --                                             | --                                                 | 29                                                             |
| LAPHAM BLVD NB ENTRANCE RAMP  | --                                                 | --                                                 | 1,486                                                         | --                                             | --                                                 | 56                                                             |
| NATIONAL AVE NB EXIT RAMP     | --                                                 | --                                                 | 1,746                                                         | --                                             | --                                                 | 51                                                             |
| 6TH ST NB ENTRANCE RAMP       | 8                                                  | --                                                 | 1,910                                                         | --                                             | --                                                 | 64                                                             |
| NATIONAL AVE NB ENTRANCE RAMP | --                                                 | --                                                 | 1,954                                                         | --                                             | --                                                 | 66                                                             |
| LAPHAM BLVD SB ENTRANCE RAMP  | --                                                 | --                                                 | 1,211                                                         | --                                             | --                                                 | 61                                                             |
| LAPHAM BLVD SB EXIT RAMP      | --                                                 | --                                                 | 3,853                                                         | --                                             | --                                                 | 107                                                            |
| NATIONAL AVE SB EXIT RAMP     | --                                                 | --                                                 | 1,373                                                         | --                                             | --                                                 | 46                                                             |
| 6TH ST SB EXIT RAMP           | 9                                                  | --                                                 | 2,521                                                         | --                                             | --                                                 | 141                                                            |
| NATIONAL AVE SB ENTRANCE RAMP | 99                                                 | --                                                 | --                                                            | --                                             | --                                                 | --                                                             |
| HOLT AVE                      | 20                                                 | --                                                 | 9,559                                                         | 22                                             | 35                                                 | 42                                                             |
| LAPHAM BLVD & 5TH ST          | 115                                                | --                                                 | 790                                                           | 33                                             | 79                                                 | --                                                             |
| LAPHAM BLVD & 4TH ST          | 175                                                | --                                                 | 754                                                           | --                                             | 115                                                | --                                                             |
| MINERAL ST & 6TH ST           | 264                                                | --                                                 | --                                                            | 14                                             | 130                                                | --                                                             |
| MINERAL ST & 9TH ST           | 269                                                | --                                                 | --                                                            | --                                             | 132                                                | --                                                             |
| WALKER ST & 9TH ST            | 273                                                | 24                                                 | --                                                            | --                                             | 113                                                | --                                                             |
| TOTAL                         | 2,947                                              | 24                                                 | 34,020                                                        | 235                                            | 704                                                | 886                                                            |

EARTHWORK SUMMARY

| DIVISION            | FROM/TO STATION   | LOCATION | 205.0100<br>COMMON EXCAVATION<br>(1) |                       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL<br>(4) | AVAILABLE<br>MATERIAL<br>(5) | UNEXPANDED<br>FILL | EXPANDED FILL<br>(6) | MASS ORDINATE +/-<br>(7) | WASTE<br>(8) | COMMENT |
|---------------------|-------------------|----------|--------------------------------------|-----------------------|-----------------------------------------------|------------------------------|--------------------|----------------------|--------------------------|--------------|---------|
|                     |                   |          | CUT<br>(2)                           | EBS EXCAVATION<br>(3) |                                               |                              |                    | FACTOR<br>1.20       |                          |              |         |
| DIVISION 1          |                   |          |                                      |                       |                                               |                              |                    |                      |                          |              |         |
| HOLT AVE OFF RAMP   | 94+73.72/98+01.00 |          | 1,416                                | 0                     | 400                                           | 1,016                        | 0                  | 0                    | 1,016                    | 1,016        |         |
| DIVISION 1 SUBTOTAL |                   |          | 1,416                                | 0                     | 400                                           | 1,016                        | 0                  | 0                    | 1,016                    | 1,016        |         |
| GRAND TOTAL         |                   |          | 1,416                                | 0                     | 400                                           | 1,016                        | 0                  | 0                    | 1,016                    | 1,016        |         |
|                     |                   |          | 60                                   |                       |                                               |                              |                    |                      |                          |              |         |
| TOTAL COMMON EXC    |                   |          | 1,476                                |                       |                                               |                              |                    |                      |                          |              |         |

NOTES:  
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100  
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.  
(3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN.  
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL  
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL  
(6) EXPANDED FILL FACTOR = 1.20                      EXPANDED FILL = UNEXPANDED FILL \* FILL FACTOR  
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.  
(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



| AGGREGATE ITEMS               |                                              |                                      |               |
|-------------------------------|----------------------------------------------|--------------------------------------|---------------|
| LOCATION                      | 305.0120                                     | 312.0110                             | 624.0100      |
|                               | BASE<br>AGGREGATE<br>DENSE 1 1/4-INCH<br>TON | SELECT<br>CRUSHED<br>MATERIAL<br>TON | WATER<br>MGAL |
| HOLT AVE NB EXIT RAMP         | 1,483                                        | 943                                  | 23            |
| HOLT AVE NB ENTRANCE RAMP     | 56                                           | --                                   | 1             |
| 6TH ST NB ENTRANCE RAMP       | 3                                            | --                                   | 1             |
| 6TH ST SB EXIT RAMP           | 3                                            | --                                   | 1             |
| NATIONAL AVE SB ENTRANCE RAMP | 13                                           | --                                   | 1             |
| HOLT AVE                      | 29                                           | --                                   | 1             |
| LAPHAM BLVD & 5TH ST          | 77                                           | --                                   | 2             |
| LAPHAM BLVD & 4TH ST          | 133                                          | --                                   | 2             |
| MINERAL ST & 6TH ST           | 75                                           | --                                   | 2             |
| MINERAL ST & 9TH ST           | 149                                          | --                                   | 3             |
| WALKER ST & 9TH ST            | 164                                          | --                                   | 3             |
| TOTAL                         | 2,185                                        | 943                                  | 40            |

PIPE UNDERDRAIN ITEMS

| LOCATION              | STATION |       | SIDE | 310.0110                             | 612.0406                                |
|-----------------------|---------|-------|------|--------------------------------------|-----------------------------------------|
|                       | FROM    | TO    |      | BASE AGGREGATE<br>OPEN-GRADED<br>TON | PIPE UNDERDRAIN<br>WRAPPED 6-INCH<br>LF |
| HOLT AVE NB EXIT RAMP | 97+76   | 97+96 | RT   | 2                                    | 20                                      |
| HOLT AVE              | 49+68   | 50+46 | RT   | 10                                   | 80                                      |
| TOTAL                 |         |       |      | 12                                   | 100                                     |

CONCRETE PAVEMENT ITEMS

| LOCATION                      | 320.0145                      | 390.0405                                   | 415.0090                             | 415.1410                                           | 416.1725                                          |
|-------------------------------|-------------------------------|--------------------------------------------|--------------------------------------|----------------------------------------------------|---------------------------------------------------|
|                               | CONCRETE<br>BASE 8-INCH<br>SY | BASE<br>PATCHING<br>CONCRETE<br>SHES<br>CY | CONCRETE<br>PAVEMENT<br>9-INCH<br>SY | CONCRETE<br>PAVEMENT<br>APPROACH<br>SLAB HES<br>SY | CONCRETE<br>PAVEMENT<br>REPLACEMENT<br>SHES<br>SY |
| HOWARD AVE NB ENTRANCE RAMP   | --                            | 44                                         | --                                   | --                                                 | --                                                |
| HOLT AVE NB EXIT RAMP         | --                            | 30                                         | --                                   | --                                                 | --                                                |
| HOLT AVE NB ENTRANCE RAMP     | 30                            | 149                                        | --                                   | --                                                 | --                                                |
| LAPHAM BLVD NB EXIT RAMP      | --                            | 29                                         | --                                   | --                                                 | --                                                |
| LAPHAM BLVD NB ENTRANCE RAMP  | --                            | 56                                         | --                                   | --                                                 | --                                                |
| NATIONAL AVE NB EXIT RAMP     | --                            | 51                                         | --                                   | --                                                 | --                                                |
| 6TH ST NB ENTRANCE RAMP       | 8                             | 64                                         | --                                   | --                                                 | --                                                |
| NATIONAL AVE NB ENTRANCE RAMP | --                            | 66                                         | --                                   | --                                                 | --                                                |
| LAPHAM BLVD SB ENTRANCE RAMP  | --                            | 61                                         | --                                   | --                                                 | --                                                |
| LAPHAM BLVD SB EXIT RAMP      | --                            | 107                                        | --                                   | --                                                 | --                                                |
| NATIONAL AVE SB EXIT RAMP     | --                            | 46                                         | --                                   | --                                                 | --                                                |
| 6TH ST SB EXIT RAMP           | 9                             | 141                                        | --                                   | --                                                 | --                                                |
| NATIONAL AVE SB ENTRANCE RAMP | --                            | --                                         | --                                   | 40                                                 | 99                                                |
| HOLT AVE                      | 10                            | 42                                         | --                                   | --                                                 | --                                                |
| LAPHAM BLVD & 5TH ST          | 33                            | --                                         | 14                                   | --                                                 | --                                                |
| LAPHAM BLVD & 4TH ST          | 55                            | --                                         | 35                                   | --                                                 | --                                                |
| MINERAL ST & 6TH ST           | 16                            | --                                         | --                                   | --                                                 | 216                                               |
| MINERAL ST & 9TH ST           | 30                            | --                                         | 162                                  | --                                                 | --                                                |
| WALKER ST & 9TH ST            | 29                            | --                                         | 174                                  | --                                                 | --                                                |
| TOTAL                         | 220                           | 886                                        | 385                                  | 40                                                 | 315                                               |

DRILLED TIE BARS & DOWEL BARS

| LOCATION                      | 416.0610                    | 416.0620                      |
|-------------------------------|-----------------------------|-------------------------------|
|                               | DRILLED TIE<br>BARS<br>EACH | DRILLED<br>DOWEL BARS<br>EACH |
| HOLT AVE NB EXIT RAMP         | 16                          | 214                           |
| HOLT AVE NB ENTRANCE RAMP     | 65                          | 134                           |
| LAPHAM BLVD NB EXIT RAMP      | --                          | 598                           |
| LAPHAM BLVD NB ENTRANCE RAMP  | --                          | 128                           |
| NATIONAL AVE NB EXIT RAMP     | --                          | 224                           |
| 6TH ST NB ENTRANCE RAMP       | --                          | 204                           |
| NATIONAL AVE NB ENTRANCE RAMP | --                          | 256                           |
| LAPHAM BLVD SB ENTRANCE RAMP  | --                          | 268                           |
| LAPHAM BLVD SB EXIT RAMP      | --                          | 248                           |
| NATIONAL AVE SB EXIT RAMP     | --                          | 424                           |
| 6TH ST SB EXIT RAMP           | 51                          | 256                           |
| NATIONAL AVE SB ENTRANCE RAMP | 2                           | 364                           |
| HOLT AVE                      | 90                          | 96                            |
| LAPHAM BLVD & 5TH ST          | 94                          | --                            |
| LAPHAM BLVD & 4TH ST          | 143                         | --                            |
| MINERAL ST & 6TH ST           | 153                         | 100                           |
| MINERAL ST & 9TH ST           | 122                         | 28                            |
| WALKER ST & 9TH ST            | 121                         | 24                            |
| TOTAL                         | 857                         | 3,566                         |

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



| LOCATION                      | ASPHALTIC PAVEMENT ITEMS |                                          |                                     |                                     |                                                              |                                       |
|-------------------------------|--------------------------|------------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------------------------------|---------------------------------------|
|                               | 455.0605                 | 460.2000                                 | 460.6623                            | 460.6624                            | 465.0120                                                     | 465.0125                              |
|                               | TACK COAT<br>GAL         | INCENTIVE DENSITY<br>HMA PAVEMENT<br>DOL | HMA PAVEMENT<br>3 MT 58-28 V<br>TON | HMA PAVEMENT<br>4 MT 58-28 V<br>TON | ASPHALTIC SURFACE<br>DRIVEWAYS AND<br>FIELD ENTRANCES<br>TON | ASPHALTIC SURFACE<br>TEMPORARY<br>TON |
| HOWARD AVE NB ENTRANCE RAMP   | 185                      | 207                                      | 190                                 | 133                                 | --                                                           | 1                                     |
| HOLT AVE NB EXIT RAMP         | 356                      | 549                                      | 602                                 | 256                                 | --                                                           | 1                                     |
| HOLT AVE NB ENTRANCE RAMP     | 421                      | 470                                      | 432                                 | 303                                 | --                                                           | 3                                     |
| LAPHAM BLVD NB EXIT RAMP      | 236                      | 264                                      | 242                                 | 170                                 | --                                                           | 1                                     |
| LAPHAM BLVD NB ENTRANCE RAMP  | 208                      | 233                                      | 214                                 | 150                                 | --                                                           | 1                                     |
| NATIONAL AVE NB EXIT RAMP     | 245                      | 273                                      | 251                                 | 176                                 | --                                                           | 1                                     |
| 6TH ST NB ENTRANCE RAMP       | 269                      | 300                                      | 276                                 | 193                                 | --                                                           | 2                                     |
| NATIONAL AVE NB ENTRANCE RAMP | 274                      | 306                                      | 281                                 | 197                                 | --                                                           | 1                                     |
| LAPHAM BLVD SB ENTRANCE RAMP  | 170                      | 190                                      | 175                                 | 122                                 | --                                                           | 1                                     |
| LAPHAM BLVD SB EXIT RAMP      | 540                      | 603                                      | 554                                 | 388                                 | --                                                           | 1                                     |
| NATIONAL AVE SB EXIT RAMP     | 193                      | 216                                      | 198                                 | 139                                 | --                                                           | 2                                     |
| 6TH ST SB EXIT RAMP           | 355                      | 396                                      | 364                                 | 255                                 | --                                                           | 2                                     |
| HOLT AVE                      | 1,340                    | 1,233                                    | --                                  | 1,926                               | --                                                           | 10                                    |
| LAPHAM BLVD & 5TH ST          | 116                      | 106                                      | --                                  | 166                                 | --                                                           | 7                                     |
| LAPHAM BLVD & 4TH ST          | 114                      | 104                                      | --                                  | 163                                 | --                                                           | 9                                     |
| MINERAL ST & 6TH ST           | 3                        | 3                                        | --                                  | 4                                   | --                                                           | 1                                     |
| MINERAL ST & 9TH ST           | 5                        | 4                                        | --                                  | 6                                   | --                                                           | --                                    |
| WALKER ST & 9TH ST            | 5                        | 4                                        | --                                  | 6                                   | 5                                                            | --                                    |
| TOTAL                         | 5,035                    | 5,470                                    | 3,779                               | 4,753                               | 5                                                            | 44                                    |

| LOCATION                         | CONCRETE CURB & GUTTER ITEMS               |                                            |                                      |                                         |
|----------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------|-----------------------------------------|
|                                  | 601.0319                                   | 601.0331                                   | 601.0600                             | 620.0300                                |
|                                  | CONCRETE<br>CURB & GUTTER<br>19-INCH<br>LF | CONCRETE<br>CURB & GUTTER<br>31-INCH<br>LF | CONCRETE<br>CURB<br>PEDESTRIAN<br>LF | CONCRETE<br>MEDIAN SLOPED<br>NOSE<br>SF |
| HOLT AVE NB EXIT RAMP            | --                                         | 166                                        | 42                                   | --                                      |
| HOLT AVE NB ENTRANCE RAMP        | --                                         | 103                                        | 36                                   | 6                                       |
| NATIONAL AVE SB ENTRANCE<br>RAMP | --                                         | 57                                         | --                                   | --                                      |
| HOLT AVE                         | --                                         | 56                                         | 17                                   | --                                      |
| LAPHAM BLVD & 5TH ST             | --                                         | 125                                        | 67                                   | 63                                      |
| LAPHAM BLVD & 4TH ST             | --                                         | 236                                        | 50                                   | 60                                      |
| MINERAL ST & 6TH ST              | --                                         | 124                                        | 49                                   | --                                      |
| MINERAL ST & 9TH ST              | --                                         | 201                                        | --                                   | 19                                      |
| WALKER ST & 9TH ST               | 15                                         | 201                                        | 40                                   | 10                                      |
| TOTAL                            | 15                                         | 1,269                                      | 301                                  | 158                                     |

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



| CONCRETE SIDEWALK & DRIVEWAY ITEMS |          |               |               |            |
|------------------------------------|----------|---------------|---------------|------------|
|                                    | 602.0410 | 602.0505      | 602.0605      | 602.0860   |
|                                    | CONCRETE | CURB RAMP     | CURB RAMP     | CONCRETE   |
|                                    | SIDEWALK | DETECTABLE    | DETECTABLE    | DRIVEWAY   |
|                                    | 5-INCH   | WARNING FIELD | WARNING FIELD | HES 6-INCH |
| LOCATION                           | SF       | YELLOW        | RADIAL YELLOW | SY         |
| HOLT AVE NB EXIT RAMP              | 379      | 35            | --            | --         |
| HOLT AVE NB ENTRANCE RAMP          | 476      | 32            | 16            | --         |
| HOLT AVE                           | 299      | 21            | --            | --         |
| LAPHAM BLVD & 5TH ST               | 822      | 50            | 78            | --         |
| LAPHAM BLVD & 4TH ST               | 1,057    | 80            | 42            | --         |
| MINERAL ST & 6TH ST                | 1,160    | 70            | 11            | --         |
| MINERAL ST & 9TH ST                | 1,120    | 90            | --            | --         |
| WALKER ST & 9TH ST                 | 839      | 79            | --            | 29         |
| TOTAL                              | 6,152    | 457           | 147           | 29         |

| SANITARY SEWER ITEMS  |         |          |           |        |                                                         |
|-----------------------|---------|----------|-----------|--------|---------------------------------------------------------|
| LOCATION              | STATION | OFFSET   | RIM ELEV. |        | SPV.0060.30<br>ADJUSTING<br>SANITARY<br>MANHOLE<br>EACH |
|                       |         |          | EX.       | PR.    |                                                         |
| HOLT AVE NB EXIT RAMP | 96+48   | 30.4' RT | 638.56    | 638.53 | 1                                                       |
| TOTAL                 |         |          |           |        | 1                                                       |

\*SANITARY SEWER ITEMS ARE CATEGORY 8010.

| STORM SEWER ITEMS         |                |  |                |  |                |  |                 |                   |                   |
|---------------------------|----------------|--|----------------|--|----------------|--|-----------------|-------------------|-------------------|
|                           | 611.0410       |  | 611.0430       |  | 611.8110       |  | 611.8115        |                   |                   |
|                           | RECONSTRUCTING |  | RECONSTRUCTING |  | ADJUSTING      |  | ADJUSTING INLET |                   |                   |
|                           | CATCH BASINS   |  | INLETS         |  | MANHOLE COVERS |  | COVERS          |                   |                   |
| LOCATION                  | EACH           |  | EACH           |  | EACH           |  | EACH            | SHOWN ON          | NOTES             |
| HOLT AVE NB EXIT RAMP     | --             |  | --             |  | 1              |  | --              | PLAN DETAILS      |                   |
|                           | --             |  | --             |  | --             |  | 1               | PLAN DETAILS      |                   |
|                           | --             |  | 1              |  | --             |  | --              | PLAN DETAILS      | RECONST. TOP 2 FT |
| HOLT AVE NB ENTRANCE RAMP | --             |  | 1              |  | --             |  | --              | PLAN DETAILS      | RECONST. TOP 2 FT |
| HOLT AVE                  | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
| LAPHAM BLVD               | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
| 9TH ST                    | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
|                           | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
|                           | 1              |  | --             |  | --             |  | --              | CURB RAMP DETAILS | RECONST. TOP 2 FT |
|                           | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
|                           | --             |  | --             |  | --             |  | 1               | CURB RAMP DETAILS |                   |
| TOTAL                     | 1              |  | 2              |  | 1              |  | 7               |                   |                   |

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



GUARDRAIL ITEMS

| LOCATION                  | STATION |       | SIDE | 614.2300                 | 614.2610                              | 614.2620                                 |
|---------------------------|---------|-------|------|--------------------------|---------------------------------------|------------------------------------------|
|                           | FROM    | TO    |      | MGS<br>GUARDRAIL 3<br>LF | MGS GUARDRAIL<br>TERMINAL EAT<br>EACH | MGS GUARDRAIL<br>TERMINAL TYPE 2<br>EACH |
| NATIONAL AVE NB EXIT RAMP | 7+91    | 18+39 | RT   | 450                      | 1                                     | 1                                        |
| TOTAL                     |         |       |      | 450                      | 1                                     | 1                                        |

RESTORATION ITEMS

| LOCATION                  | 625.0100      | 627.0200       | 629.0210                    | 630.0200                   | 631.0300             | 631.1000       |
|---------------------------|---------------|----------------|-----------------------------|----------------------------|----------------------|----------------|
|                           | TOPSOIL<br>SY | MULCHING<br>SY | FERTILIZER<br>TYPE B<br>CWT | SEEDING<br>TEMPORARY<br>LB | SOD<br>WATER<br>MGAL | SOD LAWN<br>SY |
| HOLT AVE NB EXIT RAMP     | 53            | --             | --                          | --                         | 2                    | 53             |
| HOLT AVE NB ENTRANCE RAMP | 71            | --             | --                          | --                         | 2                    | 71             |
| HOLT AVE                  | 8             | --             | --                          | --                         | 1                    | 8              |
| LAPHAM BLVD & 5TH ST      | 65            | --             | --                          | --                         | 2                    | 65             |
| LAPHAM BLVD & 4TH ST      | 103           | --             | --                          | --                         | 3                    | 103            |
| MINERAL ST & 6TH ST       | 78            | --             | --                          | --                         | 2                    | 78             |
| MINERAL ST & 9TH ST       | 106           | --             | --                          | --                         | 3                    | 106            |
| WALKER ST & 9TH ST        | 85            | --             | --                          | --                         | 2                    | 85             |
| UNDISTRIBUTED             | --            | 150            | 1                           | 4                          | --                   | --             |
| TOTAL                     | 570           | 150            | 1                           | 4                          | 17                   | 570            |

EROSION CONTROL ITEMS

| LOCATION                      | 628.1905                                    | 628.1910                                              | 628.7020                              | 628.7560                 |
|-------------------------------|---------------------------------------------|-------------------------------------------------------|---------------------------------------|--------------------------|
|                               | MOBILIZATIONS<br>EROSION<br>CONTROL<br>EACH | MOBILIZATIONS<br>EMERGENCY<br>EROSION CONTROL<br>EACH | INLET<br>PROTECTION<br>TYPE D<br>EACH | TRACKING<br>PADS<br>EACH |
| HOWARD AVE NB ENTRANCE RAMP   | --                                          | --                                                    | 2                                     | --                       |
| HOLT AVE NB EXIT RAMP         | --                                          | --                                                    | 5                                     | 2                        |
| HOLT AVE NB ENTRANCE RAMP     | --                                          | --                                                    | 6                                     | --                       |
| LAPHAM BLVD NB EXIT RAMP      | --                                          | --                                                    | 5                                     | --                       |
| LAPHAM BLVD NB ENTRANCE RAMP  | --                                          | --                                                    | 2                                     | --                       |
| NATIONAL AVE NB EXIT RAMP     | --                                          | --                                                    | 4                                     | --                       |
| 6TH ST NB ENTRANCE RAMP       | --                                          | --                                                    | 3                                     | --                       |
| NATIONAL AVE NB ENTRANCE RAMP | --                                          | --                                                    | 3                                     | --                       |
| LAPHAM BLVD SB ENTRANCE RAMP  | --                                          | --                                                    | 1                                     | --                       |
| LAPHAM BLVD SB EXIT RAMP      | --                                          | --                                                    | 7                                     | --                       |
| NATIONAL AVE SB EXIT RAMP     | --                                          | --                                                    | 4                                     | --                       |
| 6TH ST SB EXIT RAMP           | --                                          | --                                                    | 4                                     | --                       |
| NATIONAL AVE SB ENTRANCE RAMP | --                                          | --                                                    | 1                                     | --                       |
| HOWARD AVE                    | --                                          | --                                                    | 5                                     | --                       |
| HOLT AVE                      | --                                          | --                                                    | 11                                    | --                       |
| LAPHAM BLVD & 5TH ST          | --                                          | --                                                    | 4                                     | --                       |
| LAPHAM BLVD & 4TH ST          | --                                          | --                                                    | 1                                     | --                       |
| MINERAL ST & 6TH ST           | --                                          | --                                                    | 5                                     | --                       |
| MINERAL ST & 9TH ST           | --                                          | --                                                    | 4                                     | --                       |
| WALKER ST & 9TH ST            | --                                          | --                                                    | 6                                     | --                       |
| UNDISTRIBUTED                 | 4                                           | 2                                                     | 17                                    | --                       |
| TOTAL                         | 4                                           | 2                                                     | 100                                   | 2                        |

NOTE:ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



3

| TYPE I & II PERMANENT SIGNING |                  |                |                                     |                                                      |                                                                 |                                                      |                                                |                                             |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                                                 |
|-------------------------------|------------------|----------------|-------------------------------------|------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------|------------------------------------------------|---------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|-------------------------------------------------|
| 1228-09-76 IH 43              |                  |                |                                     |                                                      |                                                                 |                                                      |                                                |                                             |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                                                 |
| SIGN NO.                      | SIGN CODE & SIZE | SIGN MESSAGE   | SIGN SIZE<br>W x H<br>[IN.] x [IN.] | 637.2210<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H [SF] | 637.2215<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H FOLDING<br>[SF] | 637.2230<br>SIGNS<br>TYPE II<br>RELFECTIVE<br>F [SF] | 638.2102<br>MOVING<br>SIGNS<br>TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS<br>TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN<br>SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION                     |
| 1                             | R5-57(5)         | --             | 36 X 36                             | 9.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                                      |
| 2                             | W4-3R(5)         | --             | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                                                 |
| 3                             | J2-1(2M)         | --             | 24 X 57                             | 9.50                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                                                 |
|                               | M3-4(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M1-1(2M)         | IH 94          | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M4-20L(2M)       | USE LEFT LANE  | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 4                             | E5-1(5)          | --             | 72 X 60                             | 30.00                                                | --                                                              | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | --                                                 | 2                                                  | --                                                 | --                                                     | 4                                     |                                                 |
| 5                             | W5-54(2M)        | --             | 18 X 18                             | --                                                   | --                                                              | 2.25                                                 | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 4                                     |                                                 |
| 6                             | W5-54(2M)        | --             | 18 X 18                             | --                                                   | --                                                              | 2.25                                                 | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 7                             | D4-55L(2M)       | --             | 36 X 36                             | 9.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 8                             | D4-2L(2M)        | --             | 30 X 36                             | 7.50                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE<br>LIGHT POLE; REMOVE EXISTING W5-54 |
| 9                             | W3-3(5)          | --             | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 10                            | W1-7(2S)         | --             | 48 X 24                             | --                                                   | --                                                              | 8.00                                                 | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 11                            | R1-2(2S)         | --             | 36 X 31                             | 3.88                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | 1                                                      |                                       |                                                 |
| 12                            | R1-2(2S)         | --             | 36 X 31                             | 3.88                                                 | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 13                            | R3-1(2S)         | --             | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                                      |
| 14                            | R3-1(2S)         | --             | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 13                                    |                                                 |
| 15                            | R5-1A(5)         | --             | 42 X 30                             | 8.75                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 11                                    |                                                 |
| 16                            | R5-1A(5)         | --             | 42 X 30                             | 8.75                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 17                            | J2-1(2M)         | --             | 24 X 57                             | 9.50                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                                                 |
|                               | M4-5(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE<br>LIGHT POLE                        |
|                               | M1-6(2M)         | STH 38         | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M5-1R(2M)        | --             | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 18                            | R2-1(2S)         | SPEED LIMIT 30 | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 19                            | R3-7L(2M)        | --             | 30 X 30                             | 6.25                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 20                            | J3-2(2M)         | --             | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | --                                                 | --                                                 | 2                                                  | --                                                     |                                       |                                                 |
|                               | M3-3(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M1-1(2M)         | IH 43          | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M6-2(2M)         | --             | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M3-2(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M1-1(2M)         | IH 94          | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                                     |
| 21                            | M6-2(2M)         | --             | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 20                                    |                                                 |
| 22                            | R11-54F(2S)      | --             | 48 X 30                             | --                                                   | 10.00                                                           | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 23                            | W3-8(5)          | --             | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | D13-3(2S)        | --             | 60 X 30                             | 12.50                                                | --                                                              | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | 2                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 24                            | R11-54F(2S)      | --             | 48 X 30                             | --                                                   | 10.00                                                           | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                                     |
| 25                            | W3-8(5)          | --             | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                                     |
| 26                            | R1-1(2S)         | --             | 30 X 30                             | 5.18                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                                      |
| 27                            | J3-2(2M)         | --             | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M3-3(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M1-1(2M)         | IH 43          | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M6-1(2M)         | --             | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M3-2(2M)         | --             | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M1-1(2M)         | IH 94          | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
|                               | M6-1(2M)         | --             | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 28                            | R5-1(2S)         | --             | 30 X 30                             | 6.25                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 29                            | W4-1R(2S)        | --             | 36 X 36                             | --                                                   | --                                                              | 9.00                                                 | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 30                            | D4-55R(2S)       | --             | 36 X 36                             | 9.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 31                            | R6-2R(2S)        | --             | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 32                            | W4-2R(2S)        | --             | 36 X 36                             | --                                                   | --                                                              | 9.00                                                 | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 33                            | R6-2L(2S)        | --             | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE<br>MOUNT ON BRIDGE PIER              |
| 34                            | R11-54F(2S)      | --             | 48 X 30                             | --                                                   | 10.00                                                           | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 35                            | R3-1(2S)         | --             | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 36                            | R3-55L(2S)       | --             | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |
| 37                            | J2-2(2M)         | --             | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                                 |

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| TYPE I & II PERMANENT SIGNING |                                                                  |                                           |                                                     |                                                      |                                                              |                                                      |                                             |                                          |                                              |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                                                                                  | 1228-09-76 IH 43 |
|-------------------------------|------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|---------------------------------------------|------------------------------------------|----------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------|------------------|
| SIGN NO.                      | SIGN CODE & SIZE                                                 | SIGN MESSAGE                              | SIGN SIZE<br>W x H<br>[IN.] x [IN.]                 | 637.2210<br>SIGNS TYPE II<br>REFLECTIVE<br>H<br>[SF] | 637.2215<br>SIGNS TYPE II<br>REFLECTIVE<br>H FOLDING<br>[SF] | 637.2230<br>SIGNS TYPE II<br>RELFECTIVE<br>F<br>[SF] | 638.2102<br>MOVING<br>SIGNS TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION                                                      |                  |
|                               | M3-1(2M)<br>M1-1(2M)<br>M5-1L(2M)<br>M3-4(2M)<br>M1-1(2M)        | --<br>IH 43<br>--<br>--<br>IH 94          | 24 X 12<br>24 X 24<br>21 X 21<br>24 X 12<br>24 X 24 | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                                   | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | --<br>--<br>--<br>--<br>--               | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       |                                                                                  |                  |
| 38                            | M5-1L(2M)<br>J2-2(2M)<br>M3-3(2M)<br>M1-1(2M)<br>M5-1L(2M)       | --<br>--<br>--<br>IH 43<br>--             | 21 X 21<br>48 X 57<br>24 X 12<br>24 X 24<br>21 X 21 | --<br>19.00<br>--<br>--<br>--                        | --<br>--<br>--<br>--<br>--                                   | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | --<br>1<br>--<br>--<br>--                | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | MOUNT ON BRIDGE PIER                                                             |                  |
| 39<br>40                      | M3-2(2M)<br>M1-1(2M)<br>M5-1L(2M)<br>R2-1(2S)<br>R11-54F(2S)     | --<br>IH 94<br>--<br>SPEED LIMIT 30<br>-- | 24 X 12<br>24 X 24<br>21 X 21<br>24 X 30<br>48 X 30 | --<br>--<br>--<br>5.00<br>--                         | --<br>--<br>--<br>--<br>10.00                                | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | --<br>--<br>--<br>1<br>1                 | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | MOUNT ON BRIDGE PIER<br>MOUNT ON BRIDGE PIER                                     |                  |
| 41                            | J3-2(2M)<br>M3-1(2M)<br>M1-1(2M)<br>M6-1(2M)<br>M3-4(2M)         | --<br>--<br>IH 43<br>--<br>--             | 48 X 57<br>24 X 12<br>24 X 24<br>21 X 21<br>24 X 12 | 19.00<br>--<br>--<br>--<br>--                        | --<br>--<br>--<br>--<br>--                                   | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | 1<br>--<br>--<br>--<br>--                | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | MOUNT ON BRIDGE PIER                                                             |                  |
| 42<br>42A<br>43               | M1-1(2M)<br>M6-1(2M)<br>R2-1(2S)<br>X<br>R5-1(2M)                | IH 94<br>--<br>--<br>NO PARKING<br>--     | 24 X 24<br>21 X 21<br>24 X 30<br>X<br>36 X 36       | --<br>--<br>5.00<br>--<br>9.00                       | --<br>--<br>--<br>--<br>--                                   | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>1<br>--                   | --<br>--<br>--<br>--<br>1                | --<br>--<br>--<br>--<br>1                    | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>1                          | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             | 42                                    |                                                                                  |                  |
| 44<br>45<br>46<br>47<br>48    | R5-1(2M)<br>R5-1A(5)<br>R5-1A(5)<br>R1-1F(3)<br>R3-1(2S)         | --<br>--<br>--<br>--<br>--                | 36 X 36<br>42 X 30<br>42 X 30<br>36 X 36<br>24 X 24 | 9.00<br>8.75<br>8.75<br>--<br>4.00                   | --<br>--<br>--<br>7.46<br>--                                 | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | 1<br>1<br>1<br>--<br>--                  | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             | 43                                    | SIGNAL POLE<br><br>SIGNAL POLE<br>SIGNAL POLE<br>SIGNAL POLE; 2' MOUNTING HEIGHT |                  |
| 49<br>50<br>51<br>52          | D1-60(MOD)<br>R1-1F(3)<br>R3-8LE(2S)<br>JH-1(2M)<br>D9-2(2M)     | --<br>--<br>--<br>--<br>--                | 78 X 24<br>36 X 36<br>36 X 30<br>24 X 45<br>24 X 24 | 13.00<br>--<br>7.50<br>7.50<br>--                    | --<br>7.46<br>--<br>--<br>--                                 | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | 1<br>--<br>1<br>1<br>--                  | 2<br>--<br>--<br>--<br>--                    | 2<br>--<br>--<br>--<br>--                          | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | SIGNAL POLE<br>SIGNAL POLE<br>SIGNAL POLE<br>LIGHT POLE                          |                  |
| 53<br>54                      | M6-1(2M)<br>D1-60(MOD)<br>J2-1(2M)<br>M4-5(2M)<br>M1-6(2M)       | --<br>--<br>--<br>--<br>STH 38            | 21 X 21<br>78 X 24<br>24 X 57<br>24 X 12<br>24 X 24 | --<br>13.00<br>9.50<br>--<br>--                      | --<br>--<br>--<br>--<br>--                                   | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | --<br>1<br>1<br>--<br>--                 | --<br>--<br>--<br>--<br>--                   | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | LIGHT POLE<br>LIGHT POLE                                                         |                  |
| 55<br>56<br>57<br>58          | M6-1(2M)<br>R1-1F(3)<br>R1-1<br>R1-1<br>R6-2L(2S)                | --<br>--<br>--<br>--<br>--                | 21 X 21<br>36 X 36<br>X<br>X<br>24 X 30             | --<br>--<br>--<br>--<br>5.00                         | --<br>7.46<br>--<br>--<br>--                                 | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | --<br>--<br>1<br>1<br>1                  | --<br>--<br>1<br>1<br>--                     | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | SIGNAL POLE<br><br><br>SIGNAL POLE                                               |                  |
| 59<br>60<br>61<br>62<br>63    | R6-2R(2S)<br>R3-8RR(2S)<br>R1-1F(3)<br>R11-54F(2S)<br>R3-51L(2S) | --<br>--<br>--<br>--<br>--                | 24 X 30<br>36 X 30<br>36 X 36<br>48 X 30<br>48 X 78 | 5.00<br>7.50<br>--<br>--<br>26.00                    | --<br>--<br>7.46<br>10.00<br>--                              | --<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                  | 1<br>--<br>--<br>1<br>1                  | --<br>--<br>--<br>2<br>2                     | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>2                          | --<br>--<br>--<br>--<br>--                             |                                       | SIGNAL POLE<br>SIGNAL POLE<br>SIGNAL POLE                                        |                  |
| 64<br>65<br>66<br>67<br>68    | R3-51L(2S)<br>W3-8(5)<br>W4-1R(2S)<br>R5-57(5)<br>R1-2(2M)       | --<br>--<br>--<br>--<br>--                | 48 X 78<br>48 X 48<br>36 X 36<br>36 X 36<br>48 X 42 | 26.00<br>--<br>--<br>9.00<br>7.00                    | --<br>--<br>--<br>--<br>--                                   | --<br>16.00<br>9.00<br>--<br>--                      | --<br>--<br>--<br>--<br>--                  | 1<br>1<br>1<br>1<br>1                    | 2<br>--<br>1<br>1<br>1                       | --<br>--<br>--<br>--<br>--                         | --<br>--<br>1<br>1<br>1                            | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       | SIGNAL POLE                                                                      |                  |

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| TYPE I & II PERMANENT SIGNING |                                                          |                                  |                                                     |                                                         |                                                                 |                                                         |                                                |                                             |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                             | 1228-09-76 IH 43 |
|-------------------------------|----------------------------------------------------------|----------------------------------|-----------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------|---------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|-----------------------------|------------------|
| SIGN NO.                      | SIGN CODE & SIZE                                         | SIGN MESSAGE                     | SIGN SIZE<br>W x H<br>[IN.] x [IN.]                 | 637.2210<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H<br>[SF] | 637.2215<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H FOLDING<br>[SF] | 637.2230<br>SIGNS<br>TYPE II<br>RELFECTIVE<br>F<br>[SF] | 638.2102<br>MOVING<br>SIGNS<br>TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS<br>TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN<br>SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION |                  |
| 69                            | J3-2(2M)<br>M3-1(2M)<br>M1-1(2M)<br>M6-2(2M)<br>M3-4(2M) | --<br>--<br>IH 43<br>--<br>--    | 48 X 57<br>24 X 12<br>24 X 24<br>21 X 21<br>24 X 12 | 19.00<br>--<br>--<br>--<br>--                           | --<br>--<br>--<br>--<br>--                                      | --<br>--<br>--<br>--<br>--                              | --<br>--<br>--<br>--<br>--                     | 1<br>--<br>--<br>--<br>--                   | 1<br>--<br>--<br>--<br>--                       | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                         | 1<br>--<br>--<br>--<br>--                          | --<br>--<br>--<br>--<br>--                         | --<br>--<br>--<br>--<br>--                             |                                       |                             |                  |
|                               | M1-1(2M)<br>M6-2(2M)                                     | IH 94<br>--                      | 24 X 24<br>21 X 21                                  | --<br>--                                                | --<br>--                                                        | --<br>--                                                | --<br>--                                       | --<br>--                                    | --<br>--                                        | --<br>--                                           | --<br>--                                           | --<br>--                                           | --<br>--                                           | --<br>--                                               |                                       |                             |                  |
| 70                            | W3-8(5)                                                  | --                               | 48 X 48                                             | --                                                      | --                                                              | 16.00                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |                  |
| 71                            | R3-51L(2S)                                               | --                               | 48 X 78                                             | 26.00                                                   | --                                                              | --                                                      | --                                             | 1                                           | 2                                               | --                                                 | --                                                 | --                                                 | 2                                                  | --                                                     |                                       |                             |                  |
| 72                            | R11-54F(2S)                                              | --                               | 48 X 30                                             | --                                                      | 10.00                                                           | --                                                      | --                                             | 1                                           | 2                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 73                            | W12-1D(2S)                                               | --                               | 24 X 24                                             | --                                                      | --                                                              | 4.00                                                    | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 72                                    | 2' MOUNTING HEIGHT          |                  |
| 74                            | R10-65R(2M)                                              | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 75                            | R10-6(2M)                                                | --                               | 24 X 36                                             | 6.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 76                            | R10-6(2M)                                                | --                               | 24 X 36                                             | 6.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                 |                  |
| 77                            | R10-65L(2M)                                              | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                 |                  |
| 78                            | R10-65C(2M)                                              | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |                  |
| 79                            | W4-1L(5)                                                 | --                               | 48 X 48                                             | --                                                      | --                                                              | 16.00                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 80                            | E5-1(5)                                                  | --                               | 72 X 60                                             | 30.00                                                   | --                                                              | --                                                      | --                                             | 1                                           | 2                                               | --                                                 | --                                                 | 2                                                  | --                                                 | --                                                     |                                       |                             |                  |
| 81                            | W5-54(2M)                                                | --                               | 18 X 18                                             | --                                                      | --                                                              | 2.25                                                    | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 80                                    |                             |                  |
| 82                            | W5-54(2M)                                                | --                               | 18 X 18                                             | --                                                      | --                                                              | 2.25                                                    | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 80                                    |                             |                  |
| 83                            | W3-3(5)                                                  | --                               | 48 X 48                                             | --                                                      | --                                                              | 16.00                                                   | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                             |                  |
| 84                            | R5-1A(5)                                                 | --                               | 42 X 30                                             | 8.75                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 85                            | R5-1A(5)                                                 | --                               | 42 X 30                                             | 8.75                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 86                                    |                             |                  |
| 86                            | D1-60A(MOD)                                              | --                               | 96 X 36                                             | 24.00                                                   | --                                                              | --                                                      | --                                             | 1                                           | 2                                               | --                                                 | 2                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 87                            | R3-58(2M)                                                | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 88                            | R3-58(2M)                                                | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 89                            | R5-57(5)                                                 | --                               | 36 X 36                                             | 9.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 90                            | D1-1(MOD)                                                | --                               | 78 X 15                                             | 8.13                                                    | --                                                              | --                                                      | --                                             | 1                                           | 2                                               | 2                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 91                            | W12-1D(2S)                                               | --                               | 24 X 24                                             | --                                                      | --                                                              | 4.00                                                    | --                                             | --                                          | --                                              | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       | 2' MOUNTING HEIGHT          |                  |
| 92                            | R1-1(3)                                                  | --                               | 36 X 36                                             | 7.46                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 93                            | R11-54F(2S)                                              | --                               | 48 X 30                                             | --                                                      | 10.00                                                           | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 94                            | R6-2R(2S)                                                | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 95                            | R3-2(2S)                                                 | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 96                            | R3-1(2S)                                                 | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 97                            | R6-1L(2S)                                                | --                               | 36 X 12                                             | 3.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 98                            | R5-1A(5)                                                 | --                               | 42 X 30                                             | 8.75                                                    | --                                                              | --                                                      | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                             |                  |
| 98A                           |                                                          | CITY OF MKE PARKING RULES        | X                                                   | --                                                      | --                                                              | --                                                      | 1                                              | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 98                                    |                             |                  |
| 98B                           |                                                          | NO ENG. BRAKING EXCEPT IN EMERG. | X                                                   | --                                                      | --                                                              | --                                                      | 1                                              | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 98                                    |                             |                  |
| 99                            | R10-11B(2S)                                              | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 100                           | R10-6(2M)                                                | --                               | 24 X 36                                             | 6.00                                                    | --                                                              | --                                                      | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 101                           | R5-1(2S)                                                 | --                               | 30 X 30                                             | 6.25                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 102                           | R10-50L                                                  | --                               | X                                                   | --                                                      | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |                  |
| 103                           | R4-7(2S)                                                 | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 104                           | R6-2L(2S)                                                | --                               | 24 X 30                                             | 5.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 105                           | R10-11B(2S)                                              | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                 |                  |
| 106                           | R10-11B(2S)                                              | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                 |                  |
| 107                           | J2-2(2M)<br>M3-1(2M)<br>M1-1(2M)<br>M5-1L(2M)            | --<br>--<br>IH 43<br>--          | 48 X 57<br>24 X 12<br>24 X 24<br>21 X 21            | 19.00<br>--<br>--<br>--                                 | --<br>--<br>--<br>--                                            | --<br>--<br>--<br>--                                    | --<br>--<br>--<br>--                           | 1<br>--<br>--<br>--                         | --<br>--<br>--<br>--                            | --<br>--<br>--<br>--                               | --<br>--<br>--<br>--                               | --<br>--<br>--<br>--                               | --<br>--<br>--<br>--                               | --<br>--<br>--<br>--                                   |                                       | SIGNAL POLE                 |                  |
|                               | M3-4(2M)<br>M1-1(2M)<br>M5-1L(2M)                        | --<br>IH 94<br>--                | 24 X 12<br>24 X 24<br>21 X 21                       | --<br>--<br>--                                          | --<br>--<br>--                                                  | --<br>--<br>--                                          | --<br>--<br>--                                 | --<br>--<br>--                              | --<br>--<br>--                                  | --<br>--<br>--                                     | --<br>--<br>--                                     | --<br>--<br>--                                     | --<br>--<br>--                                     | --<br>--<br>--                                         |                                       |                             |                  |
| 108                           | R11-54F(2S)                                              | --                               | 48 X 30                                             | --                                                      | 10.00                                                           | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |
| 109                           | R9-3A(2S)                                                | --                               | 24 X 24                                             | 4.00                                                    | --                                                              | --                                                      | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |                  |

3



3

| TYPE I & II PERMANENT SIGNING |                  |              |                                     |                                                      |                                                                 |                                                      |                                                |                                             |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                             |
|-------------------------------|------------------|--------------|-------------------------------------|------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------|------------------------------------------------|---------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|-----------------------------|
| 1228-09-76 IH 43              |                  |              |                                     |                                                      |                                                                 |                                                      |                                                |                                             |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                             |
| SIGN NO.                      | SIGN CODE & SIZE | SIGN MESSAGE | SIGN SIZE<br>W x H<br>[IN.] x [IN.] | 637.2210<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H [SF] | 637.2215<br>SIGNS<br>TYPE II<br>REFLECTIVE<br>H FOLDING<br>[SF] | 637.2230<br>SIGNS<br>TYPE II<br>RELFECTIVE<br>F [SF] | 638.2102<br>MOVING<br>SIGNS<br>TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS<br>TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN<br>SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION |
| 110                           | R3-2(2S)         | --           | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
| 111                           | R6-1R(2S)        | --           | 36 X 12                             | 3.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
| 112                           | R5-1(2S)         | --           | 30 X 30                             | 6.25                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
| 113                           | R9-3A(2S)        | --           | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
| 114                           | J3-2(2M)         | --           | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
|                               | M3-3(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M6-1(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M3-2(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
| 115                           | M6-1(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | R11-54F(2S)      | --           | 48 X 30                             | --                                                   | 10.00                                                           | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | 116              | J2-2(2M)     | --                                  | 48 X 57                                              | 19.00                                                           | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
|                               | M3-3(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M5-1L(2M)        | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M3-2(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
| 117                           | M5-1L(2M)        | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | J3-2(2M)         | --           | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
|                               | M3-1(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M6-1(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M6-1(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M3-4(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
| 118                           | M6-1(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 |                                                        |                                       |                             |
| 119                           | R9-3A(2S)        | --           | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
|                               | R5-1(2S)         | --           | 30 X 30                             | 6.25                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | 120              | R5-1A(5)     | --                                  | 42 X 30                                              | 8.75                                                            | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 119                                   | 2' MOUNTING HEIGHT          |
|                               | 121              | R6-2R(2S)    | --                                  | 24 X 30                                              | 5.00                                                            | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                  |
| 122                           | R6-2R(2S)        | --           | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | 1                                              | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 |                                                        | LIGHT POLE                            |                             |
| 123                           | R4-7(2S)         | --           | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | 1                                              | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 |                                                        | SIGNAL POLE                           |                             |
| 124                           | R10-50L          | --           | X                                   | --                                                   | --                                                              | --                                                   | 1                                              | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 |                                                        |                                       |                             |
| 125                           | R11-54F(2S)      | --           | 48 X 30                             | --                                                   | 10.00                                                           | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
| 126                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
| 127                           | R6-2L(2S)        | --           | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
| 128                           | R6-2R(2S)        | --           | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
| 129                           | W12-1D(2S)       | --           | 24 X 24                             | --                                                   | --                                                              | 4.00                                                 | --                                             | 1                                           | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       | 2' MOUNTING HEIGHT          |
| 130                           | R3-2(2S)         | --           | 24 X 24                             | 4.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SINGAL POLE                 |
| 131                           | R6-2L(2S)        | --           | 24 X 30                             | 5.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
| 132                           | R5-57(5)         | --           | 36 X 36                             | 9.00                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
| 133                           | W12-1D(2S)       | --           | 24 X 24                             | --                                                   | --                                                              | 4.00                                                 | --                                             | 1                                           | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       | 2' MOUNTING HEIGHT          |
| 134                           | R5-1A(5)         | --           | 42 X 30                             | 8.75                                                 | --                                                              | --                                                   | --                                             | 1                                           | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
| 134A                          | R5-1A(5)         | --           | 42 X 30                             | 8.75                                                 | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 135                                   |                             |
| 135                           | D1-60A(MOD)      | --           | 78 X 36                             | 19.50                                                | --                                                              | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | 2                                                  | --                                                 | --                                                 | --                                                     |                                       |                             |
| 136                           | W3-8(5)          | --           | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                 |
| 137                           | J3-2(2M)         | --           | 48 X 57                             | 19.00                                                | --                                                              | --                                                   | --                                             | 1                                           | 2                                               | --                                                 | --                                                 | 2                                                  | --                                                 | --                                                     |                                       |                             |
|                               | M3-1(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M6-2(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M3-4(2M)         | --           | 24 X 12                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
| 138                           | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | M6-2(2M)         | --           | 21 X 21                             | --                                                   | --                                                              | --                                                   | --                                             | --                                          | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                             |
|                               | D1-1(MOD)        | --           | 96 X 15                             | 10.00                                                | --                                                              | --                                                   | --                                             | 1                                           | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 137                                   |                             |
| 139                           | W4-1R(5)         | --           | 48 X 48                             | --                                                   | --                                                              | 16.00                                                | --                                             | 1                                           | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                             |

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| TYPE I & II PERMANENT SIGNING1228-09-76 IH 43 |                  |              |                                     |                                                   |                                                           |                                                   |                                             |                                          |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                              |
|-----------------------------------------------|------------------|--------------|-------------------------------------|---------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|---------------------------------------------|------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|------------------------------|
| SIGN NO.                                      | SIGN CODE & SIZE | SIGN MESSAGE | SIGN SIZE<br>W x H<br>[IN.] x [IN.] | 637.2210<br>SIGNS TYPE II<br>REFLECTIVE<br>H [SF] | 637.2215<br>SIGNS TYPE II<br>REFLECTIVE<br>H FOLDING [SF] | 637.2230<br>SIGNS TYPE II<br>RELLECTIVE<br>F [SF] | 638.2102<br>MOVING<br>SIGNS TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN<br>SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION  |
| 140                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 143                                   | SIGNAL POLE                  |
| 141                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 142                                           | W3-3(5)          | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                              |
| 143                                           | E5-1B(5)         | --           | 114 X 60                            | 47.50                                             | --                                                        | --                                                | --                                          | 1                                        | 2                                               | --                                                 | --                                                 | 2                                                  | --                                                 | --                                                     |                                       |                              |
| 144                                           | W5-54(2M)        | --           | 18 X 18                             | --                                                | --                                                        | 2.25                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 145                                           | W5-54(2M)        | --           | 18 X 18                             | --                                                | --                                                        | 2.25                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 143                                   |                              |
| 146                                           | W1-6(2M)         | --           | 48 X 24                             | --                                                | --                                                        | 8.00                                              | --                                          | 1                                        | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     | 143                                   |                              |
| 147                                           | S1-1(2M)         | --           | 36 X 36                             | --                                                | --                                                        | 6.75                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 147                                   | MOUNT ON EXISTING POST       |
| 148                                           | S16-9P(2M)       | --           | 30 X 18                             | --                                                | --                                                        | 3.75                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 149                                           | S1-1(2M)         | --           | 36 X 36                             | --                                                | --                                                        | 6.75                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                   |
| 150                                           | S16-9P(2M)       | --           | 30 X 18                             | --                                                | --                                                        | 3.75                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                   |
| 151                                           | W1-6(2M)         | --           | 48 X 24                             | --                                                | --                                                        | 8.00                                              | --                                          | 1                                        | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 152                                           | W1-6(2M)         | --           | 48 X 24                             | --                                                | --                                                        | 8.00                                              | --                                          | 1                                        | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 153                                           | W1-6(2M)         | --           | 48 X 24                             | --                                                | --                                                        | 8.00                                              | --                                          | 1                                        | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 154                                           | W3-1(5)          | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | MOUNT ON SIGN STRUCTURE POST |
| 155                                           | W3-1(5)          | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                              |
| 156                                           | W3-8(5)          | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 157                                           | W3-2(2M)         | --           | 36 X 36                             | --                                                | --                                                        | 9.00                                              | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                              |
| 158                                           | R1-2(2M)         | --           | 48 X 42                             | 7.00                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                              |
| 159                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 160                                           | W4-2L(5)         | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                              |
| 161                                           | W1-6(2M)         | --           | 48 X 24                             | --                                                | --                                                        | 8.00                                              | --                                          | 1                                        | 1                                               | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 162                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 163                                           | W4-1R(5)         | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | 1                                                  | --                                                 | --                                                     |                                       |                              |
| 164                                           | R10-65L(2M)      | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 165                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 166                                           | R10-65R(2M)      | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SINGAL POLE                  |
| 167                                           | R10-6(2M)        | --           | 24 X 36                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 168                                           | D1-60A(MOD)      | --           | 72 X 30                             | 15.00                                             | --                                                        | --                                                | --                                          | 1                                        | 2                                               | --                                                 | 2                                                  | --                                                 | --                                                 | --                                                     |                                       |                              |
| 169                                           | R5-1A(5)         | --           | 42 X 30                             | 8.75                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | MOUNT ON BRIDGE PIER         |
| 170                                           | W3-8(5)          | --           | 48 X 48                             | --                                                | --                                                        | 16.00                                             | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 171                                           | D13-3(2S)        | --           | 60 X 30                             | 12.50                                             | --                                                        | --                                                | --                                          | 1                                        | 2                                               | --                                                 | --                                                 | 2                                                  | --                                                 | --                                                     |                                       |                              |
| 172                                           | R11-54F(2S)      | --           | 48 X 30                             | --                                                | 10.00                                                     | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 171                                   |                              |
| 173                                           | J3-2(2M)         | --           | 48 X 57                             | 19.00                                             | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
|                                               | M3-1(2M)         | --           | 24 X 12                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M6-1(2M)         | --           | 21 X 21                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M3-4(2M)         | --           | 24 X 12                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M6-1(2M)         | --           | 21 X 21                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 174                                           | R1-1F(3)         | --           | 36 X 36                             | --                                                | 7.46                                                      | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 175                                           | R5-57(5)         | --           | 36 X 36                             | 9.00                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                              |
| 176                                           | R5-1(2M)         | --           | 36 X 36                             | 9.00                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     | 176                                   | 2' MOUNTING HEIGHT           |
| 177                                           | R5-1A(5)         | --           | 42 X 30                             | 8.75                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 178                                           | R1-1F(3)         | --           | 36 X 36                             | --                                                | 7.46                                                      | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 179                                           | R1-1F(3)         | --           | 36 X 36                             | --                                                | 7.46                                                      | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 180                                           | J3-2(2M)         | --           | 48 X 57                             | 19.00                                             | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
|                                               | M3-1(2M)         | --           | 24 X 12                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M1-1(2M)         | IH 43        | 24 X 24                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M6-1(2M)         | --           | 21 X 21                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M3-4(2M)         | --           | 24 X 12                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M1-1(2M)         | IH 94        | 24 X 24                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
|                                               | M6-1(2M)         | --           | 21 X 21                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                              |
| 181                                           | R1-1F(3)         | --           | 36 X 36                             | --                                                | 7.46                                                      | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | SIGNAL POLE                  |
| 182                                           | M1-94S(MOD)      | --           | 72 X 30                             | 15.00                                             | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                  |

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| TYPE I & II PERMANENT SIGNING |                  |              |                                     |                                                   |                                                           |                                                   |                                             |                                          |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       | 1228-09-76 IH 43                       |
|-------------------------------|------------------|--------------|-------------------------------------|---------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|---------------------------------------------|------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------|----------------------------------------|
| SIGN NO.                      | SIGN CODE & SIZE | SIGN MESSAGE | SIGN SIZE<br>W x H<br>[IN.] x [IN.] | 637.2210<br>SIGNS TYPE II<br>REFLECTIVE<br>H [SF] | 637.2215<br>SIGNS TYPE II<br>REFLECTIVE<br>H FOLDING [SF] | 637.2230<br>SIGNS TYPE II<br>RELLECTIVE<br>F [SF] | 638.2102<br>MOVING<br>SIGNS TYPE II<br>[EA] | 638.2602<br>REM<br>SIGNS TYPE II<br>(EA) | 638.3000<br>REM<br>SMALL<br>SIGN<br>SUP<br>[EA] | 634.0614<br>POSTS<br>WOOD<br>4" x 6" x 14'<br>[EA] | 634.0616<br>POSTS<br>WOOD<br>4" x 6" x 16'<br>[EA] | 634.0618<br>POSTS<br>WOOD<br>4" x 6" x 18'<br>[EA] | 634.0620<br>POSTS<br>WOOD<br>4" x 6" x 20'<br>[EA] | SPV.0060.05<br>BLINDERS<br>FOR TYPE II<br>SIGN<br>[EA] | MOUNT<br>ON SAME<br>POST AS<br>SIGN # | REMARKS / NEW SIGN LOCATION            |
| 182A                          | M1-94S(MOD)      | --           | 72 X 30                             | 15.00                                             | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                            |
| 183                           | M1-94H(MOD)      | --           | 48 X 18                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                            |
| 183A                          | M1-94H(MOD)      | --           | 48 X 18                             | 6.00                                              | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | ON MAST ARM                            |
| 184                           | R6-1L(2S)        | --           | 36 X 12                             | 3.00                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 185                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 184                                   |                                        |
| 186                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 184                                   |                                        |
| 187                           | R6-1R(2S)        | --           | 36 X 12                             | 3.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 184                                   |                                        |
| 188                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 189                           | R5-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 188                                   | IN THE SHAPE OF AN R1-1(3)             |
| 190                           | D1-60A(MOD)      | --           | 96 X 36                             | 24.00                                             | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | MOUNT ON EXISTING POSTS                |
| 191                           | J22-1(2M)        | --           | 24 X 57                             | 9.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | MOUNT ON EXISTING POST                 |
|                               | M4-5(2M)         | --           | 24 X 12                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                        |
|                               | M1-6(2M)         | STH 59       | 24 X 24                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                        |
|                               | M6-2(2M)         | --           | 21 X 21                             | --                                                | --                                                        | --                                                | --                                          | --                                       | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 192                           | D4-2R(2M)        | --           | 30 X 36                             | 7.50                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 193                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 194                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 193                                   |                                        |
| 195                           | R4-7(2S)         | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 193                                   |                                        |
| 196                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 197                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 196                                   |                                        |
| 198                           | R5-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 196                                   | IN THE SHAPE OF AN R1-1(3)             |
| 199                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 200                           | R6-2R(2S)        | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 201                           | R6-2L(2S)        | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 202                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 203                           | R5-1A(2S)        | --           | 36 X 24                             | 6.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 202                                   |                                        |
| 204                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 206                                   |                                        |
| 205                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 206                                   |                                        |
| 206                           | R6-1L(2S)        | --           | 36 X 12                             | 3.00                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 207                           | R6-1R(2S)        | --           | 36 X 12                             | 3.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 206                                   |                                        |
| 208                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 209                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 210                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 209                                   |                                        |
| 211                           | R4-7(2S)         | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 209                                   |                                        |
| 212                           | W5-52L(2S)       | --           | 12 X 36                             | --                                                | --                                                        | 3.00                                              | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 209                                   |                                        |
| 213                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 214                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 213                                   |                                        |
| 215                           | R6-2L(2S)        | --           | 24 X 30                             | 5.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 213                                   |                                        |
| 216                           | R5-1A(5)         | --           | 42 X 30                             | 8.75                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 213                                   | 2' MOUNTING HEIGHT                     |
| 217                           | D1-60A(MOD)      | --           | 84 X 36                             | 21.00                                             | --                                                        | --                                                | --                                          | 1                                        | 2                                               | --                                                 | 2                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 218                           | R5-1(3)          | --           | 36 X 36                             | 9.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 217                                   |                                        |
| 219                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | FLASHING BEACON ASSEMBLY POLE          |
| 220                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | 1                                               | --                                                 | 1                                                  | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 221                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 220                                   |                                        |
| 222                           | R5-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     | 220                                   | IN THE SHAPE OF AN R1-1(3)             |
| 223                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 224                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 225                           | R3-2(2S)         | --           | 24 X 24                             | 4.00                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | 1                                                  | --                                                 | --                                                 | --                                                 | --                                                     |                                       |                                        |
| 226                           | R5-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE; IN THE SHAPE OF AN R1-1(3) |
| 227                           | R1-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 228                           | R1-3P(3)         | --           | 24 X 9                              | 1.50                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE                             |
| 229                           | R5-1(3)          | --           | 36 X 36                             | 7.46                                              | --                                                        | --                                                | --                                          | 1                                        | --                                              | --                                                 | --                                                 | --                                                 | --                                                 | --                                                     |                                       | LIGHT POLE; IN THE SHAPE OF AN R1-1(3) |
| UNDISTRIBUTED                 |                  |              |                                     |                                                   |                                                           |                                                   |                                             |                                          |                                                 |                                                    |                                                    |                                                    |                                                    |                                                        |                                       |                                        |
|                               |                  |              |                                     | 1446.73                                           | 169.68                                                    | 409.50                                            | 3                                           | 216                                      | 107                                             | 14                                                 | 54                                                 | 21                                                 | 8                                                  | 1                                                      | --                                    | --                                     |

NOTE: ALL ITEMS ARE CATEGORY 1000. SHEET 6 OF 6



3

|                                                           |  |                                                           |                                                   |                                        |                                                          |                                                  |                                       |
|-----------------------------------------------------------|--|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------|----------------------------------------------------------|--------------------------------------------------|---------------------------------------|
| Flashing Beacons - MSC QUANTITIES                         |  |                                                           |                                                   |                                        |                                                          | 1228-09-76 IH 43                                 |                                       |
|                                                           |  |                                                           |                                                   |                                        |                                                          |                                                  |                                       |
| LOCATION                                                  |  | Traffic Flashing Beacon system                            | Traffic Flashing Beacon System                    | Traffic Flashing Beacon System         | Traffic Flashing Beacon System                           | Traffic Flashing Beacon System                   | Traffic Flashing Beacon System        |
|                                                           |  |                                                           |                                                   |                                        |                                                          |                                                  |                                       |
|                                                           |  | IH 43 Exit ramp at Mineral St - right side ahead movement | IH 43 Exit ramp at Mineral St - Right turn bypass | IH 43 Exit ramp at Mineral St - median | IH 43 Exit Ramp at Walker St _ right side ahead movement | IH 43 Exit Ramp at Walker St _ right turn bypass | IH 43 Exit Ramp at Walker St _ median |
|                                                           |  | EACH                                                      | EACH                                              | EACH                                   | EACH                                                     | EACH                                             | EACH                                  |
|                                                           |  | SPV.0060.24                                               | SPV.0060.25                                       | SPV.0060.26                            | SPV.0060.27                                              | SPV.0060.28                                      | SPV.0060.29                           |
|                                                           |  |                                                           |                                                   |                                        |                                                          |                                                  |                                       |
| IH 43 Exit ramp at Mineral St - right side ahead movement |  | 1                                                         |                                                   |                                        |                                                          |                                                  |                                       |
| IH 43 Exit ramp at Mineral St - Right turn bypass         |  |                                                           | 1                                                 |                                        |                                                          |                                                  |                                       |
| IH 43 Exit ramp at Mineral St - median                    |  |                                                           |                                                   | 1                                      |                                                          |                                                  |                                       |
| IH 43 Exit Ramp at Walker St _ right side ahead movement  |  |                                                           |                                                   |                                        | 1                                                        |                                                  |                                       |
| IH 43 Exit Ramp at Walker St _ right turn bypass          |  |                                                           |                                                   |                                        |                                                          | 1                                                |                                       |
| IH 43 Exit Ramp at Walker St _ median                     |  |                                                           |                                                   |                                        |                                                          |                                                  | 1                                     |
| TOTAL                                                     |  | 1                                                         | 1                                                 | 1                                      | 1                                                        | 1                                                | 1                                     |

see Flashing beacons - stop sign plan for locations

3



| TRAFFIC CONTROL ITEMS |                                        |                   |                             |        |                                        |       |                                                |       |                                              |       |                                             |       |                                    |      |                             |        |                                                |                                                 |                                                    |                                  |      |
|-----------------------|----------------------------------------|-------------------|-----------------------------|--------|----------------------------------------|-------|------------------------------------------------|-------|----------------------------------------------|-------|---------------------------------------------|-------|------------------------------------|------|-----------------------------|--------|------------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------|------|
| STAGE                 | LOCATION                               | STAGE<br>DURATION | 643.0300                    |        | 643.1070                               |       | 643.0715                                       |       | 643.0420                                     |       | 643.0705                                    |       | 643.0800                           |      | 643.0900                    |        | 643.0910                                       | 643.0920                                        | 643.1000                                           | 643.1050                         |      |
|                       |                                        |                   | TRAFFIC<br>CONTROL<br>DRUMS |        | TRAFFIC<br>CONTROL<br>CONES<br>42-INCH |       | TRAFFIC<br>CONTROL<br>WARNING<br>LIGHTS TYPE C |       | TRAFFIC<br>CONTROL<br>BARRICADES<br>TYPE III |       | TRAFFIC CONTROL<br>WARNING LIGHTS<br>TYPE A |       | TRAFFIC<br>CONTROL<br>ARROW BOARDS |      | TRAFFIC<br>CONTROL<br>SIGNS |        | TRAFFIC<br>CONTROL<br>COVERING<br>SIGNS TYPE I | TRAFFIC<br>CONTROL<br>COVERING<br>SIGNS TYPE II | TRAFFIC<br>CONTROL<br>SIGNS FIXED<br>MESSAGE<br>SF | TRAFFIC<br>CONTROL<br>SIGNS PCMS |      |
|                       |                                        |                   | EACH                        | DAYS   | EACH                                   | DAYS  | EACH                                           | DAYS  | EACH                                         | DAYS  | EACH                                        | DAYS  | EACH                               | DAYS | EACH                        | DAYS   | EACH                                           | EACH                                            |                                                    | EACH                             | DAYS |
| 1A                    | HOLT AVE                               | 35                | 34                          | 1,190  | 9                                      | 315   | --                                             | --    | --                                           | --    | --                                          | --    | --                                 | --   | 15                          | 525    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | LAPHAM BLVD                            | 10                | 98                          | 980    | --                                     | --    | 6                                              | 60    | 4                                            | 40    | 8                                           | 80    | 1                                  | 10   | 64                          | 640    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | 6TH ST                                 | 25                | 36                          | 900    | --                                     | --    | --                                             | --    | 2                                            | 50    | 4                                           | 100   | --                                 | --   | 25                          | 625    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | 6TH ST (FULL CLOSURE)                  | 2                 | 66                          | 132    | --                                     | --    | 13                                             | 26    | 25                                           | 50    | 50                                          | 100   | --                                 | --   | 26                          | 52     | --                                             | --                                              | --                                                 | 4                                | 24   |
|                       | 9TH ST                                 | 20                | 66                          | 1,320  | --                                     | --    | 14                                             | 280   | 5                                            | 100   | 10                                          | 200   | --                                 | --   | 42                          | 840    | --                                             | --                                              | --                                                 | --                               | --   |
| 1B                    | HOLT AVE                               | 21                | 91                          | 1,911  | 33                                     | 693   | 16                                             | 336   | 7                                            | 147   | 14                                          | 294   | 2                                  | 42   | 55                          | 1,155  | --                                             | --                                              | --                                                 | --                               | --   |
|                       | LAPHAM BLVD                            | 10                | 117                         | 1,170  | --                                     | --    | 6                                              | 60    | 5                                            | 50    | 10                                          | 100   | 1                                  | 10   | 66                          | 660    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | 6TH ST                                 | 25                | 26                          | 650    | --                                     | --    | 4                                              | 100   | 2                                            | 50    | 4                                           | 100   | --                                 | --   | 36                          | 900    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | 9TH ST                                 | 10                | 44                          | 440    | --                                     | --    | --                                             | --    | --                                           | --    | --                                          | --    | --                                 | --   | 62                          | 620    | --                                             | --                                              | --                                                 | --                               | --   |
| 1C                    | LAPHAM BLVD                            | 20                | 123                         | 2,460  | --                                     | --    | 12                                             | 240   | 11                                           | 220   | 22                                          | 440   | 2                                  | 40   | 67                          | 1,340  | --                                             | --                                              | --                                                 | --                               | --   |
| 2                     | HOLT AVE OUTSIDE LANES                 | 2                 | 149                         | 298    | 94                                     | 188   | 16                                             | 32    | 39                                           | 78    | 78                                          | 156   | 2                                  | 4    | 100                         | 200    | --                                             | --                                              | --                                                 | 4                                | 20   |
|                       | HOLT AVE INSIDE LANES                  | 2                 | 65                          | 130    | 97                                     | 194   | 19                                             | 38    | 10                                           | 20    | 20                                          | 40    | 1                                  | 2    | 50                          | 100    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | LAPHAM BLVD                            | 2                 | 159                         | 318    | --                                     | --    | 44                                             | 88    | 47                                           | 94    | 94                                          | 188   | 3                                  | 6    | 103                         | 206    | --                                             | --                                              | --                                                 | 4                                | 20   |
|                       | HOWARD AVE NB ENTRANCE RAMP            | 4                 | 34                          | 136    | --                                     | --    | --                                             | --    | 10                                           | 40    | 20                                          | 80    | --                                 | --   | 43                          | 172    | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | HOLT AVE NB EXIT RAMP                  | 30                | 132                         | 3,960  | --                                     | --    | 26                                             | 780   | 12                                           | 360   | 24                                          | 720   | 1                                  | 30   | 47                          | 1,410  | 4                                              | 6                                               | 174                                                | 1                                | 7    |
|                       | DETOUR - HOLT AVE NB EXIT RAMP         | 30                | --                          | --     | --                                     | --    | --                                             | --    | --                                           | --    | --                                          | --    | --                                 | --   | 16                          | 480    | --                                             | --                                              | 36                                                 | 1                                | 37   |
|                       | DETOUR - HOSPITAL                      | 30                | --                          | --     | --                                     | --    | --                                             | --    | --                                           | --    | --                                          | --    | --                                 | --   | 12                          | 360    | --                                             | --                                              | --                                                 | --                               | --   |
|                       | HOLT AVE NB ENTRANCE RAMP              | 4                 | 62                          | 248    | --                                     | --    | 8                                              | 32    | 8                                            | 32    | 16                                          | 64    | 1                                  | 4    | 61                          | 244    | --                                             | --                                              | --                                                 | 2                                | 20   |
|                       | LAPHAM BLVD NB EXIT RAMP               | 4                 | 78                          | 312    | --                                     | --    | 19                                             | 76    | 8                                            | 32    | 16                                          | 64    | 1                                  | 4    | 27                          | 108    | --                                             | --                                              | 33                                                 | 1                                | 10   |
|                       | LAPHAM BLVD SB EXIT RAMP               | 4                 | 70                          | 280    | --                                     | --    | 25                                             | 100   | 2                                            | 8     | 4                                           | 16    | 2                                  | 8    | 24                          | 96     | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | LAPHAM BLVD SB ENTRANCE RAMP           | 4                 | 40                          | 160    | --                                     | --    | --                                             | --    | 5                                            | 20    | 10                                          | 40    | --                                 | --   | 45                          | 180    | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | LAPHAM BLVD NB ENTRANCE RAMP           | 4                 | 62                          | 248    | --                                     | --    | 8                                              | 32    | 4                                            | 16    | 8                                           | 32    | 1                                  | 4    | 49                          | 196    | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | NATIONAL AVE NB EXIT RAMP              | 7                 | 25                          | 175    | --                                     | --    | --                                             | --    | 2                                            | 14    | 4                                           | 28    | --                                 | --   | 7                           | 49     | --                                             | --                                              | --                                                 | 1                                | 14   |
|                       | 6TH ST NB ENTRANCE RAMP                | 4                 | 30                          | 120    | --                                     | --    | --                                             | --    | 3                                            | 12    | 6                                           | 24    | --                                 | --   | 24                          | 96     | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | NATIONAL AVE NB ENTRANCE RAMP          | 4                 | --                          | --     | --                                     | --    | --                                             | --    | 3                                            | 12    | 6                                           | 24    | --                                 | --   | 20                          | 80     | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | NATIONAL AVE/6TH ST SB EXIT RAMP       | 4                 | 66                          | 264    | --                                     | --    | 13                                             | 52    | 5                                            | 20    | 10                                          | 40    | --                                 | --   | 10                          | 40     | --                                             | --                                              | --                                                 | 1                                | 10   |
|                       | NATIONAL AVE SB ENTRANCE RAMP          | 7                 | --                          | --     | --                                     | --    | --                                             | --    | 2                                            | 14    | 4                                           | 28    | --                                 | --   | 20                          | 140    | --                                             | --                                              | --                                                 | 1                                | 7    |
|                       | DETOUR - NATIONAL AVE SB ENTRANCE RAMP | 7                 | --                          | --     | --                                     | --    | --                                             | --    | --                                           | --    | --                                          | --    | --                                 | --   | 92                          | 644    | --                                             | 2                                               | --                                                 | --                               | --   |
| 3A                    | IH 43 & HOWARD AVE                     | 8                 | 321                         | 2,568  | --                                     | --    | 108                                            | 864   | 44                                           | 352   | 88                                          | 704   | 8                                  | 64   | 110                         | 880    | --                                             | --                                              | --                                                 | 4                                | 112  |
|                       | HOWARD AVE                             | 65                | 70                          | 4,550  | --                                     | --    | 16                                             | 1,040 | 4                                            | 260   | 8                                           | 520   | 2                                  | 130  | 29                          | 1,885  | --                                             | --                                              | --                                                 | 1                                | 7    |
| 3B                    | HOWARD AVE                             | 1                 | 98                          | 98     | --                                     | --    | 32                                             | 32    | 22                                           | 22    | 44                                          | 44    | 4                                  | 4    | 43                          | 43     | --                                             | --                                              | --                                                 | 2                                | 14   |
|                       | UNDISTRIBUTED                          |                   |                             | 6,255  |                                        | 348   |                                                | 1,067 |                                              | 529   | --                                          | 1,058 |                                    | 91   |                             | 3,742  | 1                                              | 2                                               | 100                                                |                                  | 91   |
| TOTAL                 |                                        |                   |                             | 31,273 |                                        | 1,738 |                                                | 5,335 |                                              | 2,642 |                                             | 5,284 |                                    | 453  |                             | 18,708 | 5                                              | 10                                              | 343                                                |                                  | 453  |

NOTE:ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



TRAFFIC CONTROL ITEMS (CONT'D)

|               |                                  |                   | 603.8000<br>CONCRETE<br>BARRIER<br>TEMPORARY<br>PRECAST<br>DELIVERED<br>LF | 603.8125<br>CONCRETE<br>BARRIER<br>TEMPORARY<br>PRECAST<br>INSTALLED<br>LF | 643.3105<br>TEMPORARY<br>MARKING<br>LINE PAINT<br>4-INCH<br>LF | 643.3205<br>TEMPORARY<br>MARKING<br>LINE PAINT<br>8-INCH<br>LF | 643.3805<br>TEMPORARY<br>MARKING<br>STOP LINE<br>PAINT<br>18-INCH<br>LF | 643.3180<br>TEMPORARY<br>MARKING<br>LINE<br>REMOVABLE<br>TAPE 6-INCH<br>LF | 643.3960<br>TEMPORARY<br>MARKING<br>REMOVABLE<br>MASK OUT<br>TAPE 6-INCH<br>LF | 643.3550<br>TEMPORARY<br>MARKING<br>ARROW<br>REMOVABLE<br>TAPE<br>EACH | 644.1601<br>TEMPORARY<br>PEDESTRIAN<br>CURB RAMP<br>EACH DAYS | 644.1605<br>TEMPORARY<br>PEDESTRIAN<br>DETECTABLE<br>WARNING<br>FIELD<br>SF | 644.1810<br>TEMPORARY<br>PEDESTRIAN<br>BARRICADE<br>LF | 644.1900.S<br>TEMPORARY<br>AUDIBLE<br>MESSAGE<br>DEVICES<br>EACH DAY | SPV.0060.31<br>TEMPORARY<br>MARKING<br>REMOVABLE MASK<br>OUT TAPE, WORDS<br>AND ARROWS<br>EACH |     |
|---------------|----------------------------------|-------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----|
| STAGE         | LOCATION                         | STAGE<br>DURATION |                                                                            |                                                                            |                                                                |                                                                |                                                                         |                                                                            |                                                                                |                                                                        |                                                               |                                                                             |                                                        |                                                                      |                                                                                                |     |
| 1A            | HOLT AVE                         | 35                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | 166                                                                        | --                                                                             | --                                                                     | 2                                                             | 70                                                                          | 50                                                     | 442                                                                  | --                                                                                             | --  |
|               | LAPHAM BLVD                      | 10                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | 101                                                    | 11                                                                   | 110                                                                                            |     |
|               | 6TH ST                           | 25                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | 62                                                     | 6                                                                    | 150                                                                                            |     |
|               | 6TH ST (FULL CLOSURE)            | 2                 | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             |     |
|               | 9TH ST                           | 20                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | 82                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | 20                                                     | 168                                                                  | 12                                                                                             | 240 |
| 1B            | HOLT AVE                         | 21                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 47                                                                   | 7                                                                                              | 147 |
|               | LAPHAM BLVD                      | 10                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 103                                                                  | 11                                                                                             | 110 |
|               | 6TH ST                           | 25                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | 76                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 57                                                                   | 10                                                                                             | 250 |
|               | 9TH ST                           | 10                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 153                                                                  | 18                                                                                             | 180 |
| 1C            | LAPHAM BLVD                      | 20                | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | 24                                                     | 10                                                                   | 200                                                                                            |     |
| 2             | HOLT AVE OUTSIDE LANES           | 2                 | --                                                                         | --                                                                         | 620                                                            | --                                                             | 40                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 12                                                                   | --                                                                                             | --  |
|               | HOLT AVE INSIDE LANES            | 2                 | --                                                                         | --                                                                         | --                                                             | 734                                                            | 40                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 12                                                                   | --                                                                                             | --  |
|               | LAPHAM BLVD                      | 2                 | --                                                                         | --                                                                         | 600                                                            | 191                                                            | 211                                                                     | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 30                                                                   | 10                                                                                             | 20  |
|               | HOWARD AVE NB ENTRANCE RAMP      | 4                 | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | HOLT AVE NB EXIT RAMP            | 30                | --                                                                         | --                                                                         | 100                                                            | 516                                                            | 52                                                                      | 300                                                                        | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | 15                                                                   | 8                                                                                              | 240 |
|               | HOLT AVE NB ENTRANCE RAMP        | 4                 | --                                                                         | --                                                                         | 50                                                             | 727                                                            | 36                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | LAPHAM BLVD NB EXIT RAMP         | 4                 | --                                                                         | --                                                                         | --                                                             | 269                                                            | 36                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | LAPHAM BLVD SB EXIT RAMP         | 4                 | --                                                                         | --                                                                         | --                                                             | 516                                                            | 41                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | LAPHAM BLVD SB ENTRANCE RAMP     | 4                 | --                                                                         | --                                                                         | --                                                             | 110                                                            | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | LAPHAM BLVD NB ENTRANCE RAMP     | 4                 | --                                                                         | --                                                                         | --                                                             | 196                                                            | 16                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | NATIONAL AVE NB EXIT RAMP        | 7                 | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | 6TH ST NB ENTRANCE RAMP          | 4                 | --                                                                         | --                                                                         | --                                                             | 97                                                             | 20                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | NATIONAL AVE NB ENTRANCE RAMP    | 4                 | --                                                                         | --                                                                         | --                                                             | 97                                                             | 17                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | NATIONAL AVE/6TH ST SB EXIT RAMP | 4                 | --                                                                         | --                                                                         | 63                                                             | 243                                                            | 64                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | NATIONAL AVE SB ENTRANCE RAMP    | 7                 | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
| 3A            | IH 43 & HOWARD AVE               | 8                 | --                                                                         | --                                                                         | --                                                             | --                                                             | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
|               | HOWARD AVE                       | 65                | 250                                                                        | 250                                                                        | --                                                             | --                                                             | --                                                                      | 1,689                                                                      | 60                                                                             | 1                                                                      | --                                                            | --                                                                          | --                                                     | 32                                                                   | 4                                                                                              | 260 |
| 3B            | HOWARD AVE                       | 1                 | --                                                                         | --                                                                         | 120                                                            | 241                                                            | --                                                                      | --                                                                         | --                                                                             | --                                                                     | --                                                            | --                                                                          | --                                                     | --                                                                   | --                                                                                             | --  |
| UNDISTRIBUTED |                                  |                   | --                                                                         | --                                                                         | 389                                                            | 985                                                            | 144                                                                     | 579                                                                        | 20                                                                             | 1                                                                      | 18                                                            | --                                                                          | 315                                                    | --                                                                   | 477                                                                                            | --  |
| TOTAL         |                                  |                   | 250                                                                        | 250                                                                        | 1,942                                                          | 4,922                                                          | 717                                                                     | 2,892                                                                      | 80                                                                             | 2                                                                      | 88                                                            | 70                                                                          | 1,573                                                  | --                                                                   | 2,384                                                                                          | 3   |

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



3

| TRAFFIC CONTROL - CLOSURES |                                  |                |              |                    |      |              |      |                       |      |  |
|----------------------------|----------------------------------|----------------|--------------|--------------------|------|--------------|------|-----------------------|------|--|
|                            |                                  |                | 643.4100     | SPV.0060.20        |      | SPV.0060.21  |      | SPV.0060.22           |      |  |
|                            |                                  |                | TRAFFIC      | TRAFFIC CONTROL    |      | TRAFFIC      |      | TRAFFIC CONTROL LOCAL |      |  |
|                            |                                  |                | CONTROL      | CLOSE-OPEN FREEWAY |      | CONTROL FULL |      | ROAD LANE CLOSURES    |      |  |
|                            |                                  |                | INTERIM      | ENTRANCE RAMP      |      | FREEWAY      |      |                       |      |  |
|                            |                                  |                | LANE         |                    |      | CLOSURE      |      |                       |      |  |
| STAGE                      | LOCATION                         | STAGE DURATION | CLOSURE EACH | PER STAGE          | DAYS | PER STAGE    | DAYS | PER STAGE             | DAYS |  |
| 1A                         | HOLT AVE                         | 35             | --           | --                 | --   | --           | --   | 1                     | 1    |  |
|                            | LAPHAM BLVD                      | 10             | --           | --                 | --   | --           | --   | 1                     | 10   |  |
|                            | 6TH ST                           | 25             | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | 9TH ST                           | 20             | --           | --                 | --   | --           | --   | --                    | --   |  |
| 1B                         | HOLT AVE                         | 21             | --           | --                 | --   | --           | --   | 2                     | 42   |  |
|                            | LAPHAM BLVD                      | 10             | --           | --                 | --   | --           | --   | 1                     | 10   |  |
|                            | 6TH ST                           | 25             | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | 9TH ST                           | 10             | --           | --                 | --   | --           | --   | --                    | --   |  |
| 1C                         | LAPHAM BLVD                      | 20             | --           | --                 | --   | --           | --   | 2                     | 2    |  |
| 2                          | HOLT AVE OUTSIDE LANES           | 2              | --           | 2                  | 4    | --           | --   | 3                     | 6    |  |
|                            | HOLT AVE INSIDE LANES            | 2              | --           | --                 | --   | --           | --   | 2                     | 4    |  |
|                            | LAPHAM BLVD                      | 2              | --           | 2                  | 4    | --           | --   | --                    | --   |  |
|                            | HOWARD AVE NB ENTRANCE RAMP      | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | HOLT AVE NB EXIT RAMP            | 30             | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | HOLT AVE NB ENTRANCE RAMP        | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | LAPHAM BLVD NB EXIT RAMP         | 4              | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | LAPHAM BLVD SB EXIT RAMP         | 4              | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | LAPHAM BLVD SB ENTRANCE RAMP     | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | LAPHAM BLVD NB ENTRANCE RAMP     | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | NATIONAL AVE NB EXIT RAMP        | 7              | --           | --                 | --   | --           | --   | --                    | --   |  |
|                            | 6TH ST NB ENTRANCE RAMP          | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | NATIONAL AVE NB ENTRANCE RAMP    | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
|                            | NATIONAL AVE/6TH ST SB EXIT RAMP | 4              | --           | 1                  | 4    | --           | --   | --                    | --   |  |
| 3A                         | IH 43 & HOWARD AVE               | 8              | 8            | --                 | --   | 1            | 8    | --                    | --   |  |
|                            | HOWARD AVE                       | 65             | --           | --                 | --   | --           | --   | 1                     | 1    |  |
| 3B                         | HOWARD AVE                       | 1              | --           | --                 | --   | --           | --   | 3                     | 3    |  |
| UNDISTRIBUTED              |                                  |                |              |                    | 10   |              |      |                       | 20   |  |
| TOTAL                      |                                  |                | 8            |                    | 47   |              | 8    |                       | 99   |  |

3

| GEOSYNTHETIC ITEMS    |              |       |          |       |
|-----------------------|--------------|-------|----------|-------|
|                       |              |       | 645.0220 |       |
|                       |              |       | GEOGRID  |       |
|                       |              |       | TYPE SR  |       |
| LOCATION              | STATION FROM | TO    | SIDE     | SY    |
| HOLT AVE NB EXIT RAMP | 94+74        | 98+01 | RT       | 1,436 |
| TOTAL                 |              |       |          | 1,436 |

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



3

| PAVEMENT MARKING LINE ITEMS   |                           |        |       |                                         |                                           |        |                                            |                           |       |                                          |       |                                            |       |                                             |
|-------------------------------|---------------------------|--------|-------|-----------------------------------------|-------------------------------------------|--------|--------------------------------------------|---------------------------|-------|------------------------------------------|-------|--------------------------------------------|-------|---------------------------------------------|
| LOCATION                      | 646.1020                  |        |       | 646.2025                                | 646.2040                                  |        | 646.2050                                   | 646.3020                  |       | 646.4025                                 |       | 646.4040                                   |       | 646.4050                                    |
|                               | MARKING LINE EPOXY 4-INCH |        |       | MARKING LINE GROOVED BLACK EPOXY 6-INCH | MARKING LINE GROOVED WET REF EPOXY 6-INCH |        | MARKING LINE GROOVED PERMANENT TAPE 6-INCH | MARKING LINE EPOXY 8-INCH |       | MARKING LINE GROOVED BLACK EPOXY 10-INCH |       | MARKING LINE GROOVED WET REF EPOXY 10-INCH |       | MARKING LINE GROOVED PERMANENT TAPE 10-INCH |
|                               | 10-FT LINE, 30-FT SKIP    |        |       | 12.5-FT LINE, 37.5-FT SKIP              | CONTINUOUS                                |        | 12.5-FT LINE, 37.5-FT SKIP                 | 3-FT LINE, 9-FT SKIP      |       | 3-FT LINE, 2-FT LINE, 9-FT SKIP          |       | 2-FT LINE, 6-FT SKIP                       |       | 3-FT LINE, 9-FT SKIP                        |
|                               | CONTINUOUS                |        |       | BLACK                                   | CONTINUOUS                                |        | WHITE                                      | CONT.                     |       | BLACK                                    |       | WHITE                                      |       | WHITE                                       |
|                               | WHITE                     | YELLOW | WHITE | BLACK                                   | WHITE                                     | YELLOW | WHITE                                      | WHITE                     | LF    | LF                                       | BLACK | LF                                         | WHITE | WHITE                                       |
|                               | LF                        | LF     | LF    | LF                                      | LF                                        | LF     | LF                                         | LF                        | LF    | LF                                       | LF    | LF                                         | LF    | LF                                          |
| HOWARD AVE NB ENTRANCE RAMP   | --                        | --     | --    | --                                      | 808                                       | 747    | --                                         | --                        | --    | --                                       | --    | --                                         | 604   | --                                          |
| HOLT AVE NB EXIT RAMP         | --                        | --     | --    | 100                                     | 627                                       | 638    | 100                                        | --                        | --    | --                                       | --    | --                                         | 927   | --                                          |
| HOLT AVE NB ENTRANCE RAMP     | --                        | --     | --    | 50                                      | 629                                       | 551    | 50                                         | --                        | --    | 24                                       | --    | --                                         | 1,098 | 24                                          |
| LAPHAM BLVD NB EXIT RAMP      | --                        | --     | --    | --                                      | 597                                       | 546    | --                                         | --                        | --    | 27                                       | --    | --                                         | 745   | 27                                          |
| LAPHAM BLVD NB ENTRANCE RAMP  | --                        | --     | --    | --                                      | 353                                       | 573    | --                                         | --                        | --    | --                                       | --    | --                                         | 493   | --                                          |
| NATIONAL AVE NB EXIT RAMP     | --                        | --     | --    | --                                      | 851                                       | 821    | --                                         | --                        | --    | --                                       | --    | --                                         | --    | --                                          |
| 6TH ST NB ENTRANCE RAMP       | --                        | --     | --    | --                                      | 509                                       | 703    | --                                         | --                        | --    | --                                       | --    | --                                         | 148   | --                                          |
| NATIONAL AVE NB ENTRANCE RAMP | --                        | --     | --    | --                                      | 961                                       | 855    | --                                         | --                        | --    | --                                       | --    | --                                         | 147   | --                                          |
| LAPHAM BLVD SB ENTRANCE RAMP  | --                        | --     | --    | --                                      | 541                                       | 676    | --                                         | --                        | --    | --                                       | --    | --                                         | 640   | --                                          |
| LAPHAM BLVD SB EXIT RAMP      | --                        | --     | --    | --                                      | 1,263                                     | 1,132  | --                                         | --                        | --    | 75                                       | --    | --                                         | 969   | 75                                          |
| NATIONAL AVE SB EXIT RAMP     | --                        | --     | --    | --                                      | 474                                       | 473    | --                                         | --                        | --    | --                                       | --    | --                                         | 278   | --                                          |
| 6TH ST SB EXIT RAMP           | --                        | --     | --    | 63                                      | 887                                       | 912    | 63                                         | --                        | --    | --                                       | --    | --                                         | 181   | --                                          |
| NATIONAL AVE SB ENTRANCE RAMP | --                        | --     | --    | --                                      | 62                                        | 51     | --                                         | --                        | --    | --                                       | --    | --                                         | 14    | --                                          |
| HOWARD AVE                    | --                        | --     | 120   | --                                      | --                                        | --     | --                                         | --                        | 241   | --                                       | --    | --                                         | --    | --                                          |
| HOLT AVE                      | 560                       | --     | 620   | --                                      | --                                        | --     | --                                         | 18                        | 716   | --                                       | 46    | 46                                         | --    | --                                          |
| LAPHAM BLVD                   | 450                       | 450    | 150   | --                                      | --                                        | --     | --                                         | --                        | 191   | --                                       | --    | --                                         | --    | --                                          |
| MINERAL ST & 6TH ST           | 211                       | 370    | --    | --                                      | --                                        | --     | --                                         | --                        | 190   | --                                       | --    | --                                         | --    | --                                          |
| MINERAL ST & 9TH ST           | --                        | --     | --    | --                                      | --                                        | --     | --                                         | --                        | --    | --                                       | --    | --                                         | --    | --                                          |
| WALKER ST & 9TH ST            | --                        | --     | --    | --                                      | --                                        | --     | --                                         | --                        | --    | --                                       | --    | --                                         | --    | --                                          |
| TOTAL                         | 1,221                     | 820    | 890   | 213                                     | 8,562                                     | 8,678  | 213                                        | 18                        | 1,338 | 126                                      | 46    | 46                                         | 6,244 | 126                                         |
|                               |                           | 2,931  |       | 213                                     |                                           | 17,240 | 213                                        |                           | 1,356 |                                          | 172   |                                            | 6,290 | 126                                         |

3

| PAVEMENT MARKING SPECIAL MARKINGS |                             |      |      |      |                    |                      |                                 |                               |                    |                           |                                 |       |
|-----------------------------------|-----------------------------|------|------|------|--------------------|----------------------|---------------------------------|-------------------------------|--------------------|---------------------------|---------------------------------|-------|
| LOCATION                          | 646.5020                    |      |      |      | 646.5120           | 646.5220             | 646.6120                        | 646.7220                      | 646.8120           | 646.8220                  | SPV.0090.01                     |       |
|                                   | MARKING ARROW EPOXY         |      |      |      | MARKING WORD EPOXY | MARKING SYMBOL EPOXY | MARKING STOP LINE EPOXY 18-INCH | MARKING CHEVRON EPOXY 24-INCH | MARKING CURB EPOXY | MARKING ISLAND NOSE EPOXY | MARKING CROSSWALK EPOXY 12-INCH |       |
|                                   | TYPE 1 TYPE 2 TYPE 3 TYPE 4 |      |      |      |                    |                      |                                 |                               |                    |                           | TRANSV. LINE BLOCK STYLE        |       |
|                                   | WHITE                       |      |      |      | WHITE              | WHITE                | WHITE                           | WHITE                         | YELLOW             | YELLOW                    | WHITE                           | WHITE |
|                                   | EACH                        | EACH | EACH | EACH | EACH               | EACH                 | LF                              | LF                            | LF                 | EACH                      | LF                              | LF    |
|                                   |                             |      |      |      |                    |                      |                                 |                               |                    |                           |                                 |       |
| HOWARD AVE NB ENTRANCE RAMP       | --                          | --   | --   | --   | --                 | --                   | --                              | --                            | --                 | --                        | --                              | --    |
| HOLT AVE NB EXIT RAMP             | --                          | 6    | 2    | 1    | --                 | --                   | 52                              | 73                            | --                 | --                        | --                              | --    |
| HOLT AVE NB ENTRANCE RAMP         | --                          | --   | --   | --   | --                 | 4                    | 36                              | 200                           | --                 | --                        | --                              | --    |
| LAPHAM BLVD NB EXIT RAMP          | --                          | 2    | 2    | 1    | --                 | --                   | 36                              | 64                            | --                 | --                        | --                              | --    |
| LAPHAM BLVD NB ENTRANCE RAMP      | --                          | --   | --   | --   | --                 | --                   | 16                              | --                            | --                 | --                        | --                              | --    |
| NATIONAL AVE NB EXIT RAMP         | --                          | --   | --   | --   | --                 | --                   | --                              | --                            | --                 | --                        | --                              | --    |
| 6TH ST NB ENTRANCE RAMP           | --                          | --   | --   | --   | --                 | --                   | 20                              | --                            | --                 | --                        | --                              | --    |
| NATIONAL AVE NB ENTRANCE RAMP     | --                          | --   | --   | --   | --                 | --                   | 17                              | --                            | --                 | --                        | --                              | --    |
| LAPHAM BLVD SB ENTRANCE RAMP      | --                          | --   | --   | --   | --                 | --                   | --                              | --                            | --                 | --                        | --                              | --    |
| LAPHAM BLVD SB EXIT RAMP          | --                          | 2    | 2    | 1    | --                 | --                   | 41                              | 244                           | --                 | --                        | --                              | --    |
| NATIONAL AVE SB EXIT RAMP         | --                          | --   | --   | 3    | --                 | --                   | 40                              | 61                            | --                 | --                        | --                              | --    |
| 6TH ST SB EXIT RAMP               | --                          | 1    | 1    | 1    | --                 | --                   | 24                              | --                            | --                 | --                        | --                              | --    |
| NATIONAL AVE SB ENTRANCE RAMP     | --                          | --   | --   | --   | --                 | --                   | --                              | --                            | --                 | --                        | --                              | --    |
| HOWARD AVE                        | --                          | 2    | --   | --   | 1                  | --                   | --                              | --                            | --                 | --                        | --                              | --    |
| HOLT AVE                          | --                          | 5    | --   | --   | 2                  | --                   | 79                              | --                            | 164                | --                        | 358                             | --    |
| LAPHAM BLVD                       | --                          | 4    | --   | --   | --                 | --                   | 211                             | --                            | 46                 | 2                         | --                              | 1,184 |
| MINERAL ST & 6TH ST               | --                          | 2    | --   | --   | 2                  | --                   | 49                              | --                            | 10                 | 1                         | --                              | 560   |
| MINERAL ST & 9TH ST               | --                          | --   | --   | --   | --                 | --                   | --                              | --                            | 10                 | 1                         | --                              | 621   |
| WALKER ST & 9TH ST                | --                          | --   | --   | --   | --                 | --                   | 35                              | --                            | 10                 | 1                         | --                              | 648   |
| TOTAL                             | --                          | 24   | 7    | 7    | 5                  | 4                    | 656                             | 642                           | 240                | 5                         | 358                             | 3,013 |
|                                   |                             |      | 38   |      | 5                  | 4                    | 656                             | 642                           | 240                | 5                         |                                 | 3,371 |

\* = CATEGORY 8000

NOTE: ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



| PAVEMENT MARKING REMOVAL ITEMS           |               |               |
|------------------------------------------|---------------|---------------|
| 646.9200<br>MARKING REMOVAL<br>LINE WIDE |               |               |
| LOCATION                                 | 12-INCH<br>LF | 24-INCH<br>LF |
| MINERAL ST & 6TH ST                      | 418           | --            |
| MINERAL ST & 9TH ST                      | 298           | 265           |
| WALKER ST & 9TH ST                       | 314           | 257           |
| TOTAL                                    | 1,030         | 522           |
|                                          | 1,552         |               |

SAWCUT ITEMS

| LOCATION                      | 690.0150<br>SAWING<br>ASPHALT<br>LF | 690.0250<br>SAWING<br>CONCRETE<br>LF |
|-------------------------------|-------------------------------------|--------------------------------------|
| HOWARD AVE NB ENTRANCE RAMP   | 12                                  | 429                                  |
| HOLT AVE NB EXIT RAMP         | 23                                  | 1,229                                |
| HOLT AVE NB ENTRANCE RAMP     | 176                                 | 1,351                                |
| LAPHAM BLVD NB EXIT RAMP      | 76                                  | 258                                  |
| LAPHAM BLVD NB ENTRANCE RAMP  | 280                                 | 480                                  |
| NATIONAL AVE NB EXIT RAMP     | 43                                  | 449                                  |
| 6TH ST NB ENTRANCE RAMP       | 43                                  | 528                                  |
| NATIONAL AVE NB ENTRANCE RAMP | 19                                  | 579                                  |
| LAPHAM BLVD SB ENTRANCE RAMP  | 39                                  | 549                                  |
| LAPHAM BLVD SB EXIT RAMP      | 191                                 | 855                                  |
| NATIONAL AVE SB EXIT RAMP     | 22                                  | 392                                  |
| 6TH ST SB EXIT RAMP           | 67                                  | 942                                  |
| NATIONAL AVE SB ENTRANCE RAMP | --                                  | 22                                   |
| HOLT AVE                      | 470                                 | 377                                  |
| LAPHAM BLVD & 5TH ST          | 168                                 | 283                                  |
| LAPHAM BLVD & 4TH ST          | 212                                 | 403                                  |
| MINERAL ST & 6TH ST           | --                                  | 610                                  |
| MINERAL ST & 9TH ST           | --                                  | 394                                  |
| WALKER ST & 9TH ST            | 34                                  | 379                                  |
| TOTAL                         | 1,875                               | 10,509                               |

WATER MAIN ITEMS

| LOCATION              | STATION | OFFSET | SPV.0060.03<br>ADJUSTING<br>WATER BOXES<br>EACH | NOTES                          |
|-----------------------|---------|--------|-------------------------------------------------|--------------------------------|
| HOLT AVE NB EXIT RAMP | 97+59   | 70' RT | 1                                               |                                |
|                       | 97+85   | 63' RT | 1                                               |                                |
| LAPHAM BLVD & 5TH ST  | 15+04   | 30' LT | 1                                               |                                |
|                       | 15+08   | 27' LT | 1                                               |                                |
|                       | 15+58   | 44' LT | 1                                               |                                |
|                       | 15+71   | 27' LT | 1                                               |                                |
| LAPHAM BLVD & 4TH ST  | 19+28   | 50' LT | 1                                               |                                |
|                       | 19+29   | 51' LT | 1                                               |                                |
|                       | 19+30   | 47' LT | 1                                               |                                |
|                       | 19+30   | 3' LT  | 1                                               |                                |
|                       | 19+35   | 27' RT | 1                                               | PAVED OVER - LOCATE AND ADJUST |
|                       | 19+38   | 47' LT | 1                                               |                                |
|                       | 19+70   | 40' RT | 1                                               |                                |
| TOTAL                 |         |        | 13                                              |                                |

\* WATER MAIN ITEMS ARE CATEGORY 8030.

PAVEMENT CLEANUP

| STAGE | LOCATION      | SPV.0075.01<br>PAVEMENT<br>CLEANUP<br>PROJECT<br>1228-09-76<br>HRS |
|-------|---------------|--------------------------------------------------------------------|
| 2     | HOLT AVE      | 16                                                                 |
|       | UNDISTRIBUTED | 4                                                                  |
|       | TOTAL         | 20                                                                 |

TEMPORARY FENCING

| STAGE | LOCATION   | SPV.0090.02<br>TEMPORARY FENCE<br>CHAIN LINK 6-FT<br>LF |
|-------|------------|---------------------------------------------------------|
| 3A    | HOWARD AVE | 280                                                     |
|       | TOTAL      | 280                                                     |

NOTE:ALL ITEMS ARE CATEGORY 1000 UNLESS NOTED OTHERWISE.



| CRASH CUSHION            |                                                 |                  |                              |                     |                   |                     |                                                                       |
|--------------------------|-------------------------------------------------|------------------|------------------------------|---------------------|-------------------|---------------------|-----------------------------------------------------------------------|
| LOCATION                 | 614.0800<br>CRASH CUSHIONS<br>PERMANENT<br>EACH | BACK WIDTH<br>FT | OBJECT<br>MARKING<br>PATTERN | CRASH TEST<br>LEVEL | TRAFFIC DIRECTION | TRAFFIC<br>LOCATION | CRASH CUSHION<br>SHIELDS                                              |
| HOLT AVE PARK & RIDE LOT | 1                                               | 2                | OM-3R                        | TL-3                | UNIDIRECTIONAL    | L                   | TEMPORARY PRECAST<br>CONCRETE BARRIER<br>LEFT IN PLACE ON<br>SHOULDER |
| TOTAL                    | 1                                               |                  |                              |                     |                   |                     |                                                                       |

| FENCING                  |                                      |                                                             |
|--------------------------|--------------------------------------|-------------------------------------------------------------|
|                          | 616.0206<br>FENCE CHAIN LINK<br>6-FT | 616.0329<br>GATES CHAIN<br>LINK (WIDTH)<br>01.22-FT<br>EACH |
| LOCATION                 | LF                                   |                                                             |
| HOLT AVE PARK & RIDE LOT | 1100                                 | 1                                                           |
| TOTAL                    | 1100                                 | 1                                                           |

| TEMPORARY CONCRETE BARRIER |                                                                             |
|----------------------------|-----------------------------------------------------------------------------|
|                            | SPV.0090.03<br>CONCRETE BARRIER<br>TEMPORARY PRECAST<br>LEFT IN PLACE<br>LF |
| LOCATION                   |                                                                             |
| HOLT AVE PARK & RIDE LOT   | 112.5                                                                       |
| TOTAL                      | 112.5                                                                       |

NOTE:ALL ITEMS ARE CATEGORY 1010 UNLESS NOTED OTHERWISE.



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| STATE FURNISHED MATERIALS SUMMARY - FOR INFORMATION ONLY |  |                                            | W HOLT AVE, S 4 <sup>TH</sup> ST & FWY RAMPS TRAFFIC SIGNALS |                          |            |
|----------------------------------------------------------|--|--------------------------------------------|--------------------------------------------------------------|--------------------------|------------|
| EACH                                                     |  | DESCRIPTION                                | REMOVING TRAFFIC SIGNALS                                     |                          |            |
| 1                                                        |  | TRAFFIC SIGNAL CONTROLLER AND CABINET      | SPV.0060.07*                                                 | SPV.0060.08*             |            |
| 2                                                        |  | POLES TYPE 9 SPECIAL                       | REMOVE POLE                                                  | REMOVE TRAFFIC           |            |
| 1                                                        |  | POLES TYPE 10 SPECIAL                      | AND WIRE                                                     | SIGNAL FACE              |            |
| 1                                                        |  | MONOTUBE ARMS 40-FT SPECIAL                | LOCATION                                                     | EACH                     | EACH       |
| 2                                                        |  | MONOTUBE ARMS 45-FT SPECIAL                | HOLT AT 4TH                                                  | 9                        | 15         |
| 1                                                        |  | LUMINAIRE ARMS STEEL 15-FT                 | TOTAL                                                        | 9                        | 15         |
| 3                                                        |  | EVP DETECTOR HEADS AND CONFIRMATION LIGHTS | * QUANTITY SHOWN ELSEWHERE ON PLAN                           |                          |            |
| 7                                                        |  | ACCESSIBLE PEDESTRIAN PUSH BUTTONS         |                                                              |                          |            |
| 1                                                        |  | CELL MODEM                                 |                                                              |                          |            |
| REMOVING CONCRETE BASES                                  |  |                                            | REMOVE TRAFFIC SIGNALS                                       |                          |            |
|                                                          |  | 204.0195*                                  |                                                              | 204.9060.S.01            |            |
|                                                          |  | REMOVING                                   |                                                              | REMOVING                 |            |
|                                                          |  | CONCRETE                                   |                                                              | TRAFFIC SIGNALS          |            |
| SIGNAL                                                   |  | BASES                                      | LOCATION                                                     | EACH                     |            |
| BASE NO.                                                 |  | EACH                                       | HOLT AT 4TH                                                  | 1                        |            |
| CB1                                                      |  | 1                                          | TOTAL                                                        | 1                        |            |
| SB1                                                      |  | 1                                          |                                                              |                          |            |
| SB2                                                      |  | 1                                          |                                                              |                          |            |
| SB3                                                      |  | 1                                          |                                                              |                          |            |
| SB4                                                      |  | 1                                          |                                                              |                          |            |
| SB5                                                      |  | 1                                          |                                                              |                          |            |
| SB6                                                      |  | 1                                          |                                                              |                          |            |
| SB7                                                      |  | 1                                          |                                                              |                          |            |
| SB8                                                      |  | 1                                          |                                                              |                          |            |
| SB9                                                      |  | 1                                          |                                                              |                          |            |
| TOTAL                                                    |  | 10                                         | TOTAL                                                        | 1                        |            |
| * QUANTITY SHOWN ELSEWHERE ON PLAN                       |  |                                            |                                                              |                          |            |
| REMOVE PULL BOXES                                        |  |                                            | TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS                  |                          |            |
|                                                          |  | 653.0905                                   |                                                              | 661.0201.01              |            |
|                                                          |  | REMOVING                                   |                                                              | TEMPORARY                |            |
| PULL BOX                                                 |  | PULL BOXES                                 |                                                              | TRAFFIC SIGNALS          |            |
| NO.                                                      |  | EACH                                       | LOCATION                                                     | EACH                     |            |
| PB1                                                      |  | 1                                          | HOLT AT 4TH                                                  | 1                        |            |
| PB2                                                      |  | 1                                          | TOTAL                                                        | 1                        |            |
| PB3                                                      |  | 1                                          |                                                              |                          |            |
| TOTAL                                                    |  | 3                                          |                                                              |                          |            |
|                                                          |  |                                            | TEMPORARY EMERGENCY VEHICLE PREEMPTION                       |                          |            |
|                                                          |  |                                            |                                                              | SPV.0060.10              |            |
|                                                          |  |                                            |                                                              | TEMPORARY INFRARED       |            |
|                                                          |  |                                            |                                                              | EVP SYSTEM               |            |
| LOCATION                                                 |  |                                            | LOCATION                                                     | EACH                     |            |
| HOLT AT 4TH                                              |  |                                            | HOLT AT 4TH                                                  | 1                        |            |
| TOTAL                                                    |  |                                            | TOTAL                                                        | 1                        |            |
|                                                          |  |                                            | PAGE 1 OF 5                                                  |                          |            |
| PROJECT NO: 1228-09-76                                   |  | HWY: IH 43                                 | COUNTY: MILWAUKEE                                            | MISCELLANEOUS QUANTITIES | SHEET: 167 |
|                                                          |  |                                            |                                                              |                          | E          |



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| CONCRETE BASES  |              |         |                |                |                 |                              |
|-----------------|--------------|---------|----------------|----------------|-----------------|------------------------------|
|                 |              |         | 654.0101*      | 654.0102*      | 654.0120        | 654.0217*                    |
|                 |              |         | CONCRETE BASES | CONCRETE BASES | CONCRETE BASES  | CONCRETE CONTROL             |
|                 |              |         | TYPE 1         | TYPE 2         | TYPE 10 SPECIAL | CABINET BASES TYPE 9 SPECIAL |
| SIGNAL BASE NO. | LOCATION STA | OFFSET  | TYPE 1 EACH    | TYPE 2 EACH    | SPECIAL EACH    | TYPE 9 SPECIAL EACH          |
| CB1             | 49+82.9      | 60.3 RT | --             | --             | --              | 1                            |
| SB1             | 49+77.5      | 57.9 RT | --             | --             | 1               | --                           |
| SB2             | 49+66.4      | 58.8 RT | 1              | --             | --              | --                           |
| SB3             | 49+25.3      | 52.0 RT | 1              | --             | --              | --                           |
| SB4             | 48+92.8      | 3.2 LT  | 1              | --             | --              | --                           |
| SB5             | 49+39.8      | 59.5 LT | --             | --             | 1               | --                           |
| SB6             | 49+47.3      | 59.3 LT | 1              | --             | --              | --                           |
| SB7             | 50+03.7      | 64.3 LT | --             | --             | 1               | --                           |
| SB8             | 50+02.4      | 58.5 LT | 1              | --             | --              | --                           |
| SB9             | 50+05.8      | 51.4 LT | --             | 1              | --              | --                           |
| SB10            | 49+85.0      | 0.6 RT  | --             | 1              | --              | --                           |
| SB11            | 50+37.5      | 4.2 RT  | 1              | --             | -               | --                           |
| SB12            | 50+51.6      | 3.8 RT  | 1              | --             | --              | --                           |
| SB13            | 50+39.8      | 62.7 RT | 1              | --             | --              | --                           |
| SB14            | 49+92.7      | 57.1 RT | 1              | --             | --              | --                           |
| TOTAL           | TOTAL        |         | 9              | 2              | 3               | 1                            |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC DETECTOR LOOPS |             |                  |              |               |                            |                    |                    |               |  |
|------------------------|-------------|------------------|--------------|---------------|----------------------------|--------------------|--------------------|---------------|--|
|                        |             |                  |              | 652.0800*     |                            | 655.0700*          |                    | 655.0800*     |  |
|                        |             |                  |              | CONDUIT       |                            | LOOP DETECTOR      |                    | LOOP DETECTOR |  |
| LOOP NO.               | HOME RUN PB | SIZE (FT) X (FT) | NO. OF TURNS | PAVEMENT TYPE | SDD INSTALLATION REFERENCE | LOOP DETECTOR L.F. | LEAD IN CABLE L.F. | WIRE L.F.     |  |
| 11                     | PB7         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 68                 | 205                | 214           |  |
| 12                     | PB7         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 66                 | 205                | 208           |  |
| 21                     | PB14        | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 76                 | 300                | 319           |  |
| 22                     | PB14        | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 52                 | 300                | 218           |  |
| 51                     | PB4         | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 90                 | 300                | 378           |  |
| 52                     | PB17        | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 88                 | 50                 | 277           |  |
| 53                     | PB17        | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 94                 | 50                 | 296           |  |
| 54                     | PB17        | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 66                 | 50                 | 208           |  |
| 55                     | PB17        | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 66                 | 50                 | 208           |  |
| 61                     | PB6         | 6 X 15           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 62                 | 365                | 195           |  |
| 62                     | PB6         | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 84                 | 365                | 353           |  |
| 81                     | PB4         | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 66                 | 300                | 277           |  |
| 82                     | PB4         | 6 X 6            | 4            | CONCRETE      | 9F15-4B OPTION 2           | 42                 | 300                | 176           |  |
| 83                     | PB2         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 70                 | 55                 | 221           |  |
| 84                     | PB2         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 70                 | 55                 | 221           |  |
| 85                     | PB2         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 92                 | 55                 | 290           |  |
| 86                     | PB2         | 6 X 20           | 3            | CONCRETE      | 9F15-4B OPTION 2           | 92                 | 55                 | 290           |  |
| TOTAL                  |             |                  |              |               |                            | 1244               | 3060               | 4349          |  |

\*\* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

\* QUANTITY SHOWN ELSEWHERE ON PLAN

W HOLT AVE, S 4<sup>TH</sup> ST & FWY RAMPS  
TRAFFIC SIGNALS

| TRAFFIC SIGNAL CABLE AND WIRE |      |                |                |
|-------------------------------|------|----------------|----------------|
|                               |      | 655.0240*      | 655.0260*      |
|                               |      | CABLE          | CABLE          |
|                               |      | TRAFFIC SIGNAL | TRAFFIC SIGNAL |
|                               |      | 7-14 AWG       | 12-14 AWG      |
| FROM                          | TO   | L.F.           | L.F.           |
| CB1                           | SB1  | --             | 60             |
| CB1                           | SB2  | 60             | --             |
| CB1                           | SB3  | 120            | --             |
| CB1                           | SB4  | 250            | --             |
| CB1                           | SB5  | --             | 345            |
| CB1                           | SB6  | 390            | --             |
| CB1                           | SB7  | 230            | --             |
| CB1                           | SB8  | 230            | --             |
| CB1                           | SB9  | --             | 205            |
| CB1                           | SB10 | --             | 130            |
| CB1                           | SB11 | 185            | --             |
| CB1                           | SB12 | 185            | --             |
| CB1                           | SB13 | --             | 115            |
| CB1                           | SB14 | 55             | --             |
| TOTAL                         |      | 1705           | 855            |

\* QUANTITY SHOWN ELSEWHERE ON PLAN



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| CONDUIT |      |               |               |           |           |
|---------|------|---------------|---------------|-----------|-----------|
|         |      | 652.0225*     | 652.0235*     | 652.0605* | 652.0615* |
|         |      | CONDUIT RIGID | CONDUIT RIGID | CONDUIT   | CONDUIT   |
|         |      | NONMETALLIC   | NONMETALLIC   | SPECIAL   | SPECIAL   |
|         |      | SCHEDULE 40   | SCHEDULE 40   | 2-INCH    | 3-INCH    |
|         |      | 2-INCH        | 3-INCH        |           |           |
| FROM    | TO   | L.F.          | L.F.          | L.F.      | L.F.      |
| CB1     | PB1  | --            | 30            | --        | --        |
| PB1     | SB1  | --            | 5             | --        | --        |
| PB1     | SB2  | 5             | --            | --        | --        |
| PB1     | PB3  | --            | --            | --        | 80        |
| PB1     | PB2  | 20            | --            | --        | --        |
| PB3     | SB3  | 10            | --            | --        | --        |
| PB3     | PB4  | 225           | --            | --        | --        |
| PB3     | PB5  | --            | 90            | --        | --        |
| PB5     | PB6  | --            | --            | 220       | --        |
| PB5     | PB7  | --            | --            | --        | 120       |
| PB7     | SB4  | 5             | --            | --        | --        |
| PB7     | PB8  | --            | --            | --        | 130       |
| PB8     | SB5  | --            | 20            | --        | --        |
| PB8     | PB9  | --            | 90            | --        | --        |
| PB9     | SB6  | 15            | --            | --        | --        |
| PB9     | PB10 | --            | --            | --        | 80        |
| PB10    | SB7  | --            | 5             | --        | --        |
| PB10    | SB8  | 5             | --            | --        | --        |
| PB10    | PB11 | --            | 40            | --        | --        |
| PB11    | SB9  | 10            | --            | --        | --        |
| PB11    | PB12 | --            | --            | --        | 120       |
| PB12    | SB10 | 10            | --            | --        | --        |
| PB12    | PB13 | 50            | --            | --        | --        |
| PB13    | SB11 | 10            | --            | --        | --        |
| PB13    | SB12 | 10            | --            | --        | --        |
| PB13    | PB14 | 170           | --            | --        | --        |
| PB12    | PB15 | --            | --            | --        | 110       |
| PB15    | SB14 | 5             | --            | --        | --        |
| PB15    | PB17 | 20            | --            | --        | --        |
| PB15    | PB16 | --            | --            | --        | 50        |
| PB16    | SB13 | 5             | --            | --        | --        |
| PB15    | CB1  | --            | 10            | --        | --        |
| TOTAL   |      | 575           | 290           | 220       | 690       |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

W HOLT AVE, S 4<sup>TH</sup> ST & FWY RAMPS  
TRAFFIC SIGNALS

| TRAFFIC SIGNAL CABLE AND WIRE |      |              |
|-------------------------------|------|--------------|
|                               |      | 655.0515*    |
|                               |      | ELECTRICAL   |
|                               |      | WIRE TRAFFIC |
|                               |      | SIGNALS      |
|                               |      | 10 AWG       |
| FROM                          | TO   | L.F.         |
| CB1                           | SB1  | 65           |
| SB1                           | SB2  | 65           |
| SB2                           | SB3  | 105          |
| SB3                           | SB4  | 170          |
| SB4                           | SB5  | 140          |
| SB5                           | SB6  | 130          |
| SB5                           | SB7  | 110          |
| SB6                           | SB8  | 65           |
| SB7                           | SB9  | 75           |
| SB8                           | SB10 | 130          |
| SB9                           | SB11 | 130          |
| SB10                          | SB12 | 65           |
| SB11                          | SB13 | 215          |
| SB12                          | SB14 | 110          |
| SB14                          | CB1  | 60           |
| CB1                           | PB1  | 35           |
| SB3                           | PB3  | 35           |
| SB3                           | PB5  | 80           |
| SB4                           | PB7  | 30           |
| SB5                           | PB8  | 50           |
| SB6                           | PB9  | 40           |
| SB7                           | PB10 | 35           |
| SB9                           | PB11 | 35           |
| SB10                          | PB12 | 40           |
| SB11                          | PB13 | 35           |
| CB1                           | PB15 | 30           |
| SB13                          | PB16 | 30           |
| TOTAL                         |      | 2110         |

| TRAFFIC SIGNAL CABLE AND WIRE |        |                |                |
|-------------------------------|--------|----------------|----------------|
|                               |        | 655.0230*      | 655.0240*      |
|                               |        | CABLE          | CABLE          |
|                               |        | TRAFFIC SIGNAL | TRAFFIC SIGNAL |
|                               |        | 5-14 AWG       | 7-14 AWG       |
| FROM                          | TO     | L.F.           | L.F.           |
| SIGNAL                        | NUMBER |                |                |
| SB1                           | 2      | 65             | --             |
| SB1                           | 3      | 55             | --             |
| SB2                           | 10     | 20             | --             |
| SB2                           | 21     | 20             | --             |
| SB3                           | 1      | 20             | --             |
| SB4                           | 4      | --             | 20             |
| SB5                           | 8      | 65             | --             |
| SB5                           | 9      | 55             | --             |
| SB5                           | 13     | 20             | --             |
| SB5                           | 18     | 20             | --             |
| SB7                           | 11     | 20             | --             |
| SB7                           | 12     | --             | 60             |
| SB7                           | 22     | 20             | --             |
| SB9                           | 5      | --             | 20             |
| SB9                           | 7      | 20             | --             |
| SB9                           | 17     | 20             | --             |
| SB10                          | 6      | --             | 20             |
| SB11                          | 15     | 20             | --             |
| SB12                          | 16     | 20             | --             |
| SB13                          | 14     | 20             | --             |
| SB13                          | 20     | 20             | --             |
| SB14                          | 19     | 20             | --             |
| TOTAL                         |        | 520            | 120            |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

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| TRAFFIC SIGNAL CABLE AND WIRE |             |               |            |
|-------------------------------|-------------|---------------|------------|
|                               |             | 655.0305*     | 655.061*   |
|                               |             | CABLE TYPE UF | ELECTRICAL |
|                               |             | 2-12 AWG      | WIRE       |
|                               |             | GROUNDED      | LIGHTING   |
|                               |             | 12 AWG        |            |
| FROM                          | TO          | L.F.          | L.F.       |
| CB1                           | SB1         | 60            | --         |
| SB1                           | LUMINAIRE 1 | --            | 145        |
|                               |             |               |            |
| CB1                           | SB10        | 130           | --         |
| SB10                          | LUMINAIRE 2 | --            | 290        |
| SB10                          | SB9         | 140           | --         |
| SB9                           | LUMINAIRE 1 | --            | 145        |
| TOTAL                         |             | 330           | 580        |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| EMERGENCY VEHICLE PREEMPTION |      |
|------------------------------|------|
| SPV.0060.32                  |      |
| TRANSPORT AND INSTALL        |      |
| STATE FURNISHED EVP          |      |
| DETECTOR HEADS               |      |
| LOCATION                     | EACH |
| HOLT AT 4TH                  | 3    |
| TOTAL                        | 3    |

W HOLT AVE, S 4<sup>TH</sup> ST & FWY RAMPS  
TRAFFIC SIGNALS

3

| TRAFFIC SIGNAL EVP DETECTOR CABLE |              |                |                |
|-----------------------------------|--------------|----------------|----------------|
|                                   |              | 655.0900*      | 655.0210*      |
|                                   |              | TRAFFIC SIGNAL | CABLE          |
|                                   |              | EVP DETECTOR   | TRAFFIC SIGNAL |
|                                   |              | CABLE          | 3-14 AWG       |
| FROM                              | TO           | L.F.           | L.F.           |
| CB1                               | SB5 (HEAD A) | 345            | 345            |
| CB1                               | SB1 (HEAD B) | 60             | 60             |
| CB1                               | SB7 (HEAD D) | 230            | 230            |
| TOTAL                             |              | 635            | 635            |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| POLES           |             |                |           |                |                |                |                |                   |             |                |                 |               |               |             |
|-----------------|-------------|----------------|-----------|----------------|----------------|----------------|----------------|-------------------|-------------|----------------|-----------------|---------------|---------------|-------------|
| 657.0100*       | 657.0255*   | 657.0310*      | 657.0405* | 657.0420*      | 657.0425*      | 657.0430*      | 657.0609*      | SPV.0060.14       | SPV.0060.15 | SPV.0060.17    | SPV.0060.18     | SPV.0060.19*  | 659.1125*     |             |
| TRANSFORMER     |             | TRAFFIC SIGNAL |           | TRAFFIC SIGNAL | TRAFFIC SIGNAL | TRAFFIC SIGNAL | TRAFFIC SIGNAL | LUMINAIRE ARMS    |             | INSTALL        | INSTALL         | INSTALL       | INSTALL       | LUMINAIRE   |
| BASES BREAKAWAY |             | STANDARDS      |           | STANDARDS      | STANDARDS      | STANDARDS      | STANDARDS      | SINGLE MEMBER     |             | TYPE 9 SPECIAL | TYPE 10 SPECIAL | MONOTUBE ARMS | MONOTUBE ARMS | UTILITY     |
| PEDESTAL        | 11 1/2-INCH | POLES          | ALUMINUM  | ALUMINUM       | ALUMINUM       | ALUMINUM       | ALUMINUM       | 4-INCH CLAMP 6-FT |             | POLE           | POLE            | 40-FT SPECIAL | 45-FT SPECIAL | STEEL 15-FT |
| SIGNAL          | BOLTS       | TYPE 3         | 3.5-FT    | 13-FT          | 15-FT          | 10-FT          |                | EACH              |             | EACH           | EACH            | EACH          | EACH          | EACH        |
| BASE NO.        | EACH        | EACH           | EACH      | EACH           | EACH           | EACH           | EACH           | EACH              |             | EACH           | EACH            | EACH          | EACH          | EACH        |
| SB1             | --          | --             | --        | --             | --             | --             | --             | --                |             | --             | 1               | --            | 1             | 1           |
| SB2             | 1           | --             | --        | --             | 1              | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB3             | 1           | --             | --        | --             | 1              | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB4             | 1           | --             | --        | --             | 1              | 1              | --             | --                |             | --             | --              | --            | --            | --          |
| SB5             | --          | --             | --        | --             | --             | --             | --             | --                |             | 1              | --              | --            | 1             | --          |
| SB6             | 1           | --             | --        | 1              | --             | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB7             | --          | --             | --        | --             | --             | --             | --             | --                |             | 1              | --              | 1             | --            | --          |
| SB8             | 1           | --             | --        | 1              | --             | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB9             | --          | 1              | 1         | --             | --             | --             | --             | 1                 |             | --             | --              | --            | --            | 1           |
| SB10            | --          | 1              | 1         | --             | --             | --             | --             | 2                 |             | --             | --              | --            | --            | 2           |
| SB11            | 1           | --             | --        | --             | 1              | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB12            | 1           | --             | --        | --             | 1              | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB13            | 1           | --             | --        | --             | 1              | --             | --             | --                |             | --             | --              | --            | --            | --          |
| SB14            | 1           | --             | --        | --             | --             | --             | 1              | --                |             | --             | --              | --            | --            | --          |
| TOTAL           | 9           | 2              | 2         | 2              | 6              | 1              | 1              | 3                 |             | 2              | 1               | 1             | 2             | 4           |

\* QUANTITY SHOWN ELSEWHERE ON PLAN



3

| FACES              |                    |                        |                        |                           |
|--------------------|--------------------|------------------------|------------------------|---------------------------|
| SIGNAL<br>BASE NO. | SIGNAL<br>HEAD NO. | 658.0173*              | 658.0174*              | 658.0416*                 |
|                    |                    | TRAFFIC<br>SIGNAL FACE | TRAFFIC<br>SIGNAL FACE | PEDESTRIAN<br>SIGNAL FACE |
|                    |                    | 3S 12-INCH<br>EACH     | 4S-12 INCH<br>EACH     | 16-INCH<br>EACH           |
| SB1                | 2                  | 1                      | --                     | --                        |
| SB1                | 3                  | 1                      | --                     | --                        |
| SB2                | 10                 | 1                      | --                     | --                        |
| SB2                | 21                 | --                     | --                     | 1                         |
| SB3                | 1                  | 1                      | --                     | --                        |
| SB4                | 4                  | --                     | 1                      | --                        |
| SB5                | 8                  | 1                      | --                     | --                        |
| SB5                | 9                  | 1                      | --                     | --                        |
| SB5                | 13                 | 1                      | --                     | --                        |
| SB5                | 18                 | --                     | --                     | 1                         |
| SB7                | 11                 | 1                      | --                     | --                        |
| SB7                | 12                 | --                     | 1                      | --                        |
| SB7                | 22                 | --                     | --                     | 1                         |
| SB9                | 5                  | --                     | 1                      | --                        |
| SB9                | 7                  | 1                      | --                     | --                        |
| SB9                | 17                 | --                     | --                     | 1                         |
| SB10               | 6                  | --                     | 1                      | --                        |
| SB11               | 15                 | 1                      | --                     | --                        |
| SB12               | 16                 | 1                      | --                     | --                        |
| SB13               | 14                 | 1                      | --                     | --                        |
| SB13               | 20                 | --                     | --                     | 1                         |
| SB14               | 19                 | --                     | --                     | 1                         |
| TOTAL              |                    | 12                     | 4                      | 6                         |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRANSPORT AND INSTALL STATE<br>FURNISHED APS BUTTONS |      |
|------------------------------------------------------|------|
| SPV.0060.39                                          |      |
| TRANSPORT AND INSTALL STATE<br>FURNISHED APS BUTTONS |      |
| LOCATION                                             | EACH |
| HOLT AT 4TH                                          | 1    |
| TOTAL                                                | 1    |

| TRAFFIC SIGNAL MOUNTING HARDWARE |      |
|----------------------------------|------|
| 658.5070.01                      |      |
| SIGNAL<br>MOUNTING<br>HARDWARE   |      |
| LOCATION                         | EACH |
| HOLT AT 4TH                      | 1    |
| TOTAL                            | 1    |

| TRAFFIC SIGNAL CABINET                                                |      |
|-----------------------------------------------------------------------|------|
| SPV.0060.34                                                           |      |
| TRANSPORT AND<br>INSTALL STATE<br>FURNISHED TRAFFIC<br>SIGNAL CABINET |      |
| LOCATION                                                              | EACH |
| HOLT AT 4TH                                                           | 1    |
| TOTAL                                                                 | 1    |

W HOLT AVE, S 4<sup>TH</sup> ST & FWY RAMPS  
TRAFFIC SIGNALS

| ELECTRICAL SERVICE METER BREAKER PEDESTAL       |      |
|-------------------------------------------------|------|
| 656.0201.01                                     |      |
| ELECTRICAL SERVICE<br>METER BREAKER<br>PEDESTAL |      |
| LOCATION                                        | EACH |
| HOLT AT 4TH                                     | 1    |
| TOTAL                                           | 1    |

| TRANSPORTING MATERIALS                                                   |      |
|--------------------------------------------------------------------------|------|
| SPV.0060.37                                                              |      |
| TRANSPORT<br>TRAFFIC SIGNAL<br>AND INTERSECTION<br>LIGHTING<br>MATERIALS |      |
| LOCATION                                                                 | EACH |
| HOLT AT 4TH                                                              | 1    |
| TOTAL                                                                    | 1    |

3



| REMOVING TRAFFIC SIGNALS |                         |                               |
|--------------------------|-------------------------|-------------------------------|
|                          | SPV.0060.07*            | SPV.0060.08*                  |
|                          | REMOVE POLE<br>AND WIRE | REMOVE TRAFFIC<br>SIGNAL FACE |
| LOCATION                 | EACH                    | EACH                          |
| 6TH AT MINERAL           | 9                       | 20                            |
| TOTAL                    | 9                       | 20                            |

## REMOVE TRAFFIC SIGNALS

|                |                 |
|----------------|-----------------|
|                | 204.9060.S.02   |
|                | REMOVING        |
|                | TRAFFIC SIGNALS |
|                | STREET LIGHTING |
| LOCATION       | EACH            |
| 6TH AT MINERAL | 1               |
| TOTAL          | 1               |

## TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

**661.0201.02  
TEMPORARY  
TRAFFIC SIGNALS  
FOR INTERSECTIONS**

## TEMPORARY EMERGENCY VEHICLE PREEMPTION

**SPV.0060.11**  
**TEMPORARY INFRARED**  
**EVP SYSTEM**

| 653.0135*  | 653.0140*  |
|------------|------------|
| PULL BOXES | PULL BOXES |
| STEEL      | STEEL      |

\* QUANTITY SHOWN ELSEWHERE ON PLAN



3

3

W MINERAL ST & S 6<sup>TH</sup> ST  
TRAFFIC SIGNALS

| CONCRETE BASES     |                             |         |           |           |          |                  |
|--------------------|-----------------------------|---------|-----------|-----------|----------|------------------|
| SIGNAL<br>BASE NO. | LOCATION<br>STA      OFFSET |         | 654.0101* | 654.0102* | 654.0110 | 654.0217*        |
|                    |                             |         | CONCRETE  | CONCRETE  | CONCRETE | CONCRETE CONTROL |
|                    |                             |         | BASES     | BASES     | BASES    | CABINET BASES    |
|                    |                             |         | TYPE 1    | TYPE 2    | TYPE 10  | TYPE 9 SPECIAL   |
|                    |                             |         | EACH      | EACH      | EACH     | EACH             |
| CB1                | 24+61.3                     | 42.6 LT | --        | --        | --       | 1                |
| SB1                | 24+74.3                     | 42.2 LT | 1         | --        | --       | --               |
| SB2                | 24+78.9                     | 44.0 LT | 1         | --        | --       | --               |
| SB3                | 25+13.0                     | 52.9 LT | 1         | --        | --       | --               |
| SB4                | 25+52.4                     | 39.3 LT | --        | --        | 1        | --               |
| SB5                | 25+56.2                     | 33.4 LT | 1         | --        | --       | --               |
| SB6                | 25+59.9                     | 29.1 LT | --        | 1         | --       | --               |
| SB7                | 25+56.8                     | 23.7 RT | --        | --        | 1        | --               |
| SB8                | 25+45.5                     | 36.7 RT | --        | 1         | --       | --               |
| SB9                | 24+76.4                     | 37.7 RT | --        | --        | 1        | --               |
| SB10               | 24+66.4                     | 20.0 RT | --        | 1         | --       | --               |
| SB11               | 24+65.7                     | 34.1 LT | --        | --        | 1        | --               |
| TOTAL              |                             | TOTAL   | 4         | 3         | 4        | 1                |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC SIGNAL CABLE AND WIRE |       |                |                |
|-------------------------------|-------|----------------|----------------|
| FROM                          | TO    | 655.0240*      | 655.0260*      |
|                               |       | CABLE          | CABLE          |
|                               |       | TRAFFIC SIGNAL | TRAFFIC SIGNAL |
|                               |       | 7-14 AWG       | 12-14 AWG      |
|                               |       | L.F.           | L.F.           |
| CB1                           | SB1   | 85             | --             |
| CB1                           | SB2   | --             | 80             |
| CB1                           | SB3   | --             | 105            |
| CB1                           | SB4   | --             | 175            |
| CB1                           | SB5   | 205            | --             |
| CB1                           | SB6   | --             | 205            |
| CB1                           | SB7   | --             | 325            |
| CB1                           | SB8   | --             | 275            |
| CB1                           | SB9   | --             | 195            |
| CB1                           | SB10  | --             | 130            |
| CB1                           | SB11  | --             | 60             |
|                               | TOTAL | 290            | 1550           |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC DETECTOR LOOPS |                |                     |                 |                  |                               |               |               |               |
|------------------------|----------------|---------------------|-----------------|------------------|-------------------------------|---------------|---------------|---------------|
| LOOP<br>NO.            | HOME<br>RUN PB | SIZE<br>(FT) X (FT) | NO. OF<br>TURNS | PAVEMENT<br>TYPE | SDD INSTALLATION<br>REFERENCE | 652.0800*     | 655.0700*     | 655.0800*     |
|                        |                |                     |                 |                  |                               | CONDUIT       | LOOP DETECTOR | LOOP DETECTOR |
|                        |                |                     |                 |                  |                               | LOOP DETECTOR | LEAD IN CABLE | WIRE          |
|                        |                |                     |                 |                  |                               | L.F.          | L.F.          | L.F.          |
| 11                     | PB12           | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 86            | 105           | 271           |
| 12                     | PB12           | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 86            | 105           | 271           |
| 31                     | PB9            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 106           | 200           | 334           |
| 32                     | PB9            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 106           | 200           | 334           |
| 41                     | PB3            | 6 X 6               | 4               | CONCRETE         | 9F15-4B OPTION 2              | 36            | 290           | 151           |
| 42                     | PB3            | 6 X 6               | 4               | CONCRETE         | 9F15-4B OPTION 2              | 60            | 290           | 252           |
| 43                     | PB2            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 88            | 60            | 277           |
| 44                     | PB2            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 88            | 60            | 277           |
| 45                     | PB2            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 66            | 60            | 208           |
| 46                     | PB2            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 66            | 60            | 208           |
| 61                     | PB13           | 6 X 6               | 4               | CONCRETE         | 9F15-4B OPTION 2              | 46            | 310           | 193           |
| 82                     | PB9            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 86            | 200           | 271           |
| 83                     | PB9            | 6 X 20              | 3               | CONCRETE         | 9F15-4B OPTION 2              | 86            | 200           | 271           |
|                        |                |                     |                 |                  | TOTAL                         | 1006          | 2140          | 3318          |

\*\* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

\* QUANTITY SHOWN ELSEWHERE ON PLAN



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|                                    |      |               |               |           |           | W MINERAL ST & S 6 <sup>TH</sup> ST<br>TRAFFIC SIGNALS |      |      |                                    |                       |                |      |       |    |    |     |     |
|------------------------------------|------|---------------|---------------|-----------|-----------|--------------------------------------------------------|------|------|------------------------------------|-----------------------|----------------|------|-------|----|----|-----|-----|
| CONDUIT                            |      |               |               |           |           | TRAFFIC SIGNAL CABLE AND WIRE                          |      |      | TRAFFIC SIGNAL CABLE AND WIRE      |                       |                |      |       |    |    |     |     |
|                                    |      | 652.0225*     | 652.0235*     | 652.0605* | 652.0615* | 655.0515*                                              |      |      | 655.0230*                          |                       | 655.0240*      |      |       |    |    |     |     |
|                                    |      | CONDUIT RIGID | CONDUIT RIGID | CONDUIT   | CONDUIT   | ELECTRICAL                                             |      |      | CABLE                              |                       | CABLE          |      |       |    |    |     |     |
|                                    |      | NONMETALLIC   | NONMETALLIC   | SPECIAL   | SPECIAL   | WIRE TRAFFIC                                           |      |      | TRAFFIC SIGNAL                     |                       | TRAFFIC SIGNAL |      |       |    |    |     |     |
|                                    |      | SCHEDULE 40   | SCHEDULE 40   | 2-INCH    | 3-INCH    | SIGNALS                                                |      |      | 5-14 AWG                           |                       | 7-14 AWG       |      |       |    |    |     |     |
|                                    |      | 2-INCH        | 3-INCH        |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
| FROM                               | TO   | L.F.          | L.F.          | L.F.      | L.F.      | FROM                                                   | TO   | L.F. | FROM                               | TO SIGNAL HEAD NUMBER | L.F.           | L.F. |       |    |    |     |     |
| CB1                                | PB1  | --            | 75            | --        | --        | CB1                                                    | SB1  | 90   | SB1                                | 21                    | 20             | --   |       |    |    |     |     |
| PB1                                | SB1  | 15            | --            | --        | --        | SB1                                                    | SB2  | 75   | SB2                                | 1                     | 20             | --   |       |    |    |     |     |
| PB1                                | SB2  | 10            | --            | --        | --        | SB2                                                    | SB3  | 95   | SB2                                | 7                     | --             | 20   |       |    |    |     |     |
| PB1                                | PB2  | 10            | --            | --        | --        | SB3                                                    | SB4  | 105  | SB3                                | 8                     | --             | 20   |       |    |    |     |     |
| PB2                                | PB3  | 225           | --            | --        | --        | SB4                                                    | SB5  | 95   | SB4                                | 5                     | 50             | --   |       |    |    |     |     |
| PB1                                | PB4  | --            | --            | --        | 70        | SB5                                                    | SB6  | 70   | SB4                                | 6                     | 40             | --   |       |    |    |     |     |
| PB4                                | SB3  | 5             | --            | --        | --        | SB6                                                    | SB7  | 125  | SB4                                | 18                    | 20             | --   |       |    |    |     |     |
| PB4                                | PB5  | --            | --            | --        | 70        | SB7                                                    | SB8  | 95   | SB6                                | 9                     | 20             | --   |       |    |    |     |     |
| PB5                                | SB4  | --            | 15            | --        | --        | SB8                                                    | SB9  | 125  | SB6                                | 15                    | --             | 20   |       |    |    |     |     |
| PB5                                | PB6  | --            | 50            | --        | --        | SB9                                                    | SB10 | 120  | SB6                                | 19                    | 20             | --   |       |    |    |     |     |
| PB6                                | SB5  | 10            | --            | --        | --        | SB10                                                   | SB11 | 120  | SB7                                | 13                    | 40             | --   |       |    |    |     |     |
| PB6                                | SB6  | 10            | --            | --        | --        | SB11                                                   | CB1  | 70   | SB7                                | 16                    | --             | 50   |       |    |    |     |     |
| PB6                                | PB7  | --            | --            | --        | 120       | CB1                                                    | PB1  | 50   | SB7                                | 24                    | 20             | --   |       |    |    |     |     |
| PB7                                | SB7  | --            | 5             | --        | --        | SB3                                                    | PB4  | 30   | SB7                                | 14                    | 20             | --   |       |    |    |     |     |
| PB7                                | PB8  | --            | 70            | --        | --        | SB4                                                    | PB5  | 40   | SB8                                | 4                     | 20             | --   |       |    |    |     |     |
| PB8                                | SB8  | 5             | --            | --        | --        | SB5                                                    | PB6  | 35   | SB8                                | 17                    | 20             | --   |       |    |    |     |     |
| PB8                                | PB9  | 10            | --            | --        | --        | SB7                                                    | PB7  | 35   | SB9                                | 2                     | 40             | --   |       |    |    |     |     |
| PB8                                | PB10 | --            | --            | --        | 130       | SB8                                                    | PB8  | 35   | SB9                                | 3                     | 40             | --   |       |    |    |     |     |
| PB10                               | SB9  | --            | 5             | --        | --        | SB9                                                    | PB10 | 35   | SB9                                | 22                    | 20             | --   |       |    |    |     |     |
| PB10                               | PB11 | --            | 80            | --        | --        | SB10                                                   | PB11 | 35   | SB10                               | 12                    | 20             | --   |       |    |    |     |     |
| PB11                               | SB10 | 10            | --            | --        | --        | CB1                                                    | PB14 | 35   | SB10                               | 23                    | 20             | --   |       |    |    |     |     |
| PB11                               | PB12 | 15            | --            | --        | --        | TOTAL                                                  |      |      | 1515                               | SB11                  | 10             | 50   | --    |    |    |     |     |
| PB12                               | PB13 | --            | --            | 205       | --        |                                                        |      |      |                                    |                       |                |      | SB11  | 11 | 40 | --  |     |
| PB11                               | PB14 | --            | --            | --        | 110       |                                                        |      |      |                                    |                       |                |      | SB11  | 20 | 20 | --  |     |
| PB14                               | SB11 | --            | 10            | --        | --        |                                                        |      |      |                                    |                       |                |      | TOTAL |    |    | 560 | 110 |
| PB14                               | CB1  | --            | 30            | --        | --        |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
| TOTAL                              |      | 325           | 340           | 205       | 500       |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
| * QUANTITY SHOWN ELSEWHERE ON PLAN |      |               |               |           |           | * QUANTITY SHOWN ELSEWHERE ON PLAN                     |      |      | * QUANTITY SHOWN ELSEWHERE ON PLAN |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |
|                                    |      |               |               |           |           |                                                        |      |      |                                    |                       |                |      |       |    |    |     |     |



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| TRAFFIC SIGNAL CABLE AND WIRE      |               |                |                | EMERGENCY VEHICLE PREEMPTION |           | W MINERAL ST & S 6 <sup>TH</sup> ST<br>TRAFFIC SIGNALS |             |                |               |                |           |   |
|------------------------------------|---------------|----------------|----------------|------------------------------|-----------|--------------------------------------------------------|-------------|----------------|---------------|----------------|-----------|---|
|                                    |               | 655.0305*      | 655.0610*      |                              |           | SPV.0060.33                                            |             |                |               |                |           |   |
|                                    |               | CABLE TYPE UF  | ELECTRICAL     |                              |           | TRANSPORT AND INSTALL                                  |             |                |               |                |           |   |
|                                    |               | 2-12 AWG       | WIRE           |                              |           | STATE FURNISHED EVP                                    |             |                |               |                |           |   |
|                                    |               | GROUNDED       | LIGHTING       |                              |           | DETECTOR HEADS                                         |             |                |               |                |           |   |
|                                    |               | 12 AWG         |                |                              |           |                                                        |             |                |               |                |           |   |
| FROM                               | TO            | L.F.           | L.F.           | LOCATION                     | EACH      |                                                        |             |                |               |                |           |   |
| CB1                                | SB6           | 205            | --             | 6TH AT MINERAL               | 4         |                                                        |             |                |               |                |           |   |
| SB6                                | LUMINAIRE 1   | --             | 145            |                              |           |                                                        |             |                |               |                |           |   |
| SB6                                | SB7           | 135            | --             |                              |           |                                                        |             |                |               |                |           |   |
| SB7                                | LUMINAIRE 1   | --             | 145            |                              |           |                                                        |             |                |               |                |           |   |
| SB7                                | SB8           | 105            | --             |                              |           |                                                        |             |                |               |                |           |   |
| SB8                                | LUMINAIRE 1   | --             | 145            |                              |           |                                                        |             |                |               |                |           |   |
|                                    |               |                |                | TOTAL                        |           | 4                                                      |             |                |               |                |           |   |
| * QUANTITY SHOWN ELSEWHERE ON PLAN |               |                |                |                              |           |                                                        |             |                |               |                |           |   |
| TRAFFIC SIGNAL EVP DETECTOR CABLE  |               |                |                |                              |           |                                                        |             |                |               |                |           |   |
|                                    |               | 655.0900*      | 655.0210*      |                              |           |                                                        |             |                |               |                |           |   |
|                                    |               | TRAFFIC SIGNAL | CABLE          |                              |           |                                                        |             |                |               |                |           |   |
|                                    |               | EVP DETECTOR   | TRAFFIC SIGNAL |                              |           |                                                        |             |                |               |                |           |   |
|                                    |               | CABLE          | 3-14 AWG       |                              |           |                                                        |             |                |               |                |           |   |
| FROM                               | TO            | L.F.           | L.F.           |                              |           |                                                        |             |                |               |                |           |   |
| CB1                                | SB11 (HEAD A) | 60             | 60             |                              |           |                                                        |             |                |               |                |           |   |
| CB1                                | SB7 (HEAD B)  | 325            | 325            |                              |           |                                                        |             |                |               |                |           |   |
| CB1                                | SB9 (HEAD C)  | 195            | 195            |                              |           |                                                        |             |                |               |                |           |   |
| CB1                                | SB4 (HEAD D)  | 175            | 175            |                              |           |                                                        |             |                |               |                |           |   |
| TOTAL                              |               | 755            | 755            |                              |           |                                                        |             |                |               |                |           |   |
| * QUANTITY SHOWN ELSEWHERE ON PLAN |               |                |                |                              |           |                                                        |             |                |               |                |           |   |
| POLES                              |               |                |                |                              |           |                                                        |             |                |               |                |           |   |
| 657.0100*                          | 657.0255*     | 657.0310*      | 657.0405*      | 657.0425*                    | 657.0430* | 657.0609*                                              | SPV.0060.12 | SPV.0060.13    | SPV.0060.16   | SPV.0060.19*   | 659.1125* |   |
| TRANSFORMER                        |               | TRAFFIC SIGNAL |                | TRAFFIC SIGNAL               |           | TRAFFIC SIGNAL                                         |             |                |               |                |           |   |
| BASES BREAKAWAY                    |               | STANDARDS      |                | STANDARDS                    |           | STANDARDS                                              |             | LUMINAIRE ARMS |               | LUMINAIRES     |           |   |
| PEDESTAL                           | 11 1/2-INCH   | POLES          | ALUMINUM       | ALUMINUM                     | ALUMINUM  | LUMINAIRE ARMS                                         | INSTALL     | INSTALL        | INSTALL       | INSTALL        | UTILITY   |   |
| BASES                              | BOLT CIRCLE   | TYPE 3         | 3.5-FT         | 15-FT                        | 10-FT     | SINGLE MEMBER                                          | TYPE 9      | TYPE 10        | MONOTUBE ARMS | LUMINAIRE ARMS | LED C     |   |
| SIGNAL                             |               |                |                |                              |           | 4-INCH CLAMP 6-FT                                      | POLE        | POLE           | 30-FT         | STEEL 15-FT    |           |   |
| BASE NO.                           | EACH          | EACH           | EACH           | EACH                         | EACH      | EACH                                                   | EACH        | EACH           | EACH          | EACH           | EACH      |   |
| SB1                                | 1             | --             | --             | --                           | --        | 1                                                      | --          | --             | --            | --             | --        |   |
| SB2                                | 1             | --             | --             | --                           | 1         | --                                                     | --          | --             | --            | --             | --        |   |
| SB3                                | 1             | --             | --             | --                           | 1         | --                                                     | --          | --             | --            | --             | --        |   |
| SB4                                | --            | --             | --             | --                           | --        | --                                                     | 1           | --             | 1             | --             | --        |   |
| SB5                                | 1             | --             | --             | 1                            | --        | --                                                     | --          | --             | --            | --             | --        |   |
| SB6                                | --            | 1              | 1              | --                           | --        | --                                                     | 1           | --             | --            | --             | 1         |   |
| SB7                                | --            | --             | --             | --                           | --        | --                                                     | --          | 1              | 1             | 1              | 1         |   |
| SB8                                | --            | 1              | 1              | --                           | --        | --                                                     | 1           | --             | --            | --             | 1         |   |
| SB9                                | --            | --             | --             | --                           | --        | --                                                     | --          | 1              | 1             | 1              | 1         |   |
| SB10                               | --            | 1              | 1              | --                           | --        | --                                                     | 1           | --             | --            | --             | 1         |   |
| SB11                               | --            | --             | --             | --                           | --        | --                                                     | --          | 1              | 1             | 1              | 1         |   |
| TOTAL                              | 4             | 3              | 3              | 1                            | 2         | 1                                                      | 3           | 1              | 3             | 3              | 6         |   |
| * QUANTITY SHOWN ELSEWHERE ON PLAN |               |                |                |                              |           |                                                        |             |                |               |                |           |   |
| PROJECT NO: 1228-09-76             |               | HWY: IH 43     |                | COUNTY: MILWAUKEE            |           | MISCELLANEOUS QUANTITIES                               |             |                |               | SHEET: 175     |           | E |
| PAGE 4 OF 5                        |               |                |                |                              |           |                                                        |             |                |               |                |           |   |



3

| FACES    |          |             |             |             |
|----------|----------|-------------|-------------|-------------|
|          |          | 658.0173*   | 658.0174*   | 658.0416*   |
|          |          | TRAFFIC     | TRAFFIC     | PEDESTRIAN  |
|          |          | SIGNAL FACE | SIGNAL FACE | SIGNAL FACE |
| SIGNAL   | SIGNAL   | 3S 12-INCH  | 4S-12 INCH  | 16-INCH     |
| BASE NO. | HEAD NO. | EACH        | EACH        | EACH        |
| SB1      | 21       | --          | --          | 1           |
| SB2      | 1        | 1           | --          | --          |
| SB2      | 7        | --          | 1           | --          |
| SB3      | 8        | --          | 1           | --          |
| SB4      | 5        | 1           | --          | --          |
| SB4      | 6        | 1           | --          | --          |
| SB4      | 18       | --          | --          | 1           |
| SB6      | 9        | 1           | --          | --          |
| SB6      | 15       | --          | 1           | --          |
| SB6      | 19       | --          | --          | 1           |
| SB7      | 13       | 1           | --          | --          |
| SB7      | 16       | --          | 1           | --          |
| SB7      | 24       | --          | --          | 1           |
| SB7      | 14       | 1           | --          | --          |
| SB8      | 4        | 1           | --          | --          |
| SB8      | 17       | --          | --          | 1           |
| SB9      | 2        | 1           | --          | --          |
| SB9      | 3        | 1           | --          | --          |
| SB9      | 22       | --          | --          | 1           |
| SB10     | 12       | 1           | --          | --          |
| SB10     | 23       | --          | --          | 1           |
| SB11     | 10       | 1           | --          | --          |
| SB11     | 11       | 1           | --          | --          |
| SB11     | 20       | --          | --          | 1           |
| TOTAL    |          | 12          | 4           | 8           |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRANSPORT AND INSTALL STATE<br>FURNISHED APS BUTTONS |      |
|------------------------------------------------------|------|
| SPV.0060.40                                          |      |
| TRANSPORT AND INSTALL STATE<br>FURNISHED APS BUTTONS |      |
| LOCATION                                             | EACH |
| 6TH AT MINERAL                                       | 1    |
| TOTAL                                                | 1    |

| TRAFFIC SIGNAL MOUNTING HARDWARE |      |
|----------------------------------|------|
| 658.5070.02                      |      |
| SIGNAL<br>MOUNTING<br>HARDWARE   |      |
| LOCATION                         | EACH |
| 6TH AT MINERAL                   | 1    |
| TOTAL                            | 1    |

| TRAFFIC SIGNAL CABINET                                                |      |
|-----------------------------------------------------------------------|------|
| SPV.0060.35                                                           |      |
| TRANSPORT AND<br>INSTALL STATE<br>FURNISHED TRAFFIC<br>SIGNAL CABINET |      |
| LOCATION                                                              | EACH |
| 6TH AT MINERAL                                                        | 1    |
| TOTAL                                                                 | 1    |

W MINERAL ST & S 6<sup>TH</sup> ST  
TRAFFIC SIGNALS

| ELECTRICAL SERVICE METER BREAKER PEDESTAL       |   |
|-------------------------------------------------|---|
| 656.0201.02                                     |   |
| ELECTRICAL SERVICE<br>METER BREAKER<br>PEDESTAL |   |
| EACH                                            |   |
| 6TH AT MINERAL                                  | 1 |
| TOTAL                                           | 1 |

| TRANSPORTING MATERIALS                                                   |      |
|--------------------------------------------------------------------------|------|
| SPV.0060.38                                                              |      |
| TRANSPORT<br>TRAFFIC SIGNAL<br>AND INTERSECTION<br>LIGHTING<br>MATERIALS |      |
| LOCATION                                                                 | EACH |
| 6TH AT MINERAL                                                           | 1    |
| TOTAL                                                                    | 1    |

| RADAR VEHICLE DETECTION SYSTEM                                        |      |
|-----------------------------------------------------------------------|------|
| SPV.0060.36                                                           |      |
| TRANSPORT AND INSTALL<br>STATE FURNISHED<br>RADAR DETECTION<br>SYSTEM |      |
| LOCATION                                                              | EACH |
| 6TH AT MINERAL                                                        | 1    |
| TOTAL                                                                 | 1    |

3



W LAPHAM BLVD & S 4<sup>TH</sup> ST  
TRAFFIC SIGNALS

| CONDUIT                                                            |      |      |
|--------------------------------------------------------------------|------|------|
| 652.0225*<br>CONDUIT RIGID<br>NONMETALLIC<br>SCHEDULE 40<br>2-INCH |      |      |
| FROM                                                               | TO   | L.F. |
| SBE                                                                | SBEE | 5    |
| TOTAL                                                              |      | 5    |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| CONCRETE BASES                           |      |
|------------------------------------------|------|
| 654.0101*<br>CONCRETE<br>BASES<br>TYPE 1 |      |
| SIGNAL<br>BASE NO.                       | EACH |
| SBEE                                     | 1    |
| TOTAL                                    | 1    |

\* QUANTITY SHOWN ELSEWHERE ON PLAI

| TRAFFIC SIGNAL CABLE AND WIRE                    |      |      |
|--------------------------------------------------|------|------|
| 655.0240*<br>CABLE<br>TRAFFIC SIGNAL<br>7-14 AWG |      |      |
| FROM                                             | TO   | L.F. |
| SBE                                              | SBEE | 50   |
| TOTAL                                            |      | 50   |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC SIGNAL CABLE AND WIRE                                |      |      |
|--------------------------------------------------------------|------|------|
| 655.0515*<br>ELECTRICAL<br>WIRE TRAFFIC<br>SIGNALS<br>10 AWG |      |      |
| FROM                                                         | TO   | L.F. |
| SBE                                                          | SBEE | 50   |
| TOTAL                                                        |      | 50   |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| POLES                                                                                                                                                                      |   |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|
| 657.0100* 657.0405* SPV.0060.09<br>TRAFFIC SIGNAL VOICE<br>STANDARDS INSTRUCTION<br>PEDESTAL ALUMINUM AUDIBLE<br>SIGNAL BASES 3.5-FT PUSHBUTTON<br>BASE NO. EACH EACH EACH |   |   |   |
| SBEE                                                                                                                                                                       | 1 | 1 | 1 |
| TOTAL                                                                                                                                                                      | 1 | 1 | 1 |

\* QUANTITY SHOWN ELSEWHERE ON PLAN



3

3

W LAPHAM BLVD & S 5<sup>TH</sup> ST  
TRAFFIC SIGNALS

| CONDUIT                                                            |       |      |
|--------------------------------------------------------------------|-------|------|
| 652.0225*<br>CONDUIT RIGID<br>NONMETALLIC<br>SCHEDULE 40<br>2-INCH |       |      |
| FROM                                                               | TO    | L.F. |
| SBJ                                                                | SBK-M | 5    |
| TOTAL                                                              |       | 5    |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| CONCRETE BASES                           |      |
|------------------------------------------|------|
| 654.0101*<br>CONCRETE<br>BASES<br>TYPE 1 |      |
| SIGNAL<br>BASE NO.                       | EACH |
| SBB                                      | 1    |
| SBK                                      | 1    |
| TOTAL                                    | 2    |

\* QUANTITY SHOWN ELSEWHERE ON PLAI

| TRAFFIC SIGNAL CABLE AND WIRE                    |     |      |
|--------------------------------------------------|-----|------|
| 655.0240*<br>CABLE<br>TRAFFIC SIGNAL<br>7-14 AWG |     |      |
| FROM                                             | TO  | L.F. |
| SBJ                                              | SBK | 100  |
| SBA                                              | SBB | 50   |
| TOTAL                                            |     | 150  |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC SIGNAL CABLE AND WIRE                                |     |      |
|--------------------------------------------------------------|-----|------|
| 655.0515*<br>ELECTRICAL<br>WIRE TRAFFIC<br>SIGNALS<br>10 AWG |     |      |
| FROM                                                         | TO  | L.F. |
| SBJ                                                          | SBK | 50   |
| SBA                                                          | SBB | 75   |
| TOTAL                                                        |     | 125  |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| POLES                         |               |                |               |
|-------------------------------|---------------|----------------|---------------|
| 657.0100* 657.0405* 657.0420* |               |                |               |
| TRAFFIC SIGNAL<br>STANDARDS   |               |                |               |
| PEDESTAL ALUMINUM ALUMINUM    |               |                |               |
| SIGNAL<br>BASE NO.            | BASES<br>EACH | 3.5-FT<br>EACH | 13-FT<br>EACH |
| SBB                           | 1             | –              | 1             |
| SBJ                           | 1             | 1              | –             |
| TOTAL                         | 2             | 1              | 1             |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| TRAFFIC SIGNAL CABLE AND WIRE                    |                                |      |
|--------------------------------------------------|--------------------------------|------|
| 655.0230*<br>CABLE<br>TRAFFIC SIGNAL<br>5-14 AWG |                                |      |
| FROM                                             | TO<br>SIGNAL<br>HEAD<br>NUMBER | L.F. |
| SBB                                              | 9                              | 20   |
| TOTAL                                            |                                | 20   |

\* QUANTITY SHOWN ELSEWHERE ON PLAN

| FACES                                             |                    |      |
|---------------------------------------------------|--------------------|------|
| 658.0173*<br>TRAFFIC<br>SIGNAL FACE<br>3S 12-INCH |                    |      |
| SIGNAL<br>BASE NO.                                | SIGNAL<br>HEAD NO. | EACH |
| SBB                                               | 9                  | 1    |
| TOTAL                                             |                    | 1    |

\* QUANTITY SHOWN ELSEWHERE ON PLAN



FTMS TRAFFIC SENSORS

SPV.0060.06

|          |                         |           |             | INSTALL<br>WIRELESS<br>TRAFFIC<br>SENSOR<br>EACH |    |
|----------|-------------------------|-----------|-------------|--------------------------------------------------|----|
| CATEGORY | ROADWAY /<br>SITE       | ITEM ID.  | LOCATION    |                                                  |    |
| 1300     | HOLT AVE. NB ON-RAMP    | I43 / 94  |             |                                                  |    |
|          |                         | WTS1025A  | 100NB3+25   | 1                                                |    |
|          |                         | WTS1050A  | 100NB3+65   | 1                                                |    |
|          |                         | WTS1050B  | 100NB3+60   | 1                                                |    |
|          |                         | WTS10345A | *           | 1                                                |    |
|          |                         | WTS10345B | *           | 1                                                |    |
|          |                         | WTS10345C | *           | 1                                                |    |
|          |                         | WTS10360A | *           | 1                                                |    |
|          |                         | WTS10360B | *           | 1                                                |    |
|          |                         | WTS10360C | *           | 1                                                |    |
|          | S. 6TH ST. / S. 9TH ST. | WTS10375A | *           | 1                                                |    |
|          |                         | WTS10375B | *           | 1                                                |    |
|          |                         | WTS10375C | *           | 1                                                |    |
|          |                         | WTS1650   | 16NATNB2+60 | 1                                                |    |
|          |                         | WTS1700   | 16NATNB2+60 | 1                                                |    |
|          |                         | WTS2375A  | *           | 1                                                |    |
|          |                         | WTS2375B  | *           | 1                                                |    |
|          |                         | WTS2365A  | *           | 1                                                |    |
|          |                         | WTS2365B  | *           | 1                                                |    |
|          |                         | WTS2350A  | *           | 1                                                |    |
|          | WTS2350B                | *         | 1           |                                                  |    |
|          | WTS8325A                | *         | 1           |                                                  |    |
|          | WTS8325B                | *         | 1           |                                                  |    |
|          | WTS8310A                | *         | 1           |                                                  |    |
|          | WTS8310B                | *         | 1           |                                                  |    |
|          | WTS8275A                | *         | 1           |                                                  |    |
|          | WTS8275B                | *         | 1           |                                                  |    |
|          | TOTALS                  |           |             |                                                  | 26 |

\* - PLACE SENSORS BASED ON DIMENSIONS FROM STOP-BAR

MISCELLANEOUS ITEMS

| CATEGORY | ROADWAY /<br>SITE | ROADWAY  | 670.0101<br>FIELD SYSTEM<br>INTEGRATOR<br>EACH |
|----------|-------------------|----------|------------------------------------------------|
| 1300     | IH 43 / 94        | I43 / 94 | 1                                              |
| TOTALS   |                   |          | 1                                              |



NOTES:  
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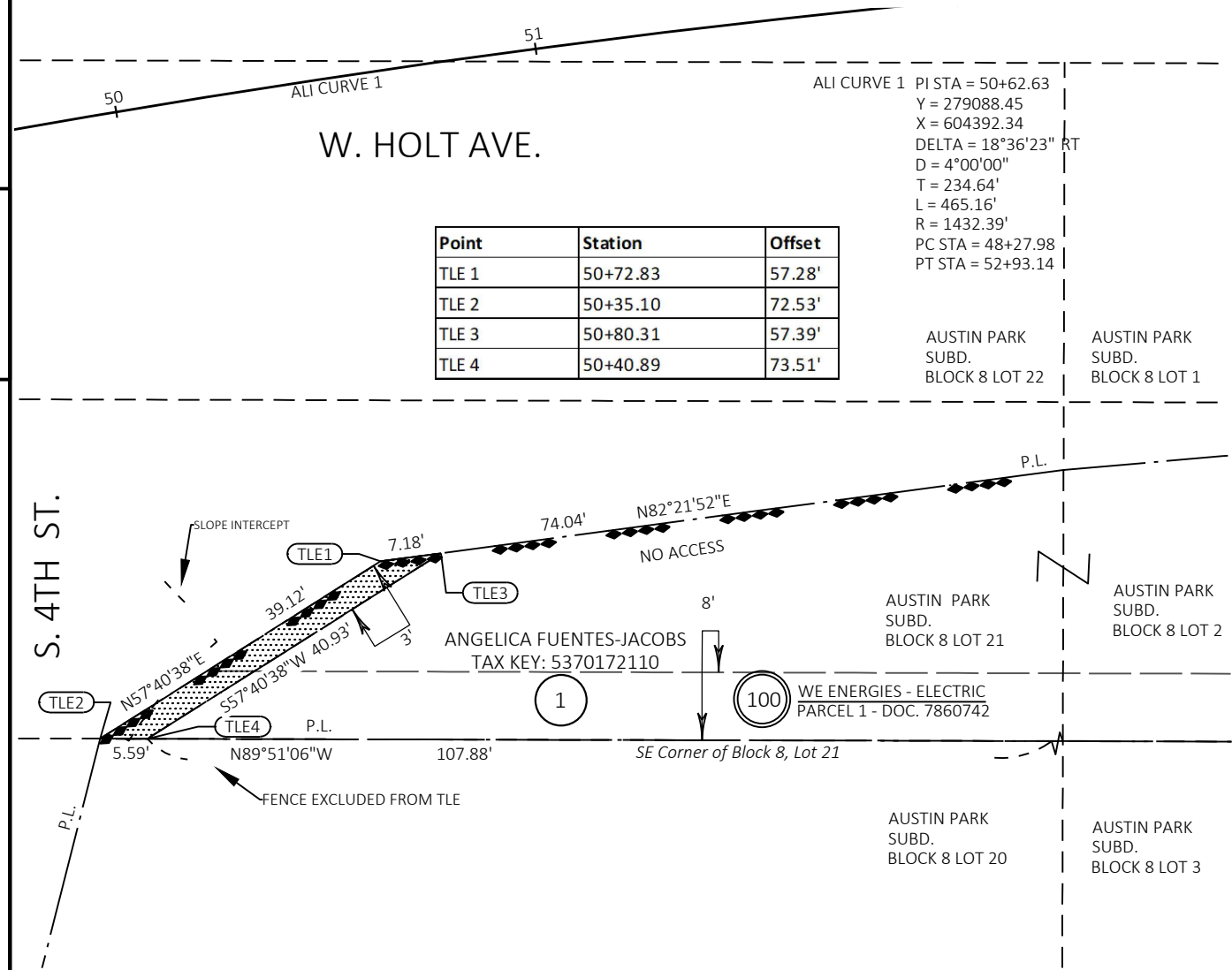
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORINATE REFERENCE SYSTEM COORDINATES (WISCRS) MILWAUKEE COUNTY, NAD83 (2011) IN SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES ON THIS EXHIBIT.

PURPOSE OF ALL TLE IS FOR SIDEWALK IMPROVEMENT, UNLESS OTHERWISE NOTED.

R/W PROJECT NUMBER: 1228-09-26 SHEET NUMBER: 4.01

TLE ACQUISITION EXHIBIT  
IH 43 NORTH-SOUTH FREEWAY  
MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE  
IH 43 MILWAUKEE COUNTY

THAT PART OF BLOCK 8 OF AUSTIN PARK SUBDIVISION, PART OF THE SW 1/4 OF THE NE 1/4 OF SECTION 17, TOWN 06 NORTH RANGE 22 EAST IN THE CITY OF MILWAUKEE, MILWAUKEE COUNTY WISCONSIN



| SCHEDULE OF LANDS & INTERESTS REQUIRED |                         |  |  | OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE |             |  |  |
|----------------------------------------|-------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------------|-------------|--|--|
| PARCEL NUMBER                          | OWNER                   |  |  | INTEREST REQUIRED                                                                                                           | T.L.E. S.F. |  |  |
| 1                                      | ANGELICA FUENTES-JACOBS |  |  | TLE                                                                                                                         | 120         |  |  |
|                                        |                         |  |  |                                                                                                                             |             |  |  |
|                                        |                         |  |  |                                                                                                                             |             |  |  |
|                                        |                         |  |  |                                                                                                                             |             |  |  |
| UTILITY INTERESTS REQUIRED             |                         |  |  |                                                                                                                             |             |  |  |
| UTILITY NUMBER                         | OWNER                   |  |  | INTEREST REQUIRED                                                                                                           |             |  |  |
| 100                                    | WE ENERGIES             |  |  | ROR                                                                                                                         |             |  |  |
|                                        |                         |  |  |                                                                                                                             |             |  |  |

GN

SCALE, FEET

0 10 20

THIS MAP IS APPROVED FOR THE DEPARTMENT OF TRANSPORTATION REGION AND CITY REGION OFFICE

SIGNATURE: *Robert A. Duffek* DATE: 4/10/2023

PRINT NAME:

NOTES:  
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

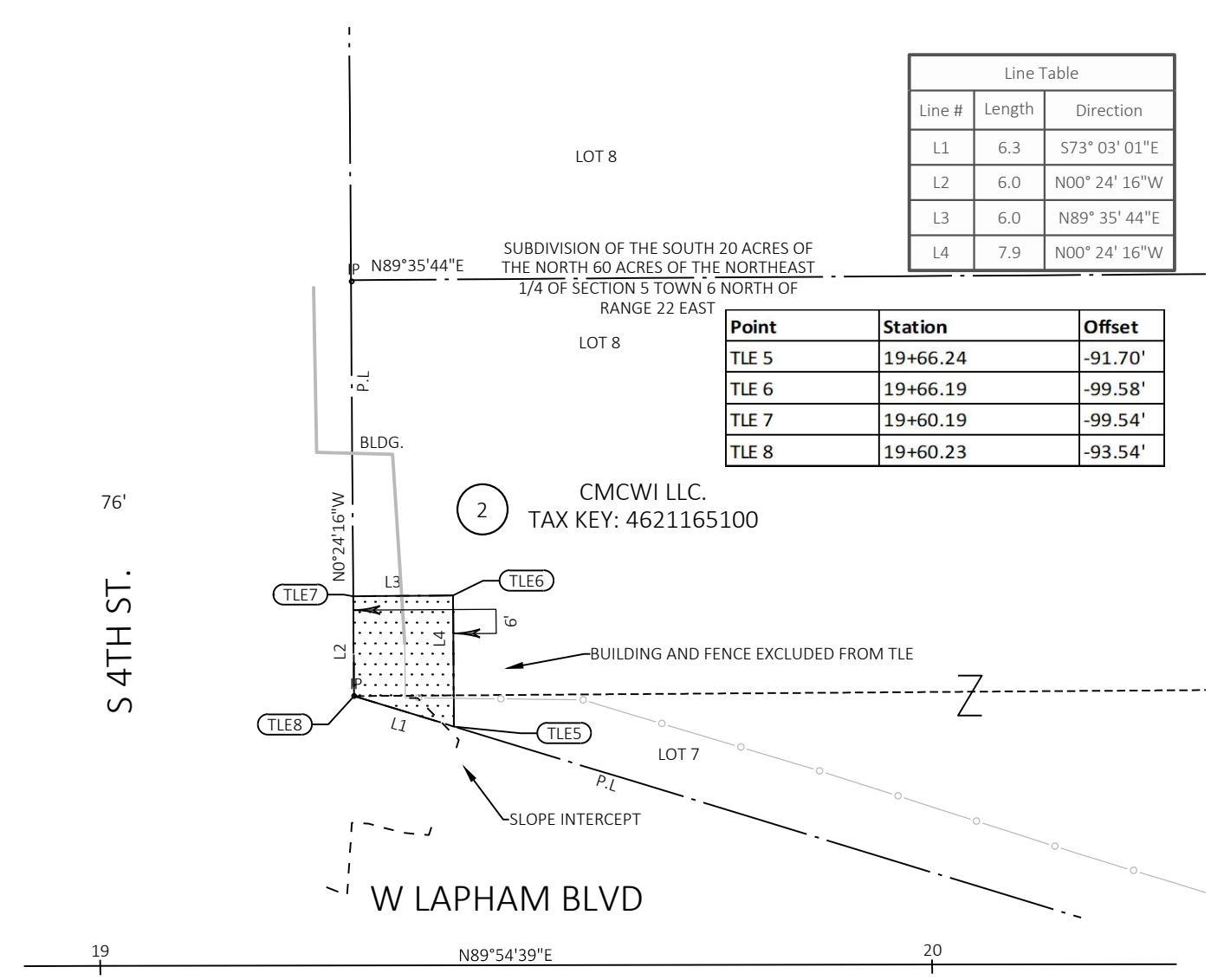
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORINATE REFERENCE SYSTEM COORDINATES (WISCRS) MILWAUKEE COUNTY, NAD83 (2011) IN SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES ON THIS EXHIBIT.

PURPOSE OF ALL TLE IS FOR SIDEWALK IMPROVEMENT, UNLESS OTHERWISE NOTED.

R/W PROJECT NUMBER: 1228-09-26 SHEET NUMBER: 4.02

TLE ACQUISITION EXHIBIT  
IH 43 NORTH-SOUTH FREEWAY  
MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE  
IH 43 MILWAUKEE COUNTY

THAT PART OF LOT 7 AND 8 IN BLOCK 127 IN SUBDIVISION OF THE SOUTH 20 ACRES OF THE NORTH 60 ACRES OF THE NORTH EAST 1/4 OF SECTION 5 TOWN 6 NORTH OF RANGE 22 EAST IN THE NW 1/4 OF THE NE 1/4 OF SECTION 5 TOWN 6 NORTH RANGE 22 EAST IN THE CITY OF MILWAUKEE, MILWAUKEE COUNTY WISCONSIN.



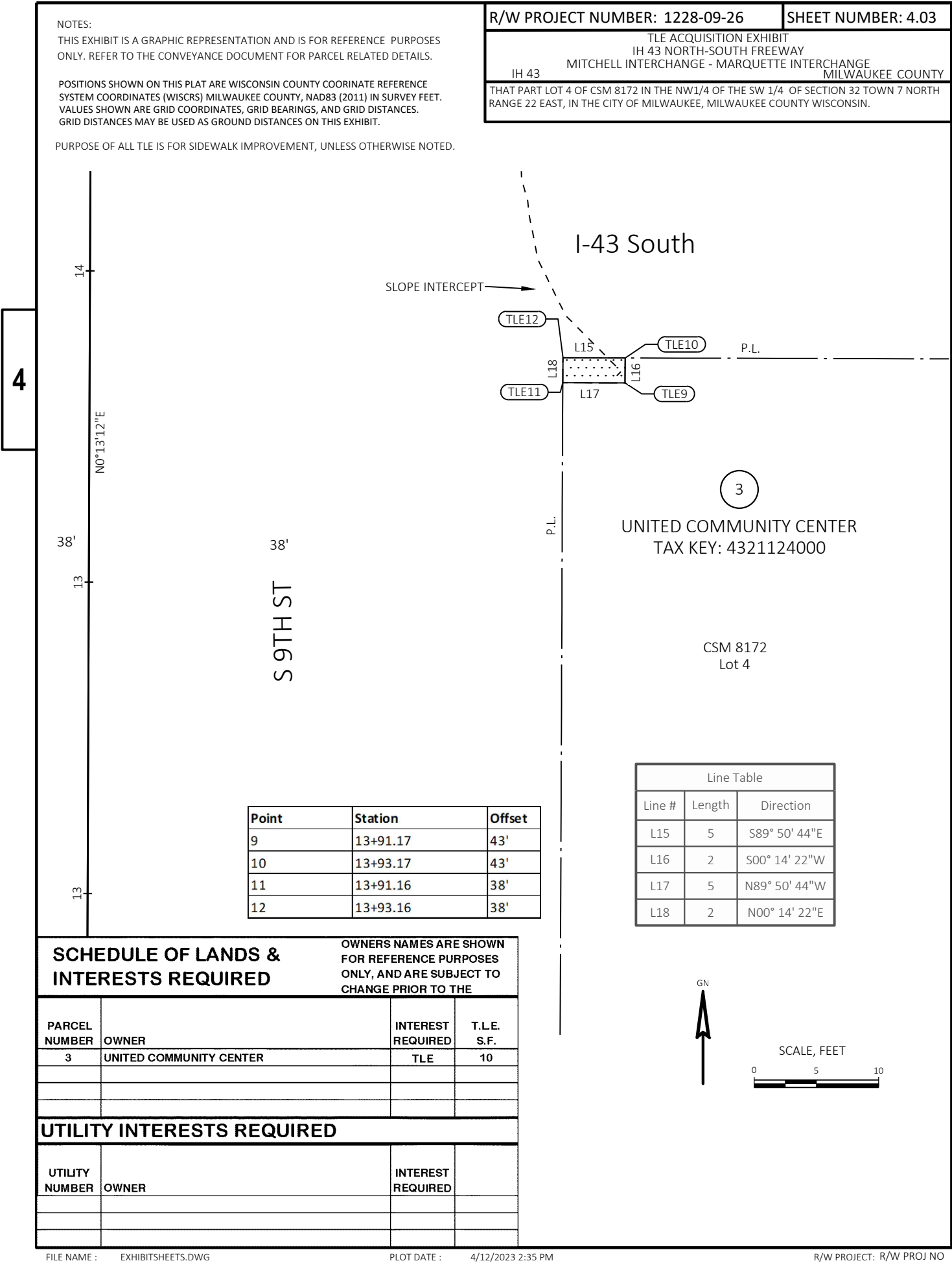
| SCHEDULE OF LANDS & INTERESTS REQUIRED |           |  |  | OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE |             |  |  |
|----------------------------------------|-----------|--|--|-----------------------------------------------------------------------------------------------------------------------------|-------------|--|--|
| PARCEL NUMBER                          | OWNER     |  |  | INTEREST REQUIRED                                                                                                           | T.L.E. S.F. |  |  |
| 2                                      | CMCWI LLC |  |  | TLE                                                                                                                         | 42          |  |  |
|                                        |           |  |  |                                                                                                                             |             |  |  |
|                                        |           |  |  |                                                                                                                             |             |  |  |
|                                        |           |  |  |                                                                                                                             |             |  |  |
| UTILITY INTERESTS REQUIRED             |           |  |  |                                                                                                                             |             |  |  |
| UTILITY NUMBER                         | OWNER     |  |  | INTEREST REQUIRED                                                                                                           |             |  |  |
|                                        |           |  |  |                                                                                                                             |             |  |  |
|                                        |           |  |  |                                                                                                                             |             |  |  |
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SCALE, FEET

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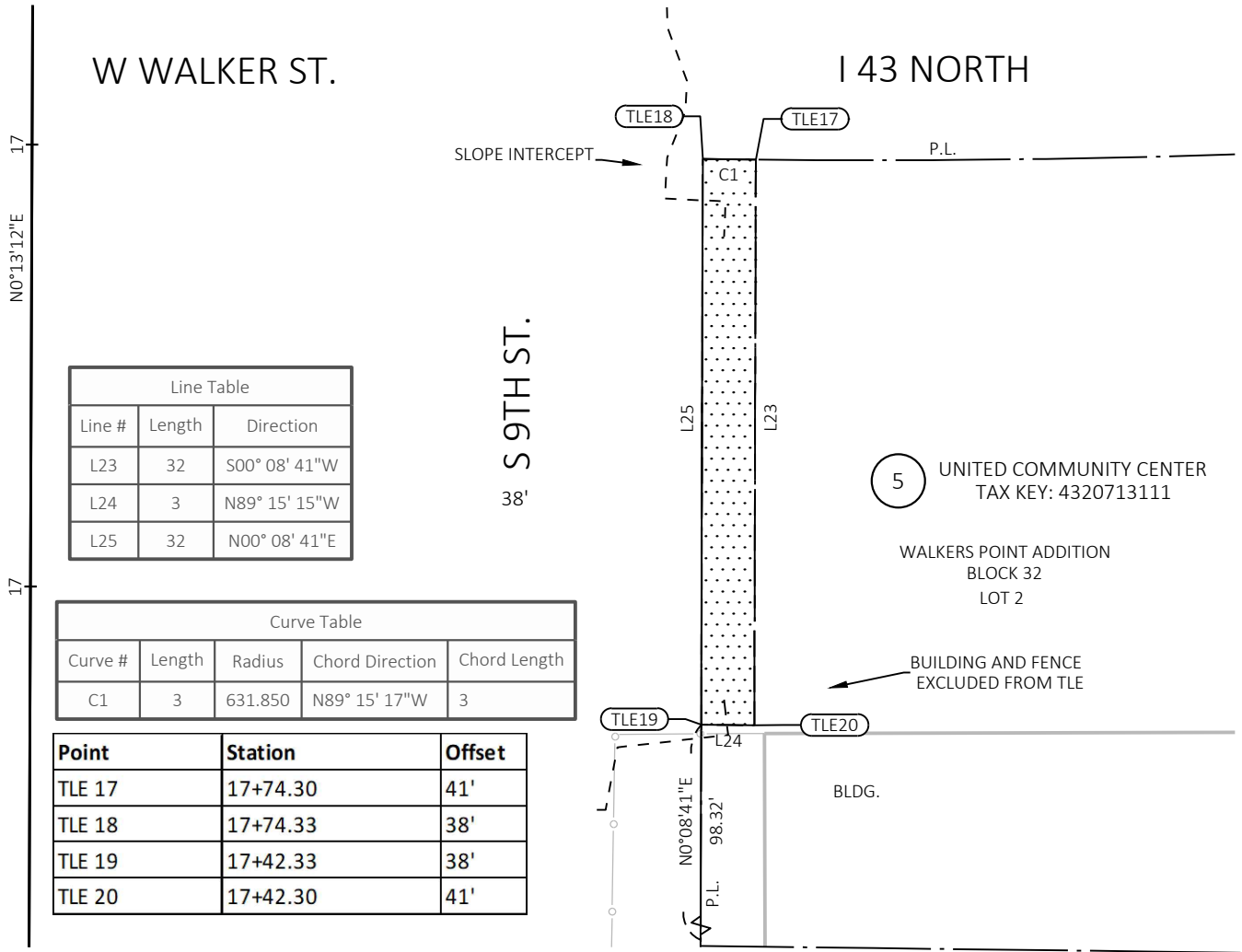




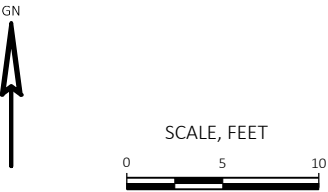
NOTES:  
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POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORINATE REFERENCE SYSTEM COORDINATES (WISCRS) MILWAUKEE COUNTY, NAD83 (2011) IN SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES ON THIS EXHIBIT.

PURPOSE OF ALL TLE IS FOR SIDEWALK IMPROVEMENT, UNLESS OTHERWISE NOTED.

|                                                                                                                                                                  |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| R/W PROJECT NUMBER: 1228-09-26                                                                                                                                   | SHEET NUMBER: 4.05 |
| TLE ACQUISITION EXHIBIT<br>IH 43 NORTH-SOUTH FREEWAY<br>MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE<br>IH 43 MILWAUKEE COUNTY                                   |                    |
| THAT PART OF LOT 2, BLOCK 32 OF WALKERS POINT ADDITION, ALSO THE SW 1/4 OF SEC. 32 TOWN 7 NORTH RANGE 22 EAST, IN CITY OF MILWAUKEE, MILWAUKEE COUNTY WISCONSIN. |                    |



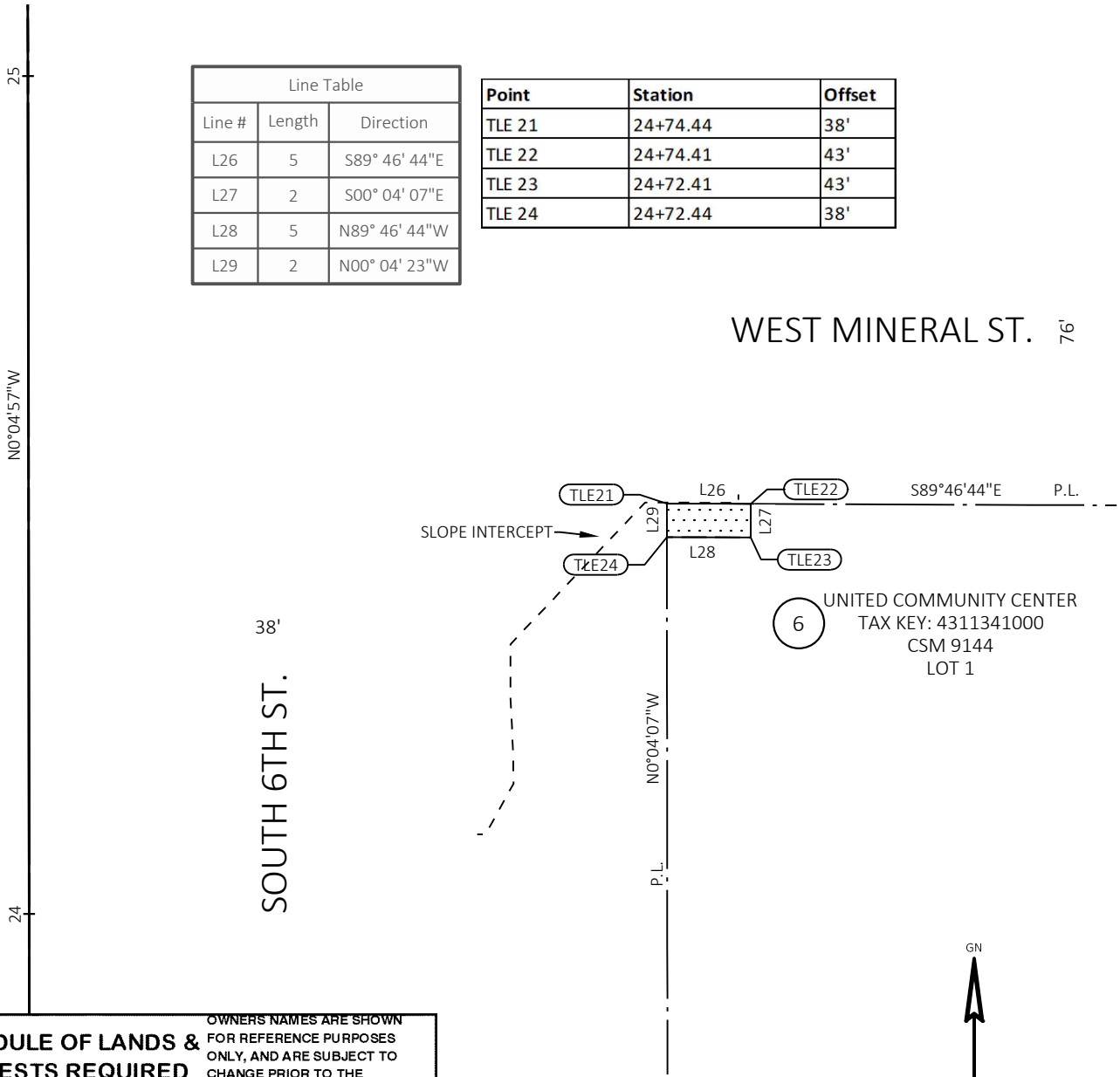
| SCHEDULE OF LANDS & INTERESTS REQUIRED                                                                                                  |                         |                   |             |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------|-------------|
| OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT. |                         |                   |             |
| PARCEL NUMBER                                                                                                                           | OWNER                   | INTEREST REQUIRED | T.L.E. S.F. |
| 5                                                                                                                                       | UNITED COMMUNITY CENTER | TLE               | 96          |
|                                                                                                                                         |                         |                   |             |
|                                                                                                                                         |                         |                   |             |
| UTILITY INTERESTS REQUIRED                                                                                                              |                         |                   |             |
| UTILITY NUMBER                                                                                                                          | OWNER                   | INTEREST REQUIRED |             |
|                                                                                                                                         |                         |                   |             |
|                                                                                                                                         |                         |                   |             |



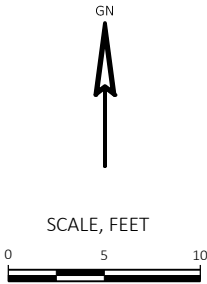
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PURPOSE OF ALL TLE IS FOR SIDEWALK IMPROVEMENT, UNLESS OTHERWISE NOTED.

|                                                                                                                                                                                      |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| R/W PROJECT NUMBER: 1228-09-26                                                                                                                                                       | SHEET NUMBER: 4.06 |
| TLE ACQUISITION EXHIBIT<br>IH 43 NORTH-SOUTH FREEWAY<br>MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE<br>IH 43 MILWAUKEE COUNTY                                                       |                    |
| THAT PART OF LOT 6, CSM 9144 IN BLOCK 87 OF WEEKS SUBDIVISION IN THE NW 1/4 OF THE SE 1/4 OF SEC. 32 TOWN 7 NORTH RANGE 22 EAST IN THE CITY OF MILWAUKEE, MILWAUKEE COUNTY WISCONSIN |                    |



| SCHEDULE OF LANDS & INTERESTS REQUIRED                                                                                  |                         |                   |             |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------|-------------|
| OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO |                         |                   |             |
| PARCEL NUMBER                                                                                                           | OWNER                   | INTEREST REQUIRED | T.L.E. S.F. |
| 6                                                                                                                       | UNITED COMMUNITY CENTER | TLE               | 10          |
|                                                                                                                         |                         |                   |             |
|                                                                                                                         |                         |                   |             |
| UTILITY INTERESTS REQUIRED                                                                                              |                         |                   |             |
| UTILITY NUMBER                                                                                                          | OWNER                   | INTEREST REQUIRED |             |
|                                                                                                                         |                         |                   |             |
|                                                                                                                         |                         |                   |             |





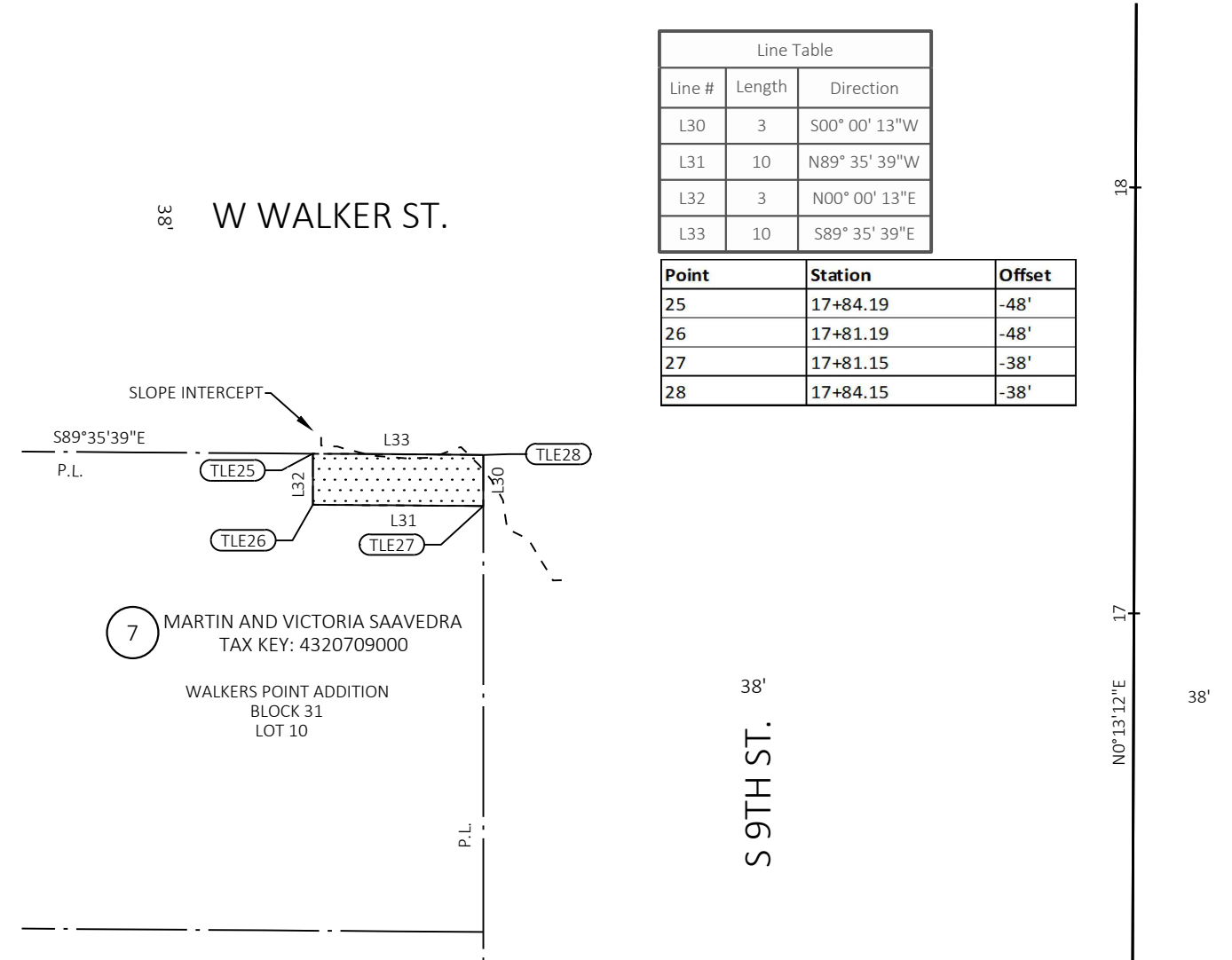
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NOTES:  
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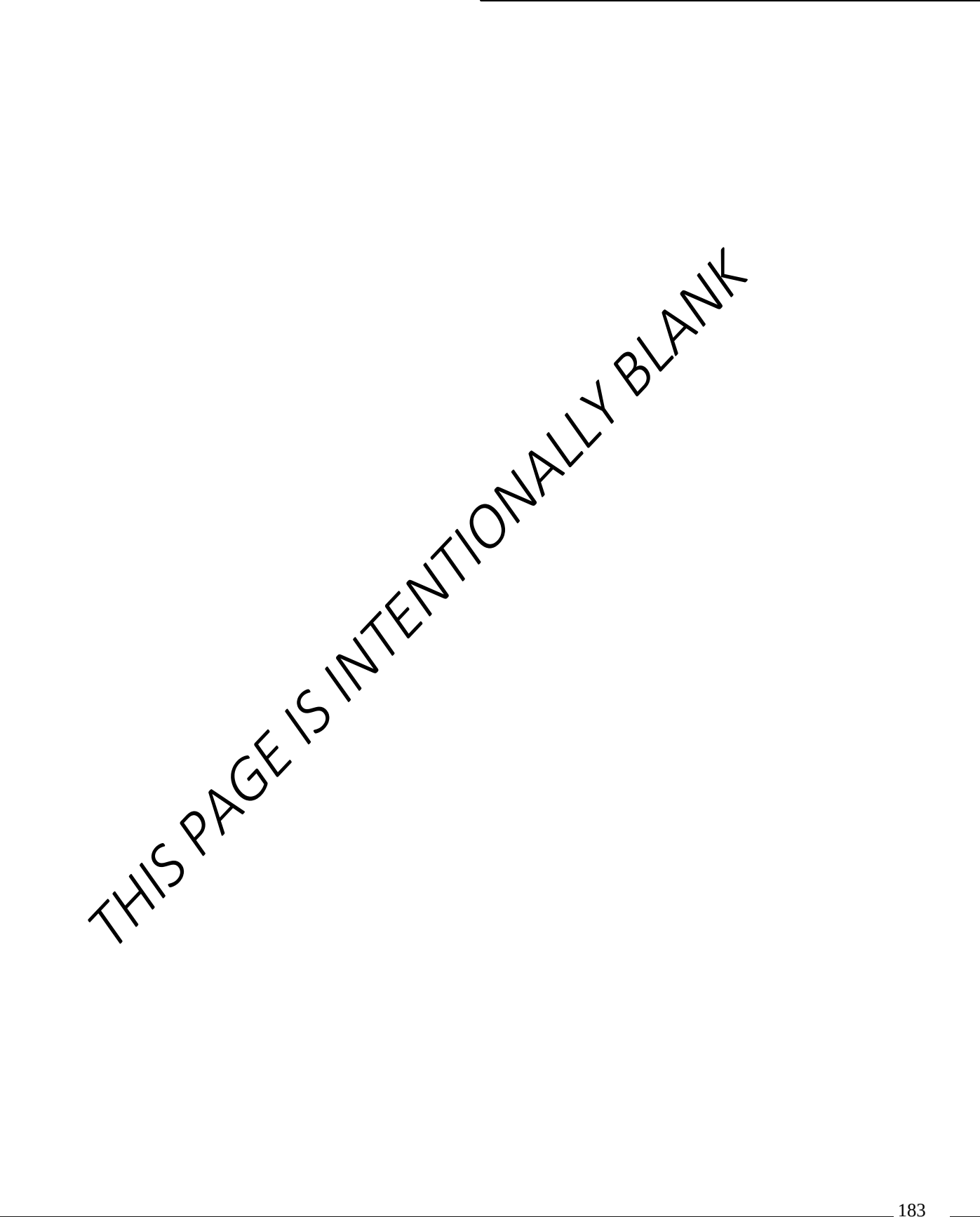
|                                                                                                                                                                                |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| R/W PROJECT NUMBER: 1228-09-26                                                                                                                                                 | SHEET NUMBER: 4.07 |
| TLE ACQUISITION EXHIBIT<br>IH 43 NORTH-SOUTH FREEWAY<br>MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE<br>IH 43 MILWAUKEE COUNTY                                                 |                    |
| THAT PART OF LOT 10, BLOCK 31 OF WALKERS POINT ADDITION, ALSO THE NE 1/4 OF THE SW 1/4 OF SEC. 32 TOWN 7 NORTH RANGE 22 EAST, IN CITY OF MILWAUKEE, MILWAUKEE COUNTY WISCONSIN |                    |



| SCHEDULE OF LANDS & INTERESTS REQUIRED                                                                                  |                              |                   |             |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------|-------------|
| OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO |                              |                   |             |
| PARCEL NUMBER                                                                                                           | OWNER                        | INTEREST REQUIRED | T.L.E. S.F. |
| 7                                                                                                                       | MARTIN AND VICTORIA SAAVEDRA | TLE               | 30          |
|                                                                                                                         |                              |                   |             |
|                                                                                                                         |                              |                   |             |
| UTILITY INTERESTS REQUIRED                                                                                              |                              |                   |             |
| UTILITY NUMBER                                                                                                          | OWNER                        | INTEREST REQUIRED |             |
|                                                                                                                         |                              |                   |             |
|                                                                                                                         |                              |                   |             |
|                                                                                                                         |                              |                   |             |

NOTES:  
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|                                                                                                                                |                    |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------|
| R/W PROJECT NUMBER: 1228-09-26                                                                                                 | SHEET NUMBER: 4.08 |
| TLE ACQUISITION EXHIBIT<br>IH 43 NORTH-SOUTH FREEWAY<br>MITCHELL INTERCHANGE - MARQUETTE INTERCHANGE<br>IH 43 MILWAUKEE COUNTY |                    |
|                                                                                                                                |                    |



4



Standard Detail Drawing List

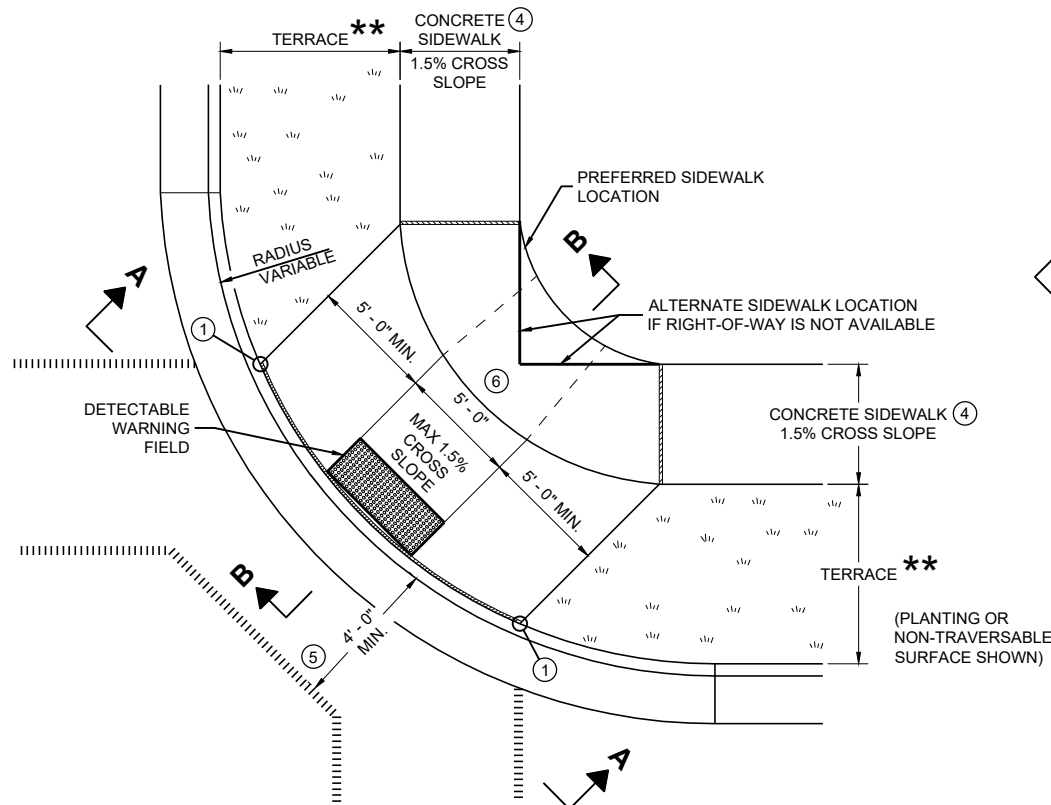
|           |                                                                                         |
|-----------|-----------------------------------------------------------------------------------------|
| 08D05-21A | CURB RAMPS TYPES 1 AND 1-A                                                              |
| 08D05-21B | CURB RAMPS TYPES 2 AND 3                                                                |
| 08D05-21C | CURB RAMPS TYPES 4A AND 4A1                                                             |
| 08D05-21D | CURB RAMPS TYPE 4B AND 4B1                                                              |
| 08D05-21E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8                                                       |
| 08D05-21F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS                                 |
| 08D05-21G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES                             |
| 08D16-11  | CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES                                      |
| 08D18-04  | DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y                                                 |
| 08E10-02  | INLET PROTECTION TYPE A, B, C AND D                                                     |
| 08E14-01  | TRACKING PAD                                                                            |
| 09B02-10  | CONDUIT                                                                                 |
| 09B04-13  | PULL BOX                                                                                |
| 09C02-09  | CONCRETE BASES, TYPES 1, 2, 5, & 6                                                      |
| 09C03-04  | TRANSFORMER/PEDESTAL BASES                                                              |
| 09C06-07  | CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL                                          |
| 09C10-03  | TRANSFORMER BASE FOR 15" BOLT CIRCLE                                                    |
| 09C11-10  | CONCRETE BASE TYPE 10                                                                   |
| 09C15-01  | CONCRETE BASE TYPE 10 SPECIAL                                                           |
| 09D01-05  | CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)                                   |
| 09D02-03  | SIGNAL CONTROL CABINET                                                                  |
| 09E01-15B | POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)              |
| 09E01-15G | HARDWARE DETAILS FOR POLE MOUNTINGS                                                     |
| 09E03-06  | NON-FREEWAY LIGHTING UNIT POLE WIRING                                                   |
| 09E06-05  | TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.               |
| 09E07-06  | TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS                 |
| 09E08-09A | TYPE 9 POLE 15'-30' MONOTUBE ARM                                                        |
| 09E08-09C | TYPE 9 SPECIAL POLE 40' MONOTUBE ARM                                                    |
| 09E08-09D | TYPE 9 SPECIAL POLE 45' MONOTUBE ARM                                                    |
| 09E08-09E | TYPE 10 POLE 15'-30' MONOTUBE ARM                                                       |
| 09E08-09H | TYPE 10 SPECIAL POLE 45' MONOTUBE ARM                                                   |
| 09E08-09K | GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS |
| 09F15-04B | LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)    |
| 09G01-04A | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04B | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04C | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04D | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04E | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04F | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 09G01-04G | SPAN WIRE TEMPORARY TRAFFIC SIGNAL                                                      |
| 11B02-02  | CONCRETE MEDIAN NOSE                                                                    |
| 13B02-09A | CONCRETE PAVEMENT APPROACH SLAB                                                         |
| 13C01-19  | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES                                          |
| 13C09-17A | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                |
| 13C09-17B | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                |
| 13C09-17C | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                |
| 13C14-07A | BASE PATCHING CONCRETE                                                                  |
| 13C14-07B | BASE PATCHING CONCRETE                                                                  |
| 13C14-07C | BASE PATCHING CONCRETE                                                                  |
| 13C15-08A | CONCRETE BASE                                                                           |
| 13C15-08B | CONCRETE BASE                                                                           |
| 13C19-03  | HMA LONGITUDINAL JOINTS                                                                 |
| 14B07-16A | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16B | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16C | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16D | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16L | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16M | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B07-16N | CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"                                              |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL                                                |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL                                                |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL                                                |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL                                                |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)                                |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)                                |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)                                |
| 14B47-05A | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                          |



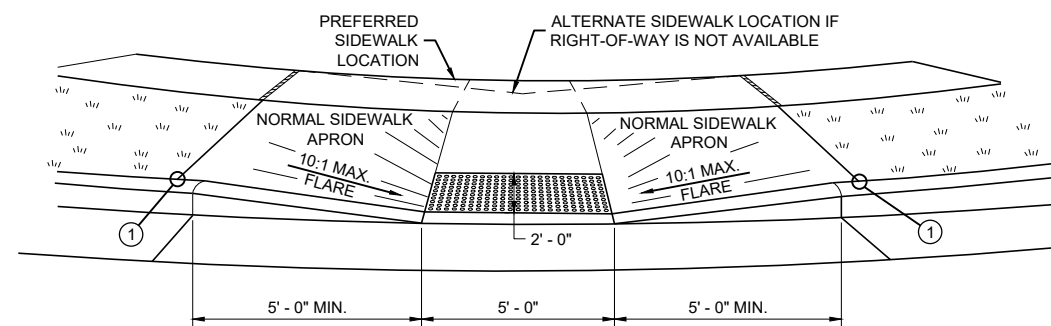
Standard Detail Drawing List

|           |                                                                                  |
|-----------|----------------------------------------------------------------------------------|
| 14B47-05B | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 14B47-05C | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 14B47-05D | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 14B47-05E | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 14B47-05F | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 14B47-05G | MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL                                   |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                       |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES                                        |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES                                             |
| 15C02-09D | ON RAMP LANE CLOSURE                                                             |
| 15C02-09E | OFF RAMP LANE CLOSURE                                                            |
| 15C02-09G | TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE                                        |
| 15C03-05  | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES                                       |
| 15C05-05  | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS                         |
| 15C07-16A | PAVEMENT MARKING SYMBOLS                                                         |
| 15C07-16B | PAVEMENT MARKING WORDS                                                           |
| 15C07-16C | PAVEMENT MARKING ARROWS                                                          |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS                                         |
| 15C08-23B | TEMPORARY LONGITUDINAL PAVEMENT MARKING                                          |
| 15C08-23D | PAVEMENT MARKING (TURN LANES)                                                    |
| 15C11-10B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS                |
| 15C18-09B | PAVEMENT MARKINGS, MEDIAN ISLAND NOSE                                            |
| 15C18-09C | MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT                     |
| 15C19-09B | MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY                   |
| 15C19-09C | MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY                     |
| 15C31-08A | PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP                                |
| 15C31-08C | PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP                        |
| 15C33-05  | STOP LINE AND CROSSWALK PAVEMENT MARKING                                         |
| 15D12-13A | TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE                       |
| 15D14-08  | TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY                       |
| 15D15-07A | TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE                      |
| 15D15-07E | TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE                          |
| 15D16-06  | TRAFFIC CONTROL, EXIT RAMP CLOSURE                                               |
| 15D20-09A | TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY             |
| 15D20-09B | TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY     |
| 15D21-07A | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                         |
| 15D21-07B | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE                         |
| 15D22-07  | TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY                        |
| 15D23-07A | TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE                            |
| 15D23-07B | TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE                            |
| 15D27-03  | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH |
| 15D28-04  | TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY             |
| 15D30-10A | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D30-10C | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D30-10F | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D30-10H | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D30-10K | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D30-10L | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                        |
| 15D42-03  | TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE                                   |



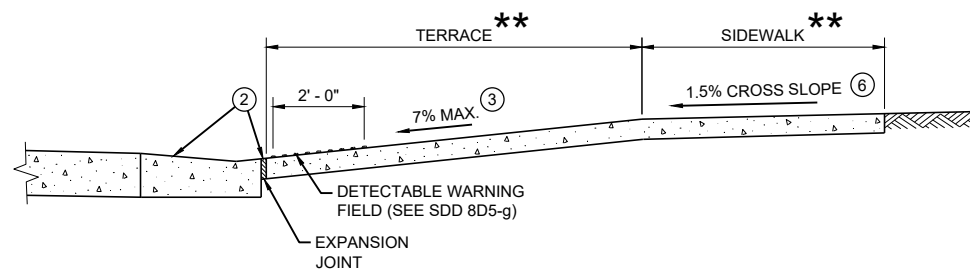


**PLAN VIEW**  
**CURB RAMP TYPE 1**  
**(CENTER OF CORNER RADIUS)**

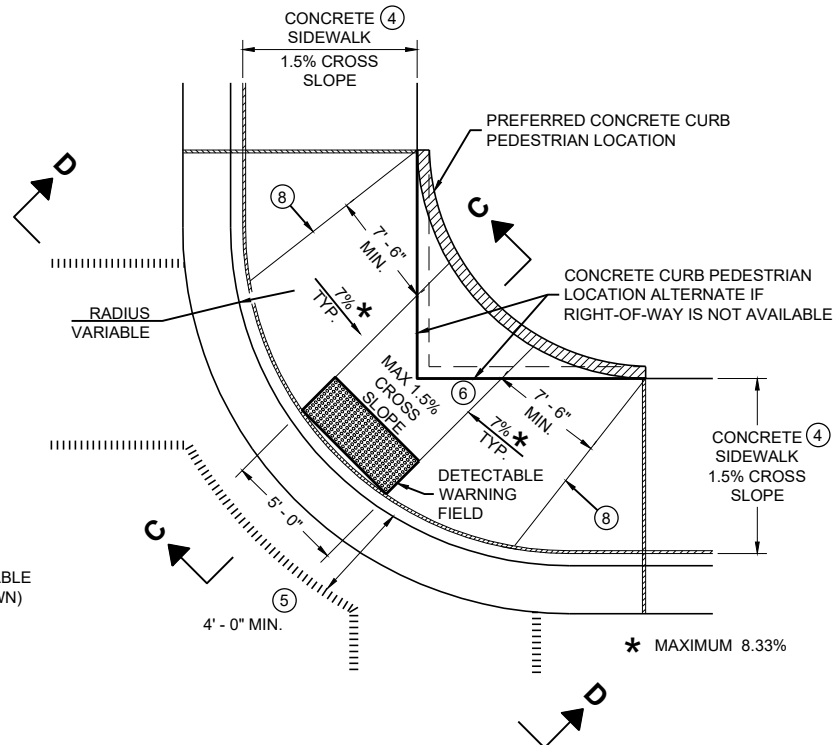


**VIEW A - A FOR TYPE 1**

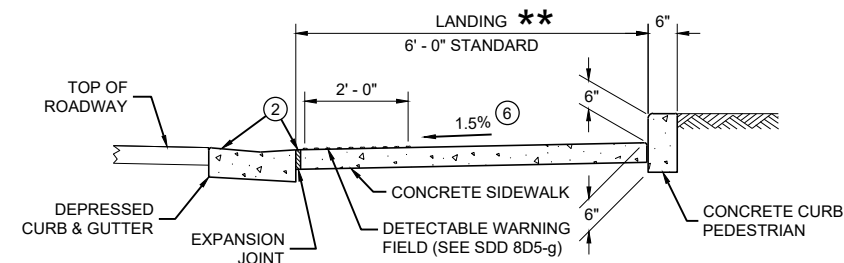
\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



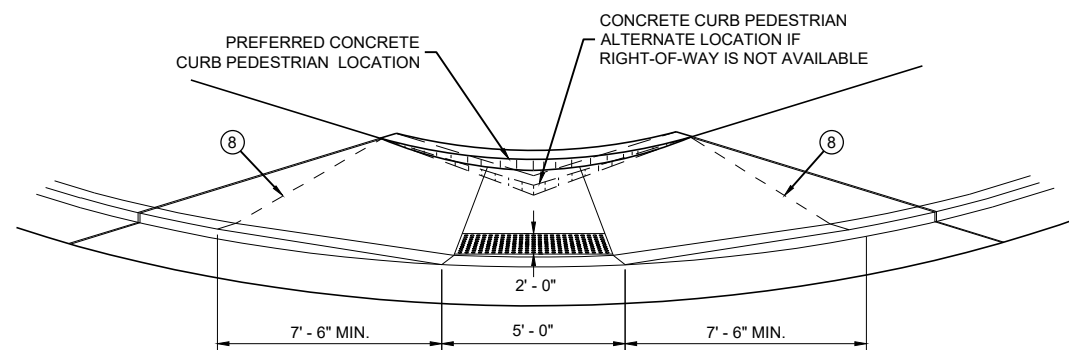
**SECTION B - B FOR TYPE 1**



**PLAN VIEW**  
**CURB RAMP TYPE 1 - A**  
**(NO TERRACE)**



**SECTION C - C FOR TYPE 1 - A**



**VIEW D - D FOR TYPE 1 - A**

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

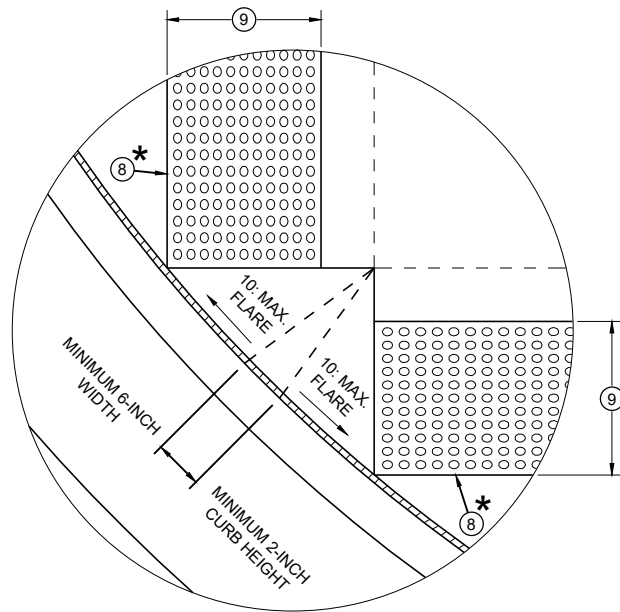
## LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

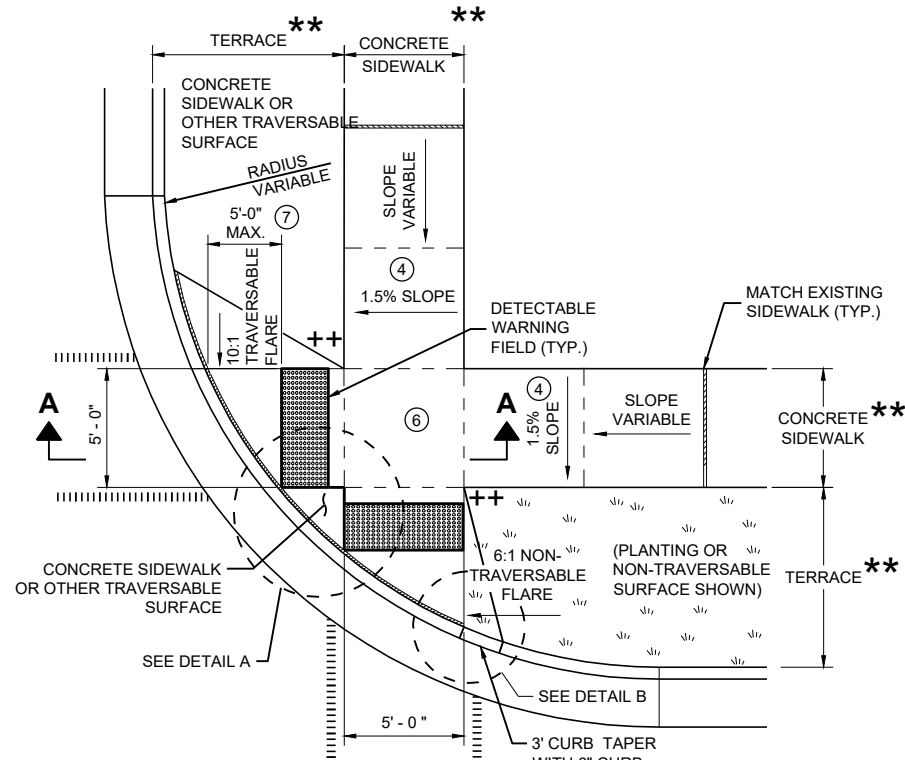
## CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

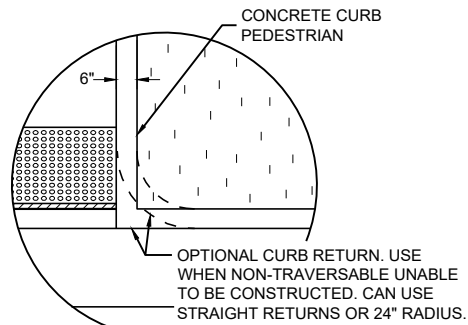




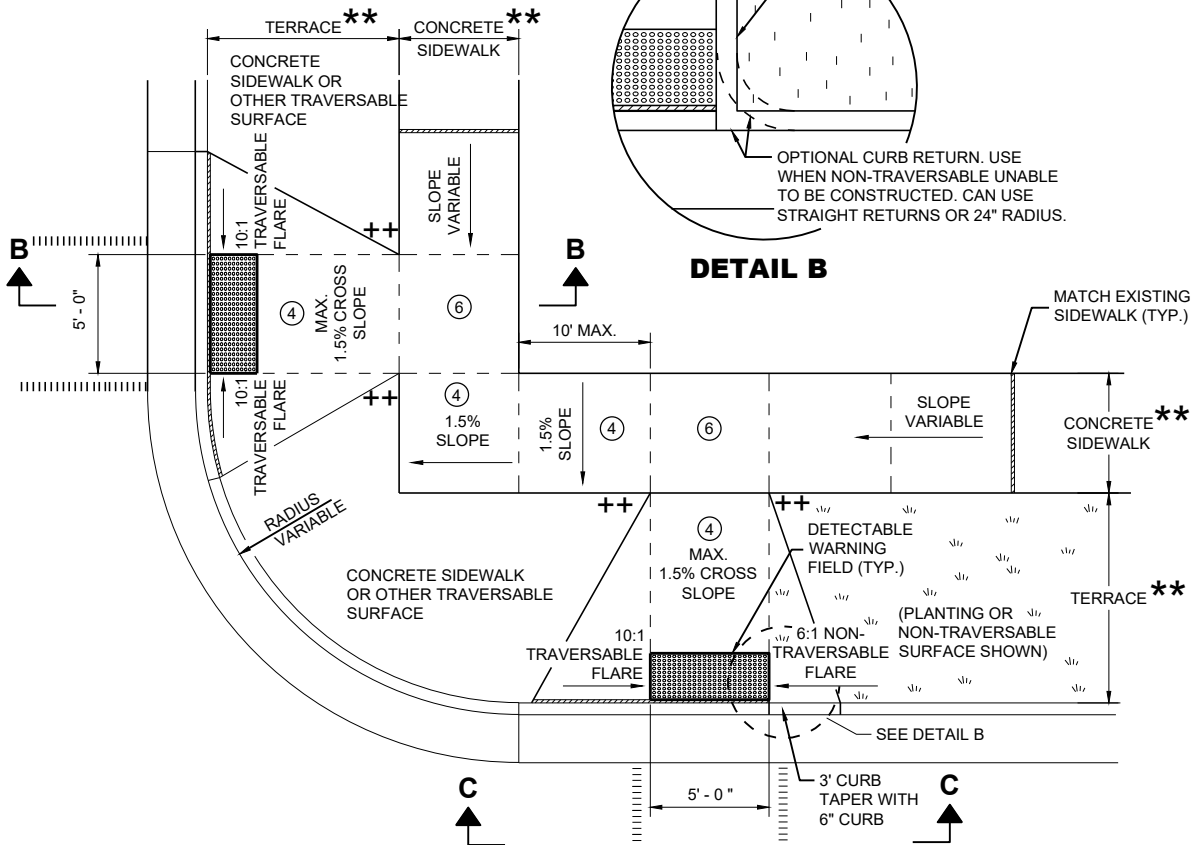
DETAIL A



PLAN VIEW  
CURB RAMP TYPE 2  
(CENTER OF CORNER RADIUS)



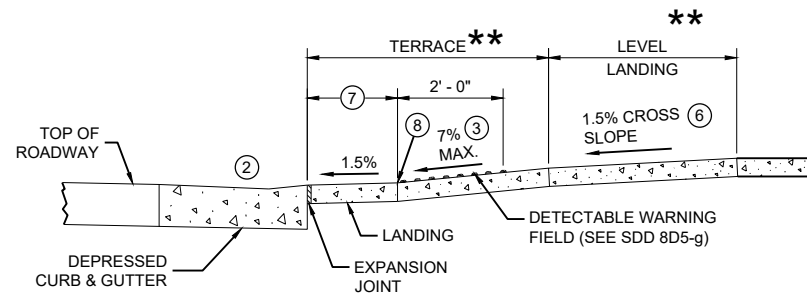
DETAIL B



PLAN VIEW  
CURB RAMP TYPE 3  
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
  - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
  - WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
  - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

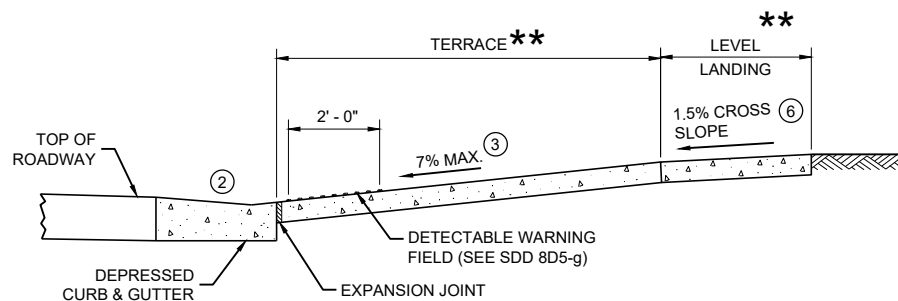


SECTION A - A FOR TYPE 2

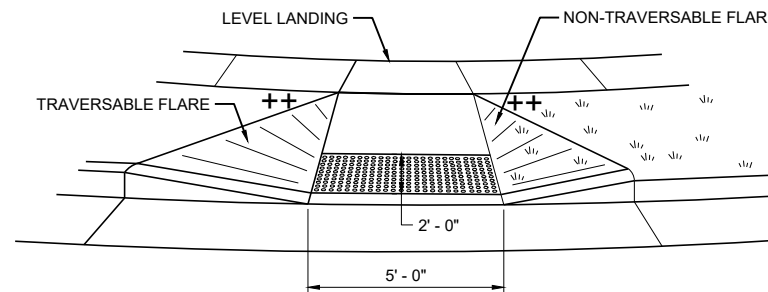
- ★ MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ★★ WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



SECTION B - B FOR TYPE 3

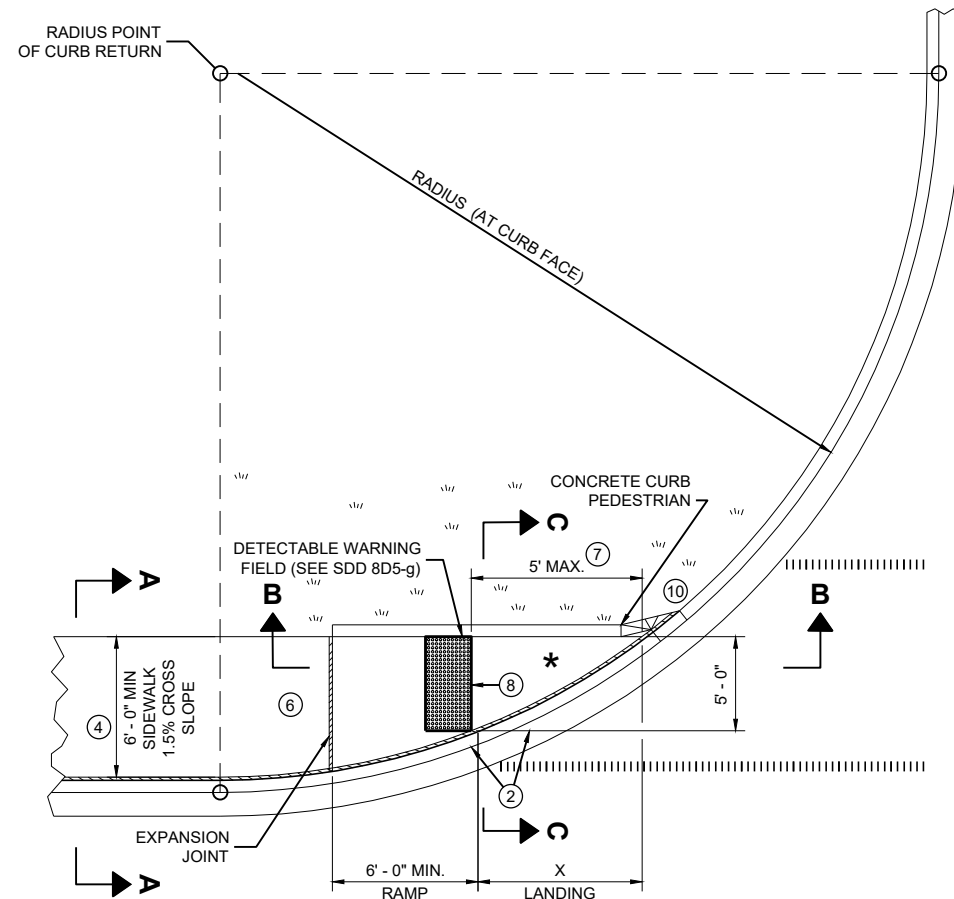


VIEW C - C FOR TYPE 3

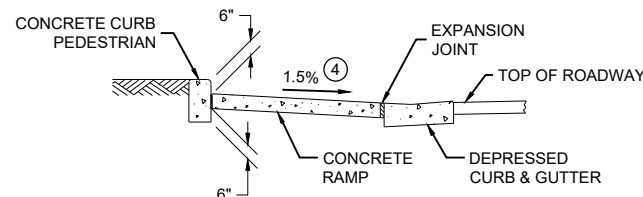
CURB RAMPS  
TYPE 2 AND 3

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

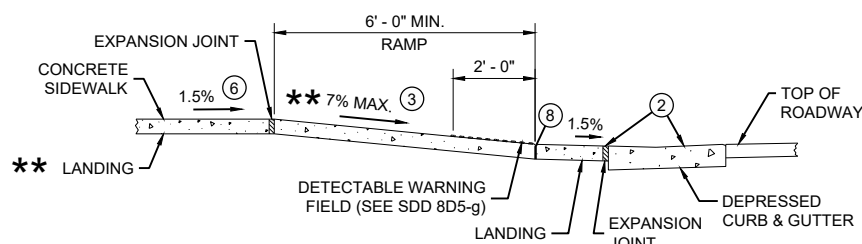




**PLAN VIEW  
CURB RAMP TYPE 4A**



**SECTION C - C FOR TYPE 4A**



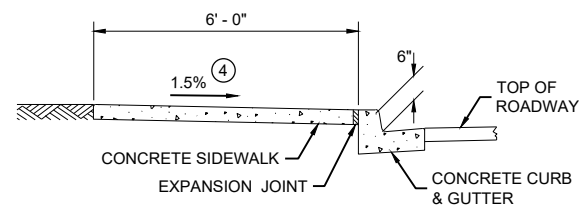
**SECTION B - B FOR  
TYPE 4A AND TYPE 4A1**

**\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED**

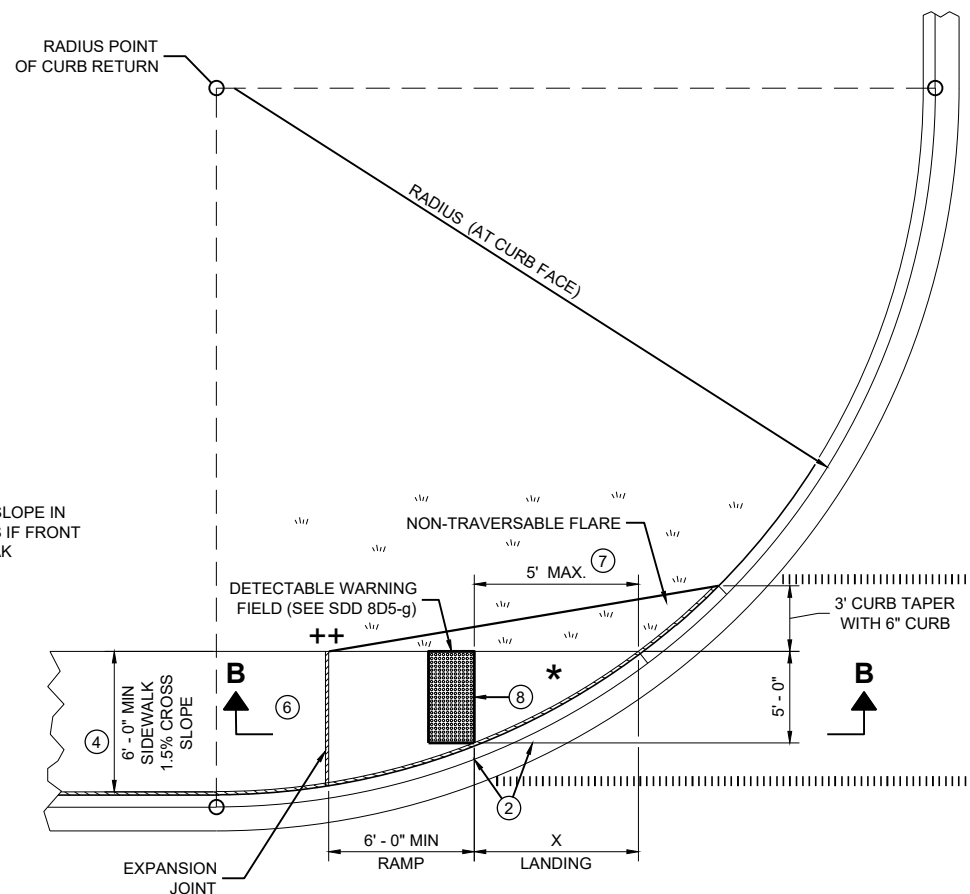
**\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK**

| RADIUS<br>(AT CURB FACE) | X       |
|--------------------------|---------|
| 10 FEET                  | 4' - 7" |

INTERMEDIATE RADII CAN BE INTERPOLATED



**SECTION A - A FOR TYPE 4A**



**PLAN VIEW  
CURB RAMP TYPE 4A1**

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

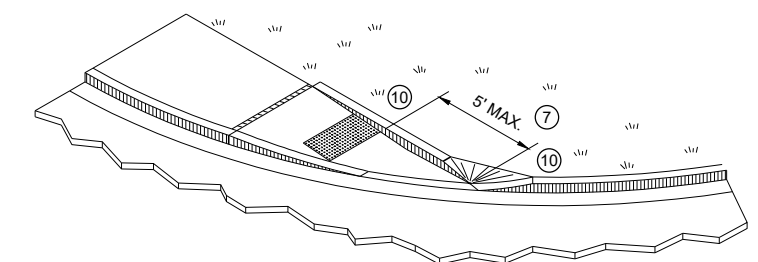
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

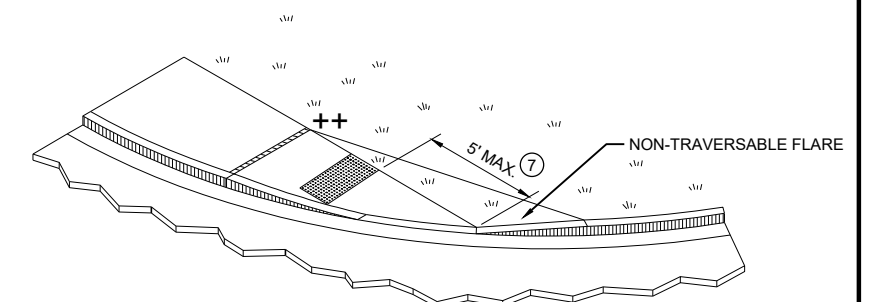
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

## LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



**ISOMETRIC VIEW FOR TYPE 4A**



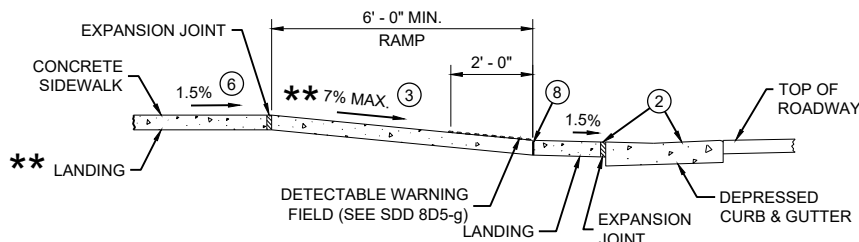
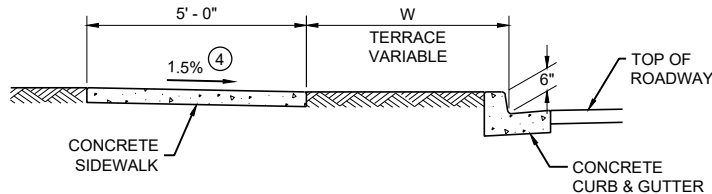
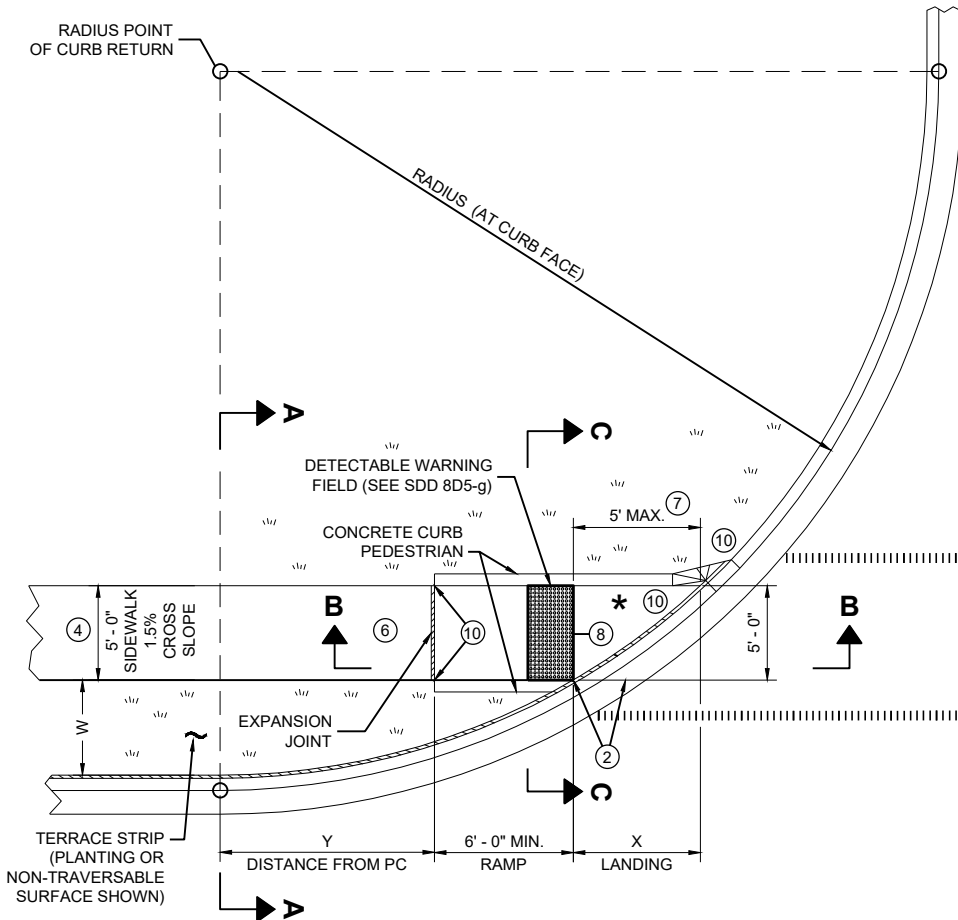
**ISOMETRIC VIEW FOR TYPE 4A1**

**++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE**

## CURB RAMPS TYPE 4A AND 4A1

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



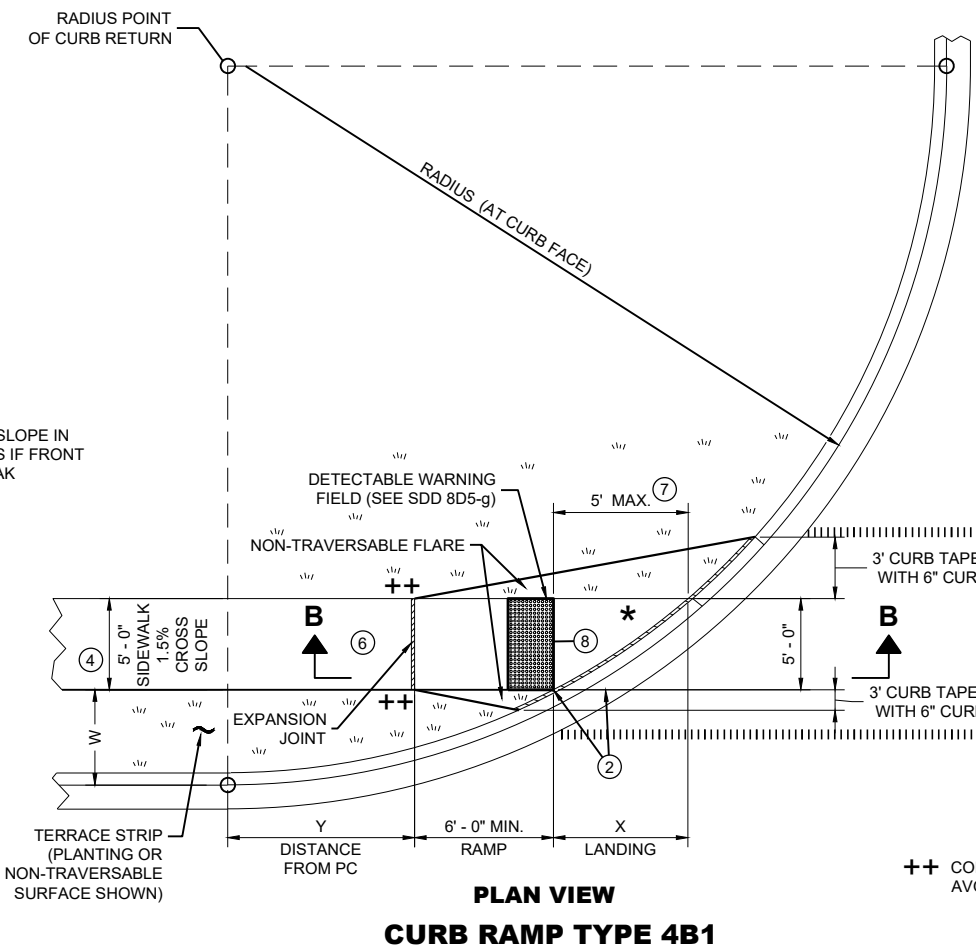
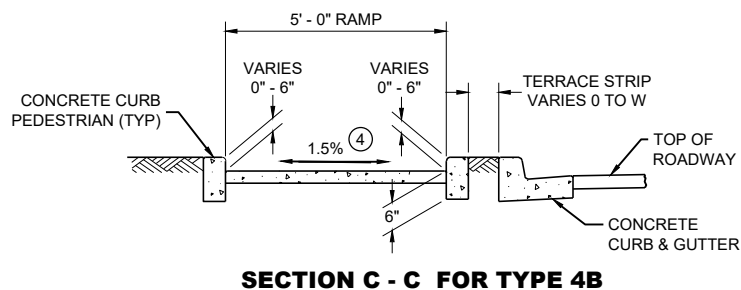


\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

| RADIUS<br>(AT CURB FACE) | W = 3' - 0"  |             | W = 4' - 0"  |             | W = 5' - 0" |             | W = 6' - 0" |             | W = 7' - 0"  |              | W = 8' - 0" |              | W = 9' - 0" |              | W = 10' - 0" |              |
|--------------------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|
|                          | X            | Y           | X            | Y           | X           | Y           | X           | Y           | X            | Y            | X           | Y            | X           | Y            | X            | Y            |
| 10 FEET                  | 2' - 10 1/4" | 0' - 5"     | 2' - 1"      | 1' - 4 1/2" | 1' - 5"     | 2' - 1"     | 0' - 10"    | 2' - 7 1/2" | 0' - 3 1/4"  | 3' - 0 1/4"  |             |              |             |              |              |              |
| 15 FEET                  | 4' - 6 3/4"  | 2' - 1 3/4" | 3' - 9"      | 3' - 5 3/4" | 3' - 1 1/4" | 4' - 6"     | 2' - 6 3/4" | 5' - 4 1/2" | 2' - 1"      | 6' - 1"      | 1' - 8"     | 6' - 8 1/2"  | 1' - 3 1/4" | 7' - 2 1/2"  | 0' - 10 3/4" | 7' - 7 1/4"  |
| 20 FEET                  |              |             | 4' - 11 1/2" | 5' - 1 3/4" | 4' - 3 1/4" | 6' - 5 1/2" | 3' - 8 3/4" | 7' - 7"     | 3' - 3"      | 8' - 6 1/2"  | 2' - 10"    | 9' - 4 1/2"  | 2' - 5 1/2" | 10' - 1 1/4" | 2' - 1 1/4"  | 10' - 9"     |
| 30 FEET                  |              |             |              |             |             |             |             |             | 4' - 10 3/4" | 12' - 5 3/4" | 4' - 5 1/2" | 13' - 7 3/4" | 4' - 0 3/4" | 14' - 8 1/2" | 3' - 8 1/2"  | 15' - 8 1/4" |
| 40 FEET                  |              |             |              |             |             |             |             |             |              |              |             |              |             |              | 4' - 10 3/4" | 19' - 8 1/4" |

INTERMEDIATE RADII CAN BE INTERPOLATED  
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

## LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

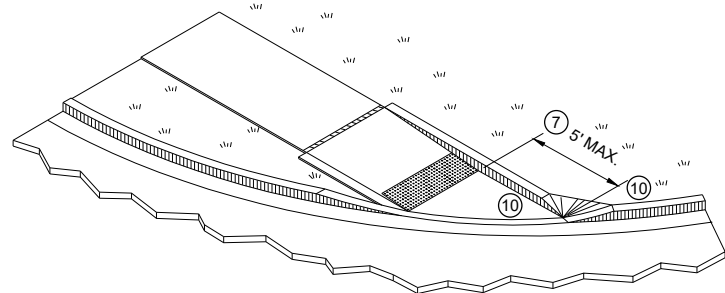
## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

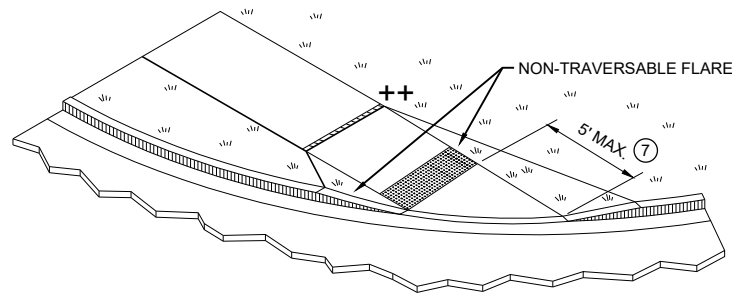
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B

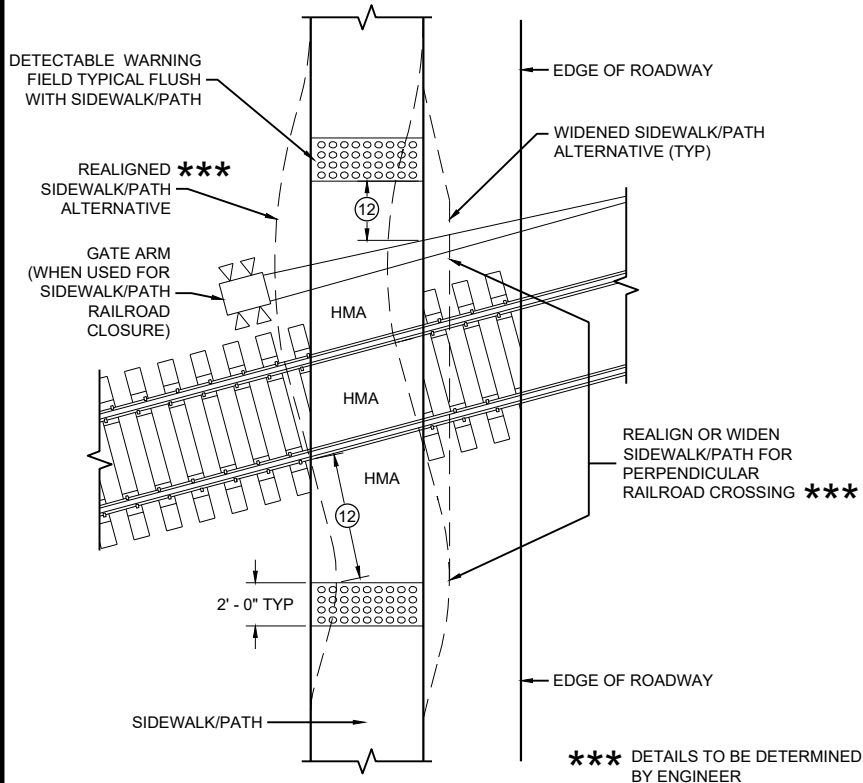


ISOMETRIC VIEW FOR TYPE 4B1

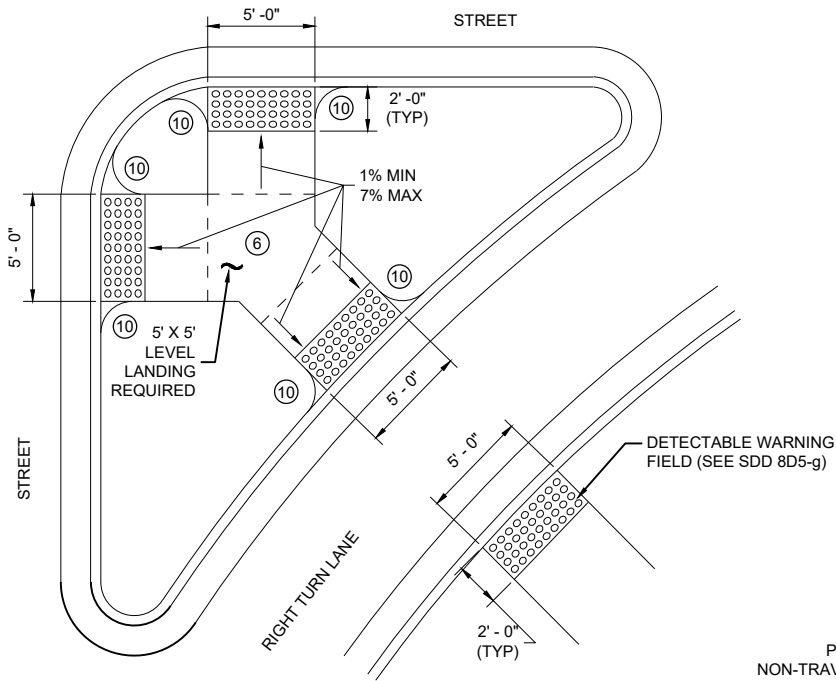
## CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



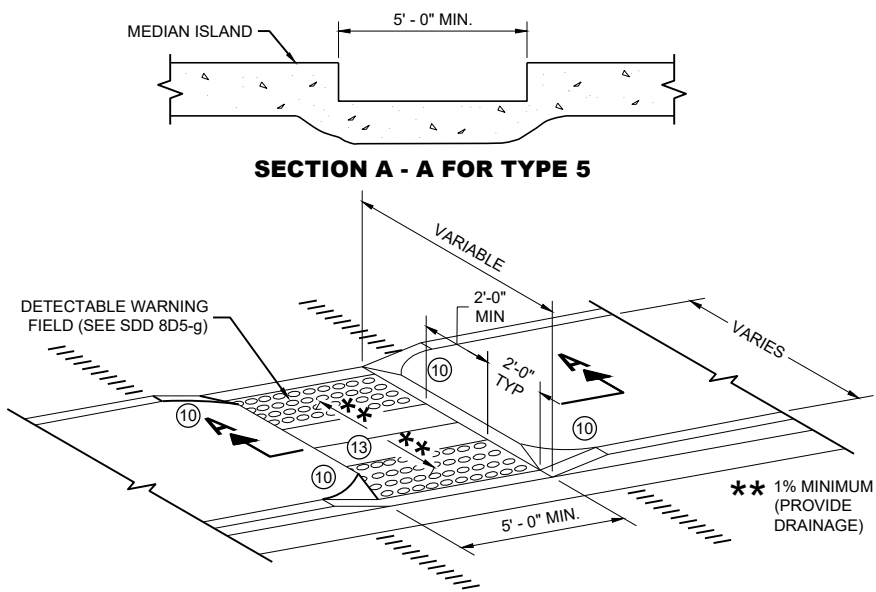


**CURB RAMP TYPE 8**  
**DETECTABLE WARNINGS**  
**FOR SIDEWALKS OR SHARED USE PATHS**  
**AT RAILROAD CROSSINGS**

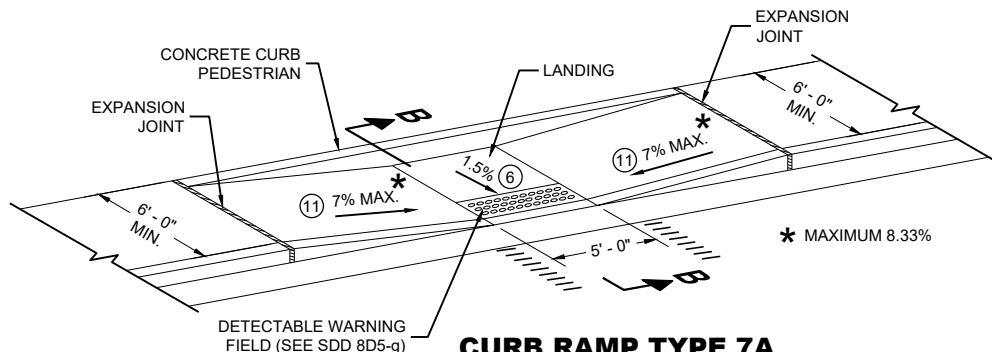


**CURB RAMP TYPE 6**  
**DETECTABLE WARNING AT ISLANDS**

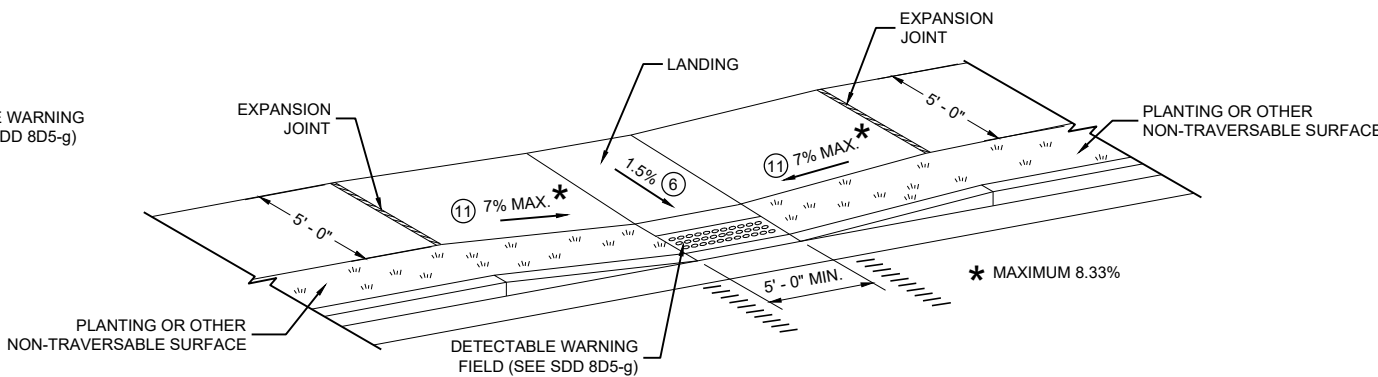
REFER TO GENERAL NOTES ② AND ③  
FOR ALL ISLAND CURB RAMPS



**CURB RAMP TYPE 5**  
**MEDIAN ISLAND**  
**NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A**  
**FOR INTERSECTIONS AND**  
**MID BLOCK CROSSINGS**



**CURB RAMP TYPE 7B**  
**FOR INTERSECTIONS AND**  
**MID BLOCK CROSSINGS**

**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

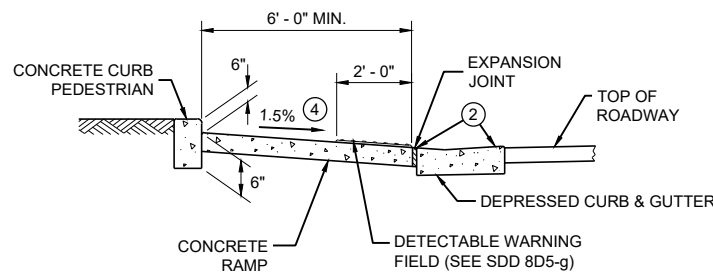
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/8 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)



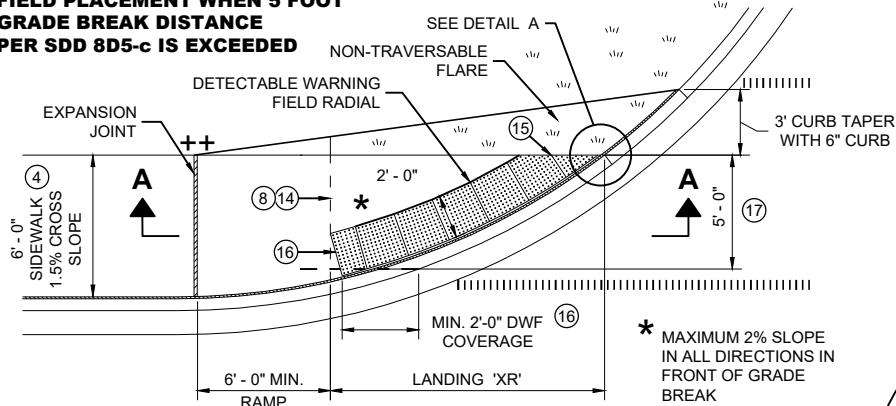
**SECTION B - B FOR TYPE 7A**

**CURB RAMPS**  
**TYPE 5, 6, 7A, 7B & 8**

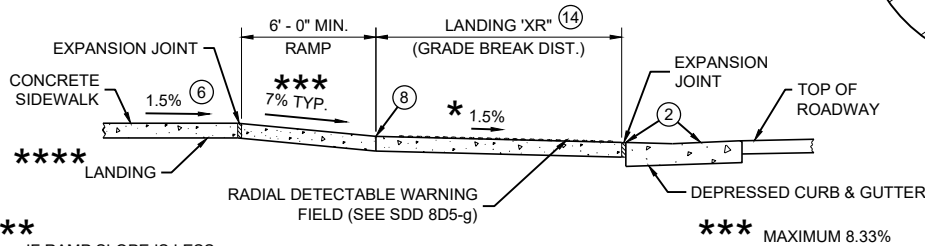
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



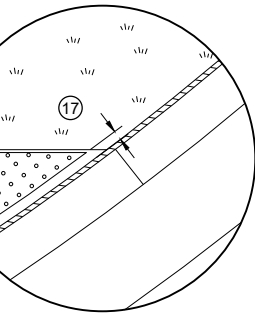
**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-c IS EXCEEDED**



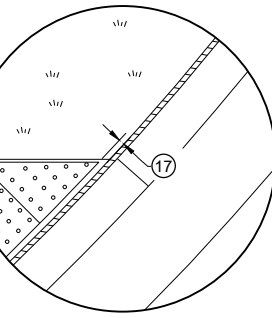
**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION A - A FOR TYPE 4A1**

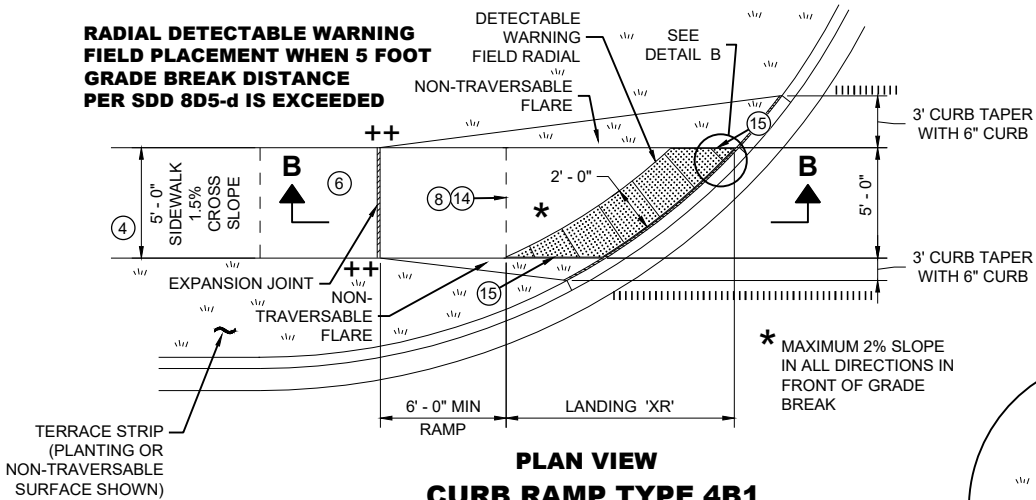


**DETAIL A**

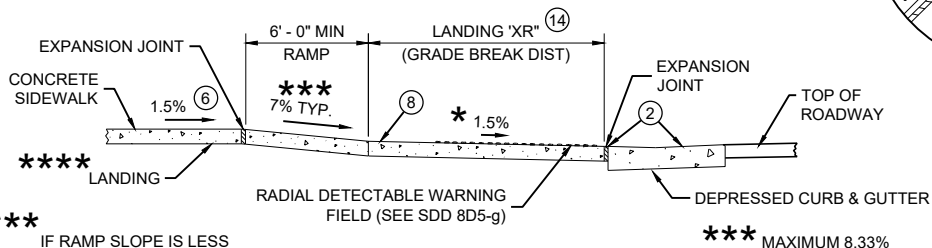


**DETAIL B**

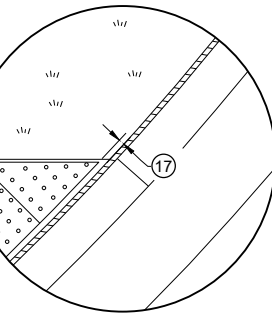
**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-d IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**



**DETAIL B**

**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

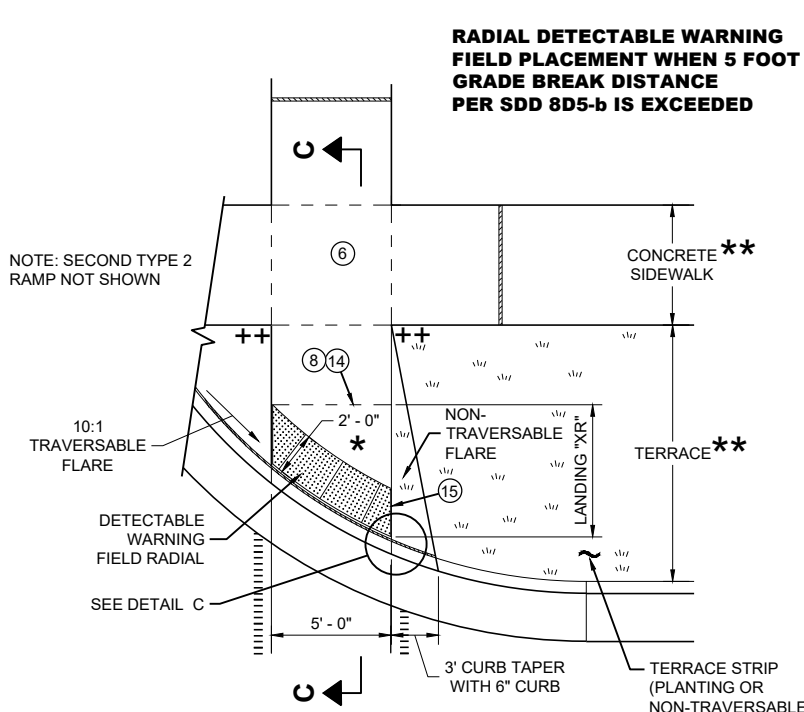
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

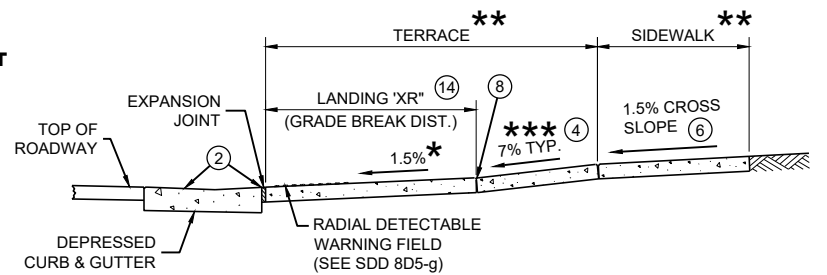
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- (15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- (16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- (17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

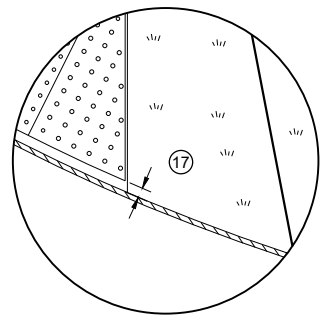
**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**



**SECTION C - C FOR TYPE 2**



**DETAIL C**

\*\*\* MAXIMUM 2% SLOPE  
IN ALL DIRECTIONS IN  
FRONT OF GRADE  
BREAK

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS

\*\*\* MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO  
AVOID CONCRETE BREAKAGE

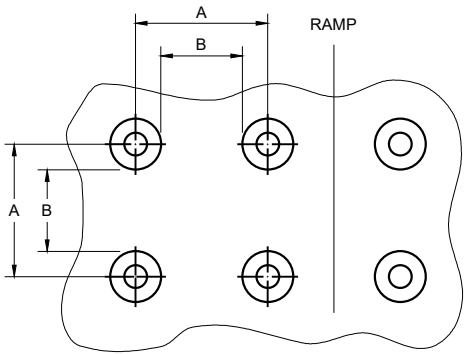
**CURB RAMPS  
RADIAL DETECTABLE WARNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

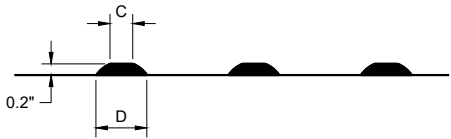


|   | MIN.  | MAX. |
|---|-------|------|
| A | 1.6"  | 2.4" |
| B | 0.65" | 1.5" |
| C | *     | *    |
| D | 0.9"  | 1.4" |

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

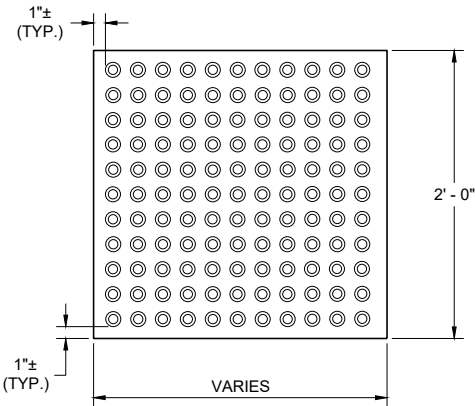


PLAN VIEW

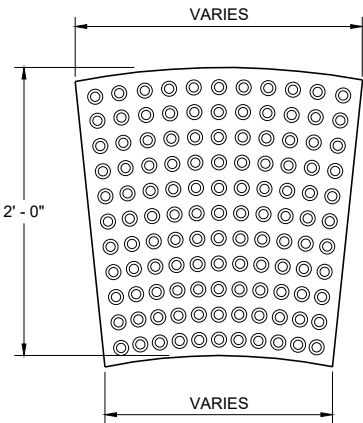


ELEVATION VIEW

TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL

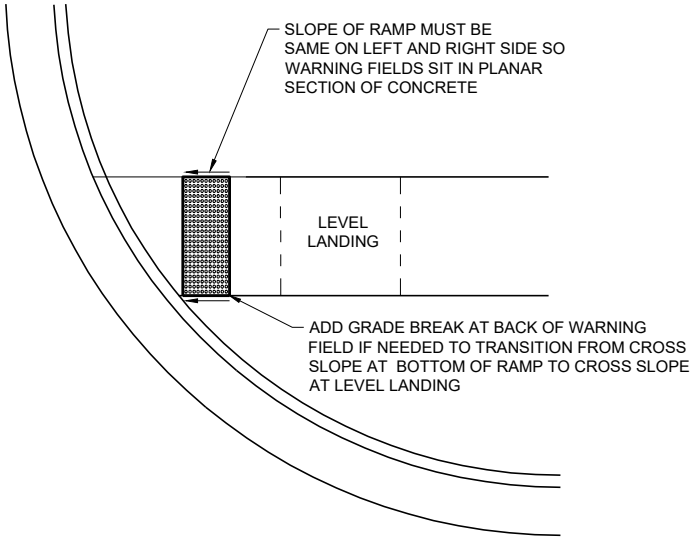


RECTANGULAR  
PLATES

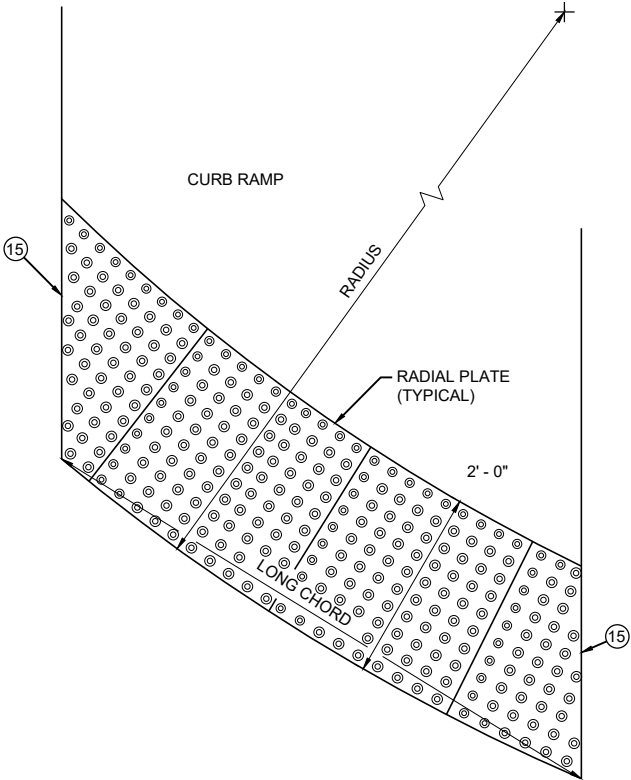


RADIAL  
PLATES

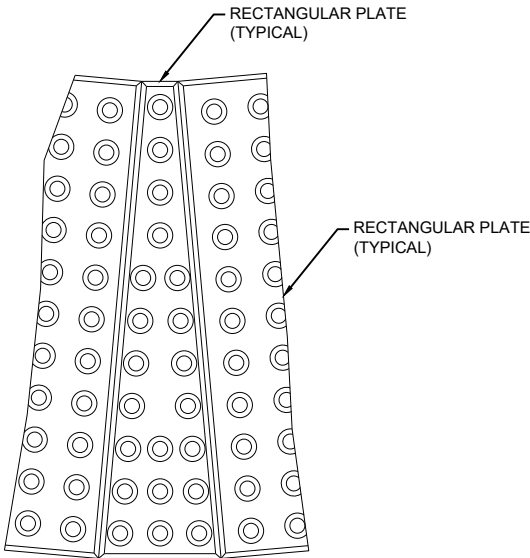
PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD  
PLANAR INSTALLATION



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES



PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8\"/>

CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR





- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



## PAVEMENT TIES

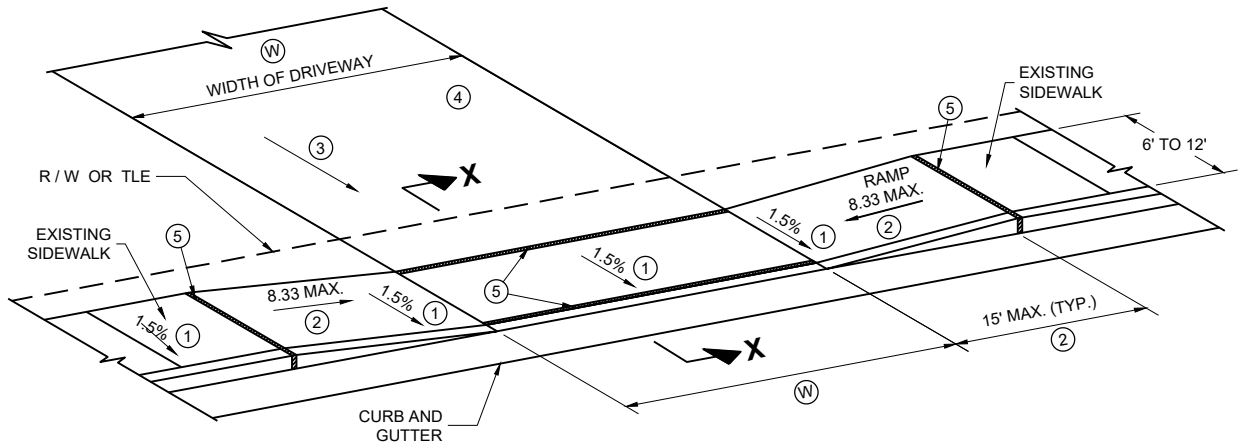
APPROVED  
February 2020  
DATE

/s/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

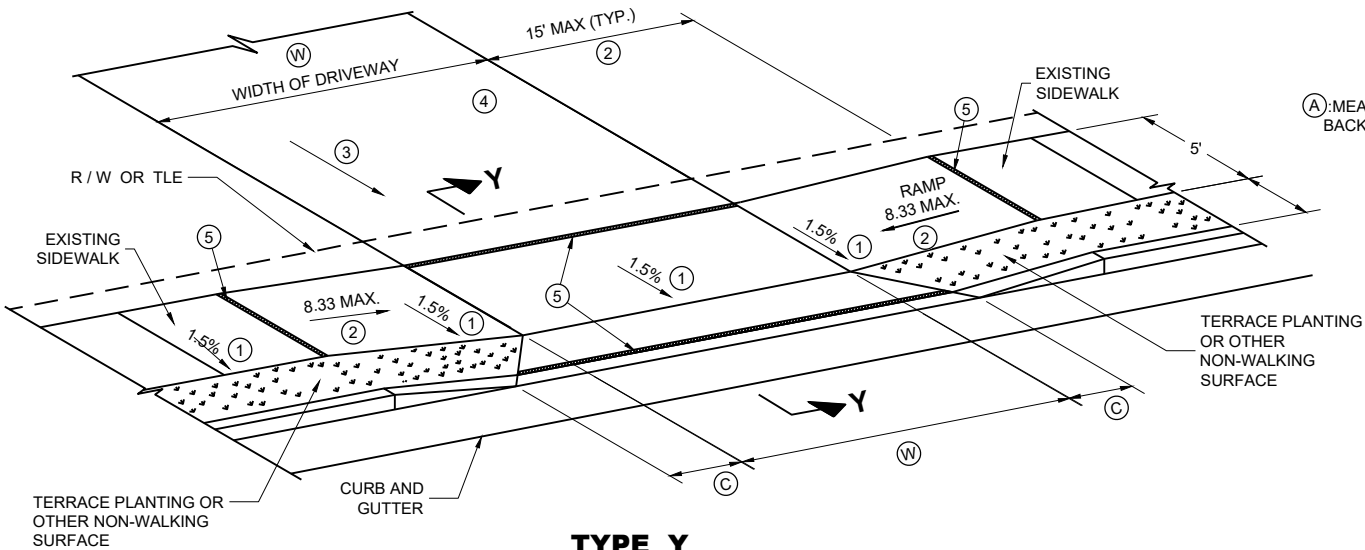
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FHWA





**TYPE X**  
**SIDEWALK ABUTS CURB AND GUTTER**  
**TERRACE VARIES 0 TO 3 FEET**



**TYPE Y**  
**SIDEWALK WITH NARROWER TERRACE**  
**TERRACE VARIES 4 TO 6 FEET**

**GENERAL NOTES**

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

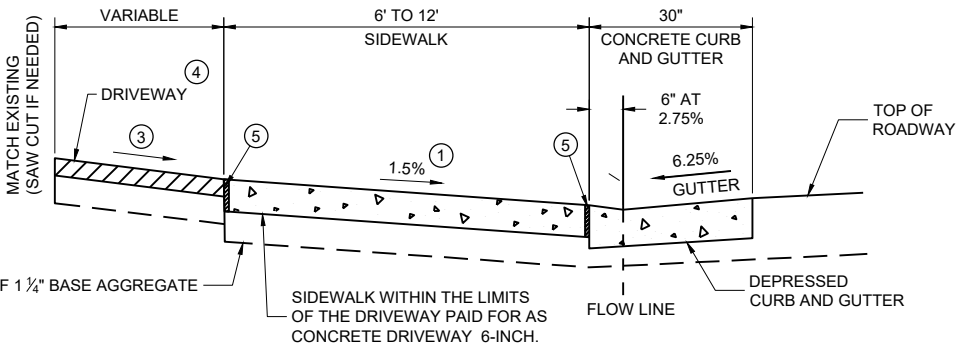
OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

- ① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- ② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

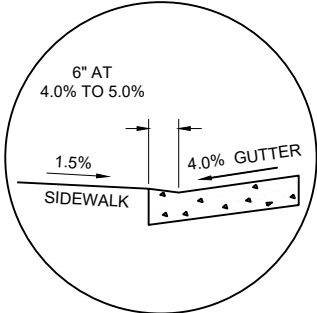
③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM  
10.5% UP AWAY FROM SIDEWALK (SAG)  
8.5% DOWN AWAY FROM SIDEWALK (CREST)  
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ DRIVEWAY TYPES  
· 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE  
· 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE  
· 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

⑤ ½" EXPANSION JOINT FILLER



**SECTION X - X**

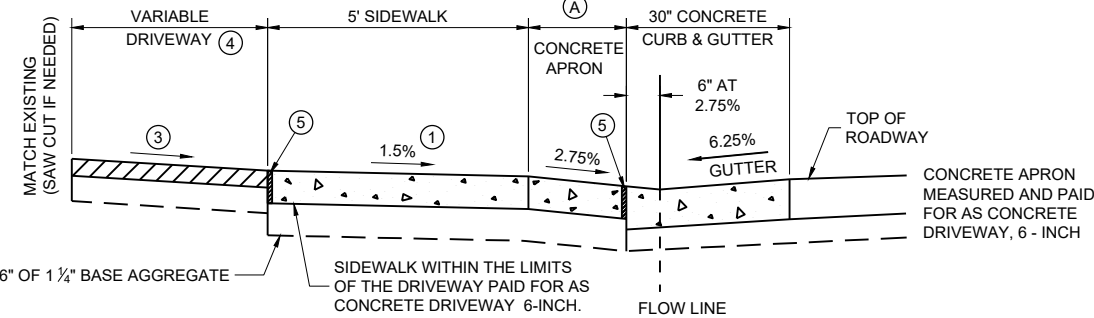


**SECTION X - X**  
**4% GUTTER SLOPE**

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND  
NON-COMMERCIAL (PE & FE)  
16' MIN. - 35' MAX. COMMERCIAL (CE)

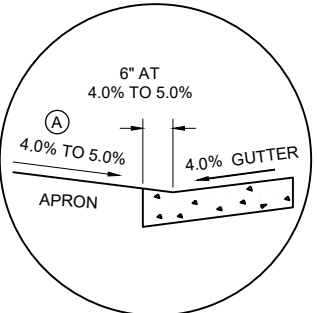
**TABLE Y**

| (A)<br>FEET | (C)<br>FEET |
|-------------|-------------|
| 3.5'        | 2.0'        |
| 4.5'        | 3.0'        |
| 5.5'        | 3.5'        |



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

**SECTION Y - Y**  
**DRIVEWAY DETAIL WITH CONCRETE**  
**CURB AND GUTTER**  
**(URBAN AND SUBURBAN)**



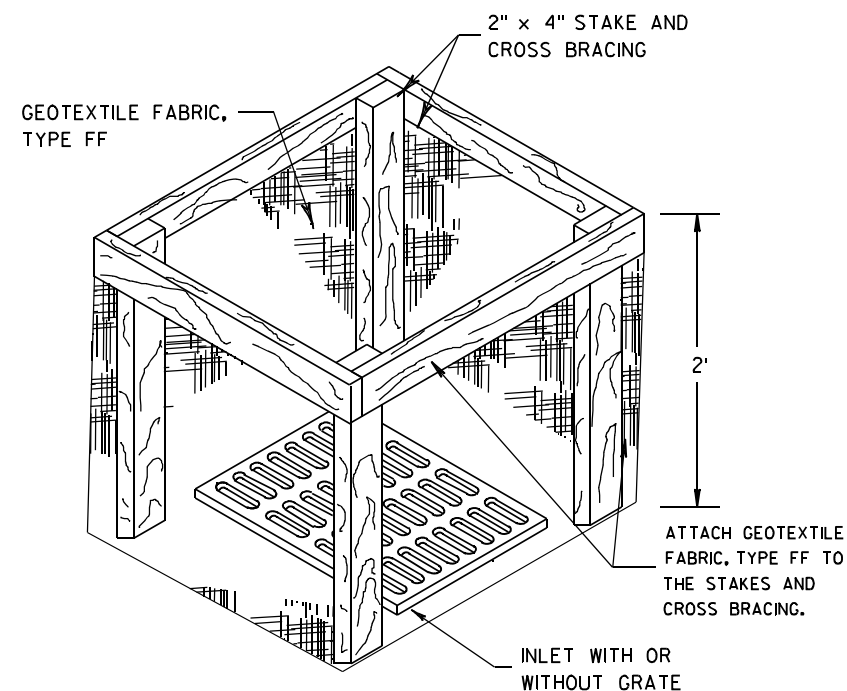
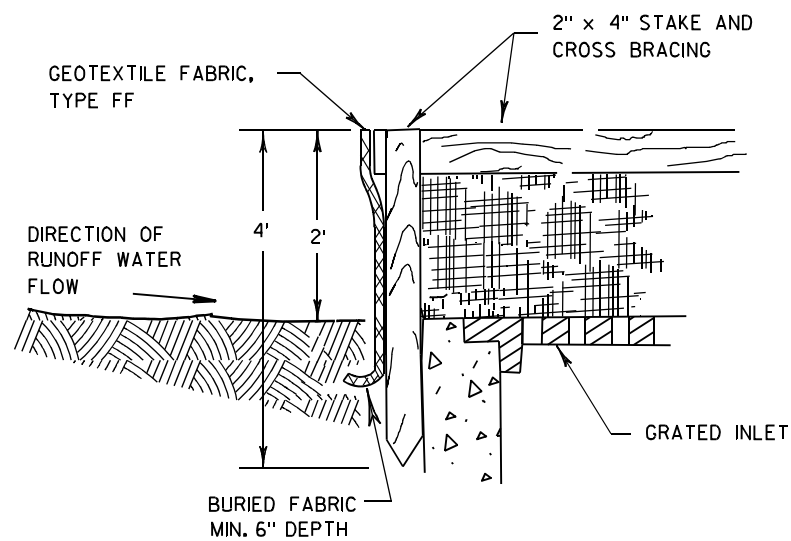
**SECTION Y - Y**  
**4% GUTTER SLOPE**

**DRIVEWAY AND**  
**SIDEWALK RAMPS**  
**TYPES X AND Y**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR





**INLET PROTECTION, TYPE A**

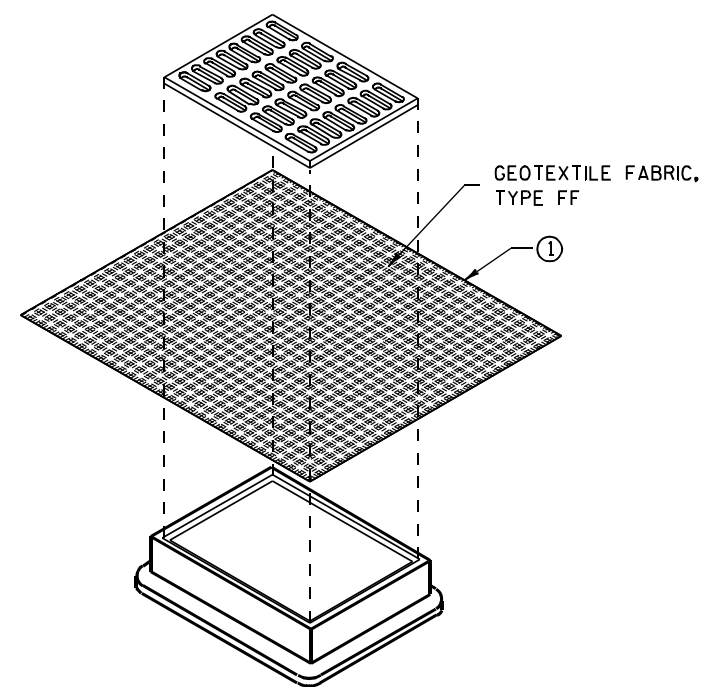
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

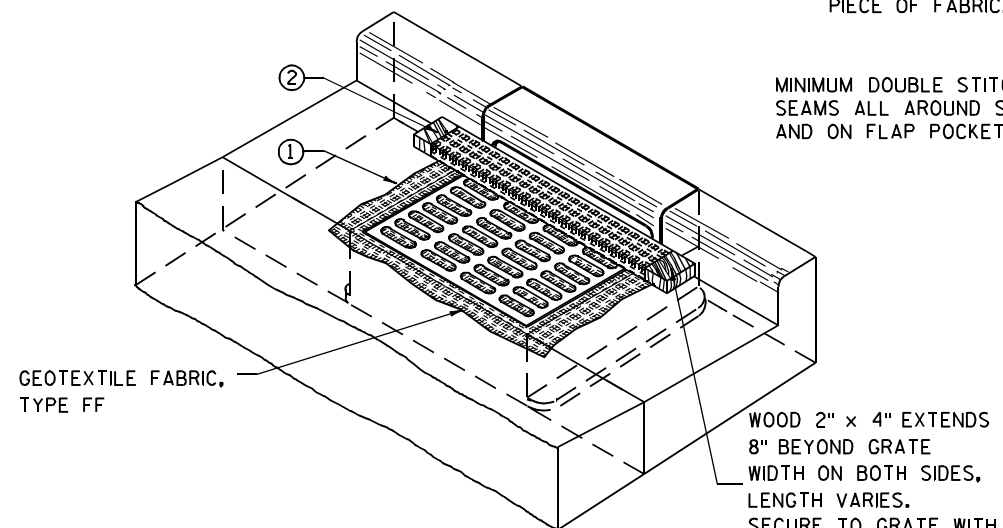
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

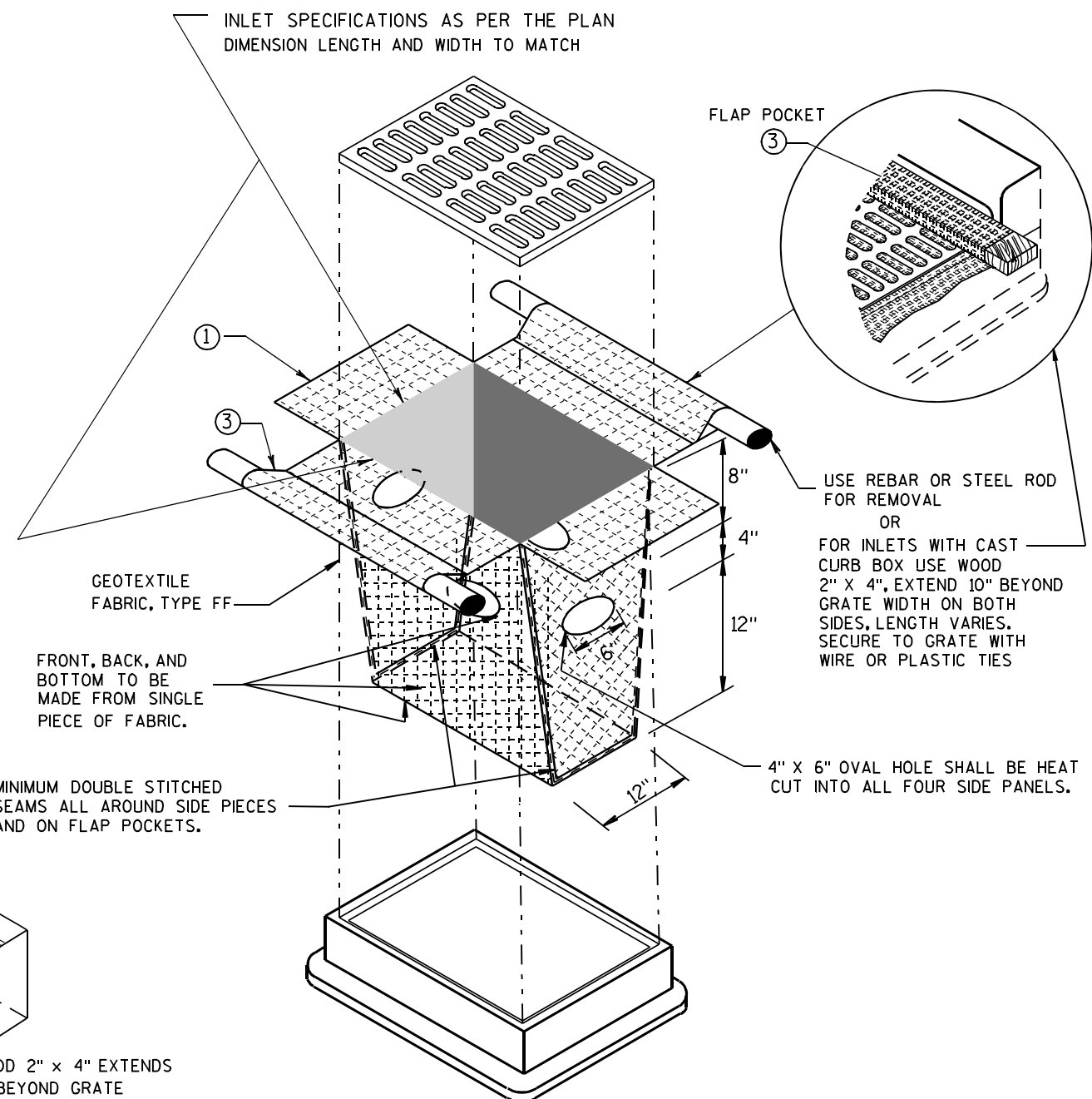
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

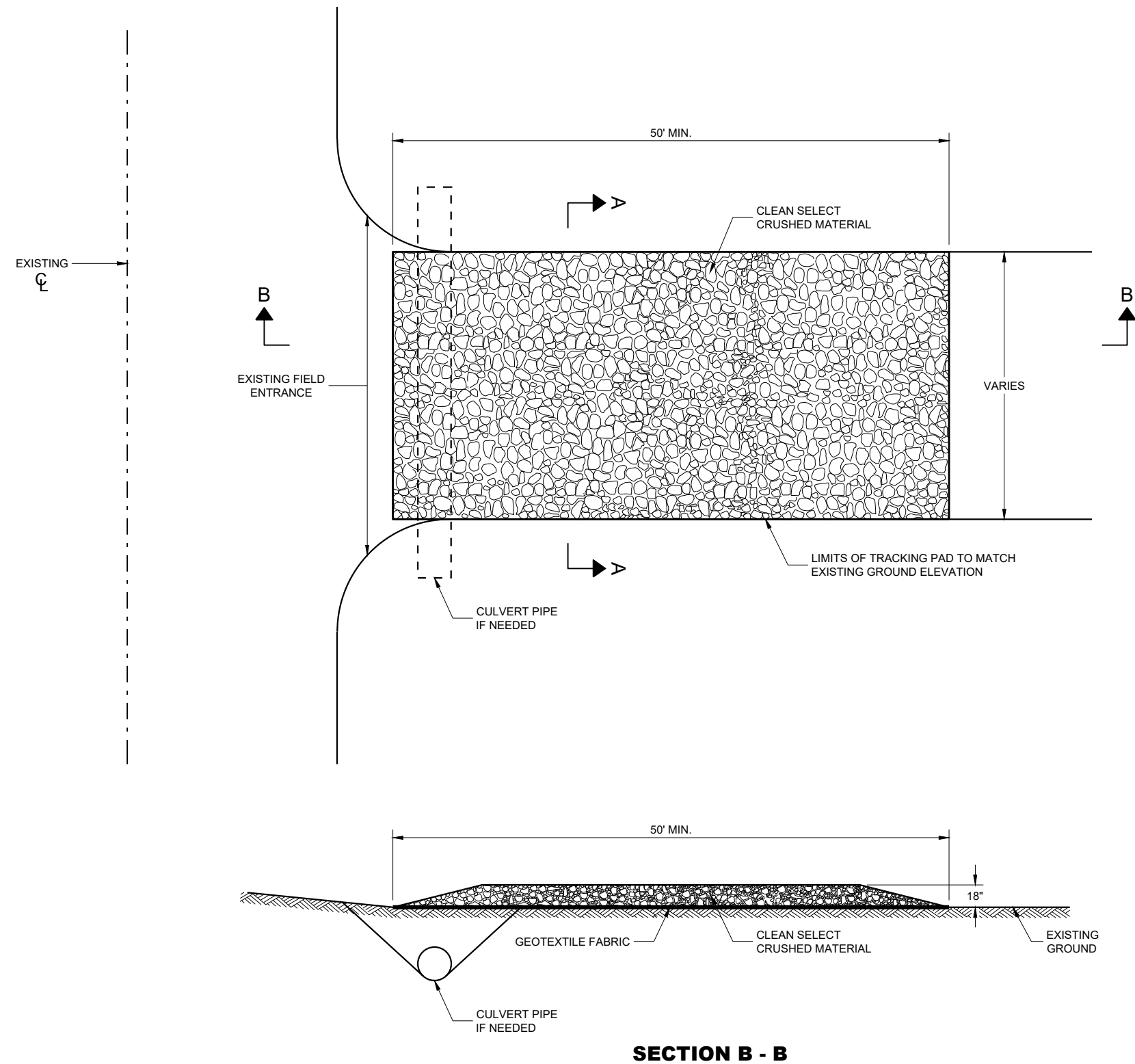


**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

|                                                            |                                                                |
|------------------------------------------------------------|----------------------------------------------------------------|
| <b>INLET PROTECTION<br/>TYPE A, B, C, AND D</b>            |                                                                |
| <b>STATE OF WISCONSIN<br/>DEPARTMENT OF TRANSPORTATION</b> |                                                                |
| APPROVED<br>10/16/02<br>DATE                               | /S/ Beth Connolly<br>195<br>CHIEF ROADWAY DEVELOPMENT ENGINEER |
| FHWA                                                       |                                                                |





**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

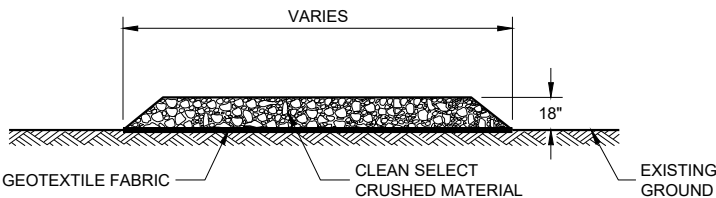
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**

**TRACKING PAD**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011

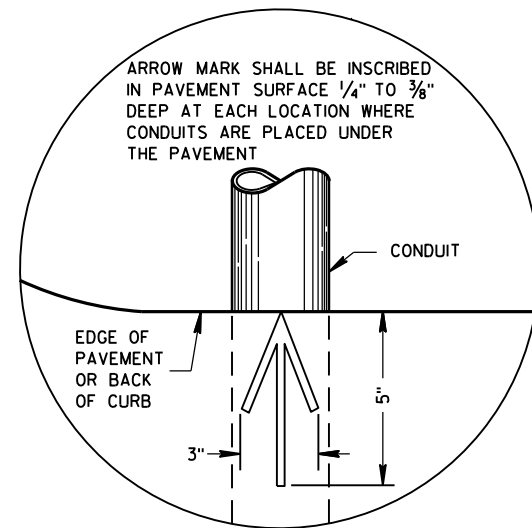
DATE

FHWA

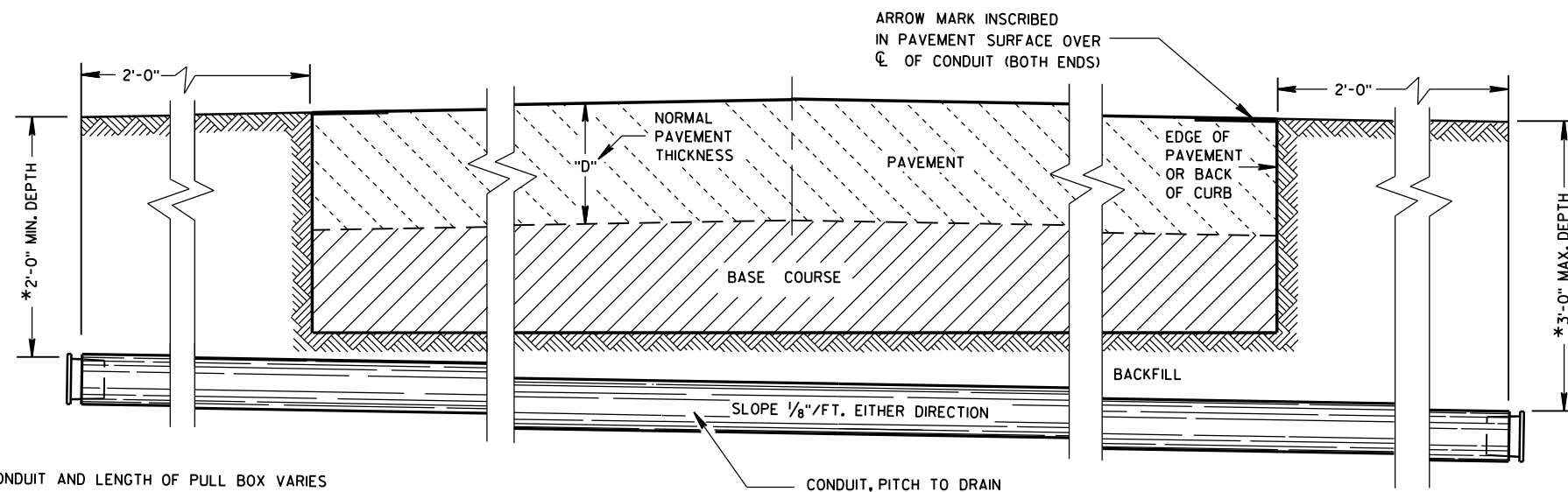
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVE  
ENGINEER

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PLAN VIEW  
ARROW MARK



SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES  
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

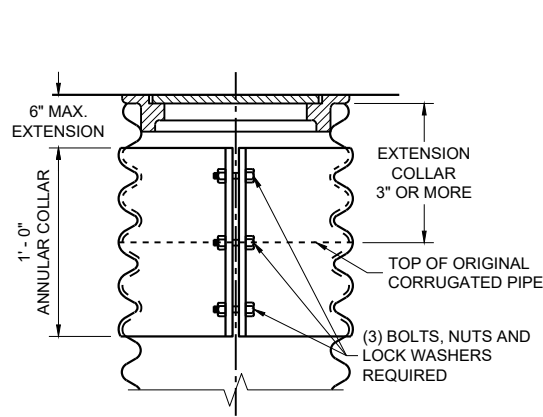
## CONDUIT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

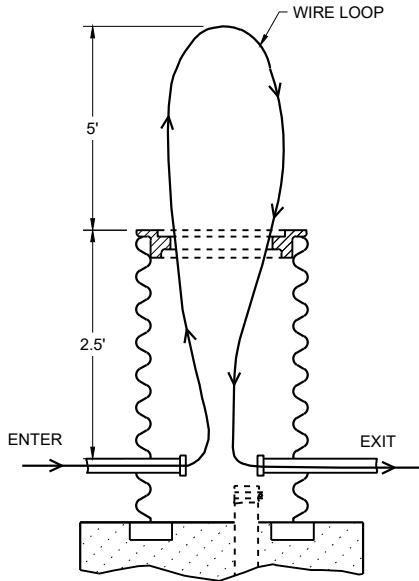
APPROVED  
March, 2017 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL 197  
FHWA



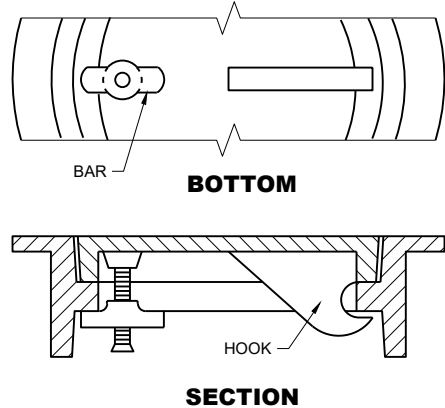
CORRUGATED PIPE EXTENDER



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

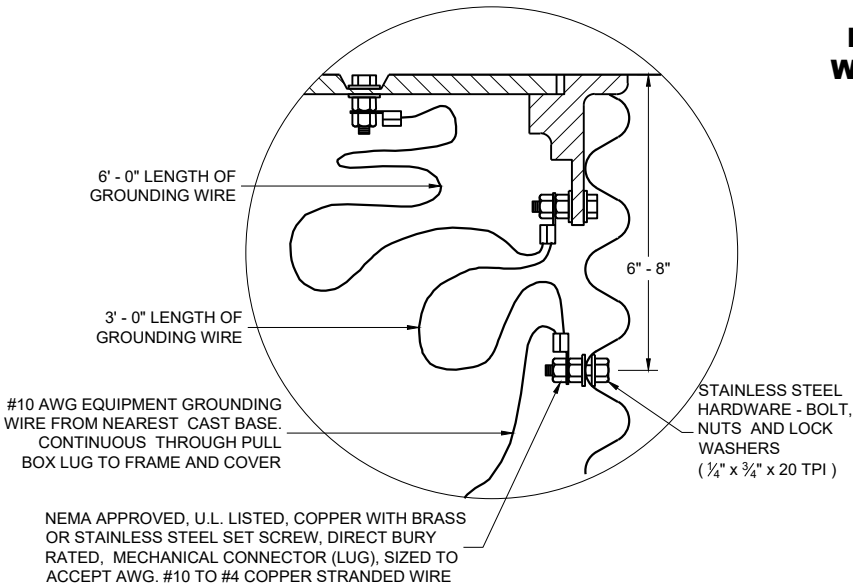
TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

| DIMENSION IN INCHES    |   | CORRUGATED STEEL PIPE |        |        |        |        |        |        |        |        |
|------------------------|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|                        |   | 12                    | 12     | 12     | 18     | 18     | 18     | 24     | 24     | 24     |
| PIPE DIAMETER (INSIDE) | A | 12                    | 12     | 12     | 18     | 18     | 18     | 24     | 24     | 24     |
| PIPE LENGTH **         | B | 24                    | 30     | 36     | 24     | 30     | 36     | 36     | 42     | 48     |
| WALL THICKNESS         | C | 0.064                 | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  |
| COVER                  | D | 10 1/4                | 10 1/4 | 10 1/4 | 16 1/4 | 16 1/4 | 16 1/4 | 22 1/4 | 22 1/4 | 22 1/4 |
| FRAME                  | E | 14 1/2                | 14 1/2 | 14 1/2 | 20 1/2 | 20 1/2 | 20 1/2 | 26 1/2 | 26 1/2 | 26 1/2 |
| FRAME                  | F | 8 1/2                 | 8 1/2  | 8 1/2  | 14 1/2 | 14 1/2 | 14 1/2 | 20 1/2 | 20 1/2 | 20 1/2 |
| FRAME                  | G | 11 1/2                | 11 1/2 | 11 1/2 | 17 1/2 | 17 1/2 | 17 1/2 | 23 1/2 | 23 1/2 | 23 1/2 |
| WEIGHT IN POUNDS*      |   |                       |        |        |        |        |        |        |        |        |
| FRAME AND COVER        |   | 60                    | 60     | 60     | 110    | 110    | 110    | 155    | 155    | 155    |

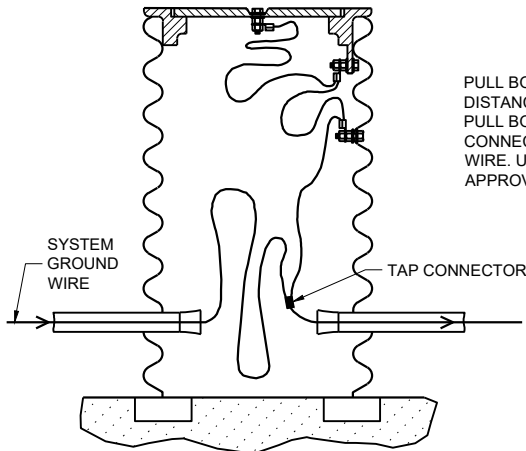
\*THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

\*\* NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

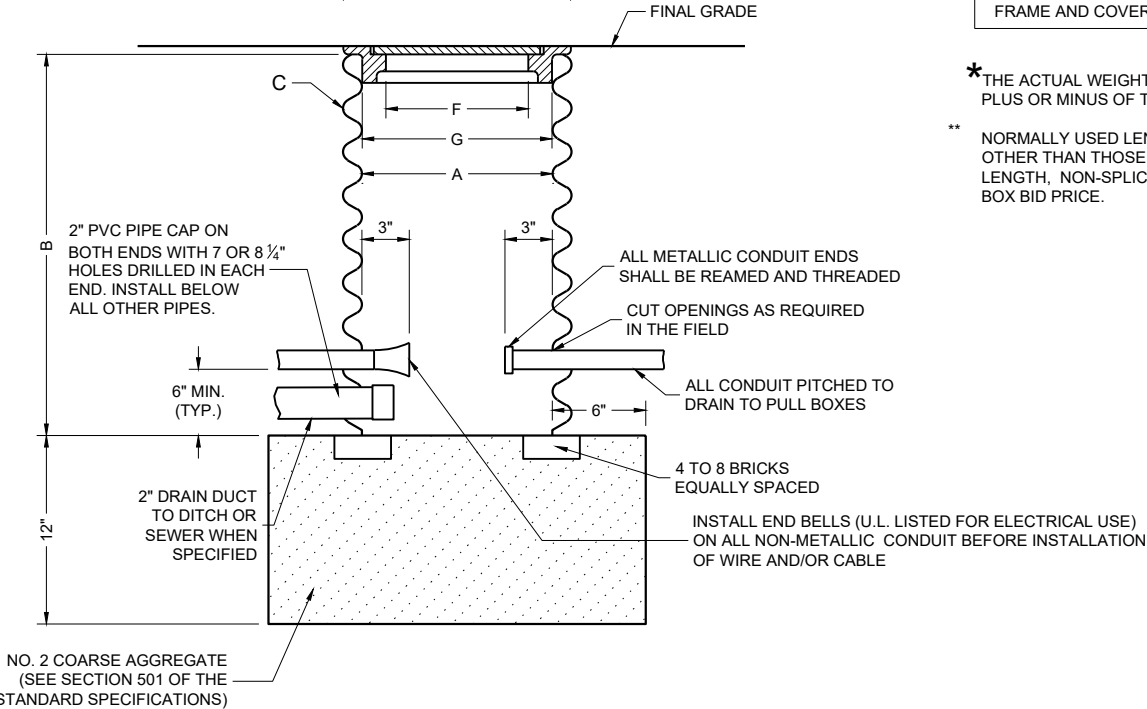


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE



PULL BOX

PULL BOX

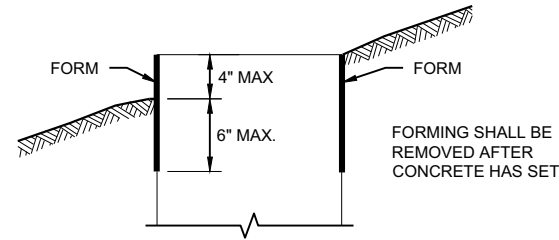
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

FHWA



FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

| QUANTITY REQUIREMENTS           | CONCRETE BASE TYPE |      |       |
|---------------------------------|--------------------|------|-------|
|                                 | 1                  | 2    | 5 & 6 |
| APPROX. CUBIC YARDS OF CONCRETE | 0.40               | 0.57 | 0.40  |
| LBS. OF HOOP BAR STEEL          | NONE               | 23   | 16    |
| LBS. OF VERTICAL BAR STEEL      | NONE               | 60   | 18    |

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

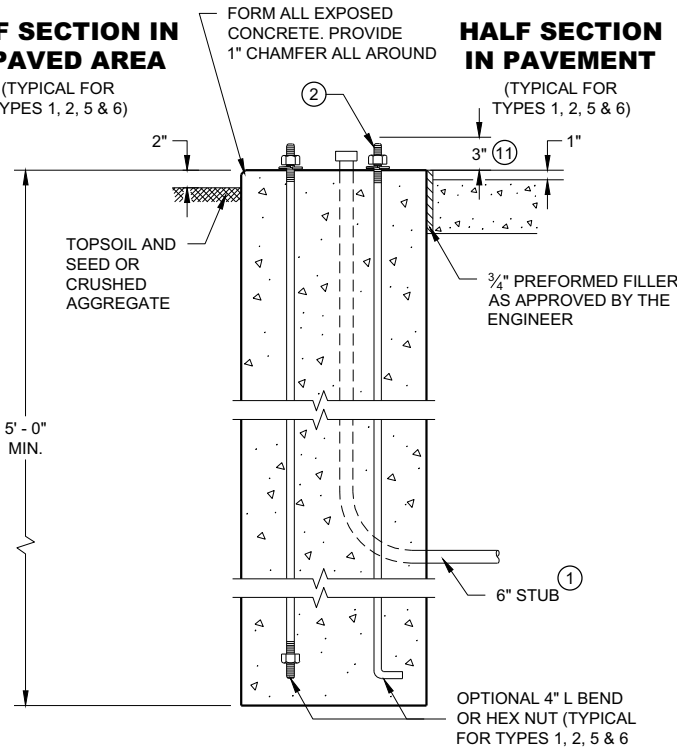
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

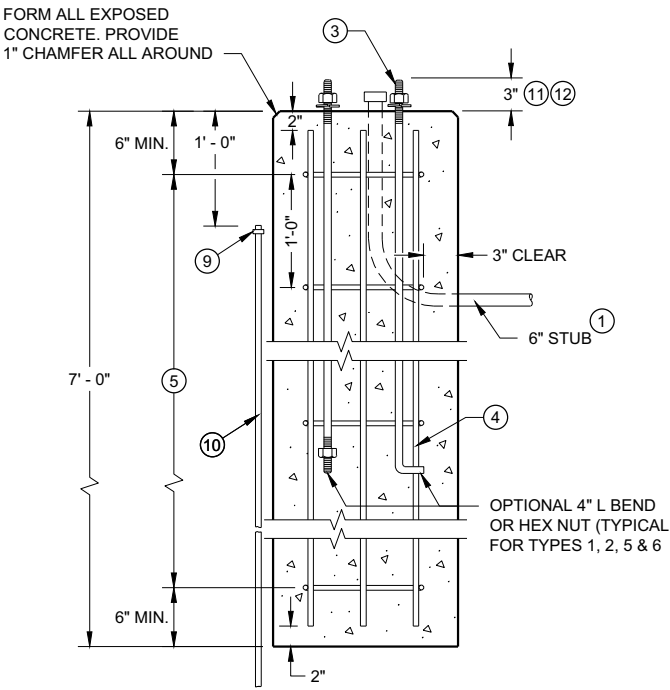
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



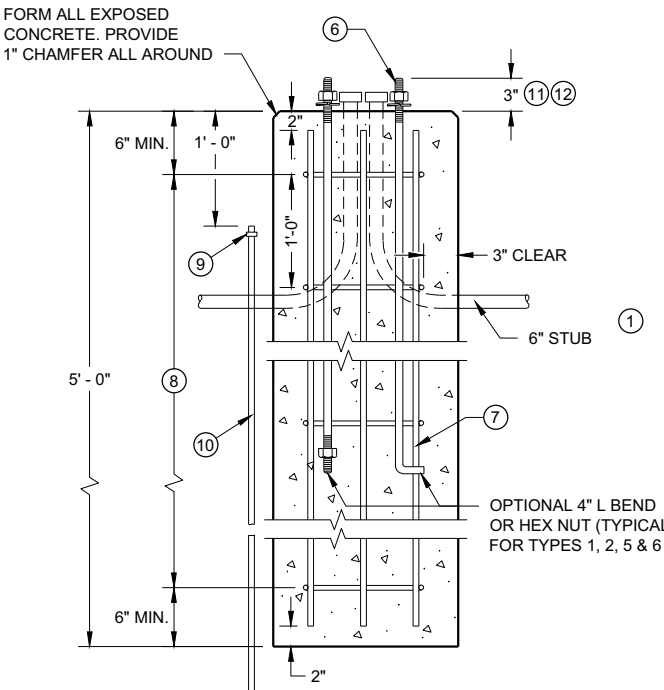
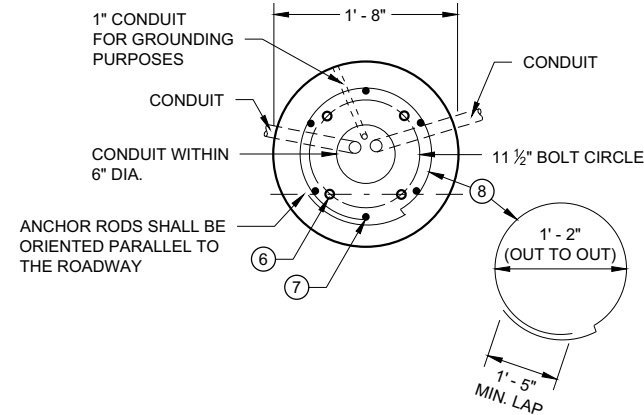
TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2

CONCRETE BASES



TYPE 5 & 6



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

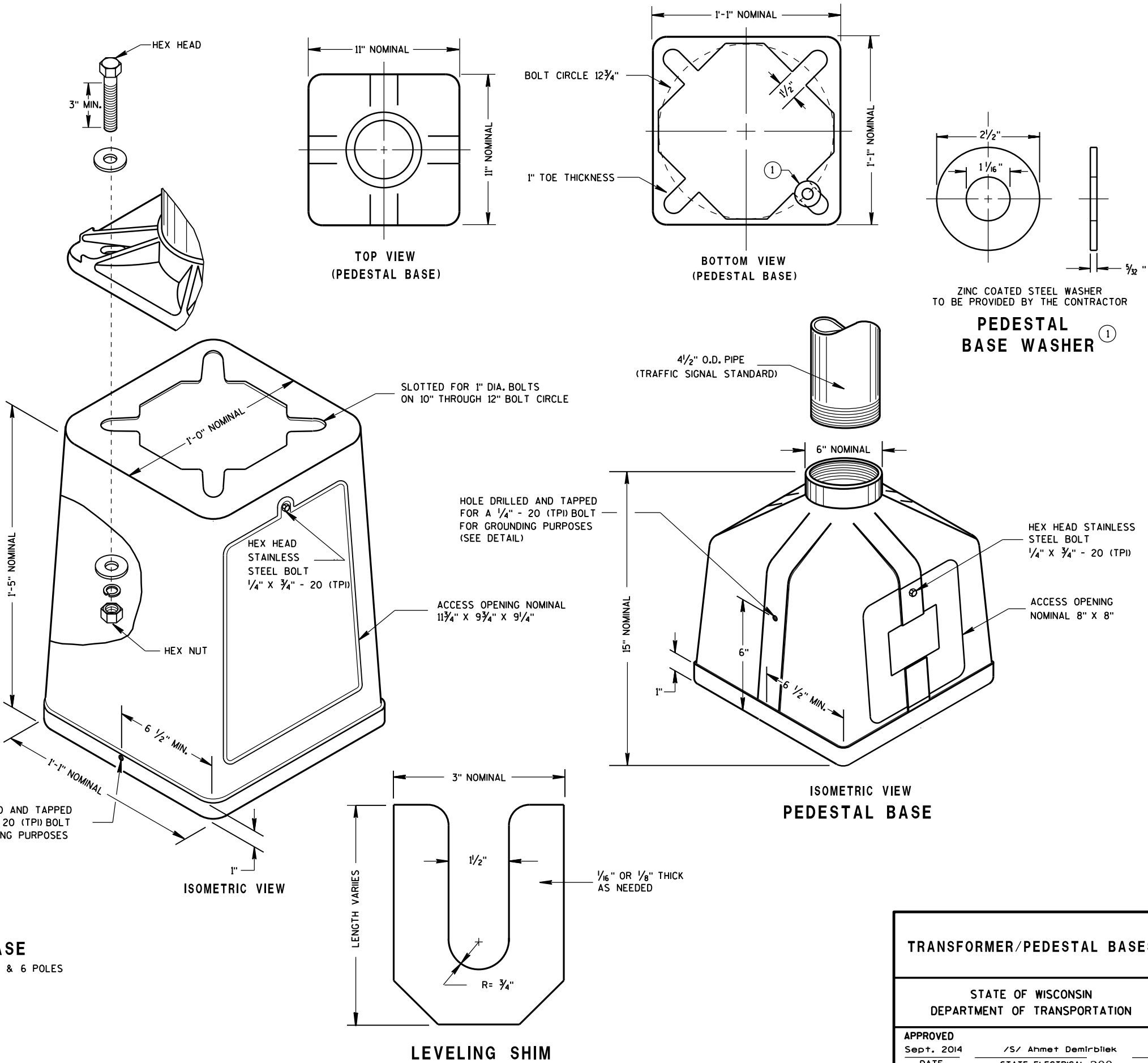
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



TYPICAL MECHANICAL  
CONNECTOR LUG  
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

ISOMETRIC VIEW  
PEDESTAL BASE

LEVELING SHIM

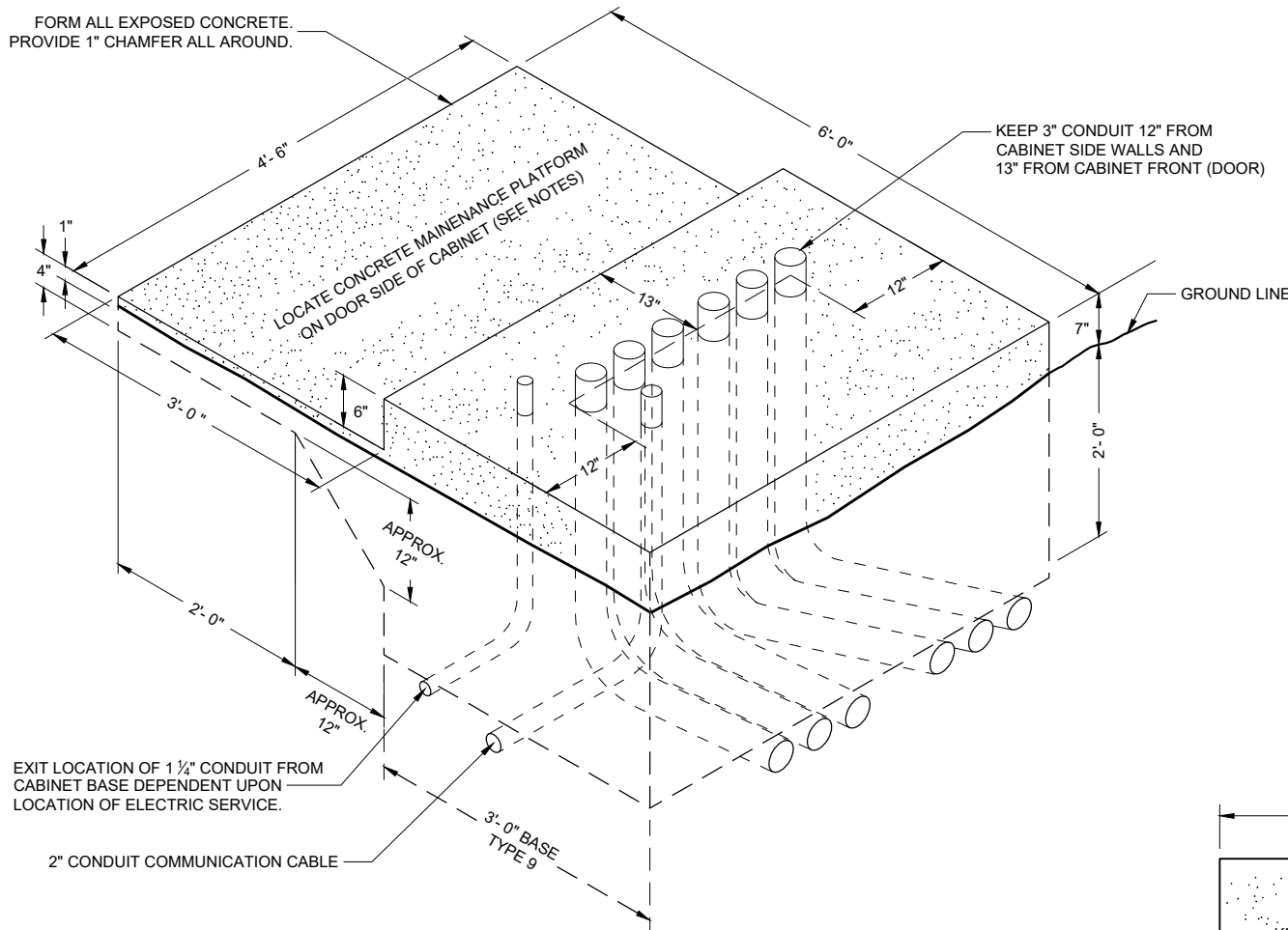
TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept. 2014 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL 200  
FHWA

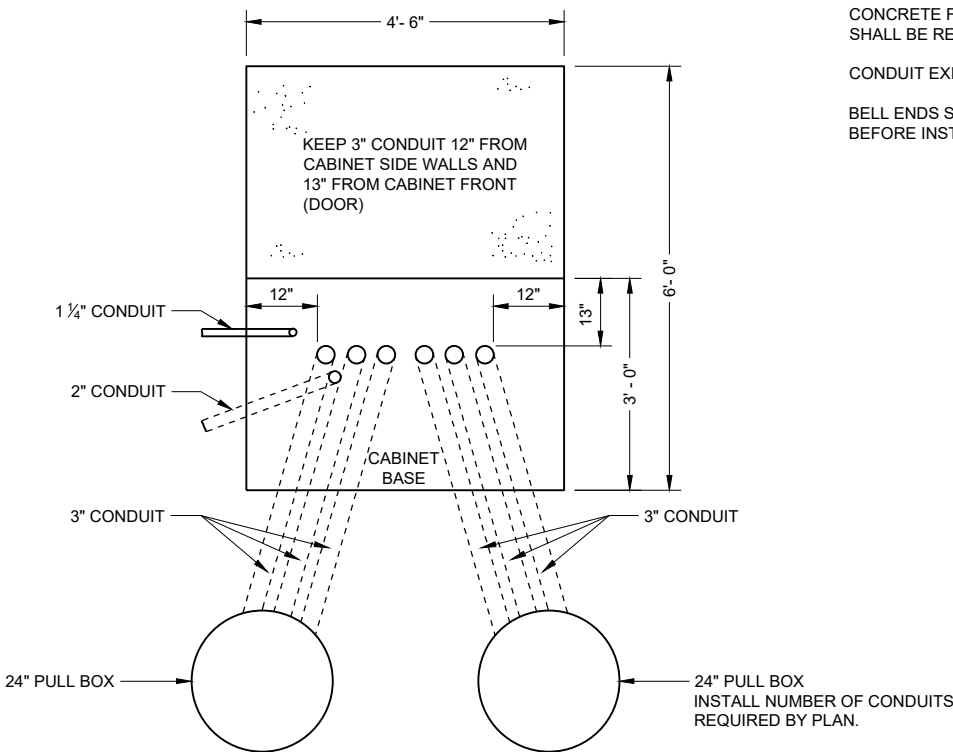


# SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



## ISOMETRIC VIEW TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



## PLAN VIEW CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

### GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

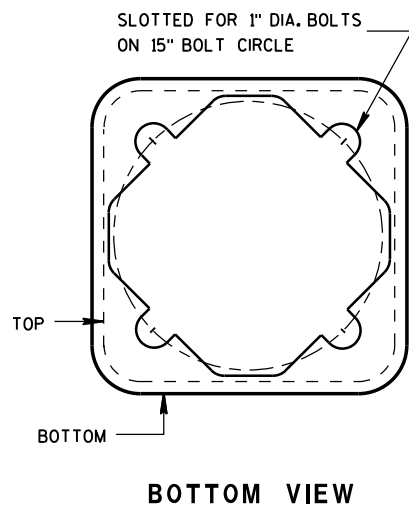
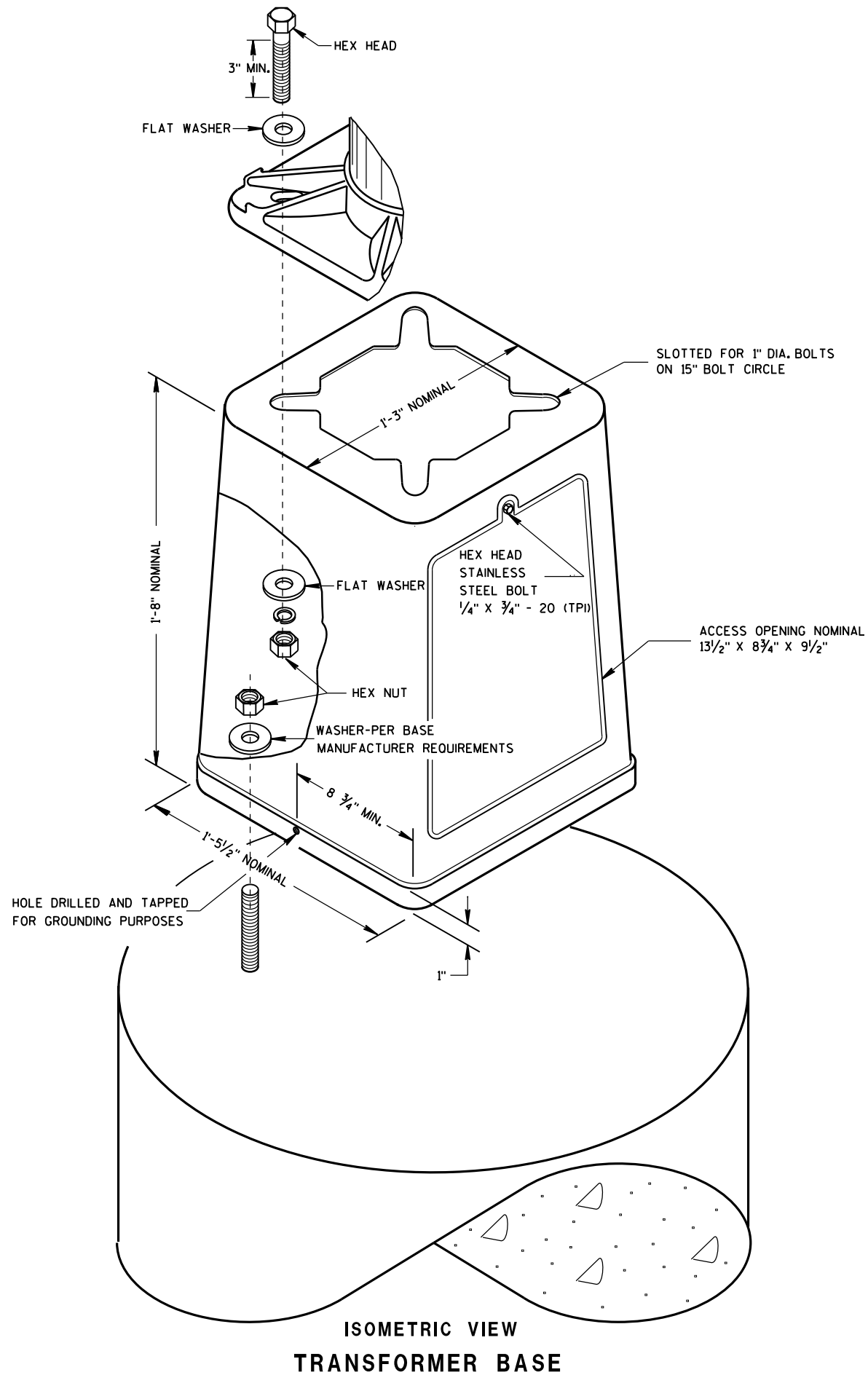
BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

### CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGI 201  
FHWA





### GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BREAKAWAY BASES (WHERE REQUIRED) WILL BE MEASURED AND PAID AS SEPARATE ITEMS OF WORK IN ADDITION TO THE LIGHT POLE.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIMS SHALL BE SIZED TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

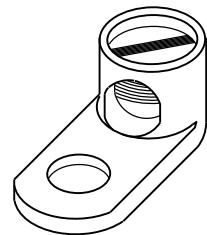
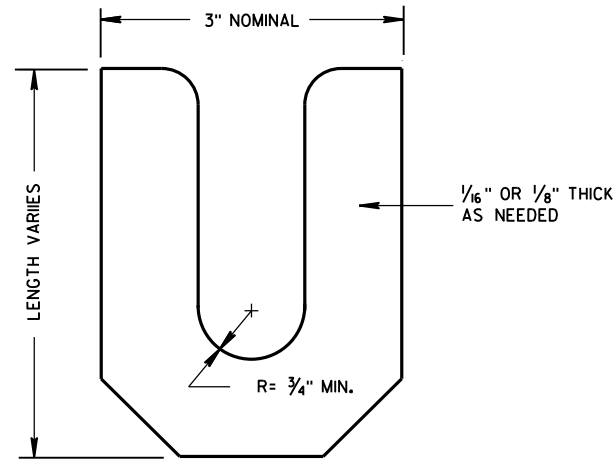
A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE TRANSFORMER BASE.

THE MECHANICAL CONNECTOR (GROUNDING LUG) SHALL BE INSTALLED USING THE TAPPED HOLE PROVIDED BY THE MANUFACTURER. THE MOUNTING BOLT HEXHEAD), NUT, WASHER AND LOCK WASHER SHALL BE STAINLESS STEEL, SIZED TO FIT THE THREADING AND HOLE SIZE, AND BE OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD A GROUNDING LUG MOUNTING HOLE NOT BE PROVIDED, THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" X 3/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE. IT SHALL BE MOUNTED IN THE SAME LOCATION AS IS SHOWN ON THE DRAWING.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, AND LOCK WASHERS, THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

THE ACCESS DOOR SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE BASE.



TYPICAL MECHANICAL  
CONNECTOR LUG  
TO BE FURNISHED WITH EACH BASE

| TRANSFORMER BASE<br>FOR 15" BOLT CIRCLE            |                                              |
|----------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                              |
| APPROVED<br>Sept. 2014<br>DATE                     | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL 202 |
| FHWA                                               |                                              |



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

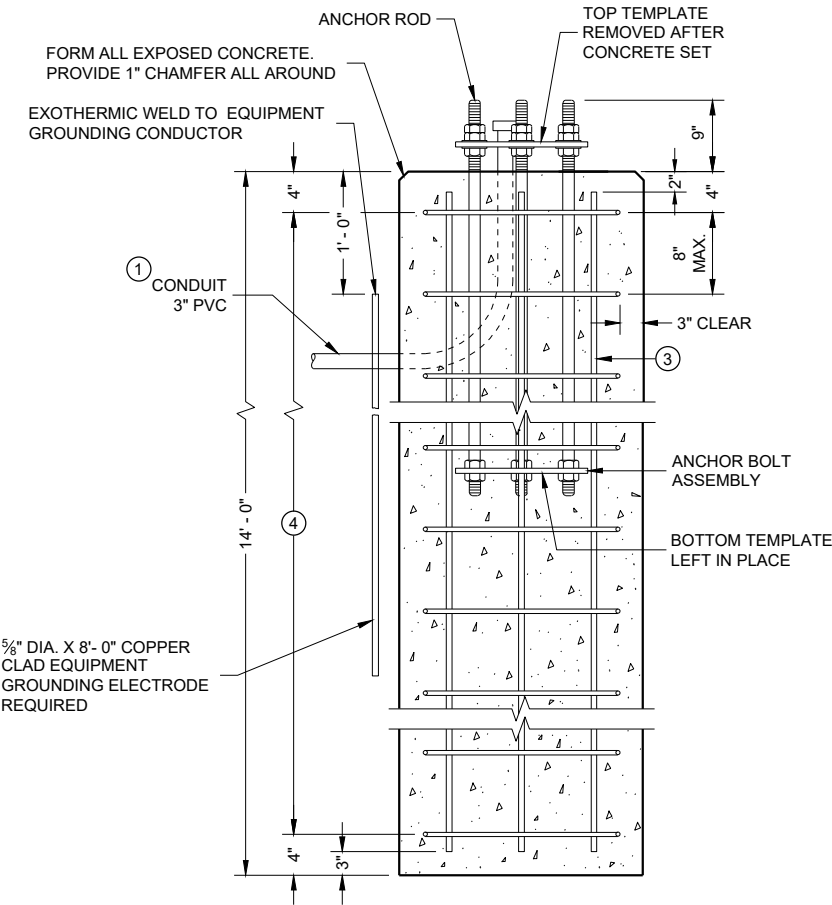
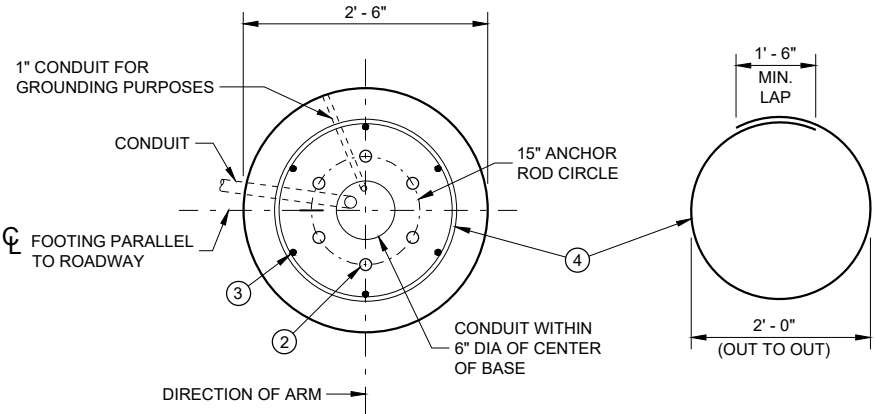
THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

- 1
- THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2
- (6) 1 1/2 DIA. X 4' - 4" ANCHOR RODS
- 3
- (6) NO. 6 X 13' - 7" BAR STEEL REINFORCEMENT.
- 4
- (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

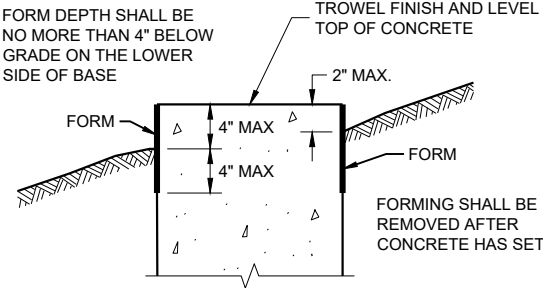
|                                                                                                      |                    |
|------------------------------------------------------------------------------------------------------|--------------------|
| CONCRETE MASONRY.....                                                                                | fc = 3,500 p.s.i   |
| HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....                                                 | fy = 60,000 p.s.i. |
| ANCHOR RODS, ASTM F1554 GRADE 55 ( IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION) | fy = 55,000 p.s.i. |
| TEMPLATES, ASTM A709, GRADE 36.....                                                                  | fy = 36,000 p.s.i. |

| QUANTITY REQUIREMENTS           |     |
|---------------------------------|-----|
| APPROX. CUBIC YARDS OF CONCRETE | 2.5 |
| LBS. OF HOOP BAR STEEL          | 172 |
| LBS. OF VERTICAL BAR STEEL      | 122 |

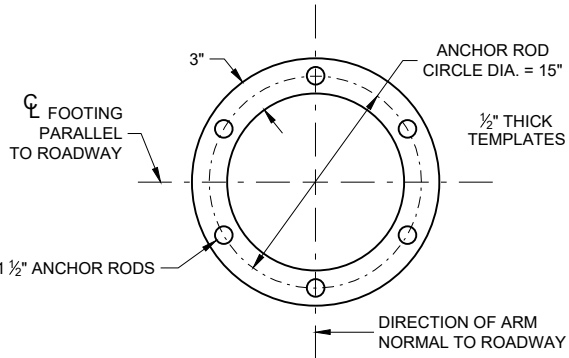


CONCRETE BASE, TYPE 10  
(FOR TYPE 9, TYPE 10 AND OVER HEIGHT (OH) POLES)

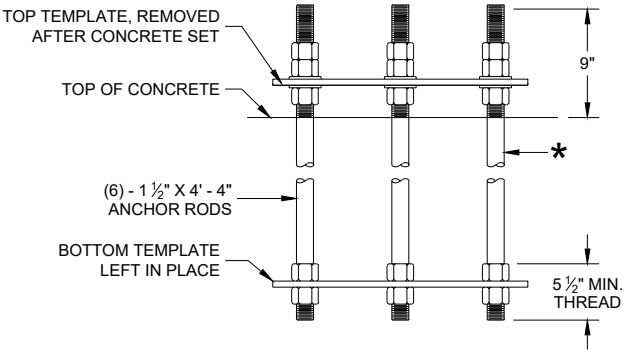
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATE



ANCHOR ROD  
ASSEMBLY DETAILS

\* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE  
TYPE 10

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2017 /S/ Ahmet Demerbilek  
DATE WIND LOADED STRUCTL PROGRAM LEADER  
FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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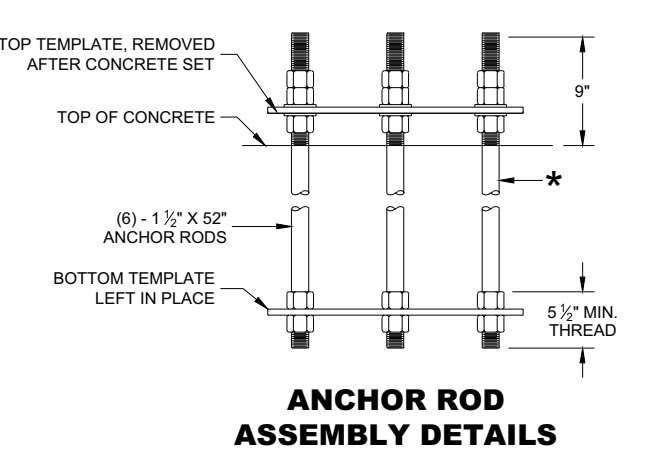
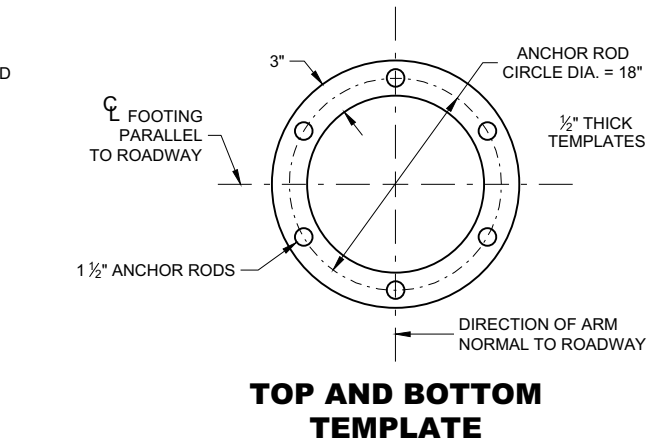
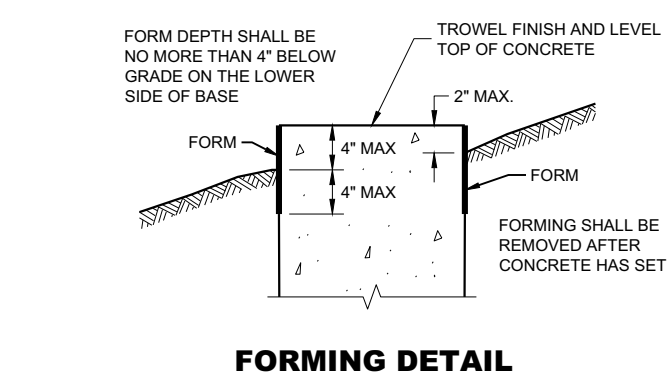
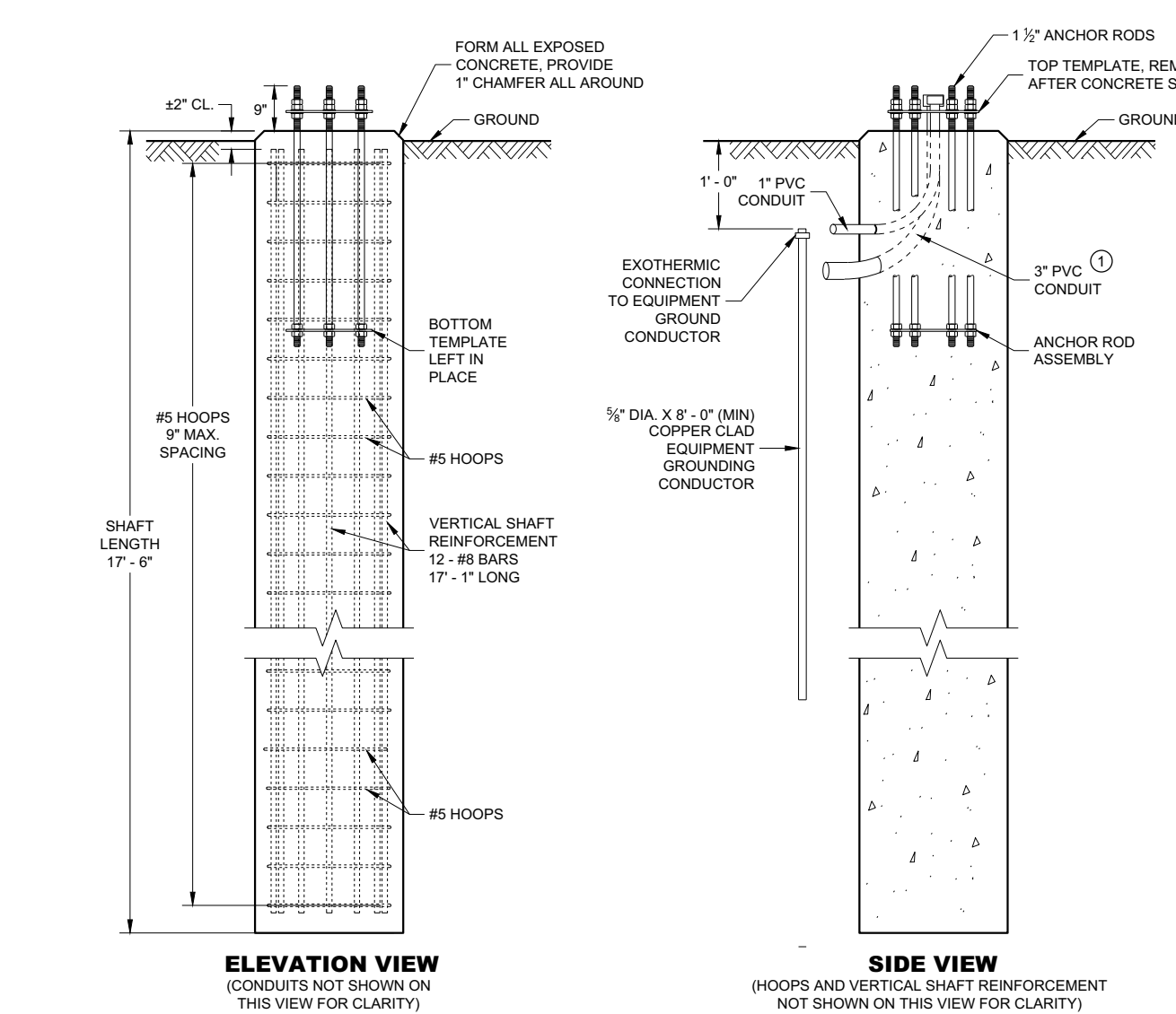
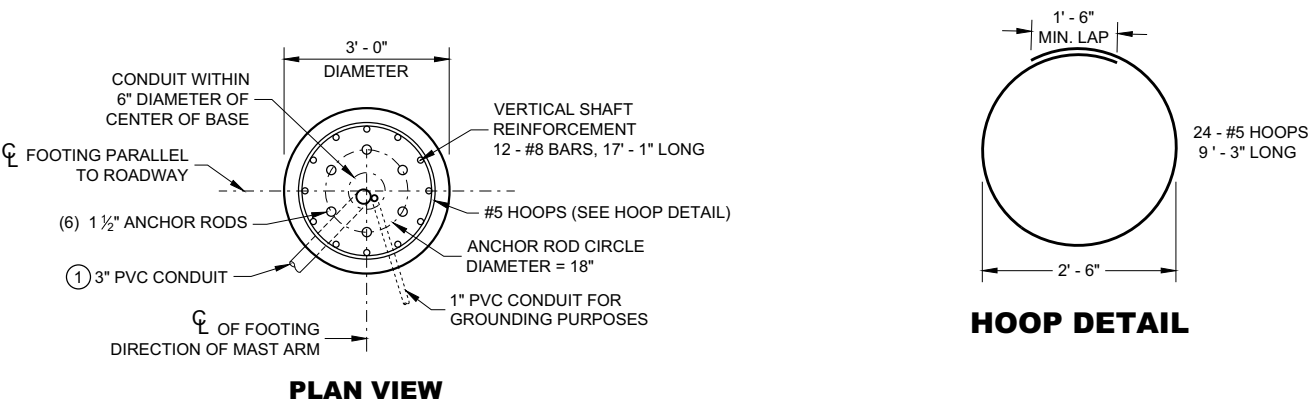
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CONCRETE MASONRY.....fc = 3,500 p.s.i  
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.  
ANCHOR RODS, ASTM F1554 GRADE 55 ( IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.  
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



\* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL  
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD  
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE  
TYPE 10 SPECIAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

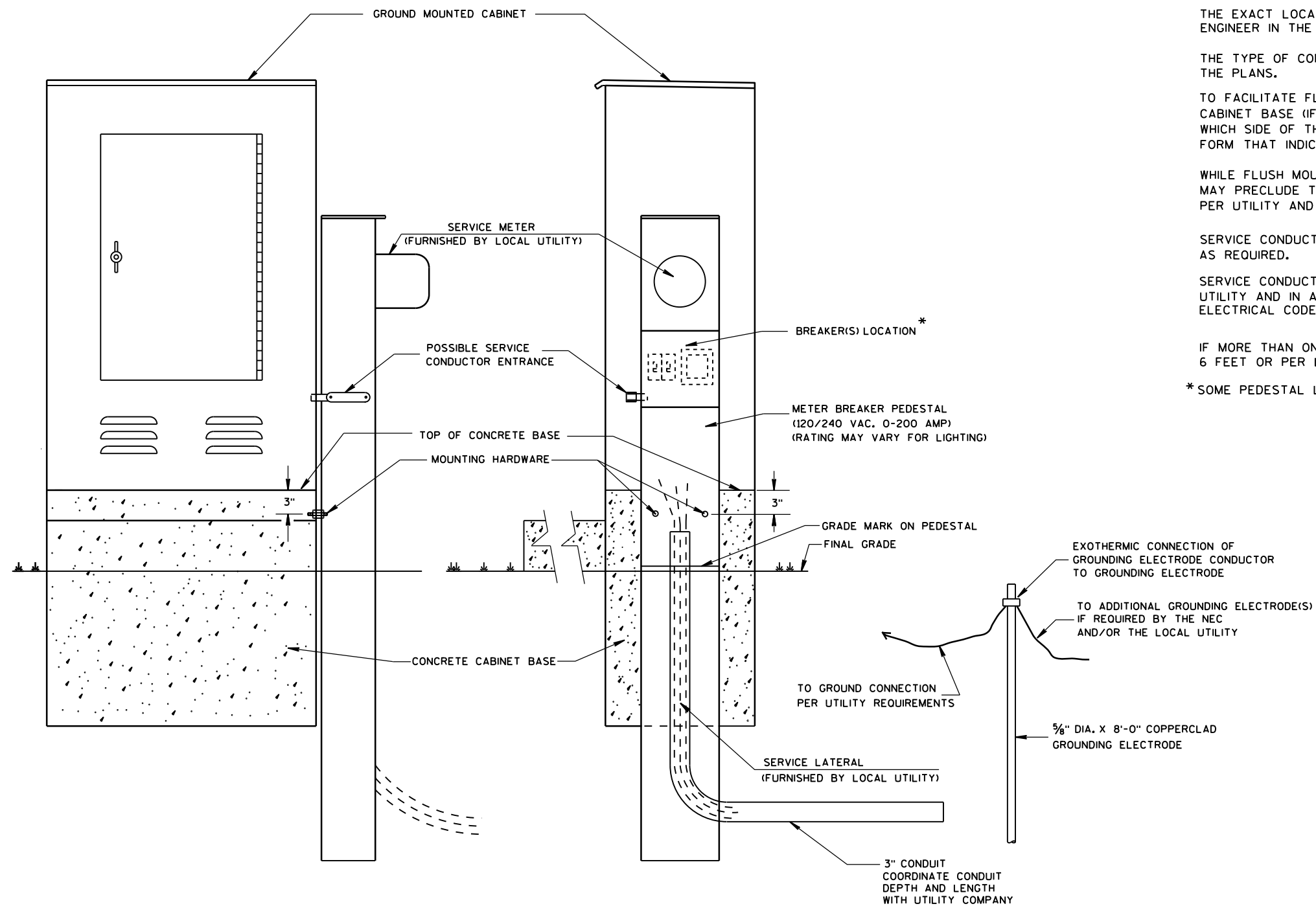
APPROVED  
August 2020  
DATE

/S/ Alex Crabtree  
WIND LOADED STRUCTL  
PROGRAM LEADER

204

FHWA





TYPICAL CABINET SERVICE INSTALLATION

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION  
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

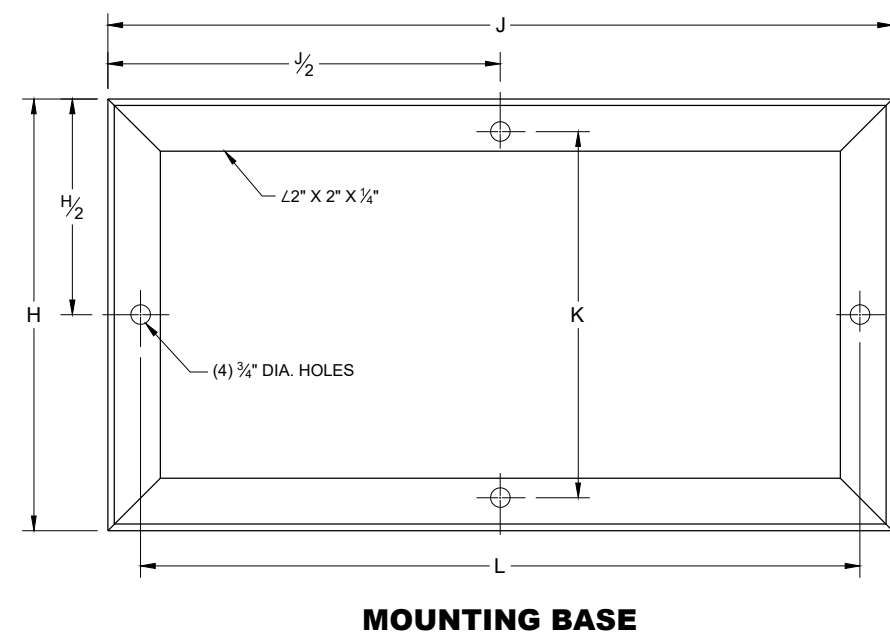
APPROVED

Sept. 2014  
DATE

/S/ Ahmet Demirbilek  
STATE ELECTRICAL 205

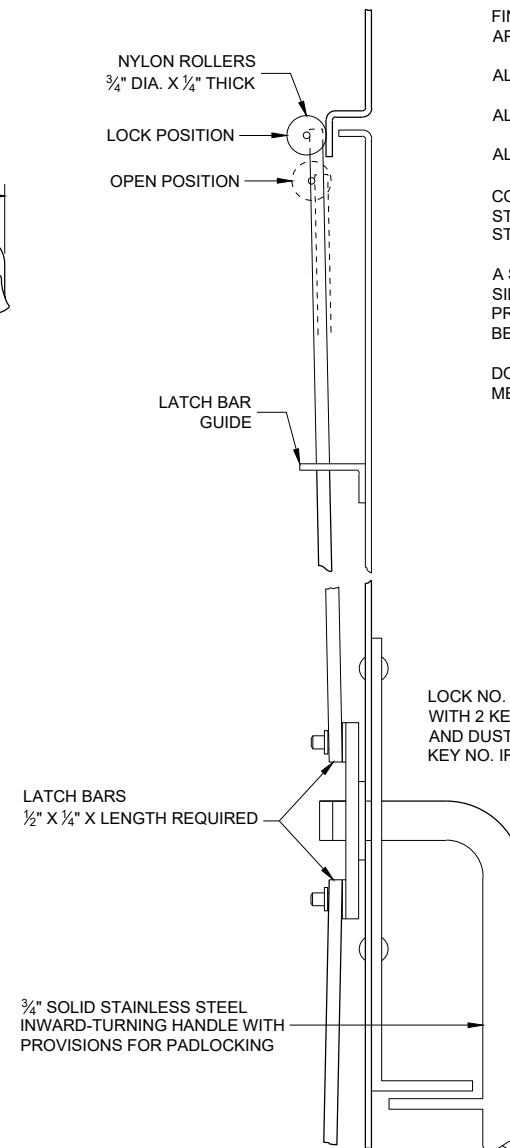
FHWA



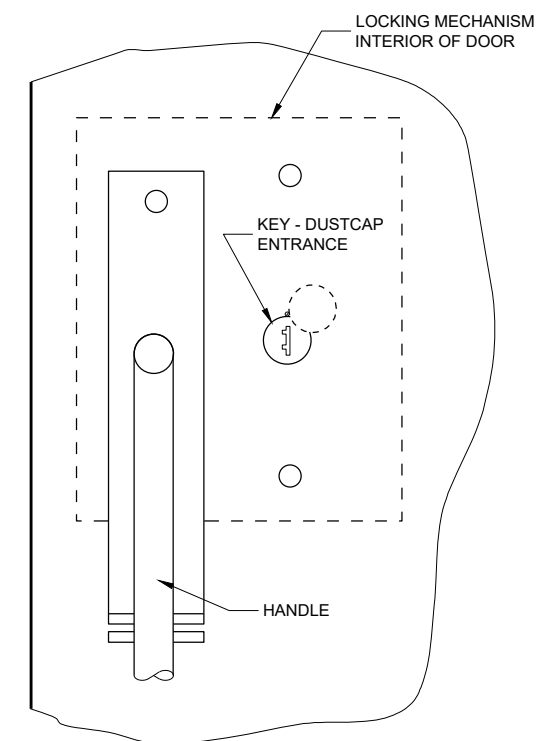


### INSIDE VIEW SHOWING FILTER

| MARK            | CABINET TYPE     |                  |                  |
|-----------------|------------------|------------------|------------------|
|                 | 3060             | 3860             | 3866             |
| A               | 30               | 38               | 38               |
| B               | 60               | 60               | 66               |
| C               | 16 $\frac{1}{2}$ | 16 $\frac{1}{2}$ | 24               |
| D               | 26 $\frac{1}{2}$ | 34 $\frac{3}{4}$ | 33 $\frac{3}{4}$ |
| E               | 38 $\frac{3}{4}$ | 38 $\frac{3}{4}$ | 38 $\frac{3}{4}$ |
| F               | 26 $\frac{1}{2}$ | 34 $\frac{3}{4}$ | 33 $\frac{3}{4}$ |
| G               | 19               | 19               | 25               |
| H               | 16 $\frac{1}{2}$ | 16 $\frac{1}{2}$ | 24               |
| H $\frac{1}{2}$ | 8 $\frac{1}{4}$  | 8 $\frac{1}{4}$  | 12               |
| J               | 30               | 38               | 38               |
| J $\frac{1}{2}$ | 15               | 19               | 19               |
| K               | 13 $\frac{3}{4}$ | 13 $\frac{3}{4}$ | 21 $\frac{1}{4}$ |
| L               | 27 $\frac{1}{2}$ | 35 $\frac{1}{2}$ | 35 $\frac{1}{2}$ |



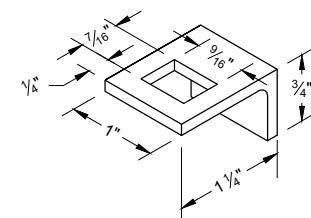
## LATCH ASSEMBLY



### FRONT VIEW

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

LOCK NO. 2510  
WITH 2 KEYS  
AND DUST CAP.  
KEY NO. IR6380

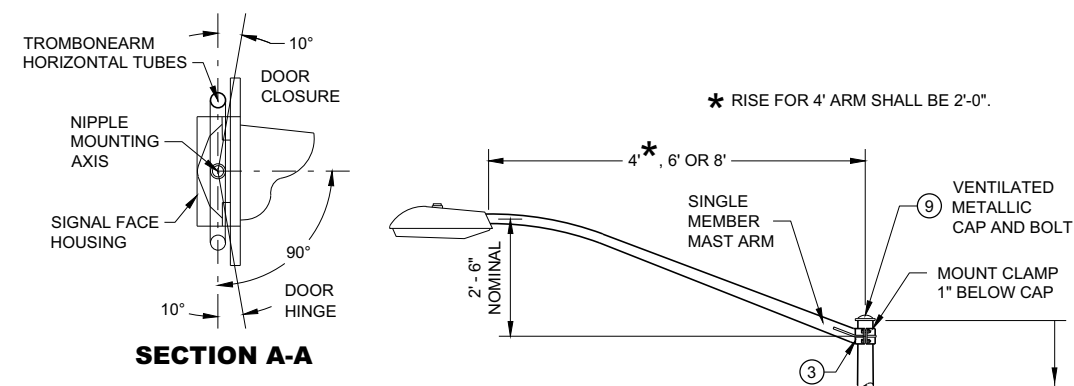


## LATCH BAR GUIDE

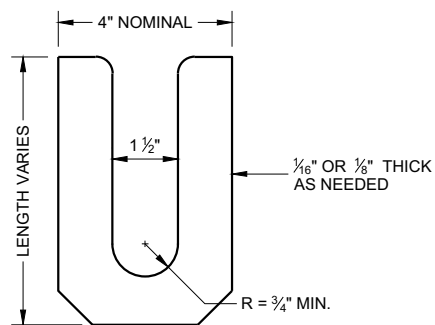
APPROVED  
September 2014 \_\_\_\_\_ /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGI 206

FHWA

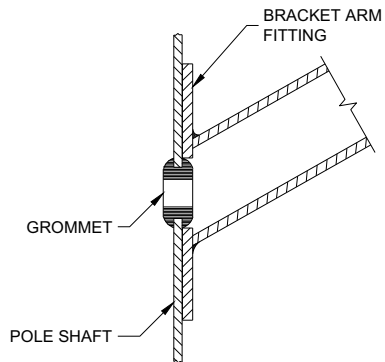




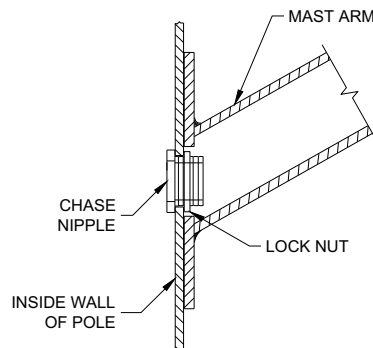




**LEVELING SHIM**  
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



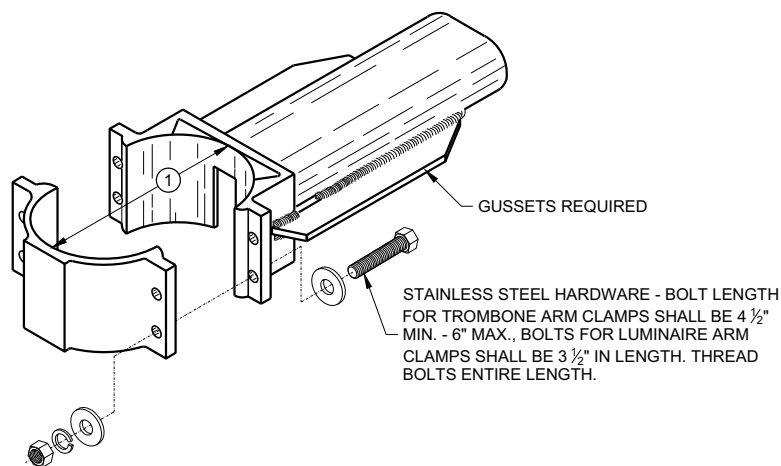
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

## GENERAL NOTES

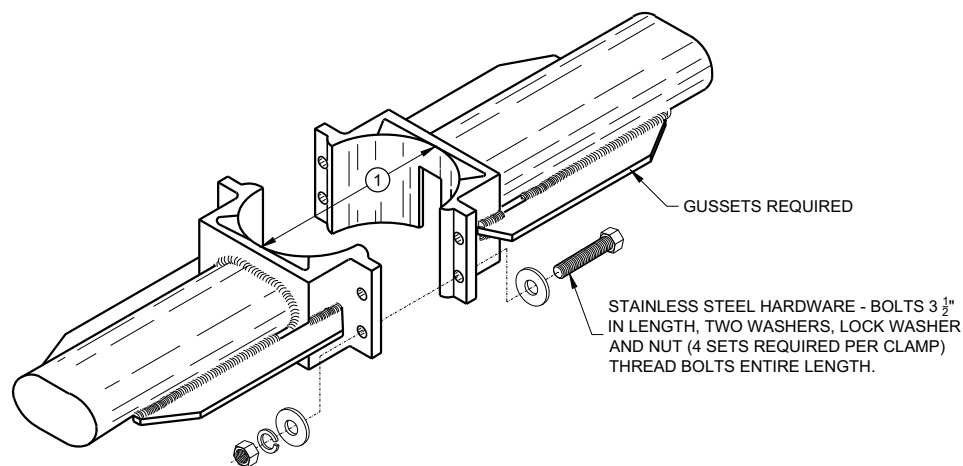
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

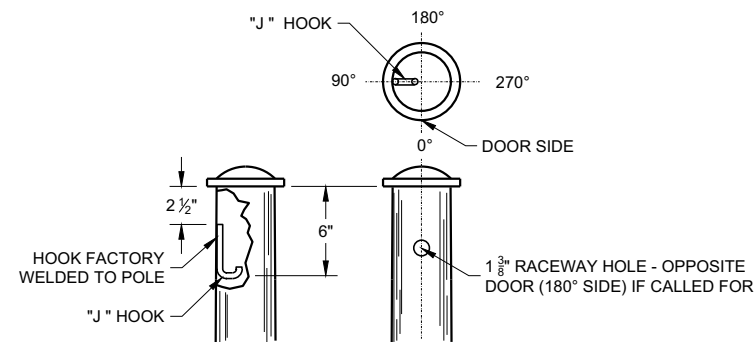
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



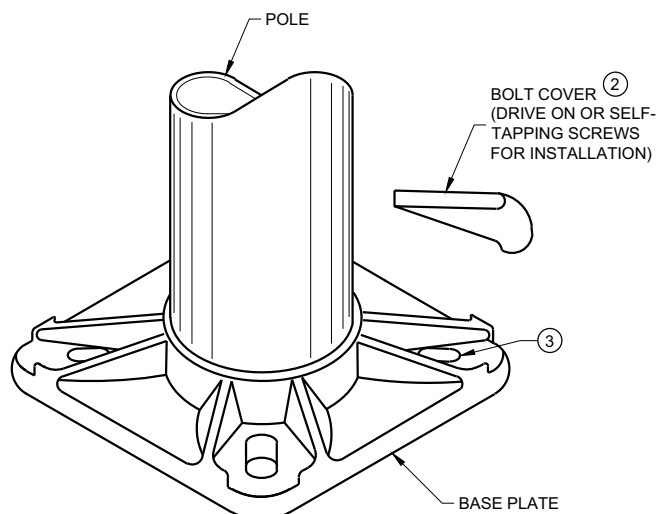
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



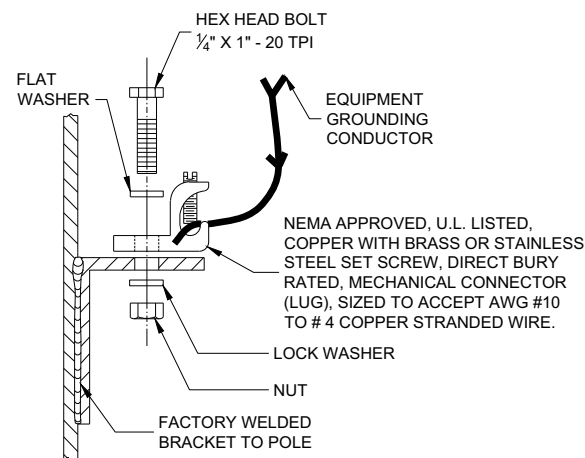
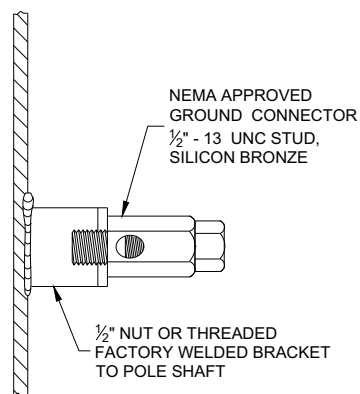
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



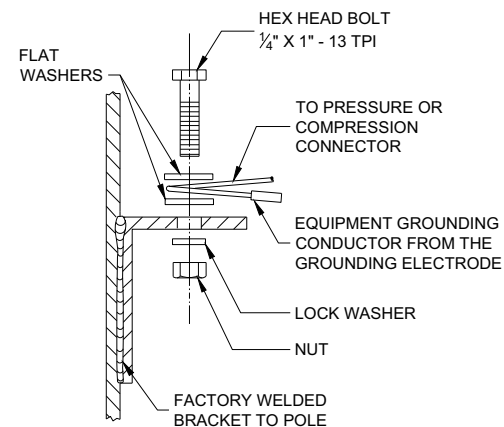
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



## HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGI 208  
FHWA

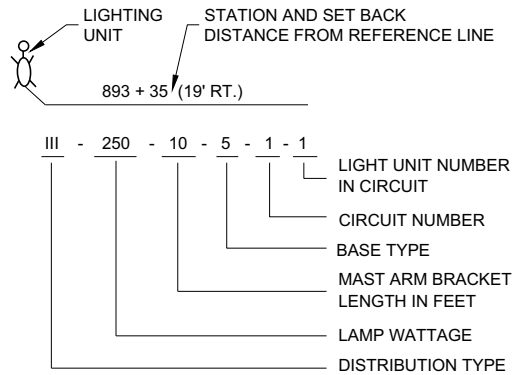


GENERAL NOTES

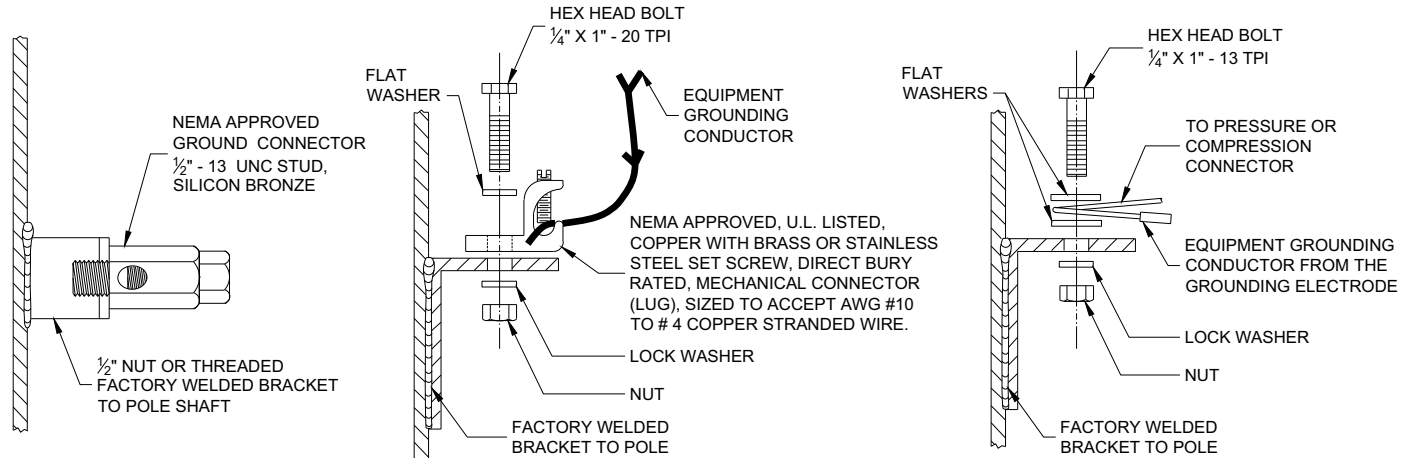
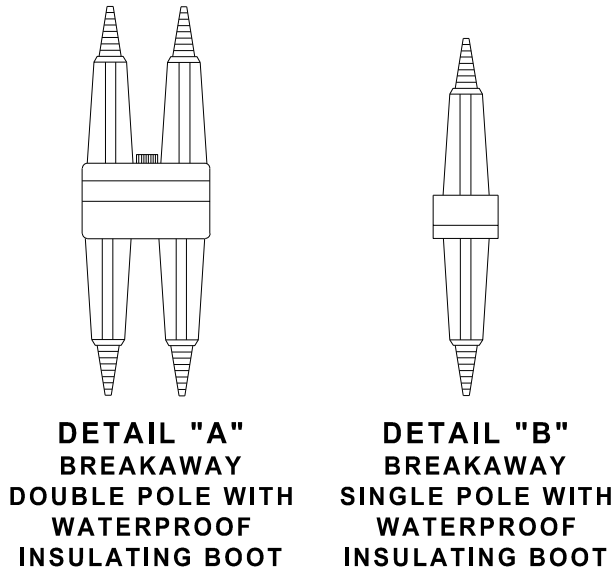
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

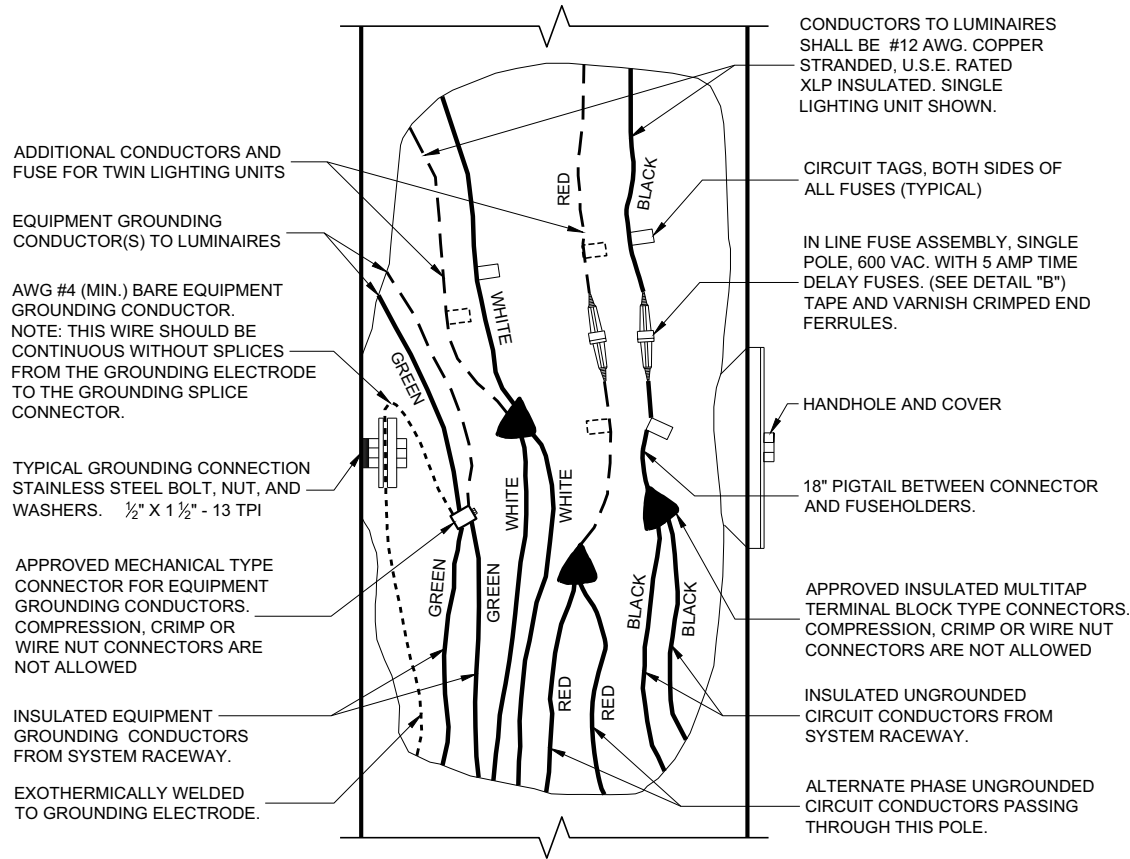


LIGHTING UNIT CODE  
(TYPICAL)

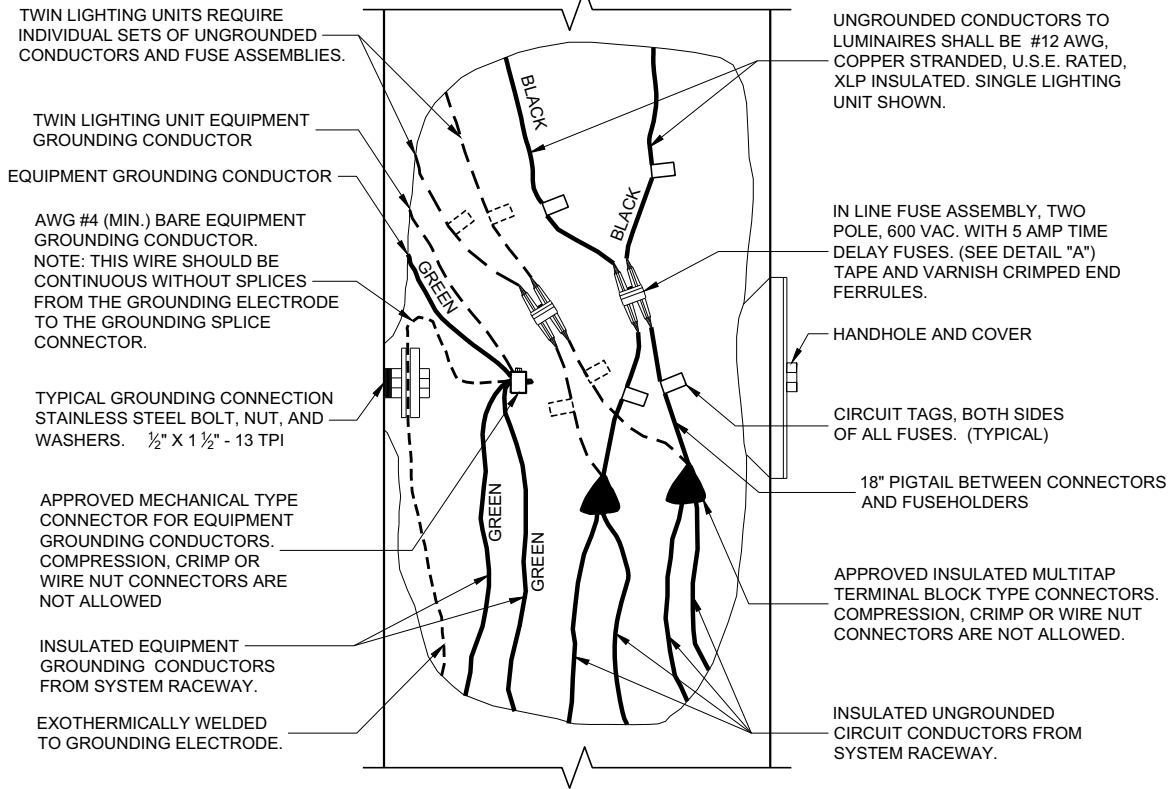


TYPICAL GROUNDING CONNECTIONS  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

6



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS)  
WITH GROUNDING CONDUCTOR AND  
EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS)  
WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT  
POLE WIRING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

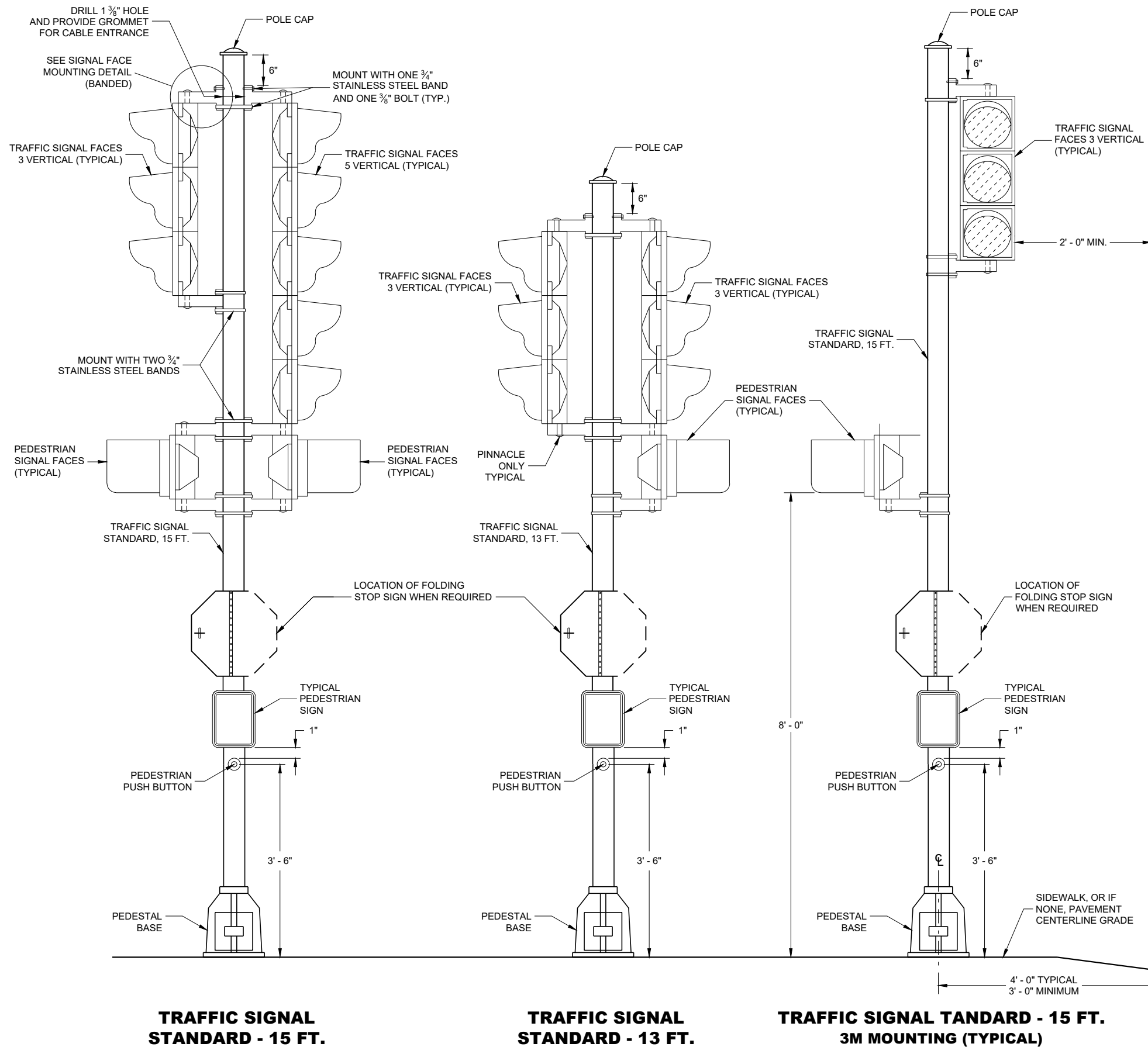
APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGI 209  
FHWA

SDD 09E03 - 06

SDD 09E03 - 06

6





## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

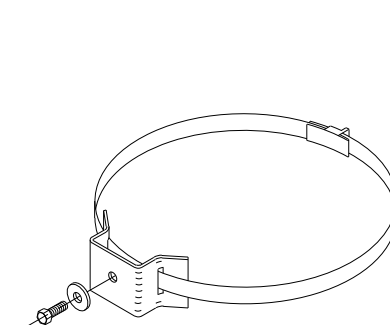
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

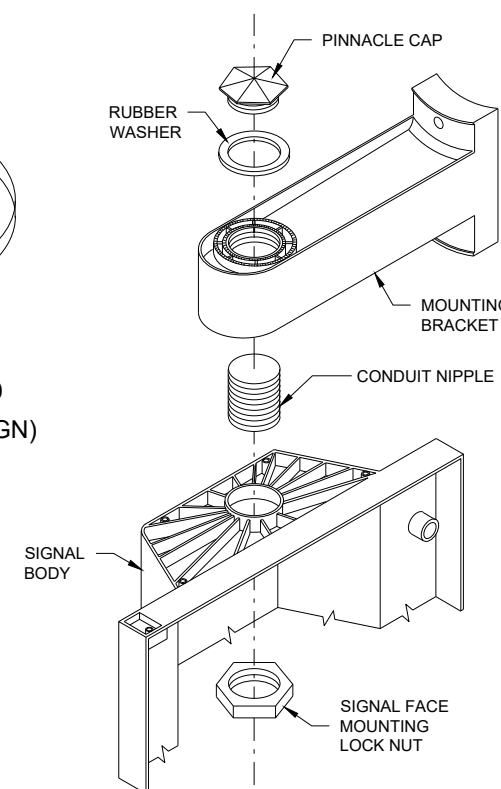
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



**TYPICAL SIGN MOUNTING BAND**  
(TOP AND BOTTOM OF SIGN)



**SIGNAL FACE MOUNTING DETAIL (BANDED)**

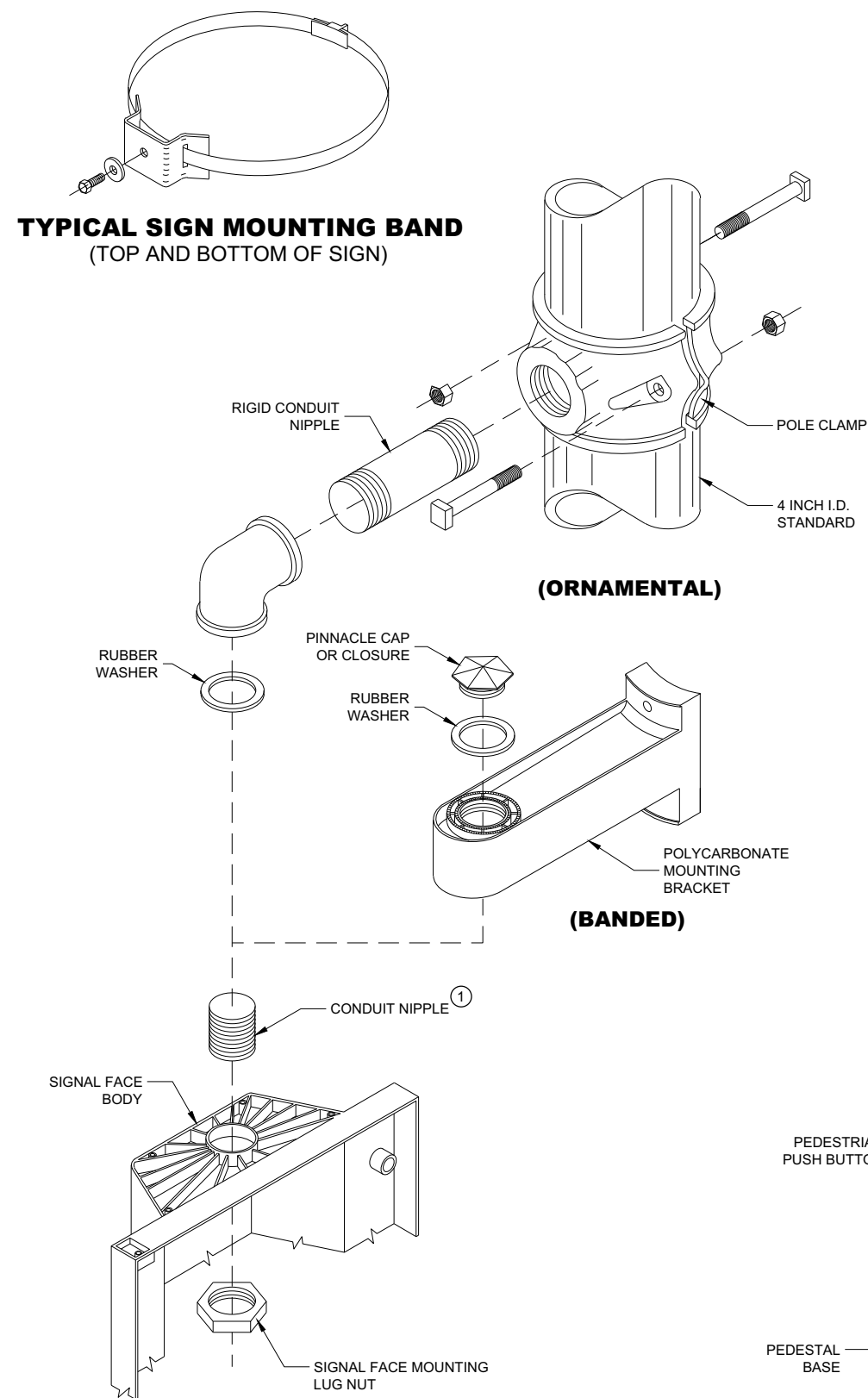
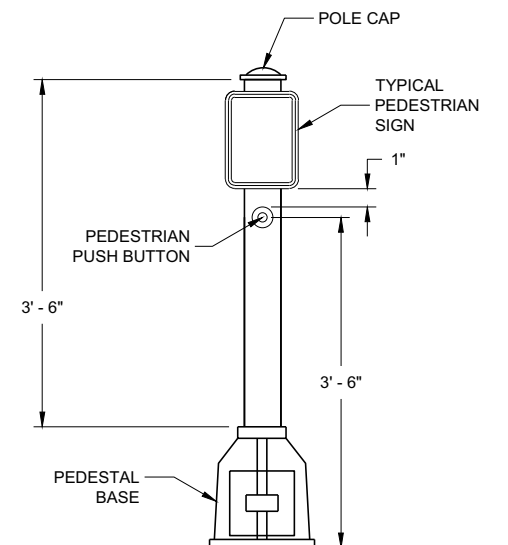
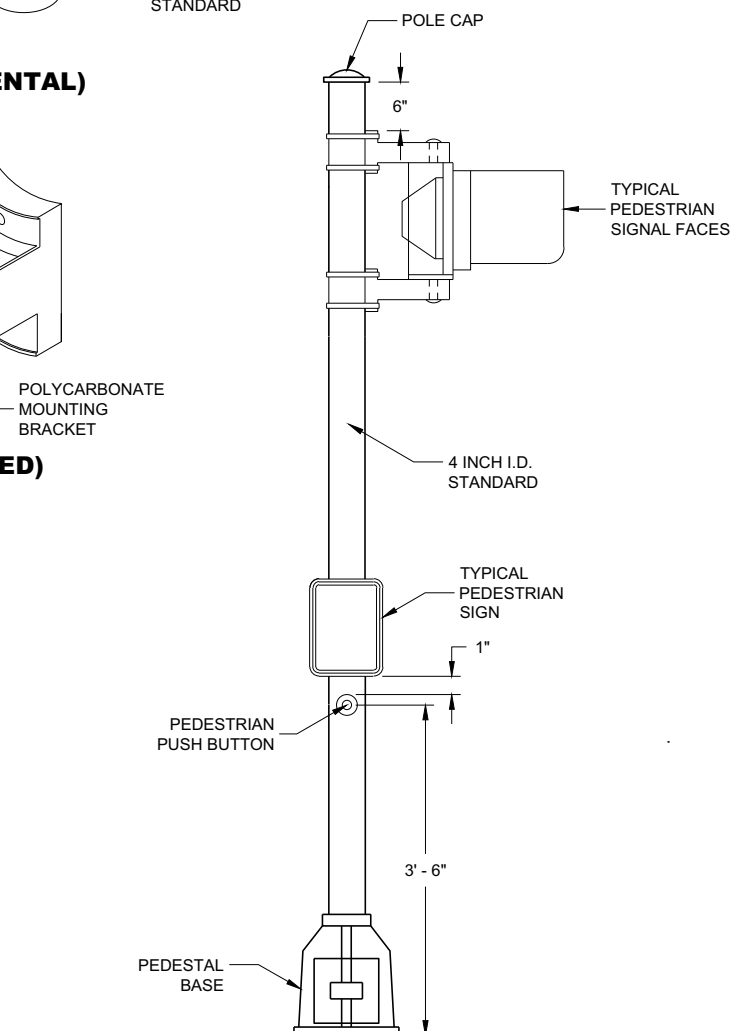
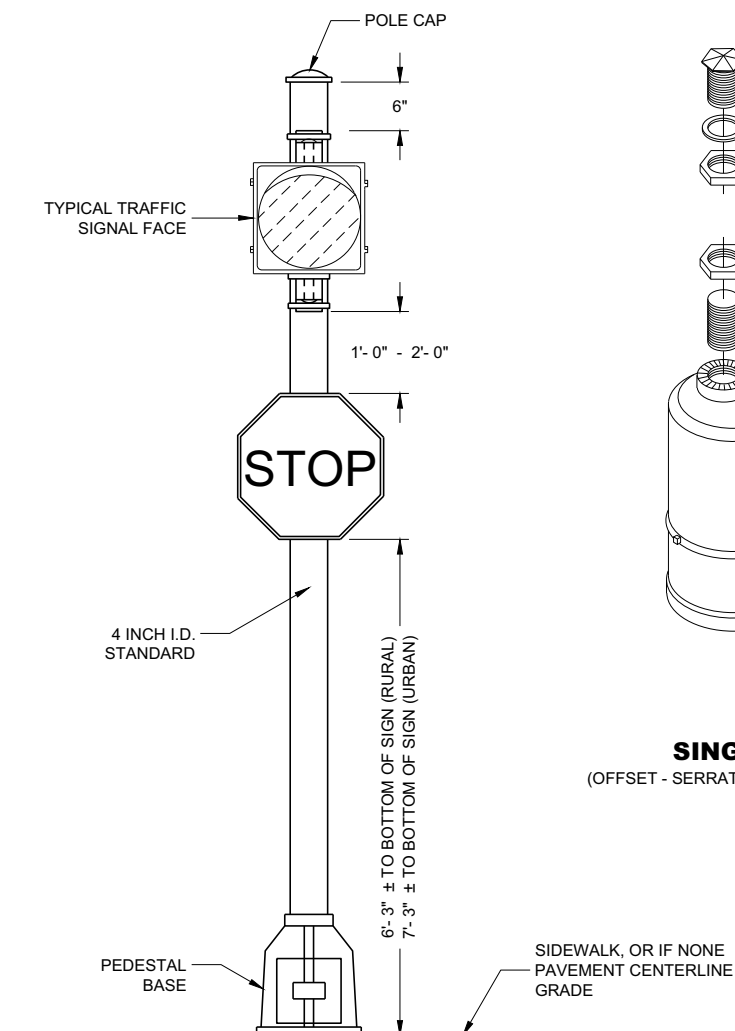
**TRAFFIC SIGNAL STANDARD  
POLY BRACKET MOUNTINGS  
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
2/28/2013 DATE /S/ Ahmet Demirelek  
STATE ELECTRICAL ENGI 210

FHWA



**SIGNAL FACE MOUNTING DETAILS****PEDESTRIAN PUSH BUTTON  
TYPICAL MOUNTING****PEDESTRIAN FACE STANDARD - 10 FT.**  
(WALK - DON'T WALK)**STANDARD FLASHER**  
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

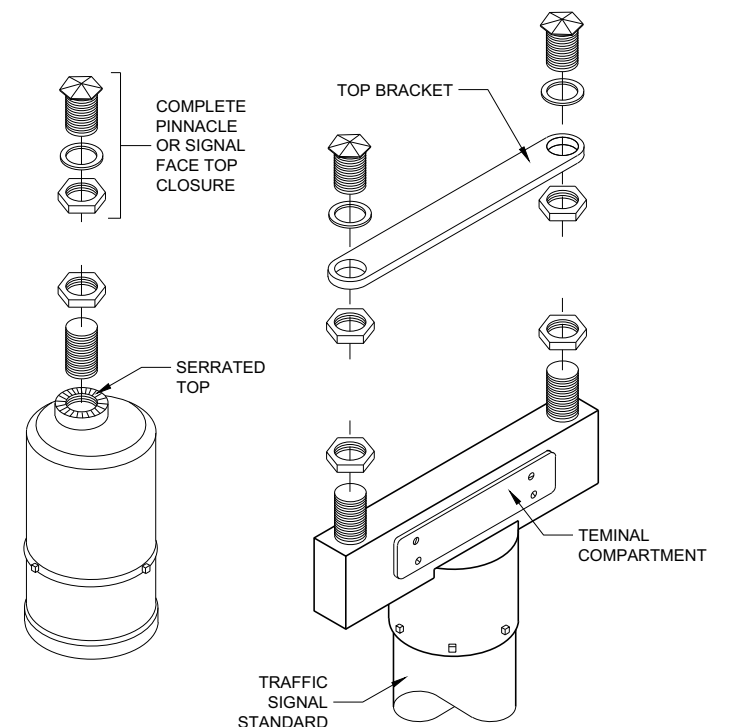
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

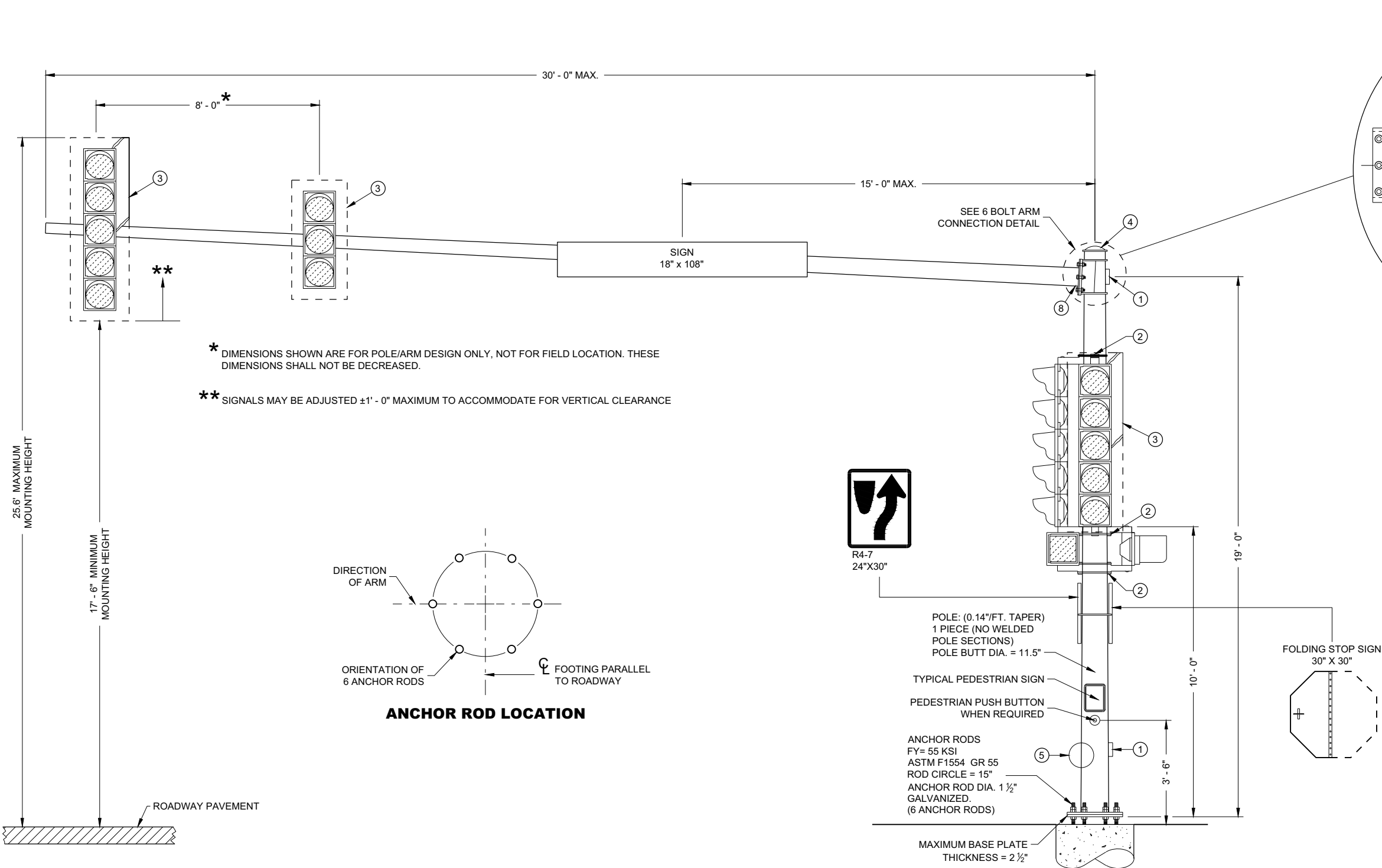
- ① USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.

**SINGLE**  
(OFFSET - SERRATED MOUNTING)**DOUBLE**  
(SERRATED MOUNTING)**SLIPFITTERS****TRAFFIC SIGNAL STANDARD  
PEDESTRIAN AND FLASHER  
TYPICAL MOUNTING DETAILS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGI 211  
FHWA

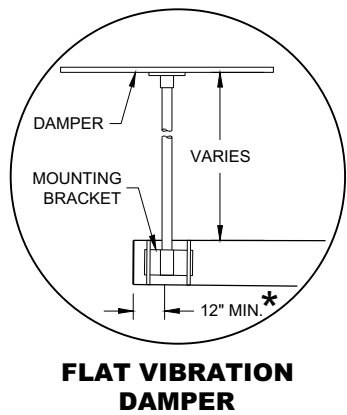
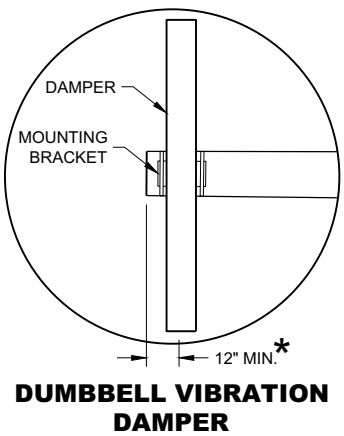
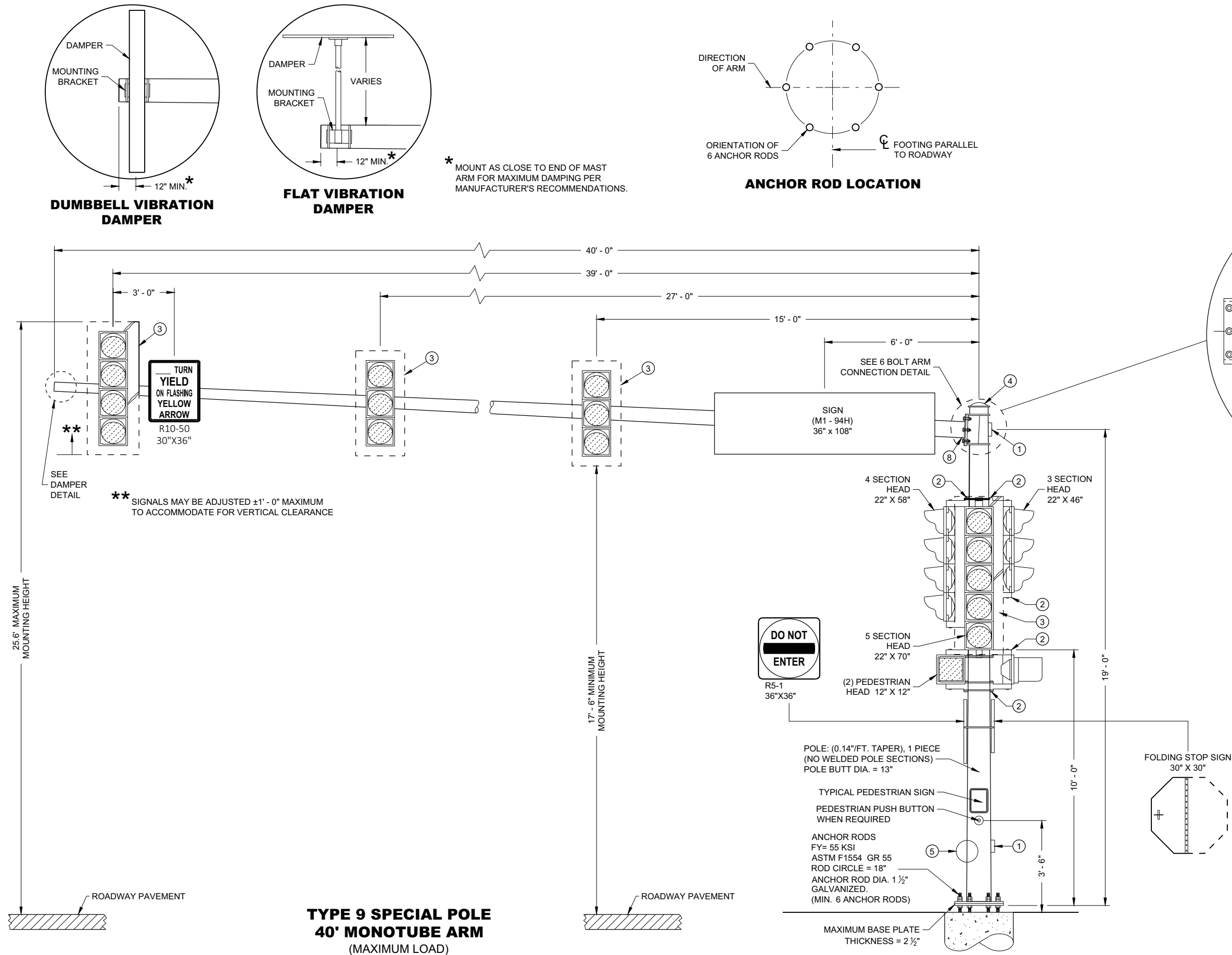




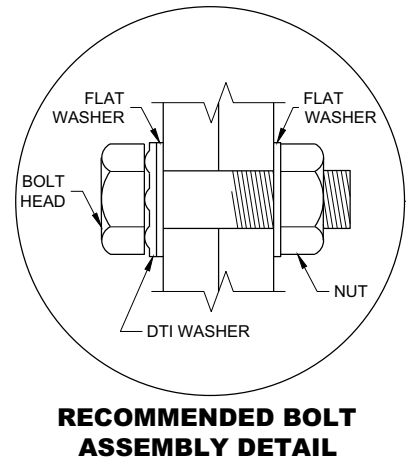
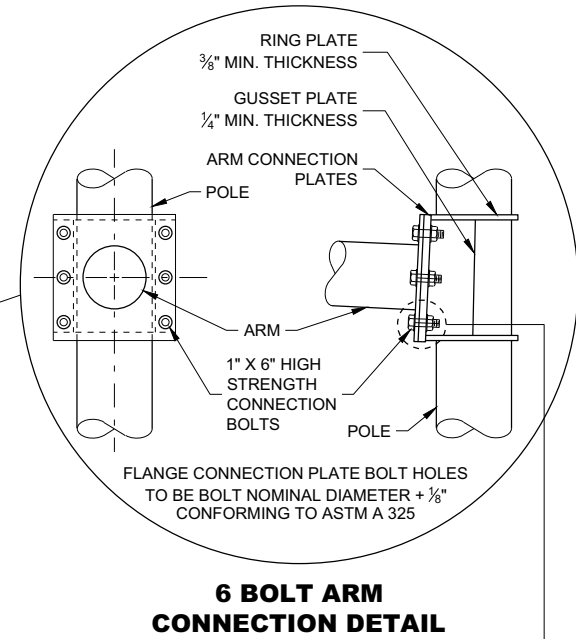
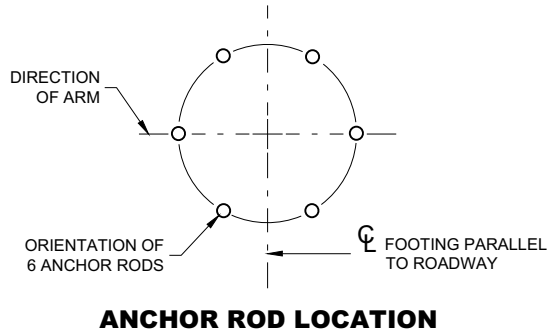
**TYPE 9 POLE  
15' - 30' MONOTUBE ARM  
(MAXIMUM LOAD)**

|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| <b>TYPE 9 POLE<br/>15' - 30' MONOTUBE ARM</b>      |                                                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                   |
| APPROVED<br>August 2020<br>DATE                    | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL ENGI 212 |
| FHWA                                               |                                                   |





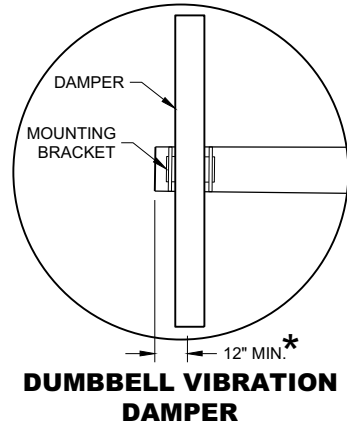
\* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



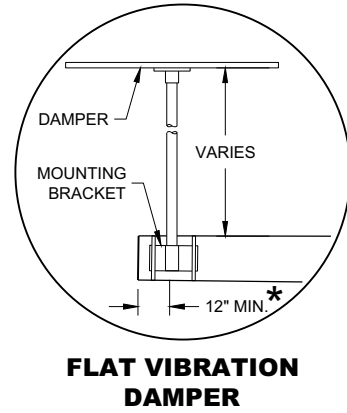
|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| <b>TYPE 9 SPECIAL POLE<br/>40' MONOTUBE ARM</b>    |                                                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                   |
| APPROVED<br>August 2020<br>DATE                    | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL ENGI 213 |
| FHWA                                               |                                                   |



25.6' MAXIMUM  
MOUNTING HEIGHT

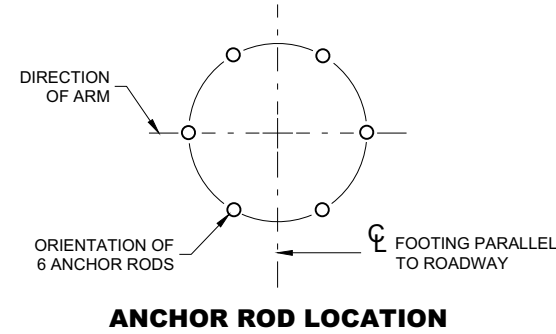


**DUMBBELL VIBRATION  
DAMPER**

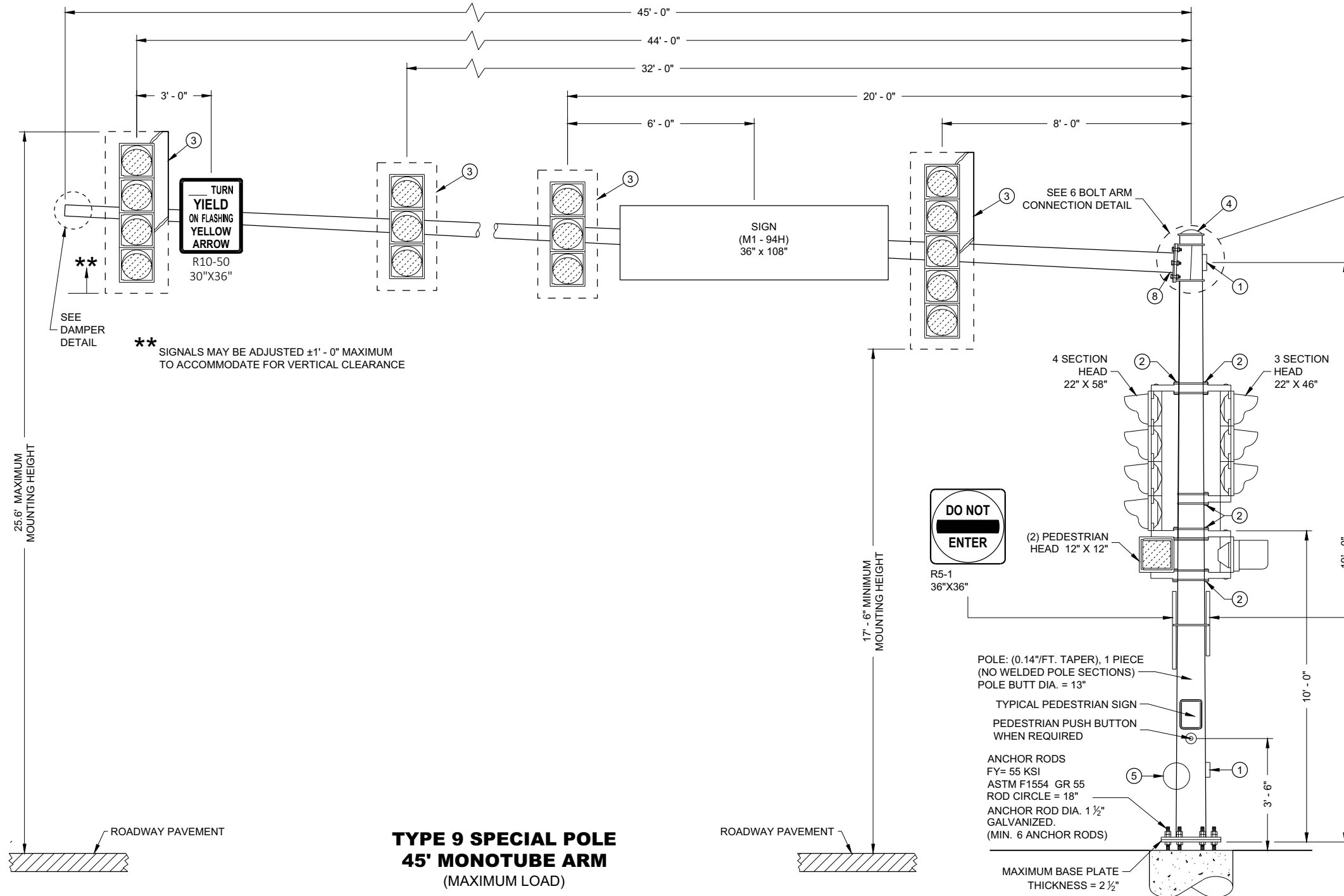


**FLAT VIBRATION  
DAMPER**

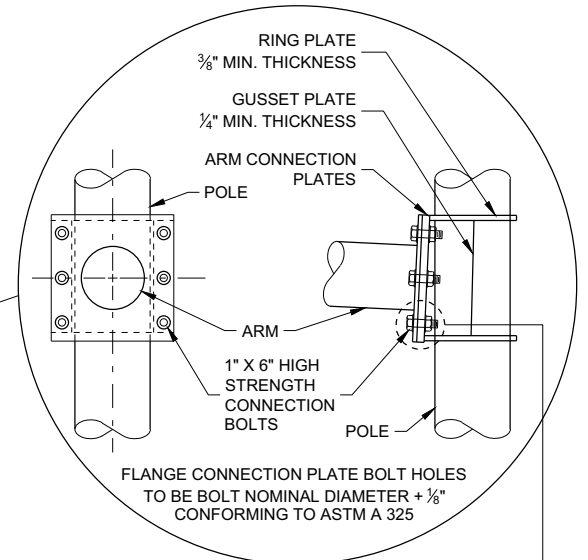
\* MOUNT AS CLOSE TO END OF MAST  
ARM FOR MAXIMUM DAMPING PER  
MANUFACTURER'S RECOMMENDATIONS.



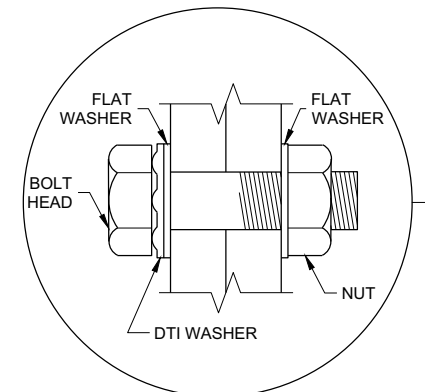
**ANCHOR ROD LOCATION**



**TYPE 9 SPECIAL POLE  
45' MONOTUBE ARM**  
(MAXIMUM LOAD)



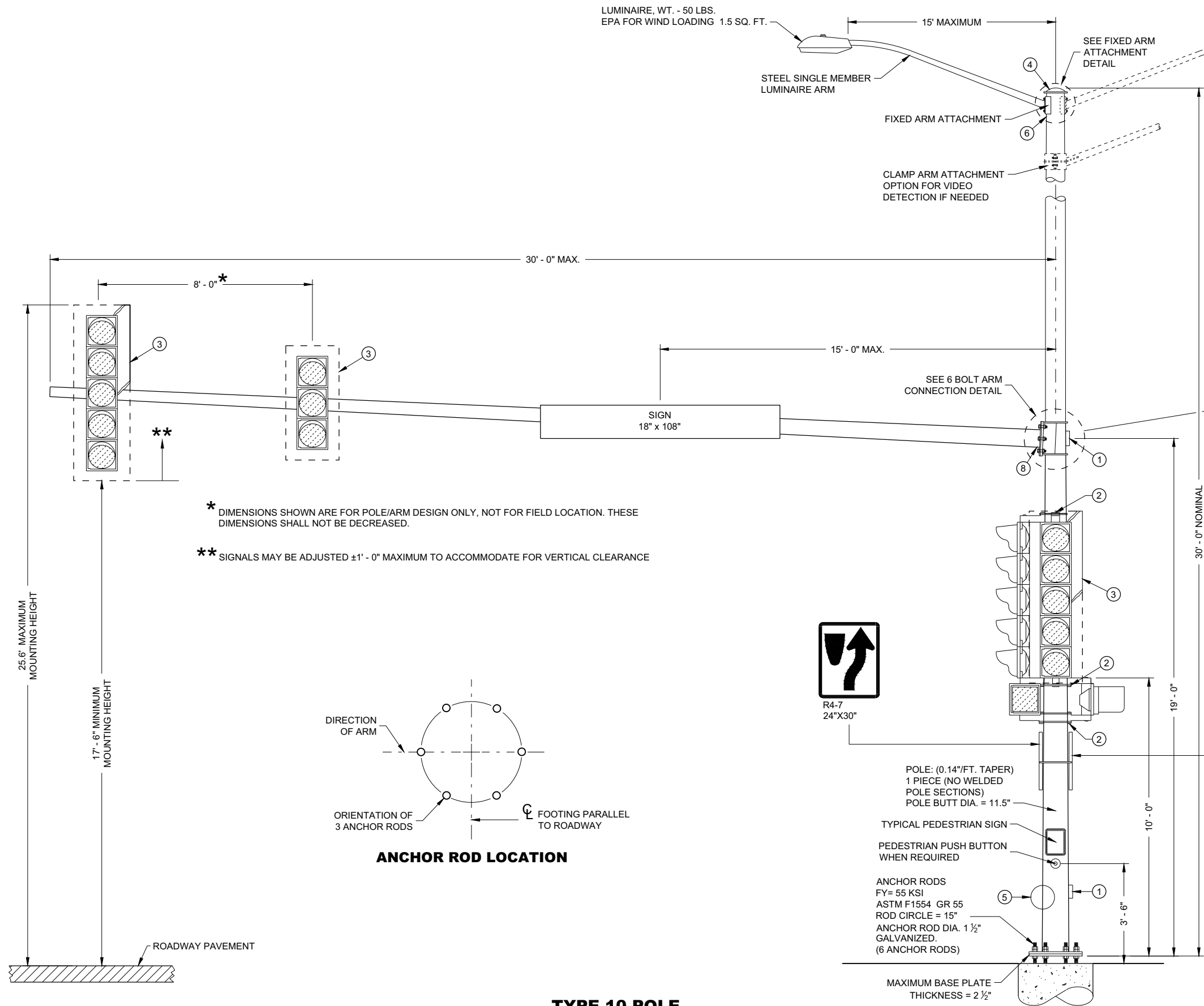
**6 BOLT ARM  
CONNECTION DETAIL**



**RECOMMENDED BOLT  
ASSEMBLY DETAIL**

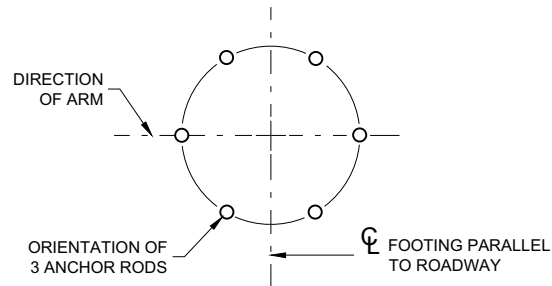
|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| <b>TYPE 9 SPECIAL POLE<br/>45' MONOTUBE ARM</b>    |                                                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                   |
| APPROVED<br>August 2020<br>DATE                    | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL ENGI 214 |
| FHWA                                               |                                                   |



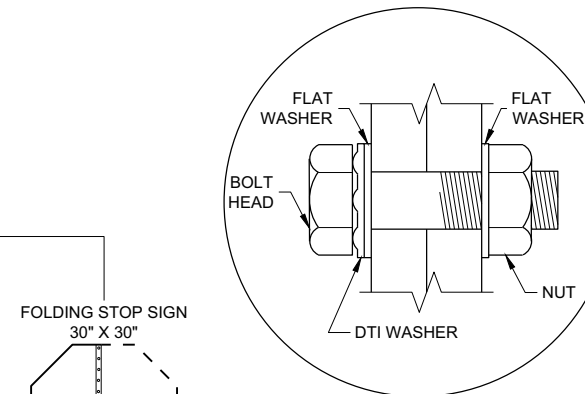
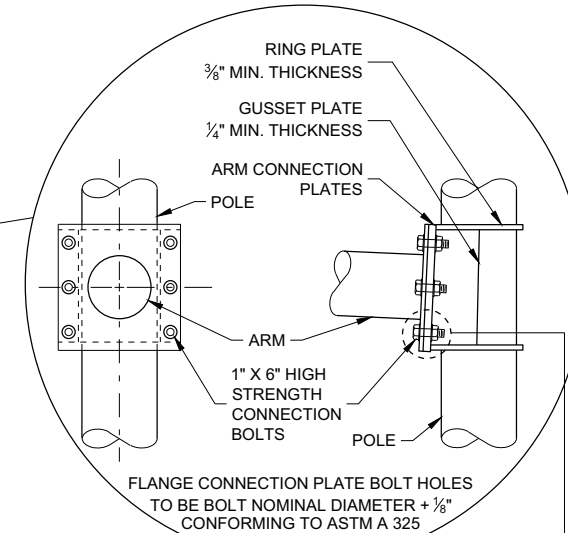
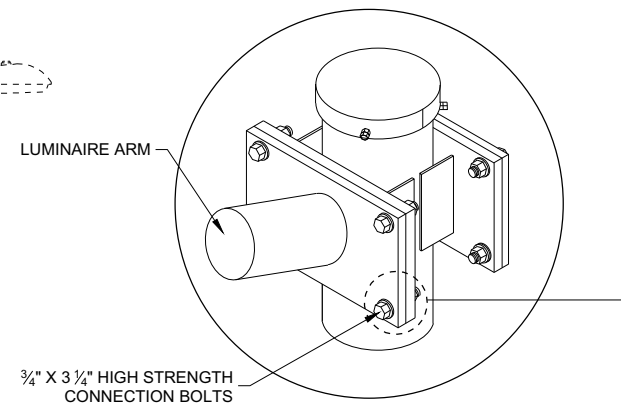


\* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

\*\* SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

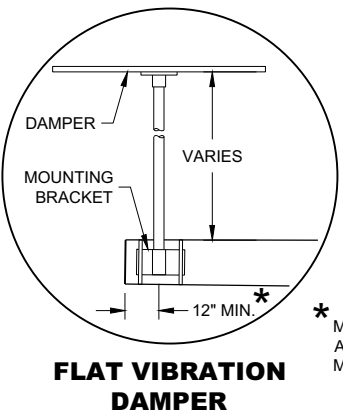
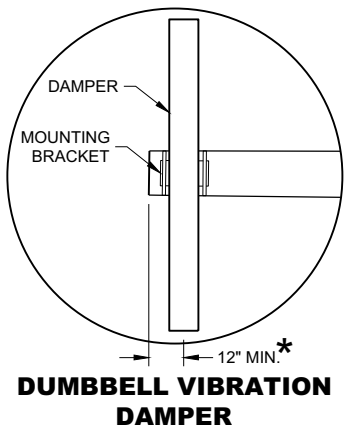
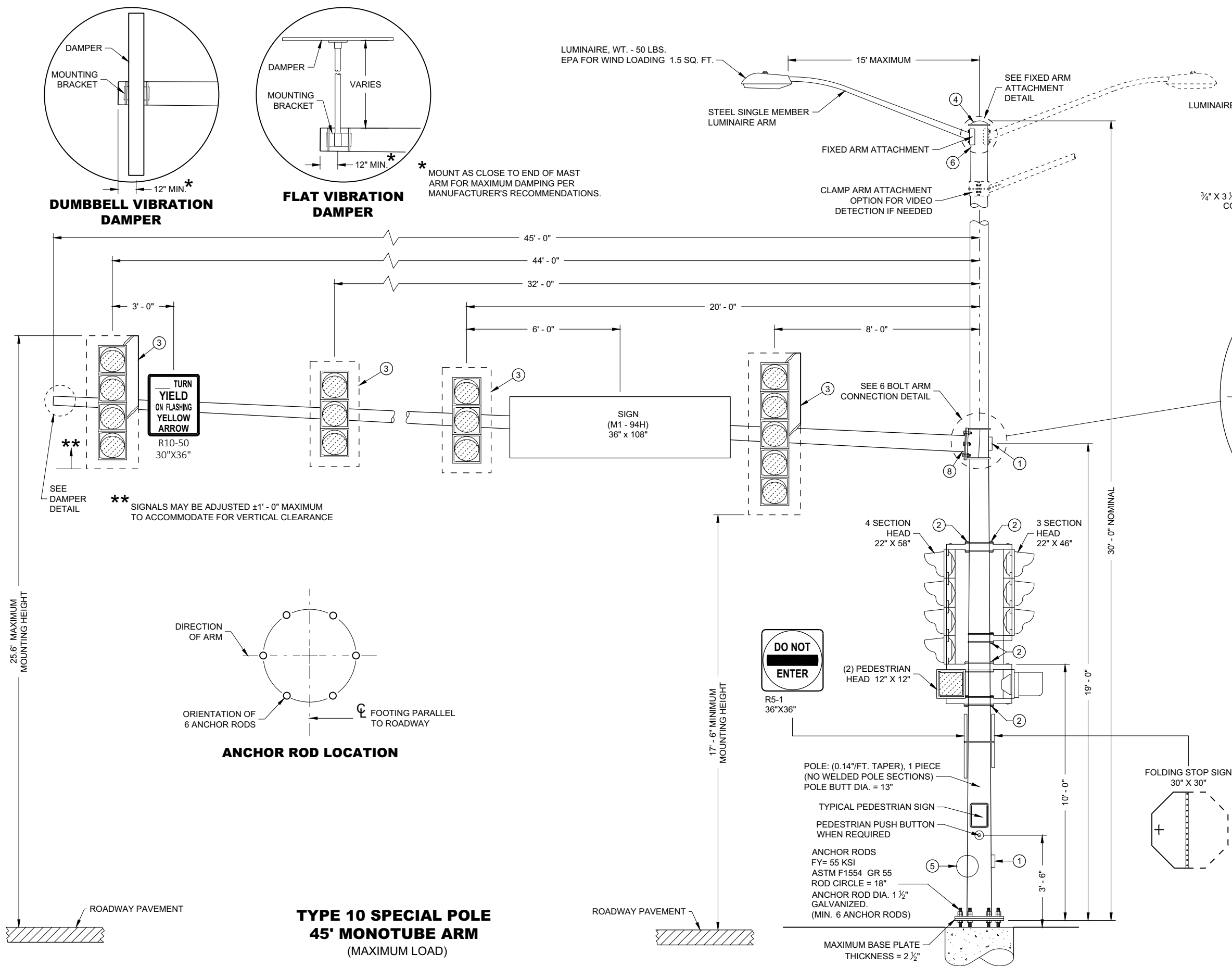


**TYPE 10 POLE  
15' - 30' MONOTUBE ARM  
(MAXIMUM LOAD)**

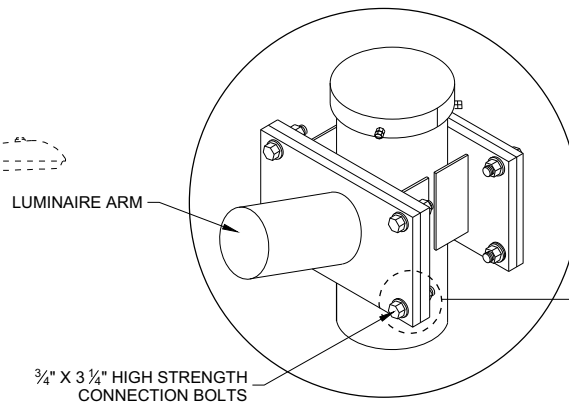


|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| <b>TYPE 10 POLE<br/>15' - 30' MONOTUBE ARM</b>     |                                                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                   |
| APPROVED<br>August 2020<br>DATE                    | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL ENGI 215 |
| FHWA                                               |                                                   |

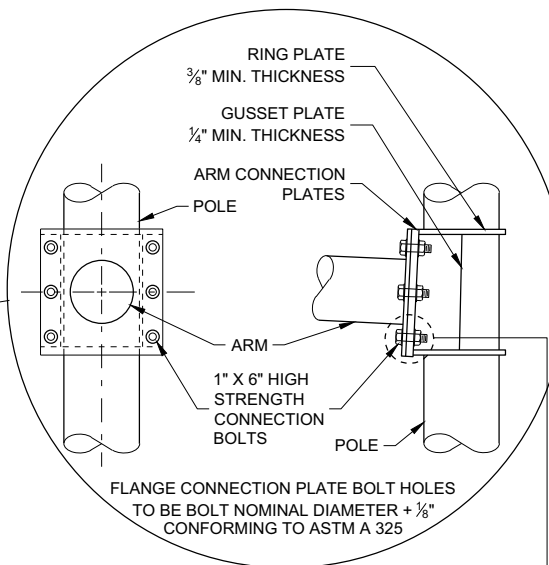




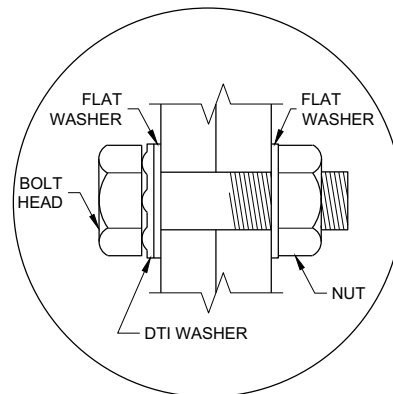
\* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE  
45' MONTUBE ARM

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGI 216  
FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

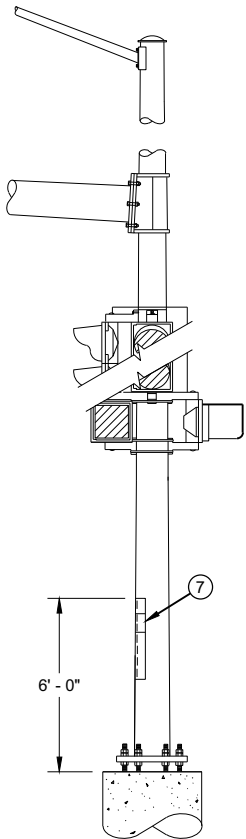
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ① DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ② SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- ③ SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④ THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤ FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

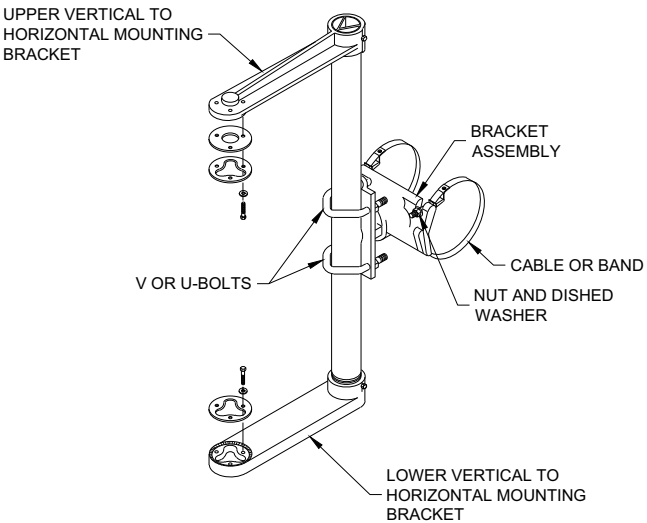
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

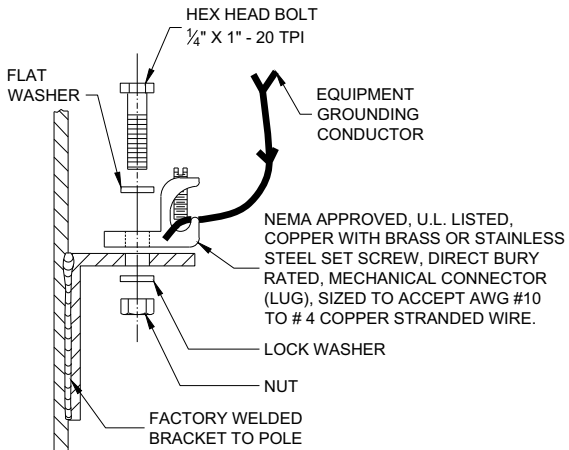
- ⑧ FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



STRUCTURAL IDENTIFICATION  
PLAQUE PLACEMENT

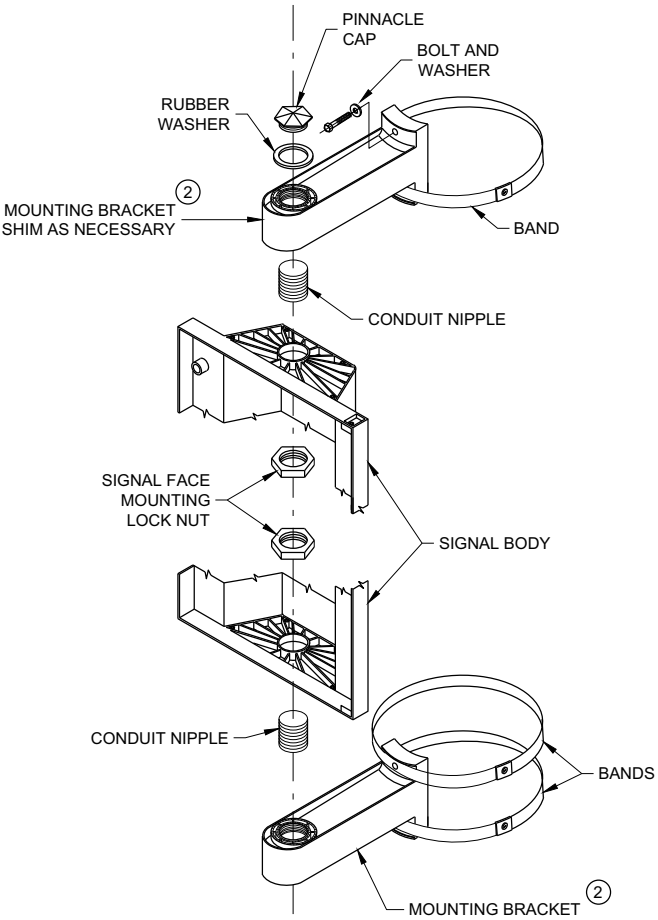


SIGNAL FACE MOUNTING BRACKET  
DETAIL FOR MONOTUBE ARM  
(MOUNT PER MANFACTURER'S RECOMMENDATION)

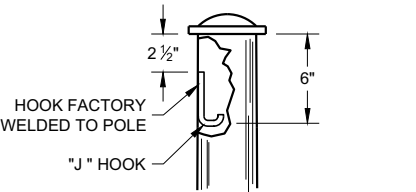


TYPICAL GROUNDING  
CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL  
MOUNTING DETAIL



TYPICAL "J" HOOK  
WIRE SUPPORT

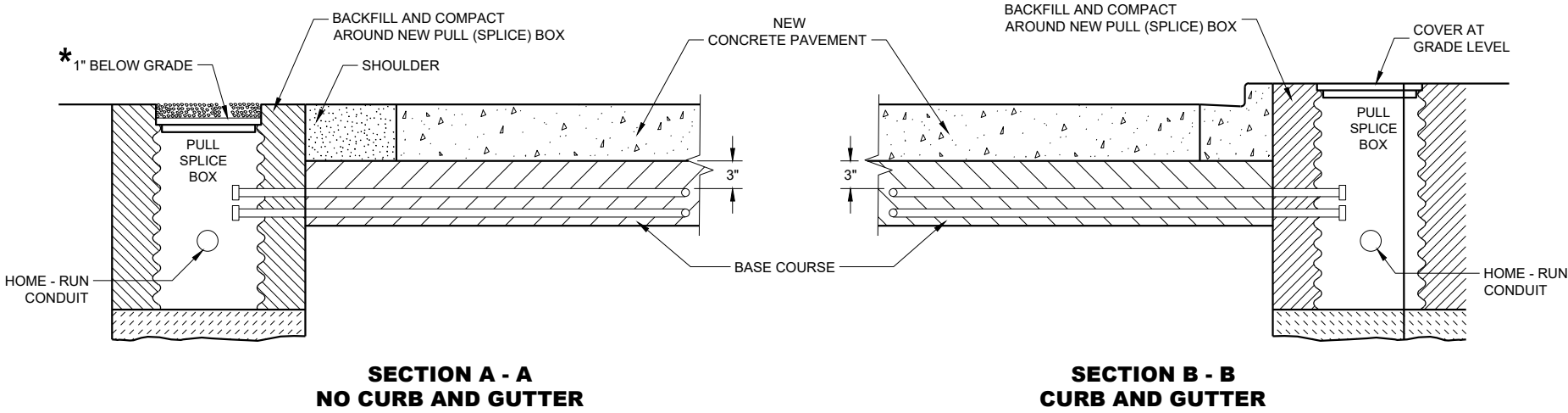
GENERAL NOTES AND  
HARDWARE FOR TYPES 9,10,  
9/10 SPECIAL, 12 AND 13  
POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER 217

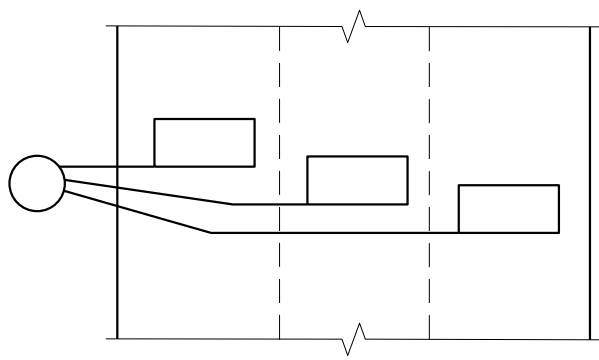
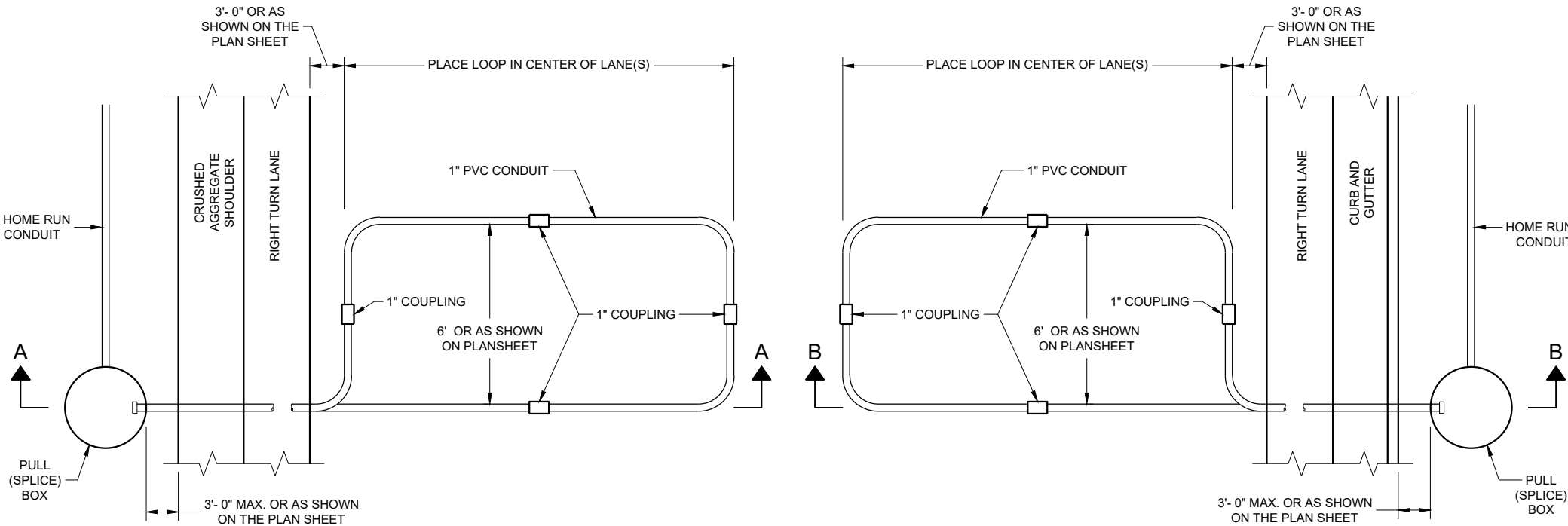
FHWA





\* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

**LOOP DETECTOR INSTALLATION DETAIL**



**MULTI-LANE  
INSTALLATION**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

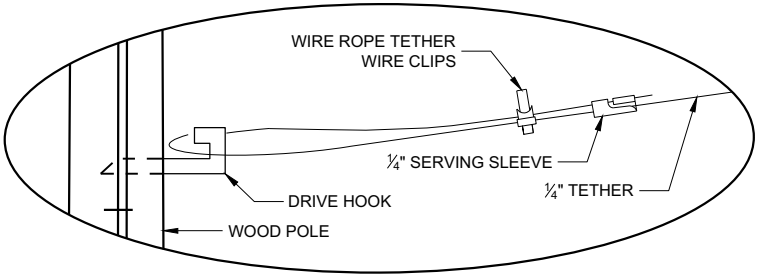
**LOOP DETECTOR INSTALLED  
IN BASE COURSE WITH  
PULL (SPLICE) BOX OFF  
ROADWAY (OPTION 2)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGI 218  
FHWA



| MINIMUM POLE LENGTHS | POLE BURIAL DEPTHS |
|----------------------|--------------------|
| 25'                  | 5'                 |
| 30'                  | 6'                 |
| 35'                  | 7'                 |
| 40'                  | 8'                 |
| 45'                  | 9'                 |

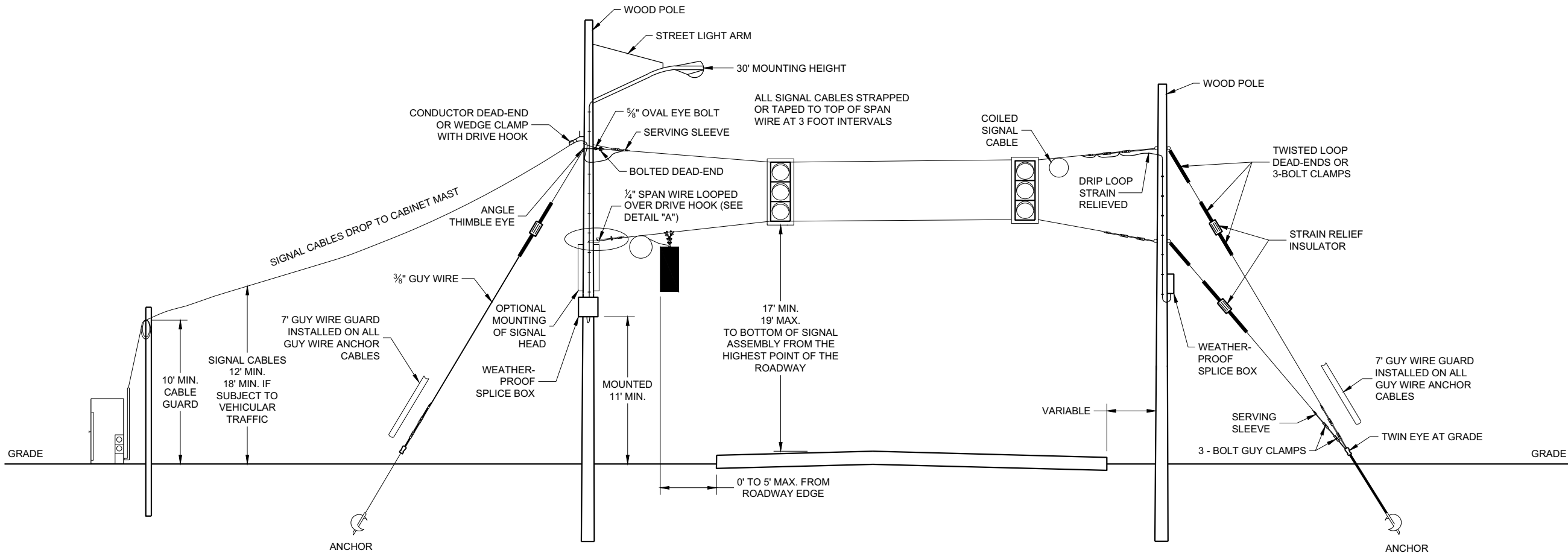


DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

- WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
- SIGNAL FACES:
  - ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
- SPAN WIRE:
  - EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE  
TEMPORARY SIGNALS

SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL

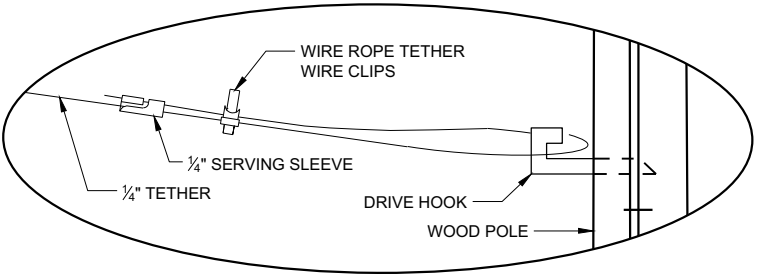
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGI 219

FHWA



| MINIMUM POLE LENGTHS | CLASS | POLE BURIAL DEPTHS |
|----------------------|-------|--------------------|
| 25'                  | V     | 5'                 |
| 30'                  | V     | 6'                 |
| 35'                  | IV    | 7'                 |
| 40'                  | IV    | 8'                 |
| 45'                  | IV    | 9'                 |

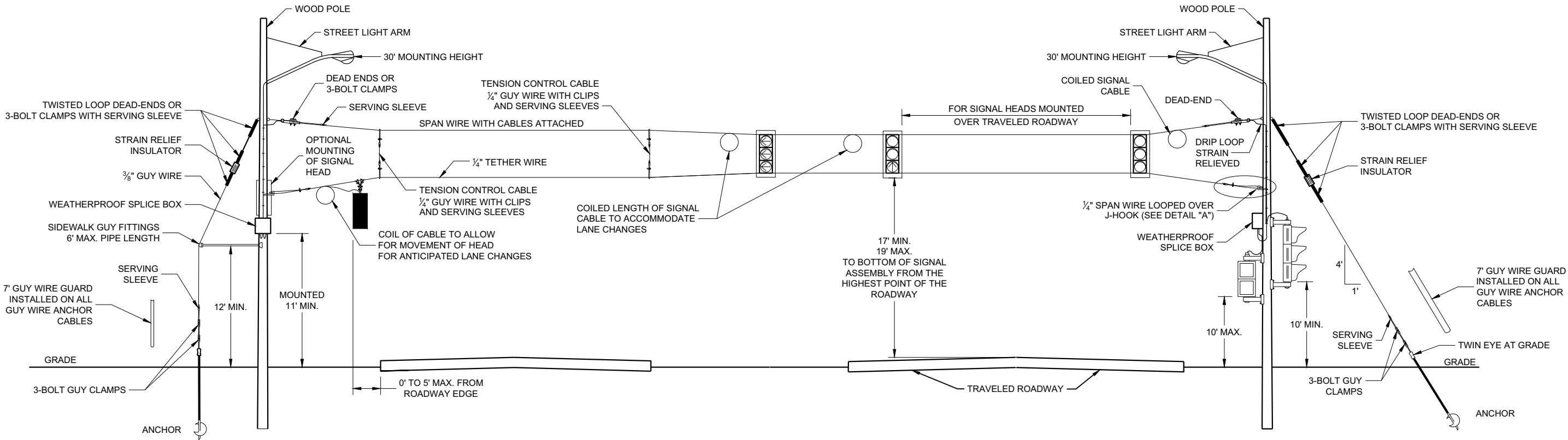


DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

- WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
- SIGNAL FACES:
  - ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
  - FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
- SPAN WIRE:
  - EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE  
TEMPORARY SIGNALS  
4 LANE ROADWAYS

SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL

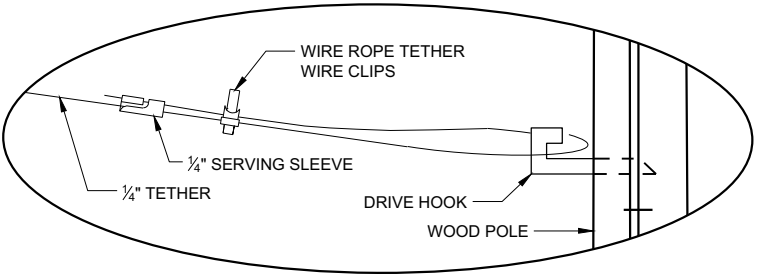
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGI 220

FHWA



| MINIMUM POLE LENGTHS | CLASS | POLE BURIAL DEPTHS |
|----------------------|-------|--------------------|
| 25'                  | V     | 5'                 |
| 30'                  | V     | 6'                 |
| 35'                  | IV    | 7'                 |
| 40'                  | IV    | 8'                 |
| 45'                  | IV    | 9'                 |

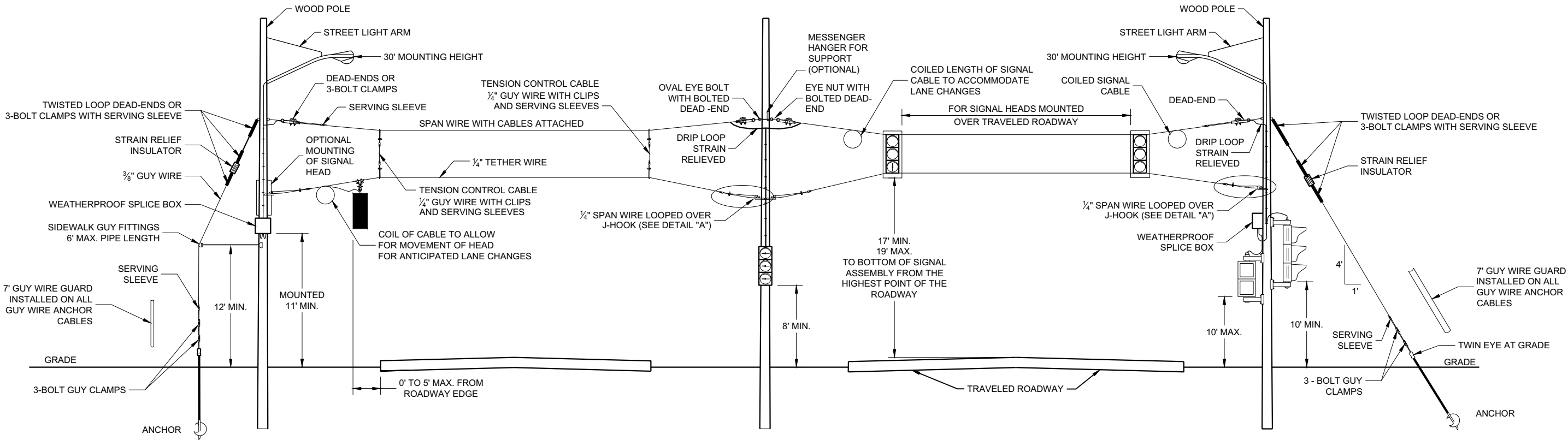


DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

- WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
- SIGNAL FACES:
  - ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
  - FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
- SPAN WIRE:
  - EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE  
TEMPORARY SIGNALS  
4 LANE ROADWAYS

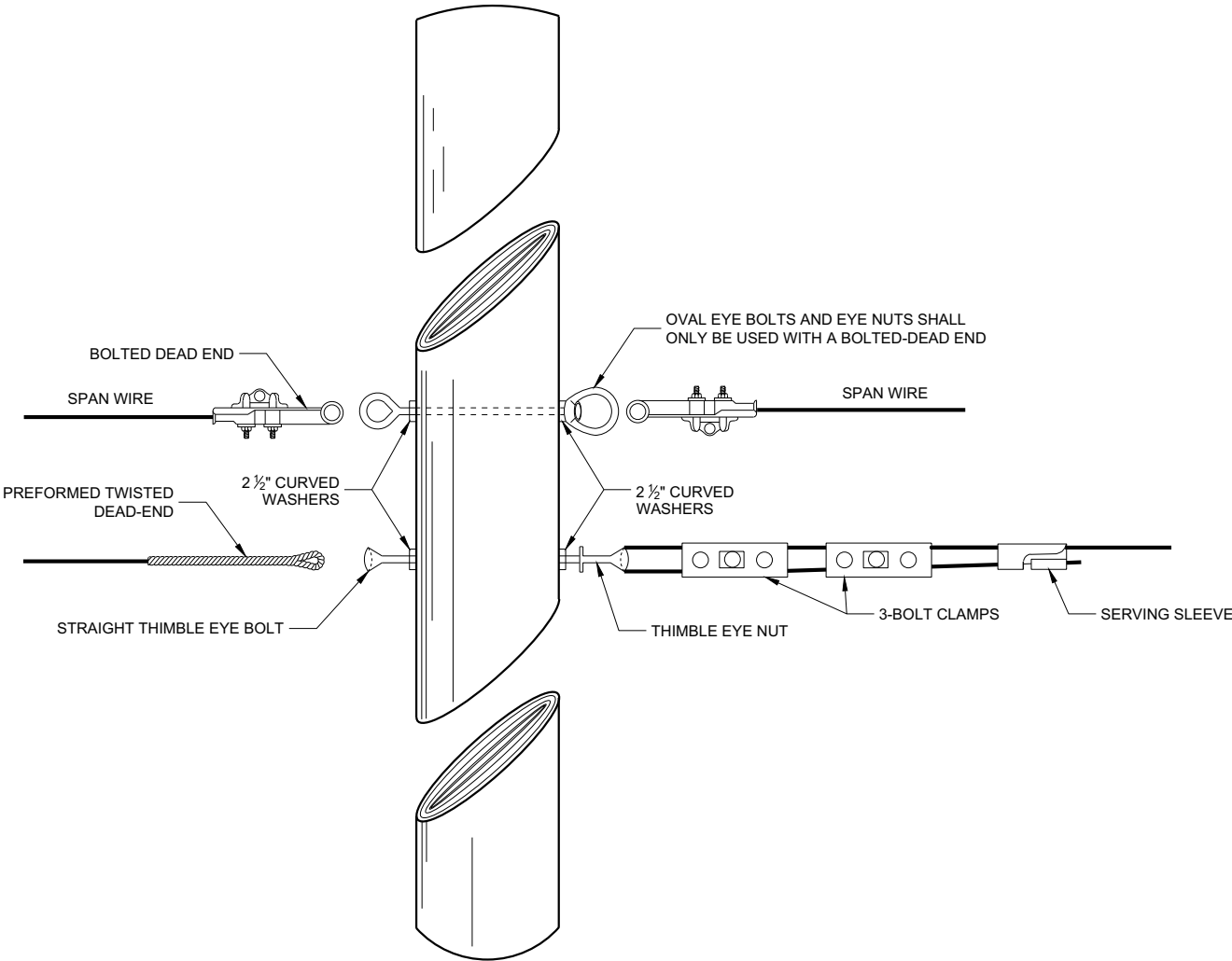
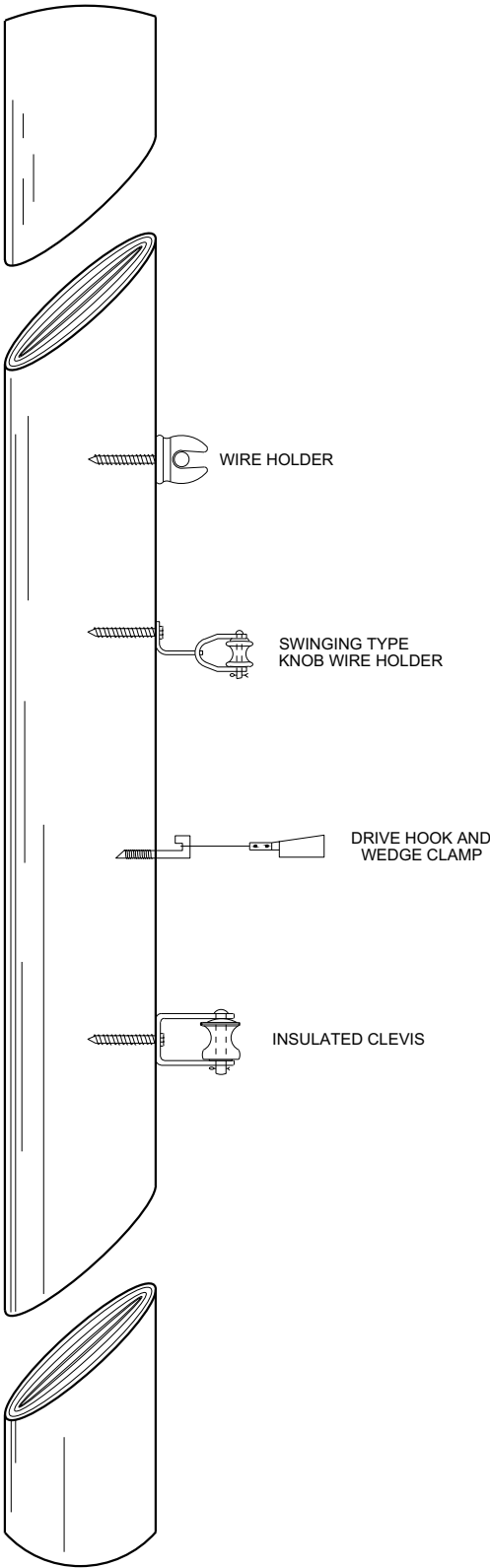
SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGI 221

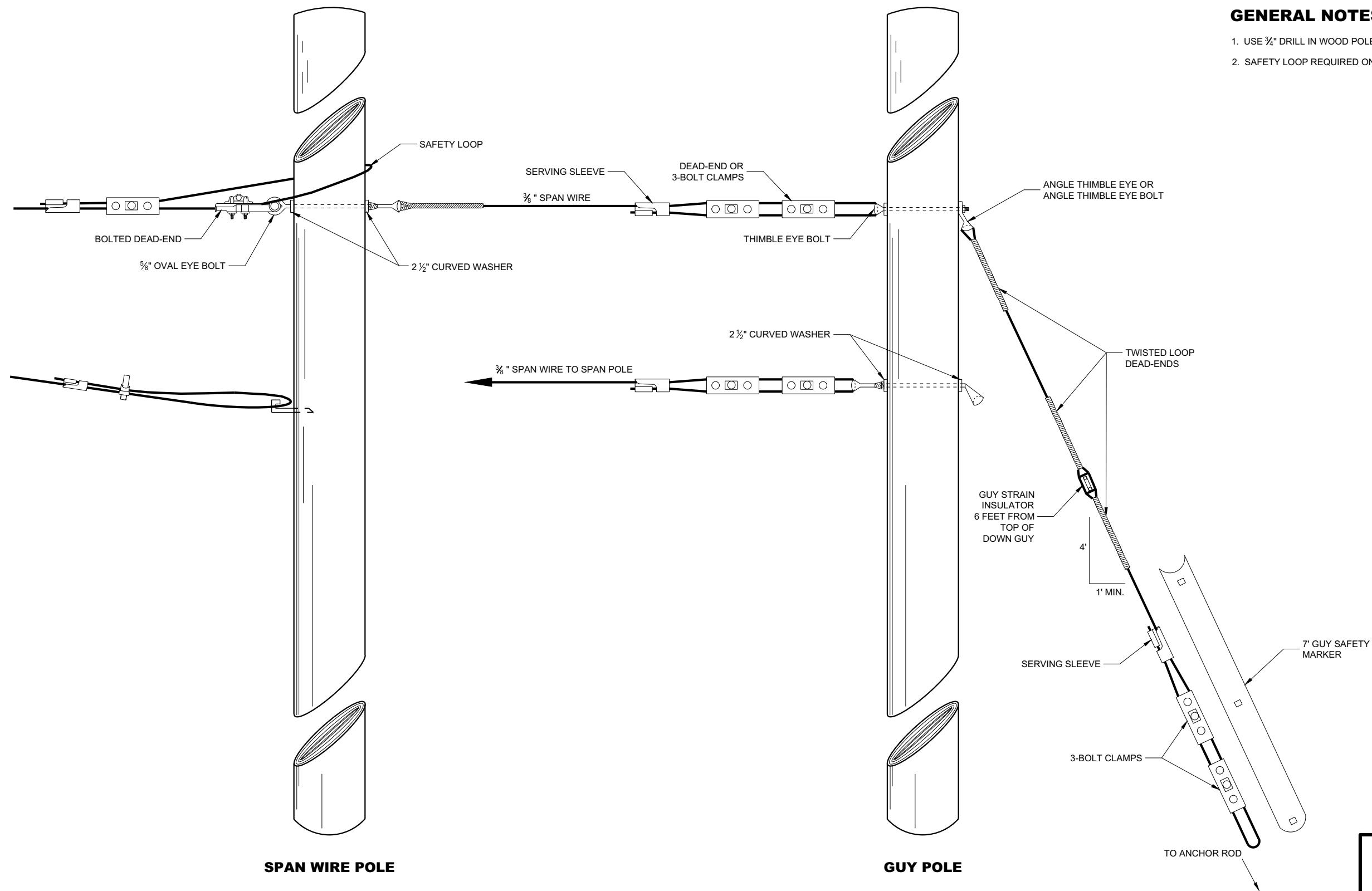
FHWA





| SPAN WIRE TEMPORARY TRAFFIC SIGNAL                 |                                                                   |     |
|----------------------------------------------------|-------------------------------------------------------------------|-----|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                                   |     |
| APPROVED<br>June 2015<br>DATE                      | /S/ Ahmet Demerbilek<br>ROADWAY STANDARDS DEVELOPMENT<br>ENGINEER | 222 |
| FHWA                                               |                                                                   |     |





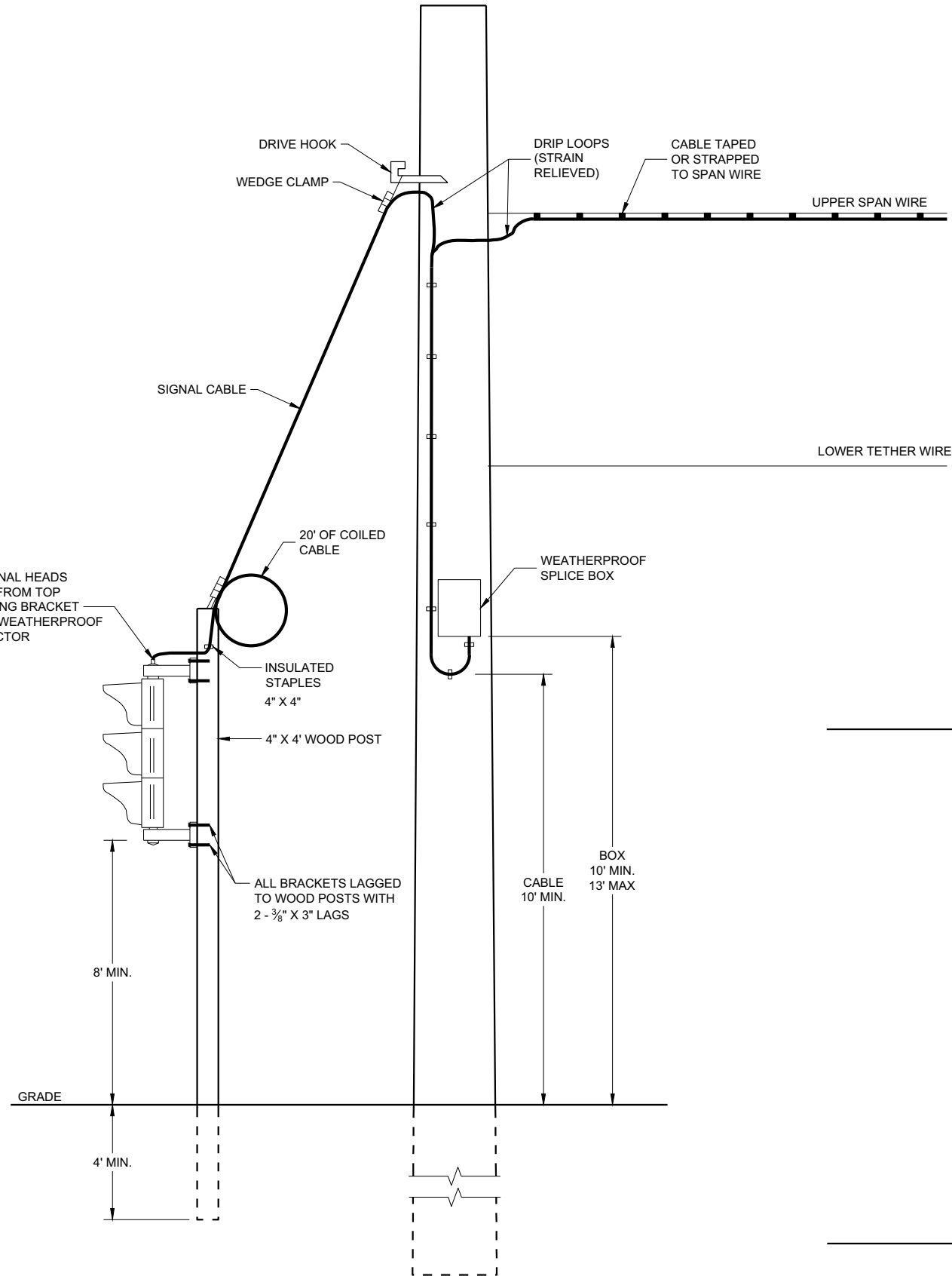
TYPICAL DEAD-ENDINGS OR GUYING

GENERAL NOTES

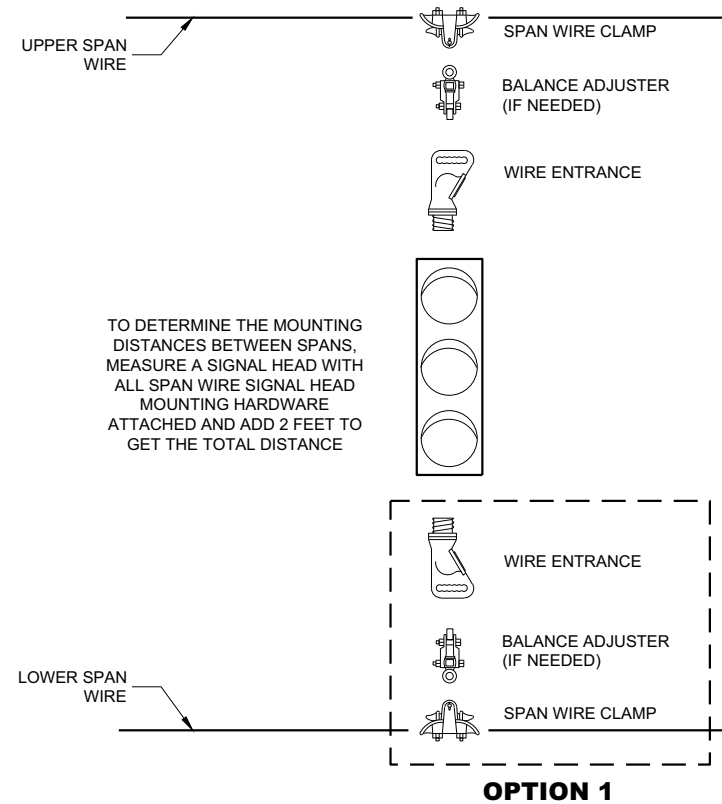
1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.

|                                                    |                                                                    |
|----------------------------------------------------|--------------------------------------------------------------------|
| <b>SPAN WIRE TEMPORARY TRAFFIC SIGNAL</b>          |                                                                    |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                                    |
| APPROVED<br>June 2015<br>DATE                      | /S/ Ahmet Demerbilek<br>ROADWAY STANDARDS DEVELOPMENT ENGINEER 223 |
| FHWA                                               |                                                                    |

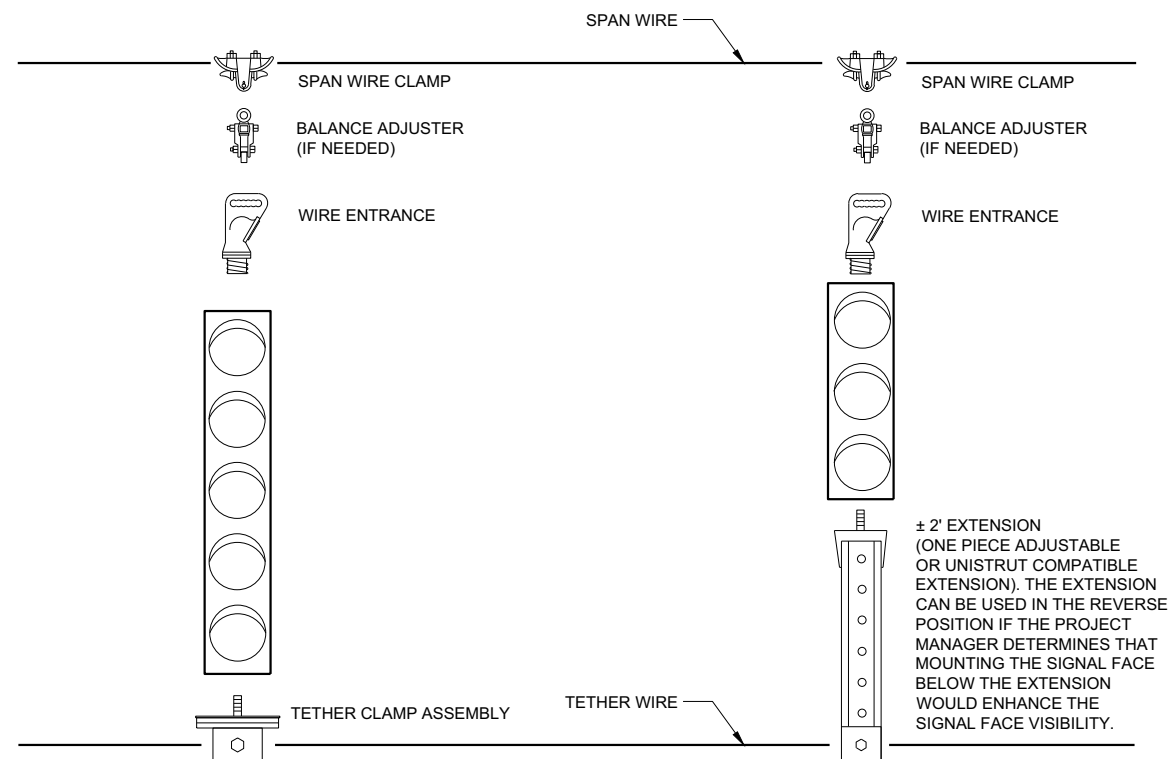




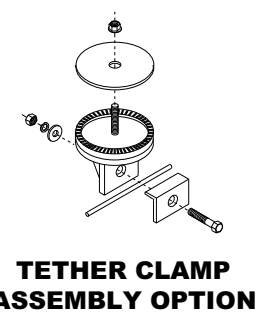
TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



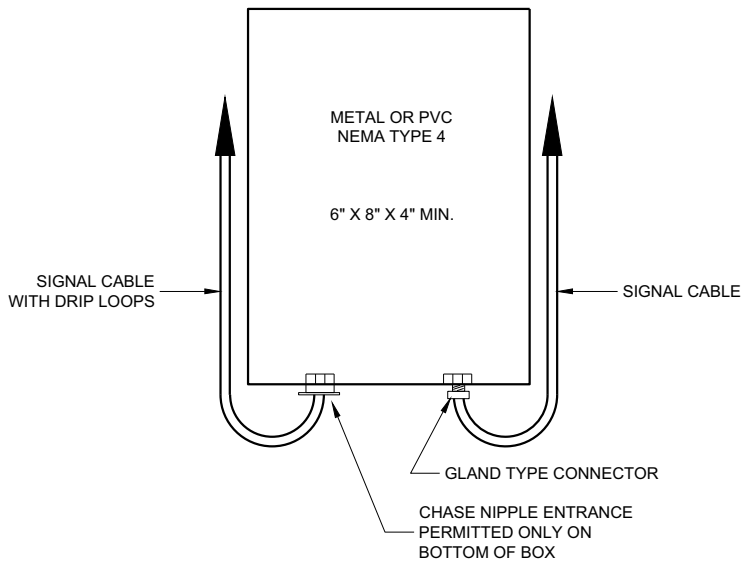
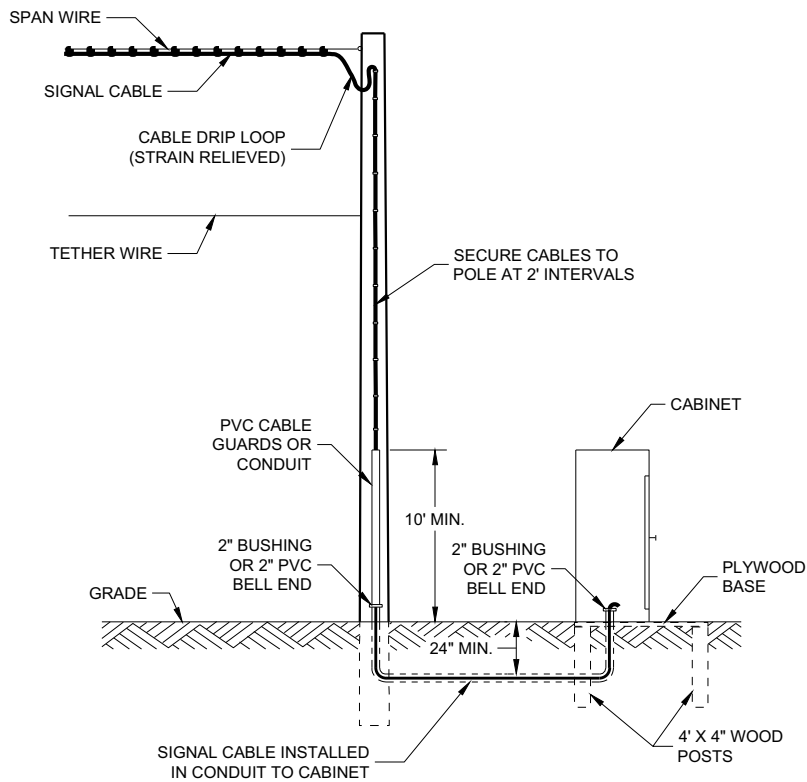
5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE



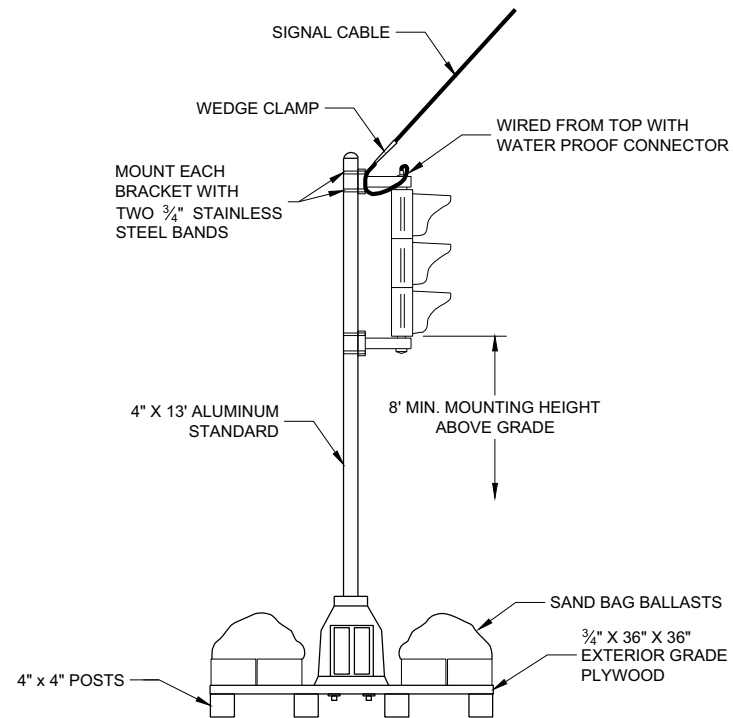
TETHER CLAMP ASSEMBLY OPTION

| SPAN WIRE TEMPORARY TRAFFIC SIGNAL                 |                                                                   |     |  |
|----------------------------------------------------|-------------------------------------------------------------------|-----|--|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                                   |     |  |
| APPROVED<br>June 2015<br>DATE                      | /S/ Ahmet Demerbilek<br>ROADWAY STANDARDS DEVELOPMENT<br>ENGINEER | 224 |  |
| FHWA                                               |                                                                   |     |  |

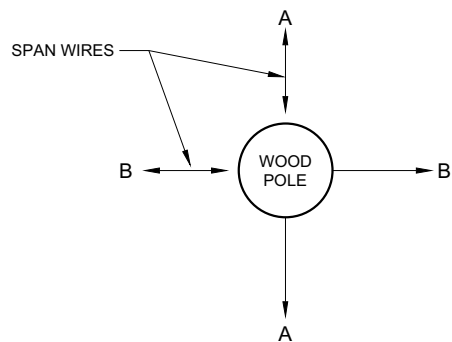




**SPLICE BOX**

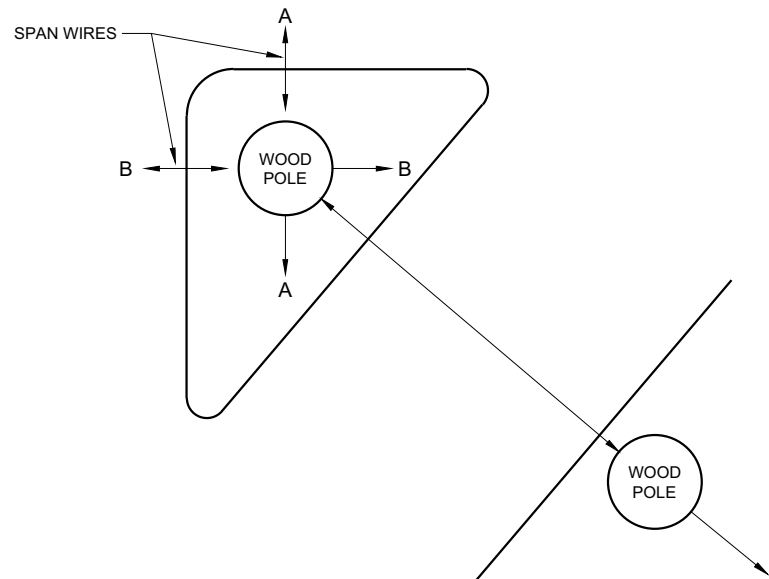


**TYPICAL SKID TYPE TEMPORARY**

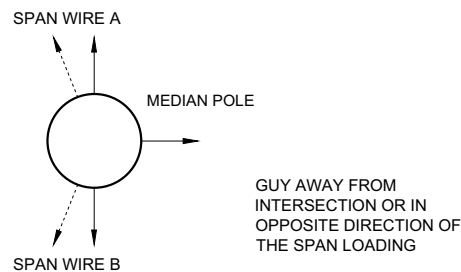


**CORNER POLES**

ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE



**ISLAND POLES**



**MEDIAN POLES**

GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

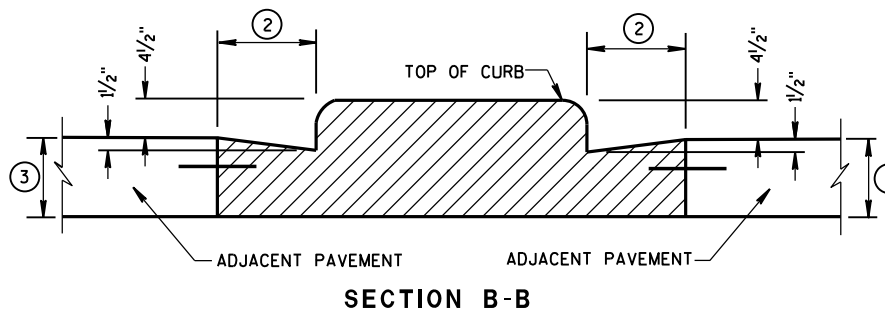
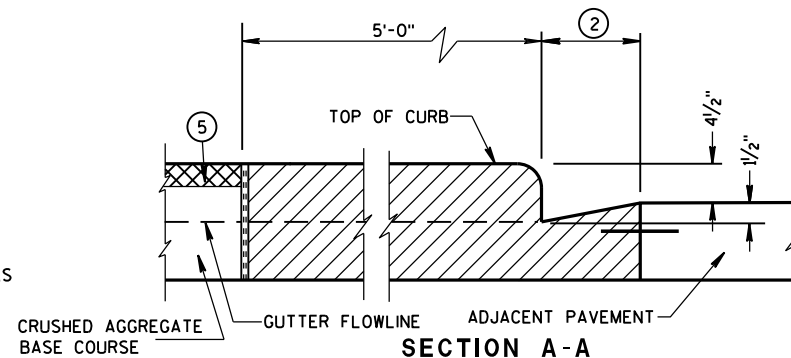
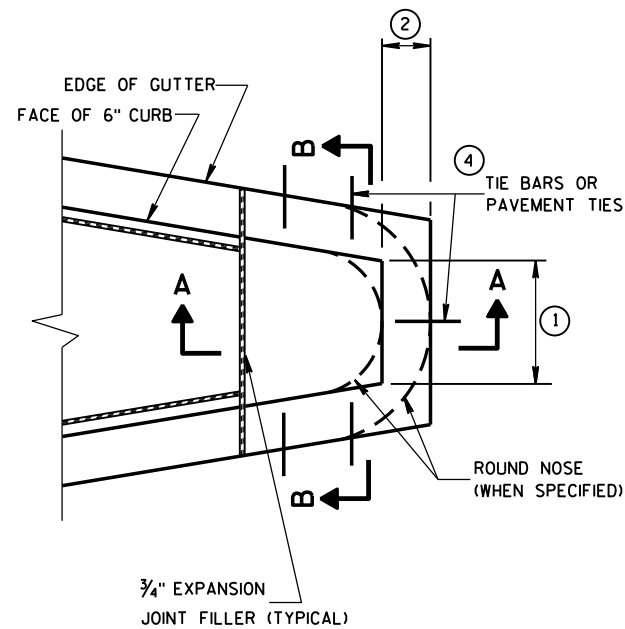
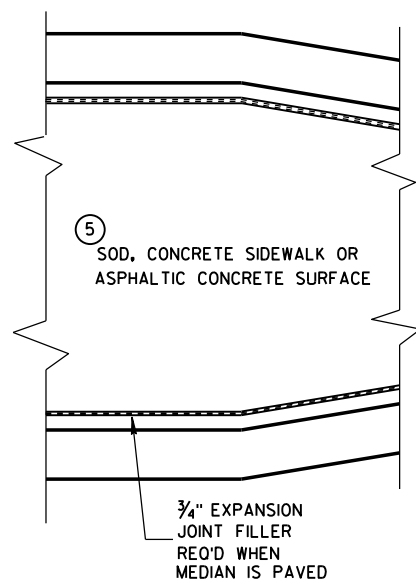
**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

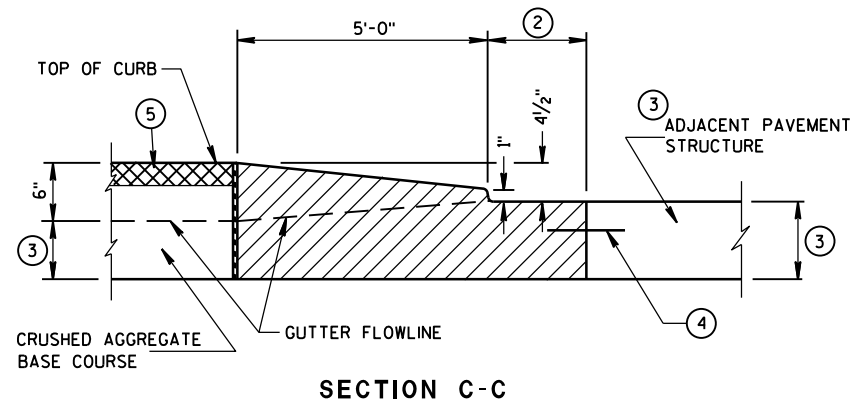
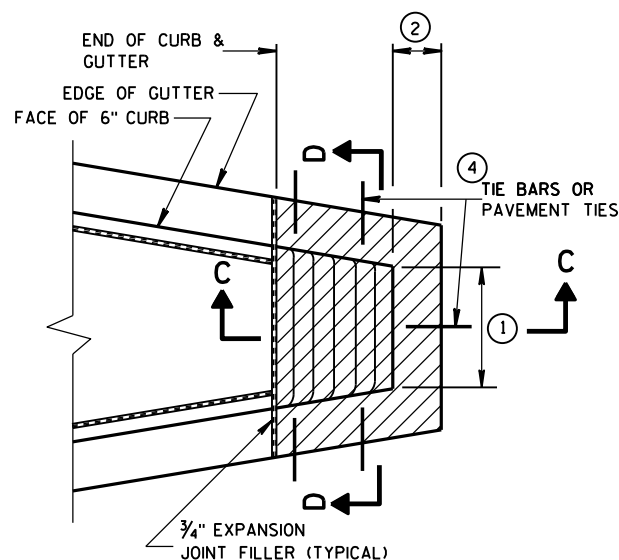
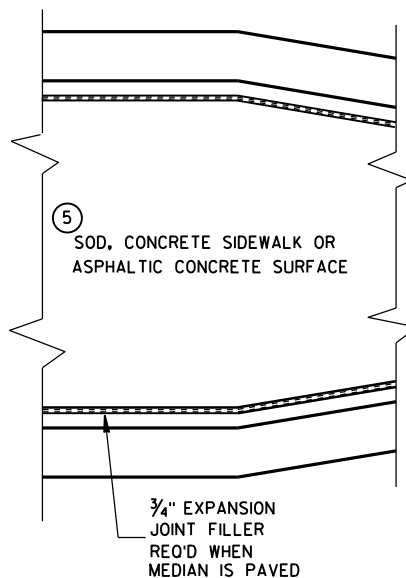
APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE ROADWAY STANDARDS DEVE 225  
ENGINEER

FHWA

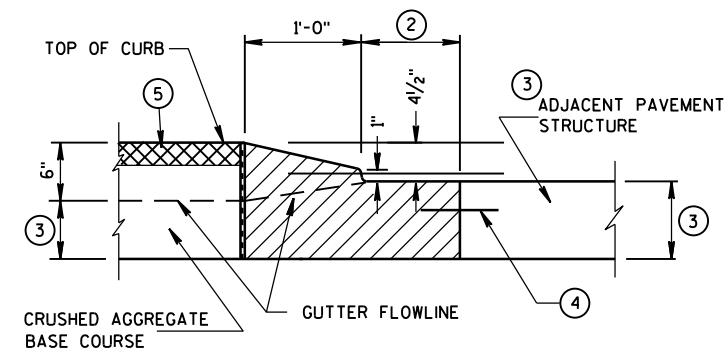
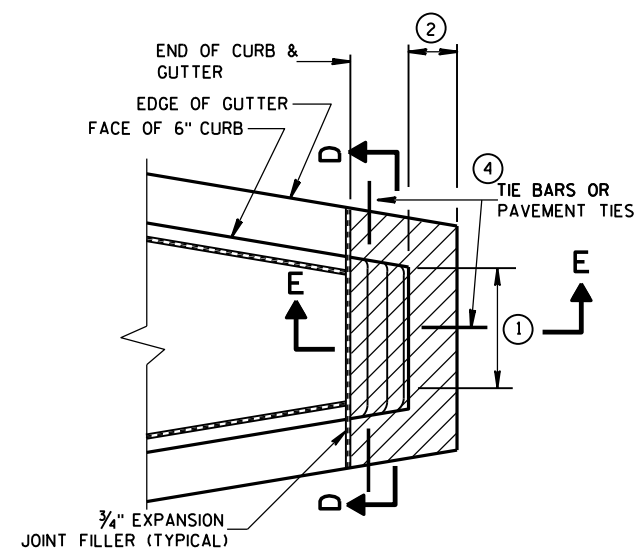




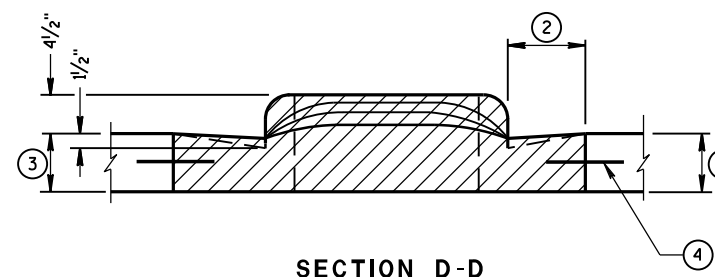
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006

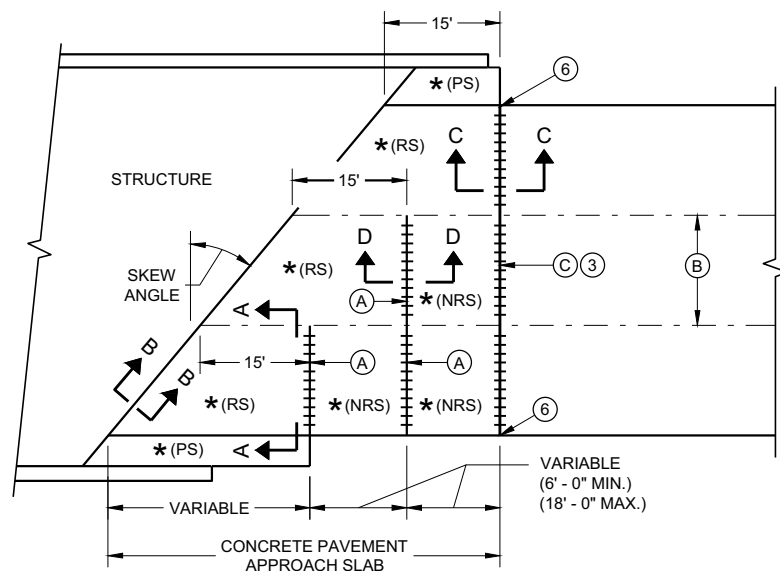
DATE

FHWA

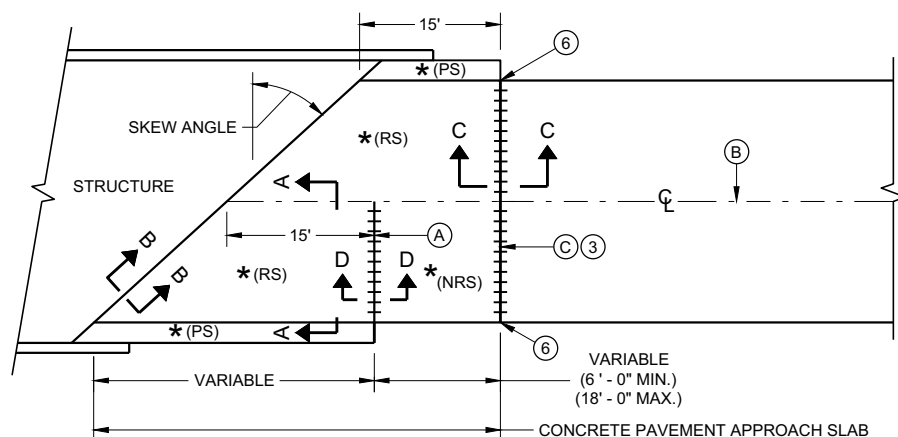
/S/ Jerry H. Zogg  
ROADWAY STANDARDS D 226  
ENGINEER

4T

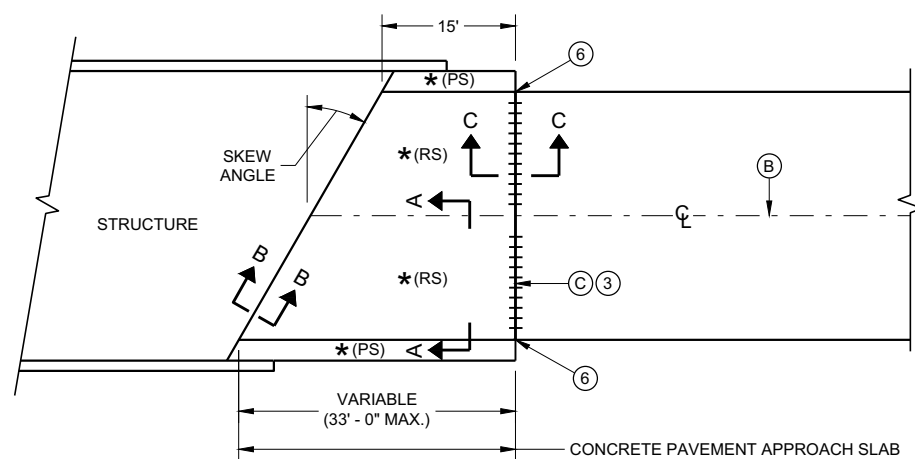




**SKewed APPROACH  
(PAVEMENT MORE THAN TWO LANES)**



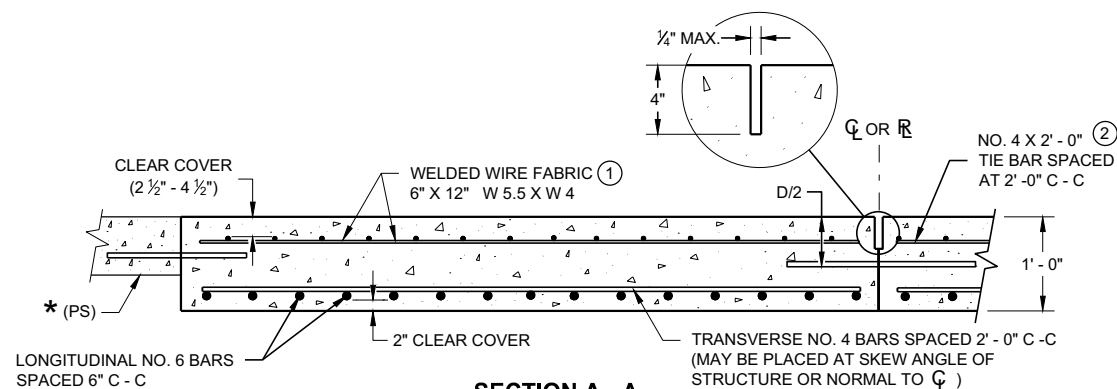
**SKews > 20°  
(PAVEMENT WIDTH ≤ 30')**



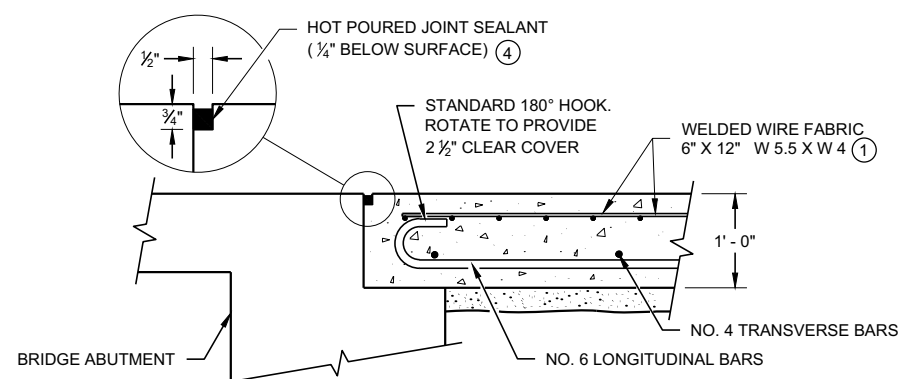
**SKews ≤ 20°  
(PAVEMENT WIDTH ≤ 30')**

**APPROACH SLAB AND ADJACENT PAVEMENT**

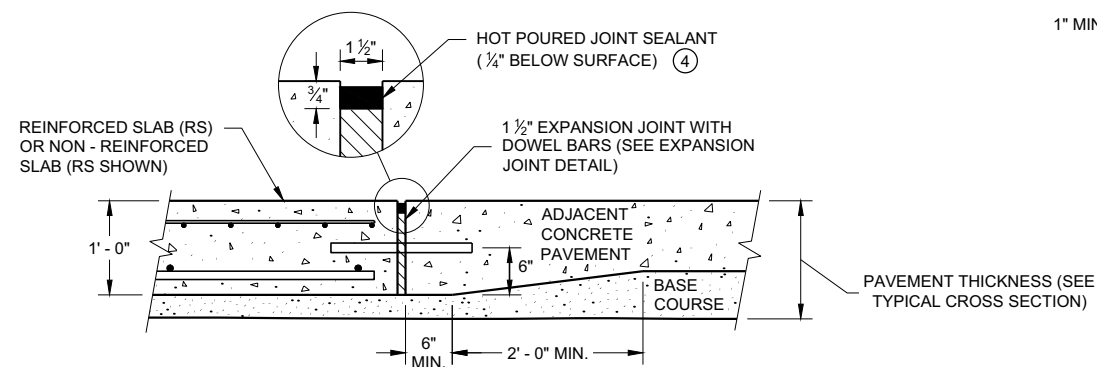
- \* (RS) = REINFORCED CONCRETE SLAB
- \* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- \* (NRS) = NON - REINFORCED CONCRETE SLAB
- \*\*\* STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A  
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B  
BEND DETAIL  
BOTTOM REINFORCEMENT**



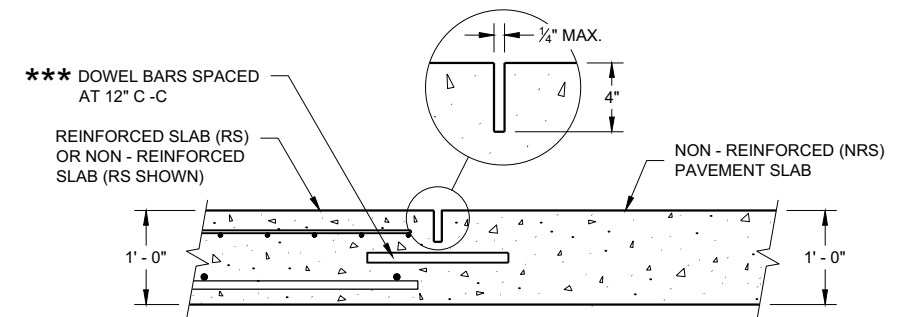
**SECTION C - C  
TRANSITION DETAIL  
APPROACH SLAB TO ADJACENT PAVEMENT**

## GENERAL NOTES

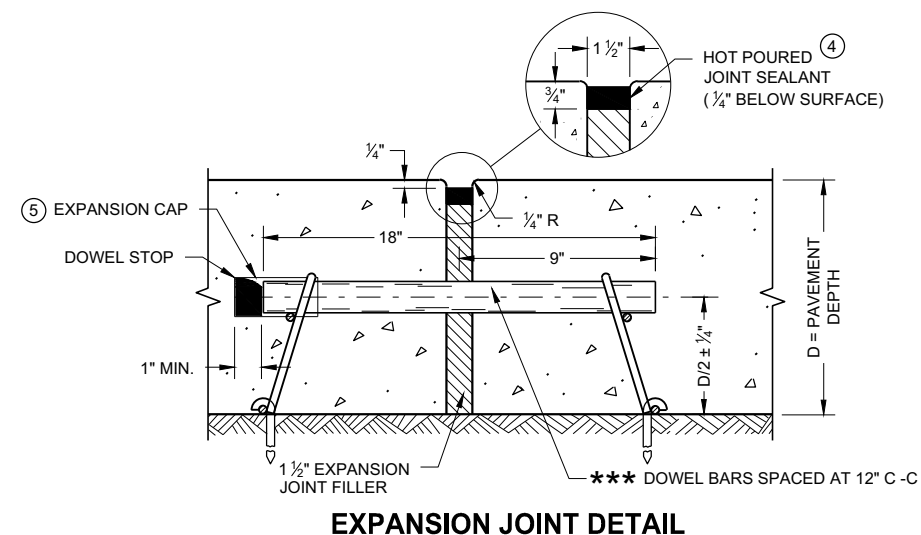
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
- ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- (A) STANDARD CONTRACTION JOINT NORMAL TO  $\mathcal{C}$  OR  $\mathcal{R}$ .
- (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO  $\mathcal{C}$  OR  $\mathcal{R}$ .



**SECTION D - D  
CONTRACTION JOINT**



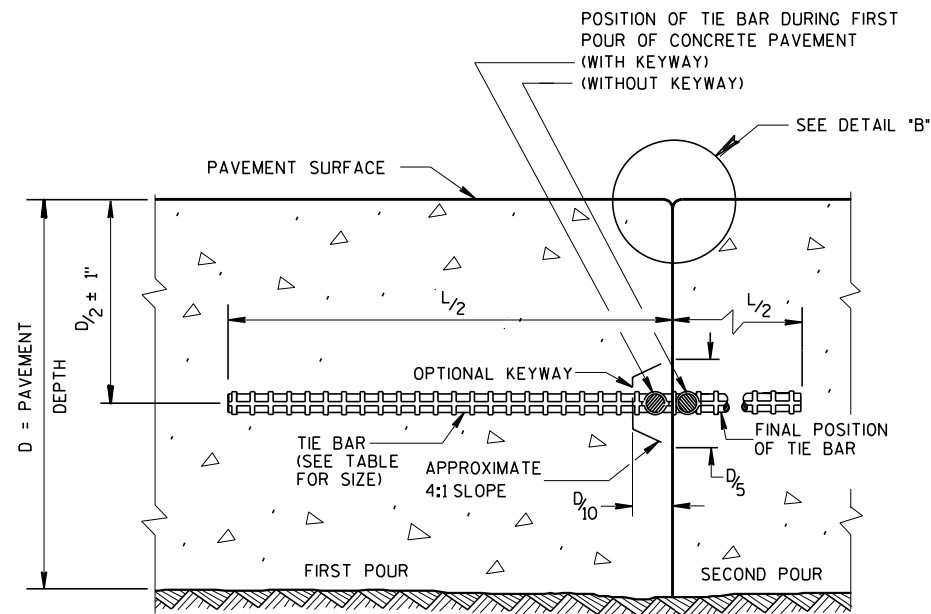
**EXPANSION JOINT DETAIL**

## CONCRETE PAVEMENT APPROACH SLAB

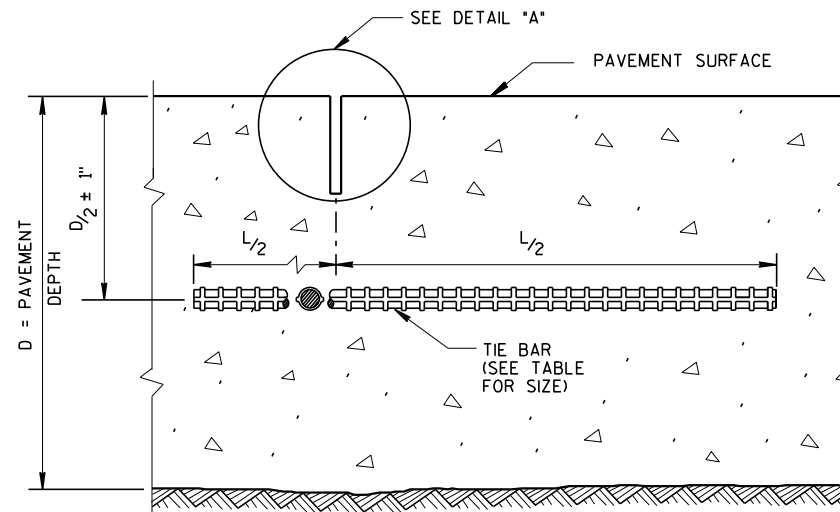
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR 227  
FHWA





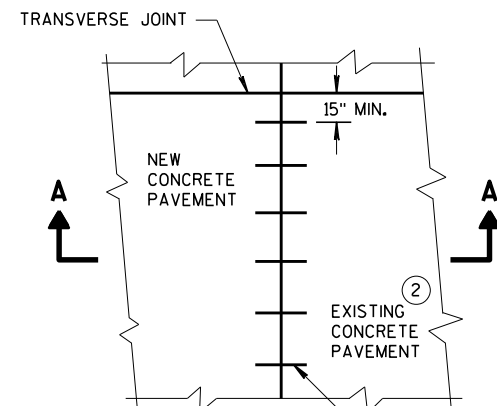
CONSTRUCTION JOINT



SAWED JOINT

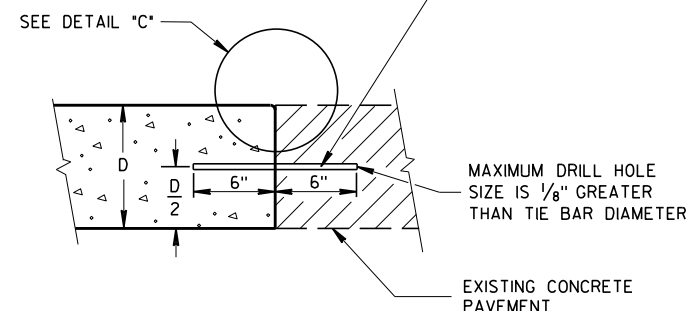
GENERAL NOTES

- CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
- 1 ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
  - 2 PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

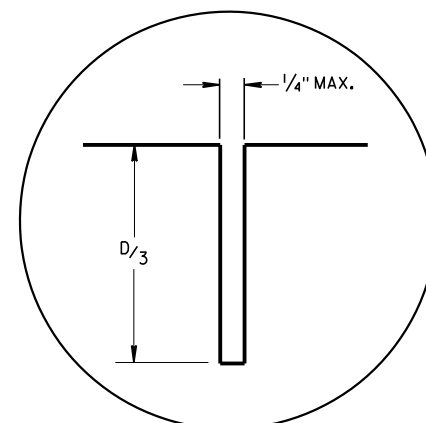


PLAN VIEW

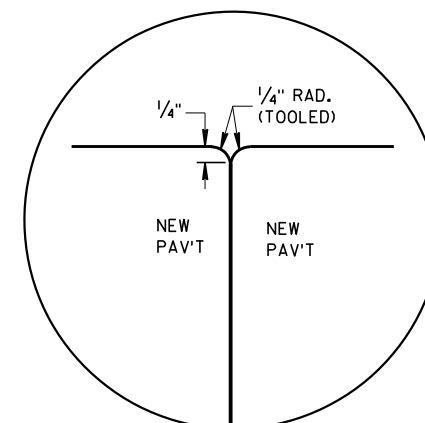
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



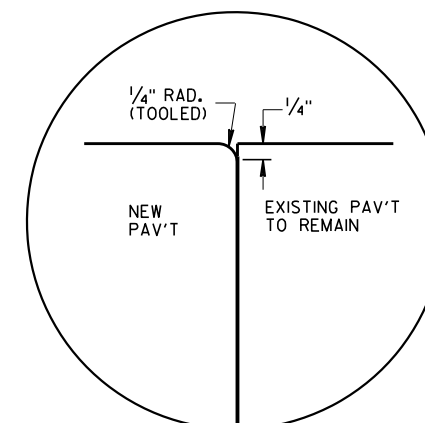
SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



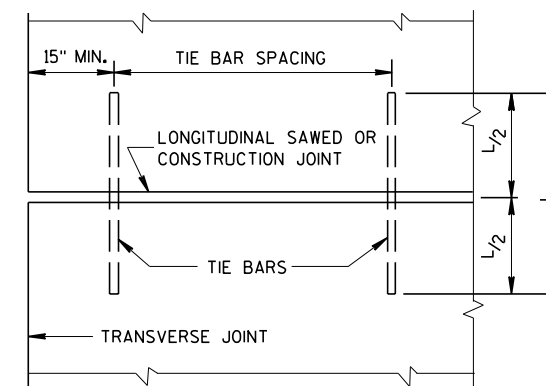
DETAIL "C"

TIE BAR TABLE

| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|--------------------|--------------|--------------------|----------------------|
| < 10 1/2"          | NO. 4        | 30"                | 36"                  |
| ≥ 10 1/2"          | NO. 5        | 36"                | 36"                  |
|                    | NO. 4 *      | 30"                | 24" **               |

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



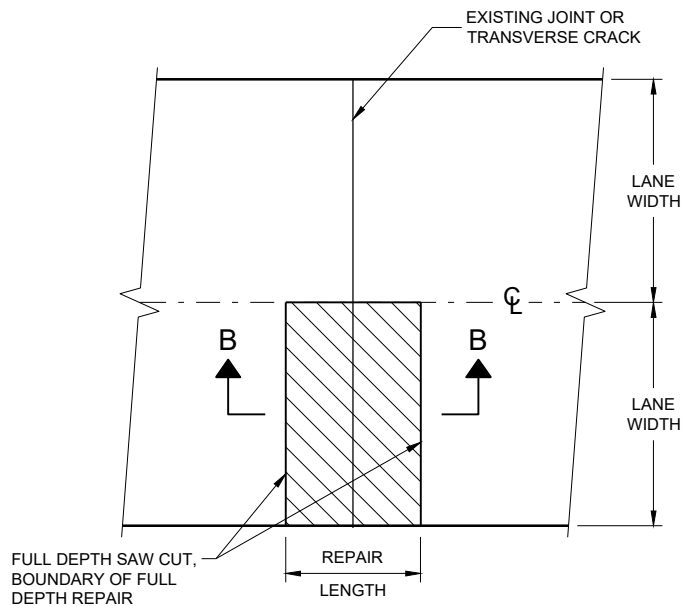
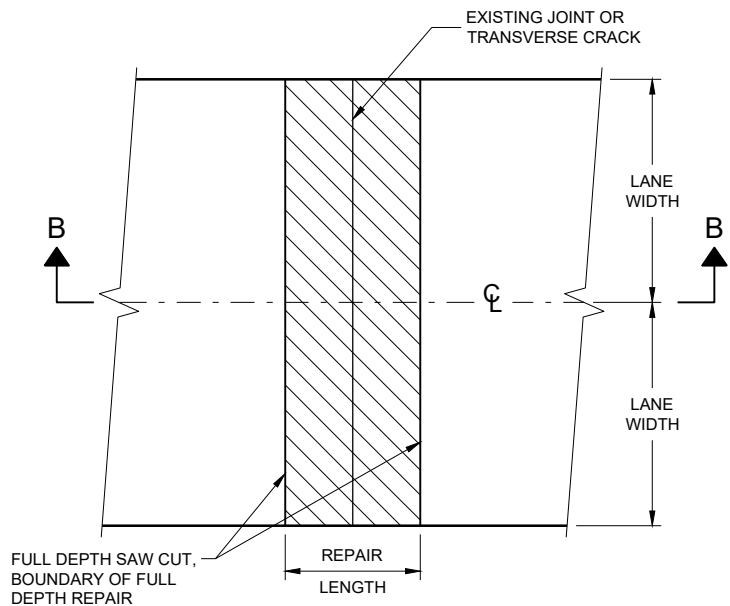
PLAN VIEW  
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES

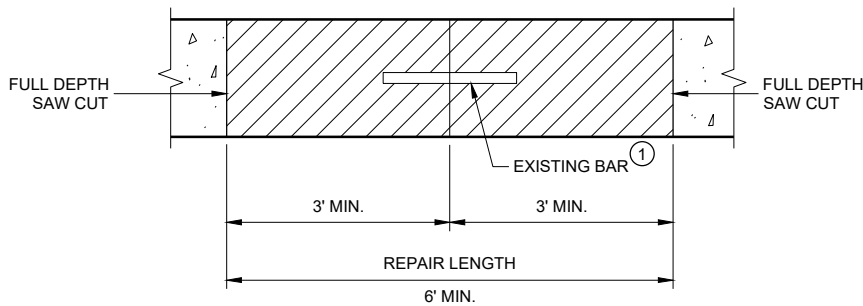
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kern  
DATE PAVEMENT SUPE 228  
FHWA





**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



**CONCRETE REMOVAL**

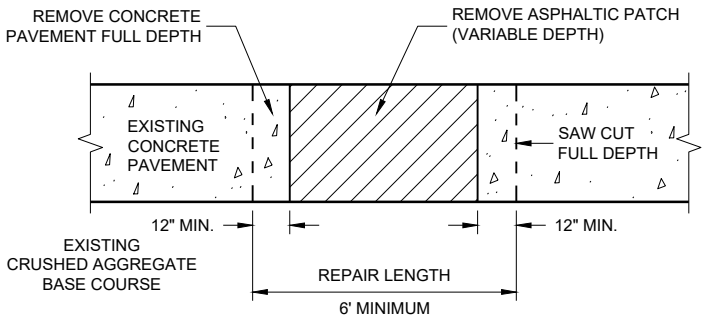
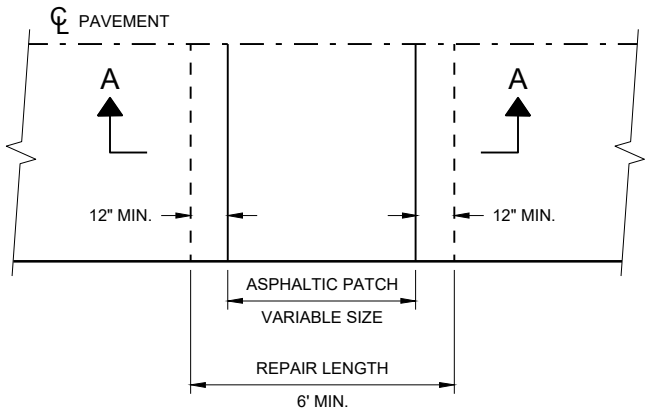
**GENERAL NOTES**

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.

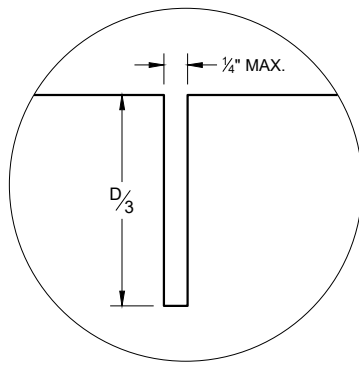


**HMA PATCH REMOVAL**

**CONCRETE PAVEMENT  
REPAIR AND REPLACEMENT**

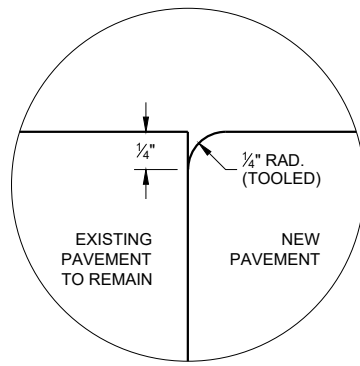
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



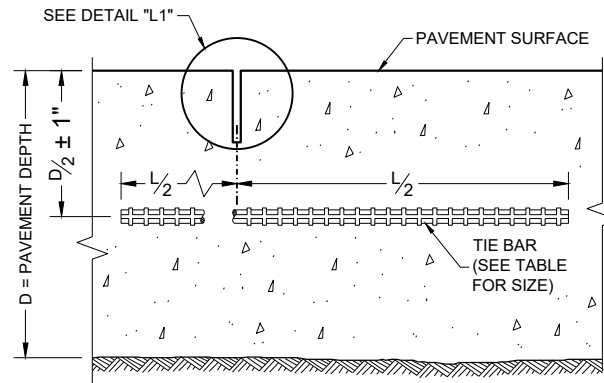


C1

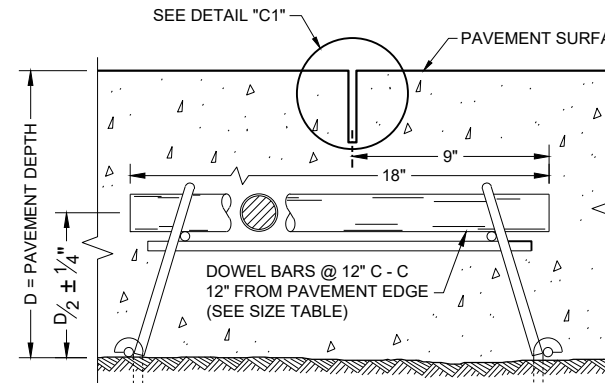
**TRANSVERSE JOINTS**



C2



**SECTION C - C  
SAWED LONGITUDINAL JOINT**



**SECTION F - F  
DOWELED CONTRACTION JOINT**

**GENERAL NOTES**

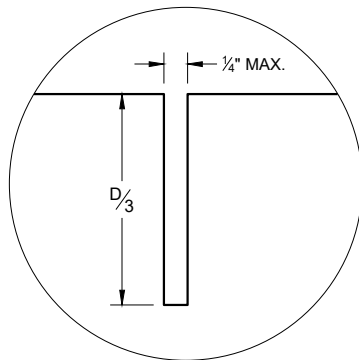
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

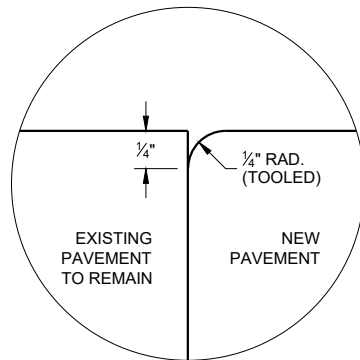
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

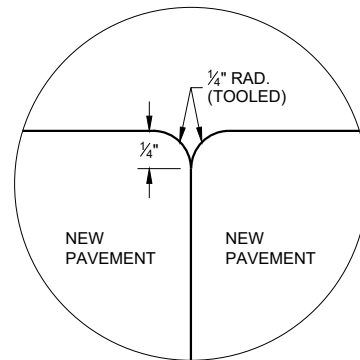


L1

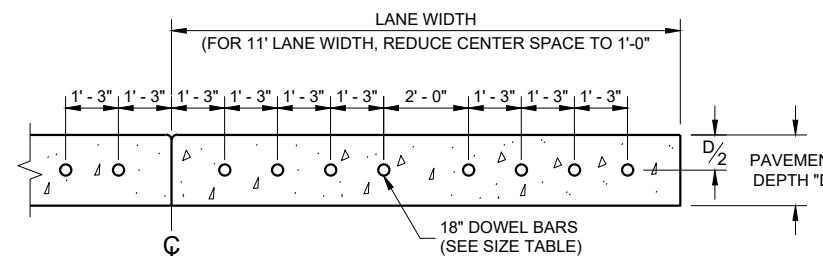


L2

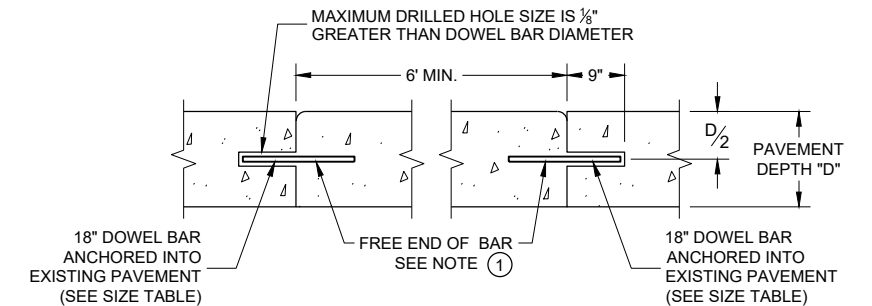
**LONGITUDINAL JOINTS**



L3



**SECTION E - E  
DRILLED DOWEL BAR CONSTRUCTION JOINT**



**SECTION D - D**

**TIE BAR TABLE**

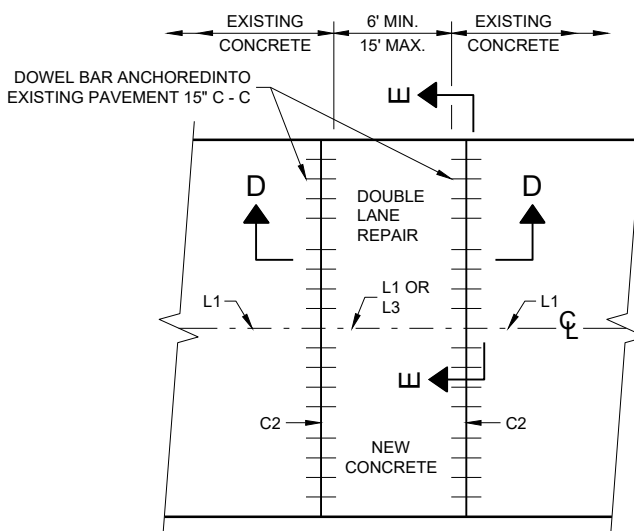
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|--------------------|--------------|--------------------|----------------------|
| < 10 1/2"          | NO. 4        | 30"                | 36"                  |
| ≥ 10 1/2"          | NO. 5        | 36"                | 36"                  |
|                    | NO. 4 *      | 30"                | 24" **               |

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

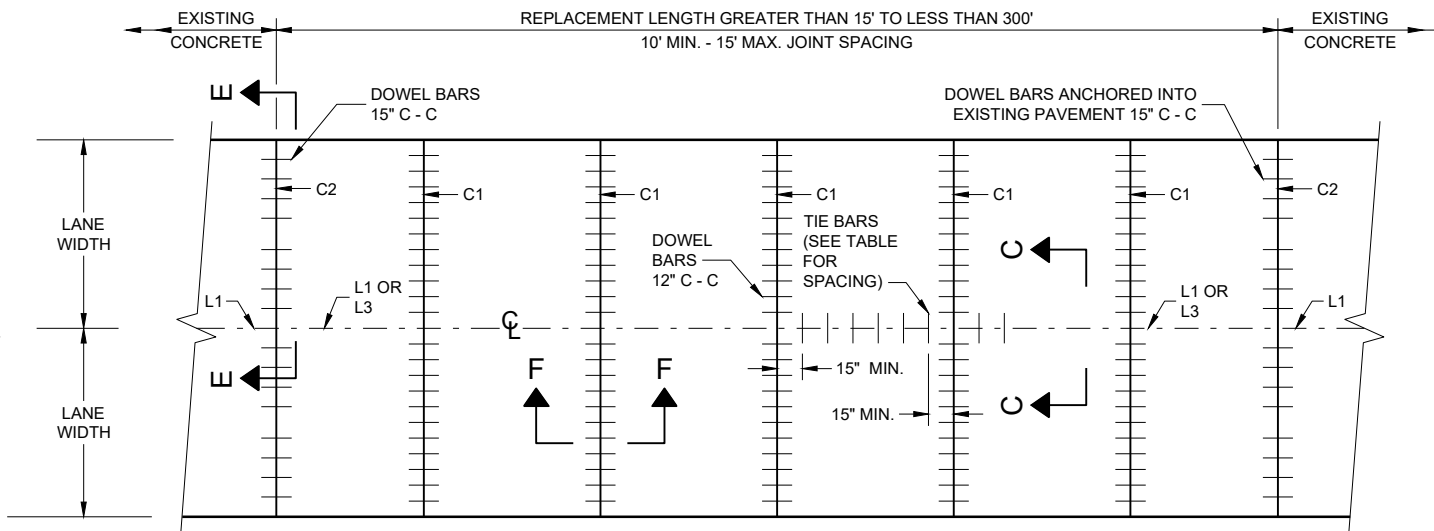
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | DRILLED DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|--------------------|--------------------|----------------------------|---------------------------|
| 6", 6 1/2"         | NONE               | NONE                       | 12'                       |
| 7", 7 1/2"         | 1"                 | 1"                         | 14'                       |
| 8" & ABOVE         | 1 1/4"             | 1 1/4"                     | 15'                       |



**PLAN VIEW  
MULTILANE CONCRETE PAVEMENT REPAIR**

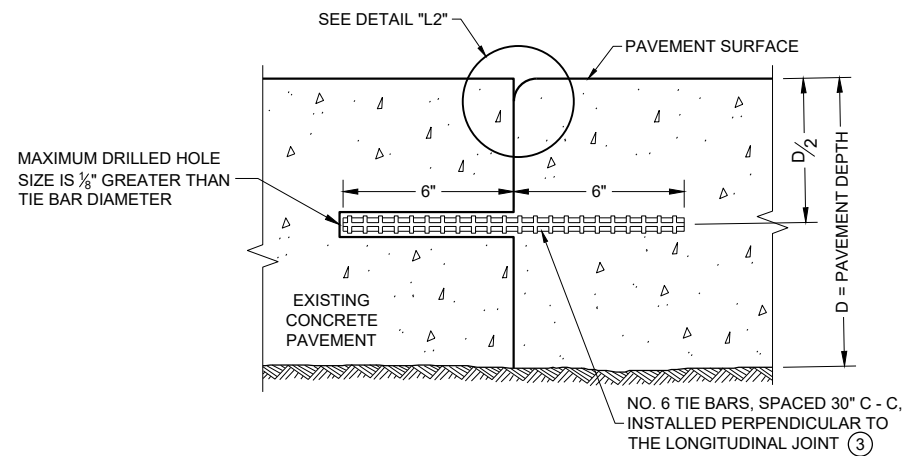


**PLAN VIEW  
MULTILANE CONCRETE PAVEMENT REPLACEMENT**

**CONCRETE PAVEMENT  
REPAIR AND REPLACEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 230

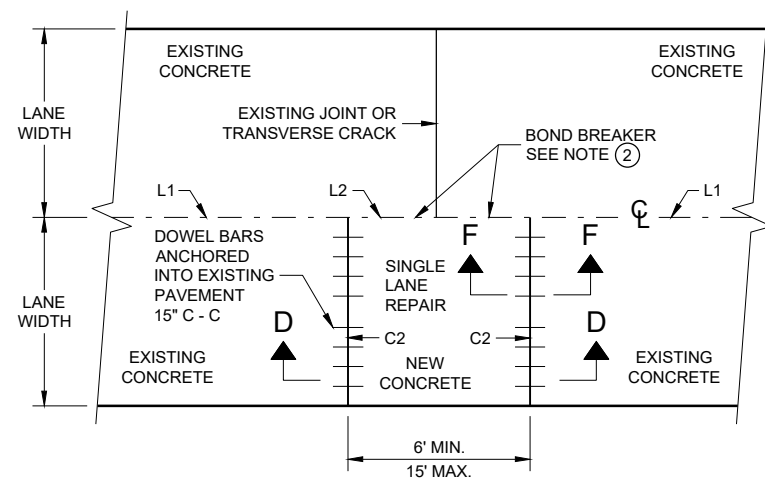




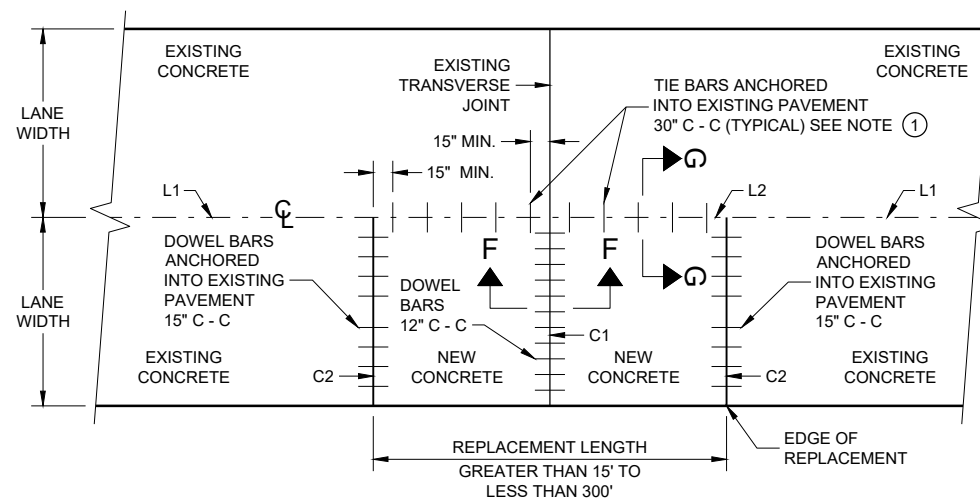
**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**

### GENERAL NOTES

- WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



**PLAN VIEW**  
**SINGLE LANE CONCRETE PAVEMENT REPAIR**



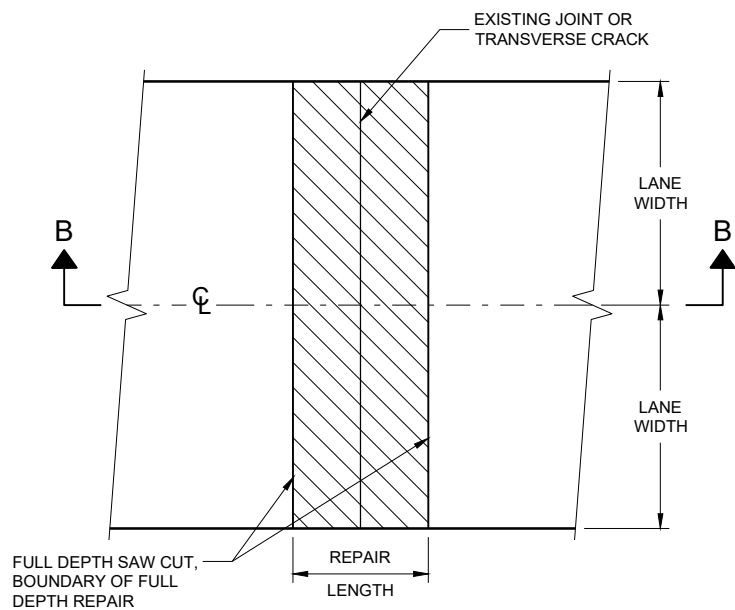
**PLAN VIEW**  
**SINGLE LANE CONCRETE PAVEMENT REPLACEMENT**

### CONCRETE REPAIR AND REPLACEMENT

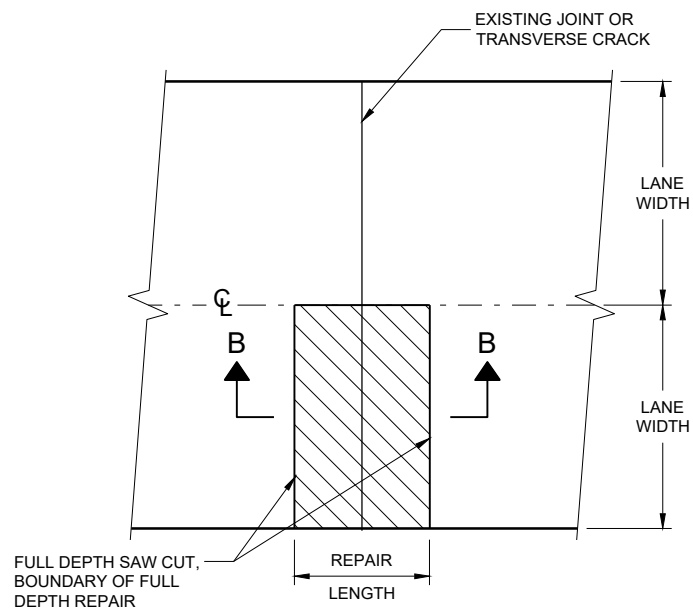
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2022 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 231  
FHWA



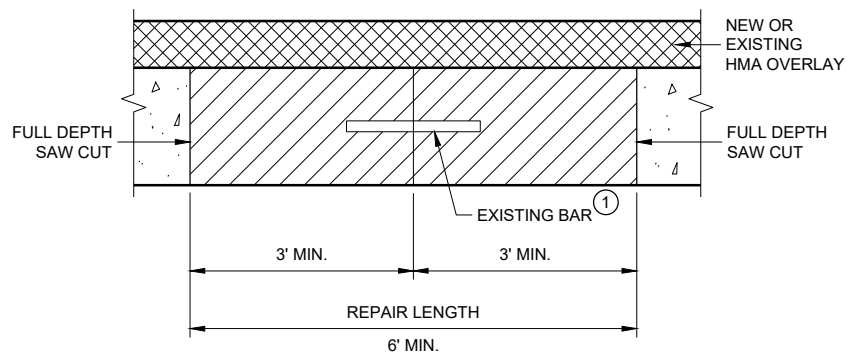


**PLAN VIEW  
DOUBLE LANE REPAIR**



**PLAN VIEW  
SINGLE LANE REPAIR**

**FULL DEPTH CONCRETE PAVEMENT REMOVAL**



**SECTION B - B  
CONCRETE REMOVAL**

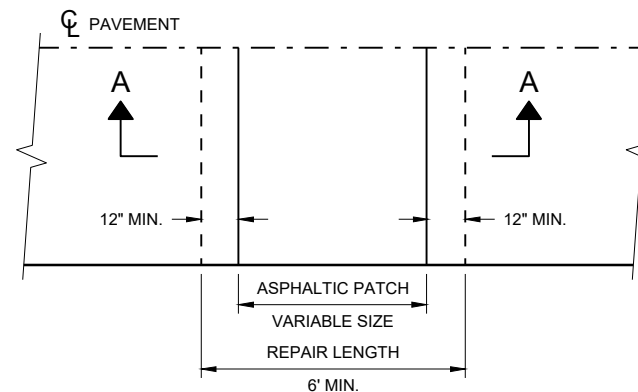
**GENERAL NOTES**

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

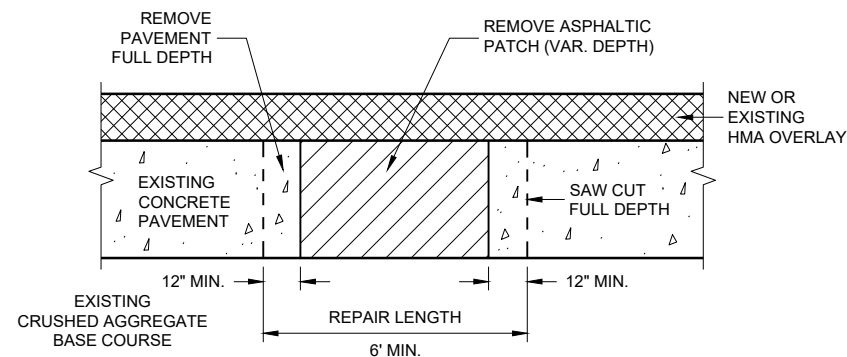
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



**PLAN VIEW**



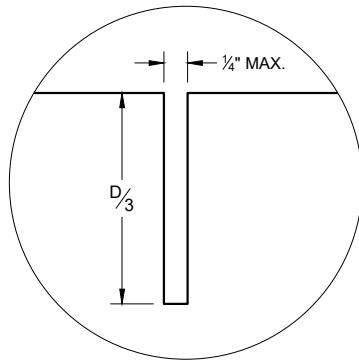
**SECTION A - A**

**HMA PATCH REMOVAL**

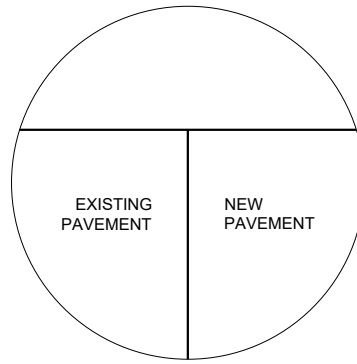
**BASE PATCHING CONCRETE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



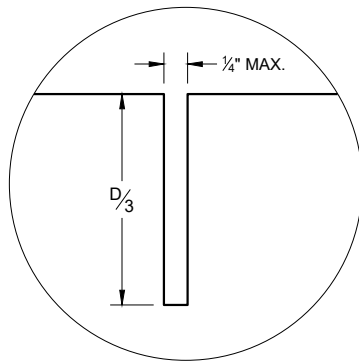


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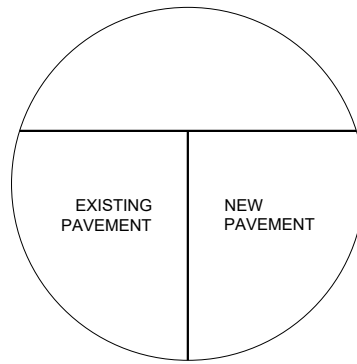


C2

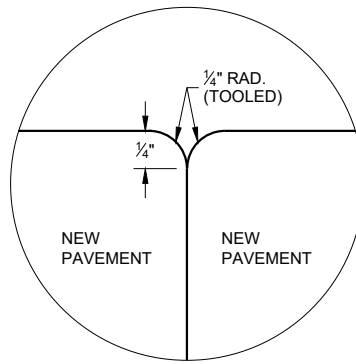
### TRANSVERSE JOINTS



L1

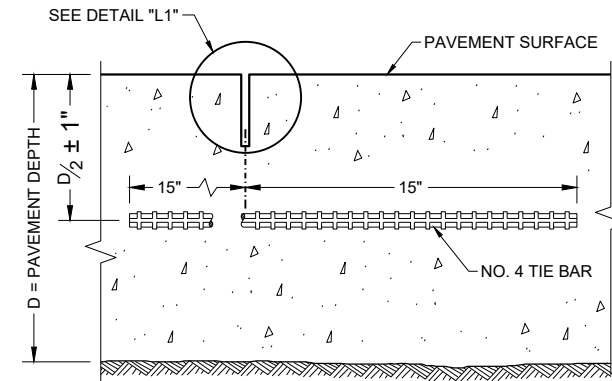


L2

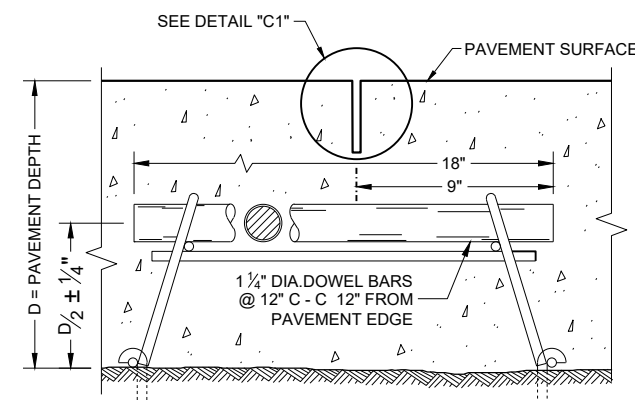


L3

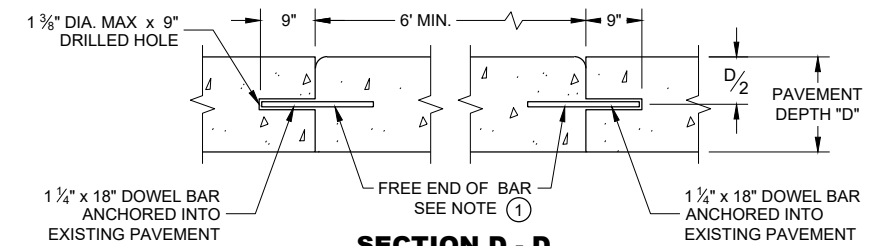
### LONGITUDINAL JOINTS



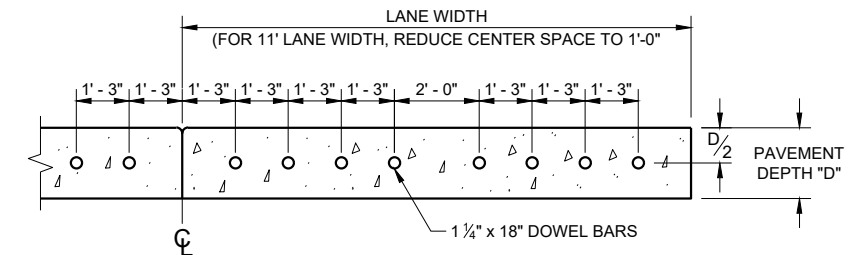
SECTION C - C  
SAWED LONGITUDINAL JOINT



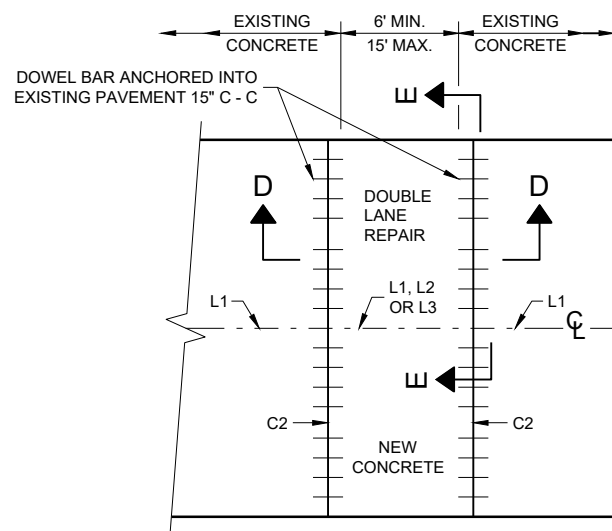
SECTION F - F  
CONTRACTION JOINT



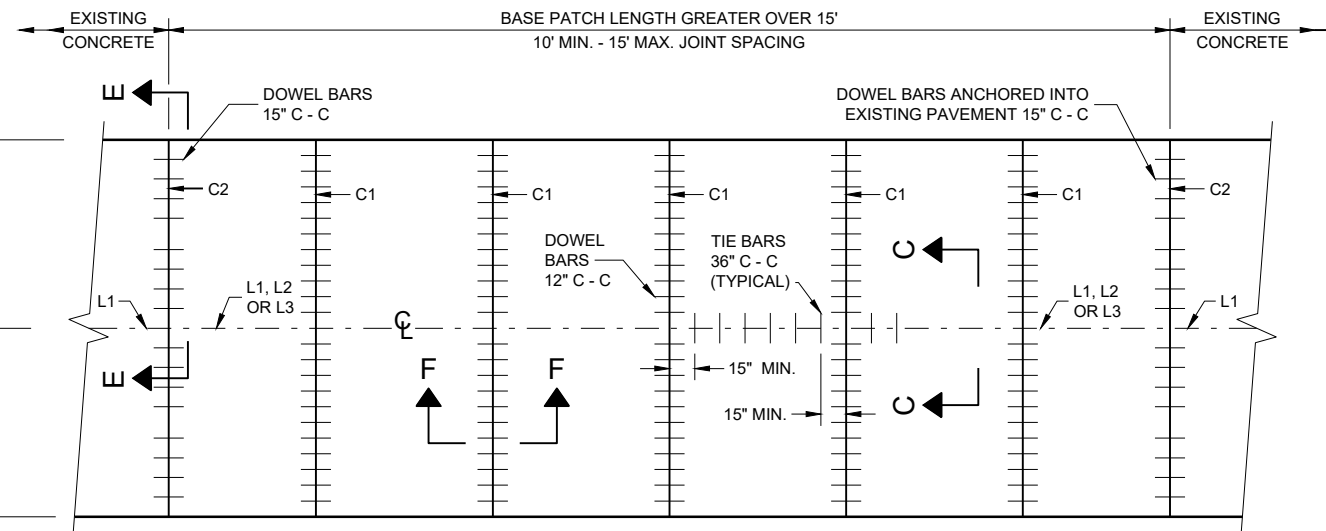
SECTION D - D



SECTION E - E  
SPACING OF DOWEL BARS  
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
15' MAXIMUM LENGTH

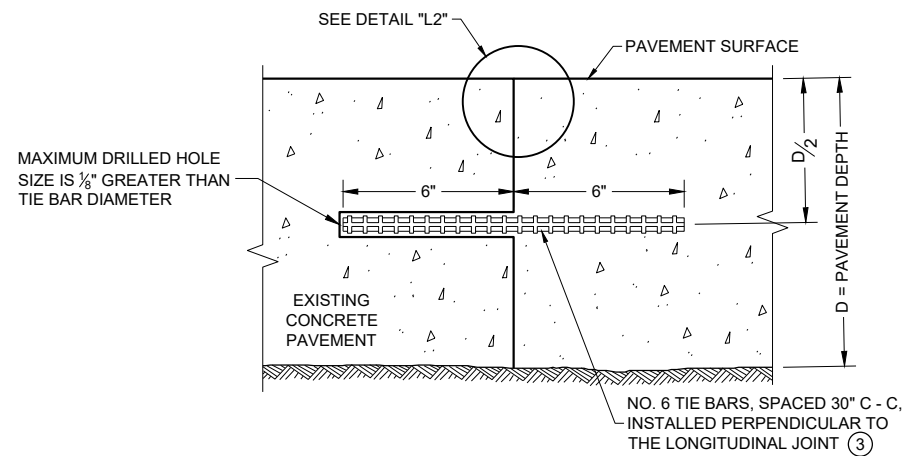


PLAN VIEW  
MULTILANE CONCRETE BASE PATCH  
GREATER THAN 15' IN LENGTH

### BASE PATCHING CONCRETE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 233

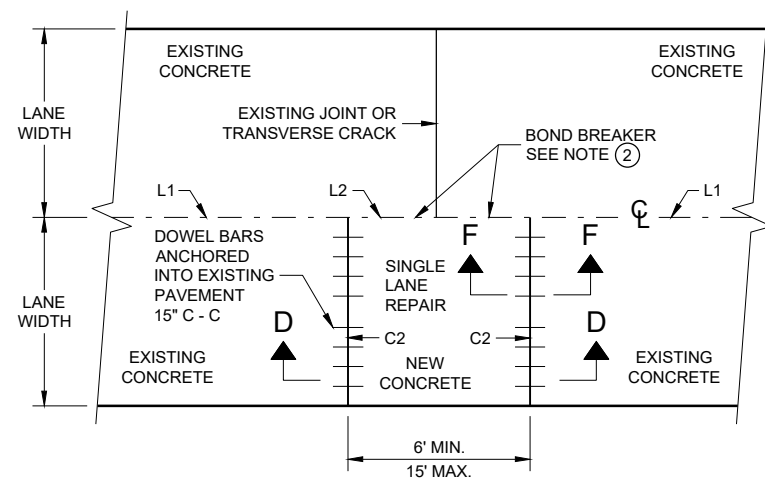




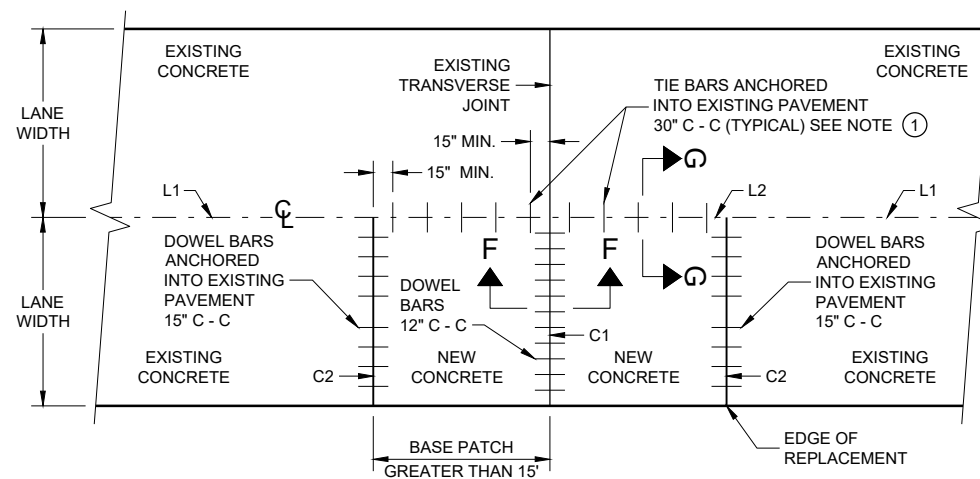
**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**

### GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**15' MAXIMUM LENGTH**



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE PATCH**  
**GREATER THAN 15' LENGTH**

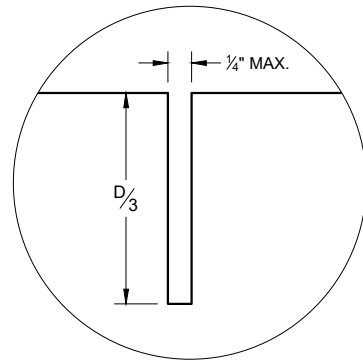
### BASE PATCHING CONCRETE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

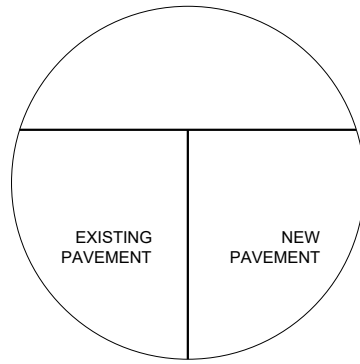
APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR 234

FHWA



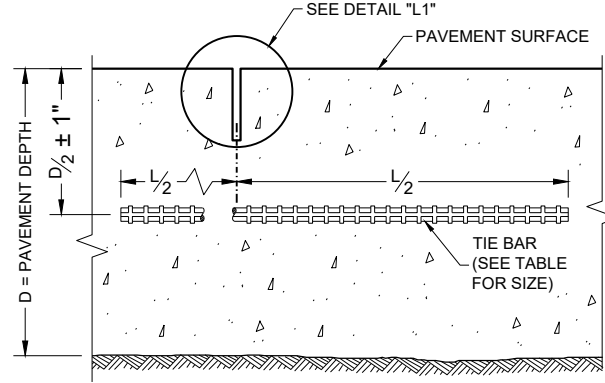


C1

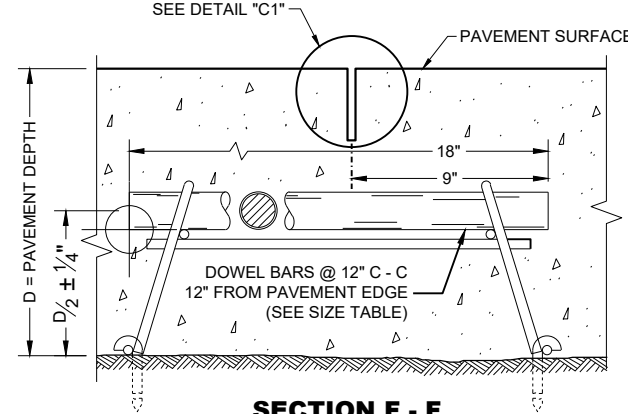


C2

### TRANSVERSE JOINTS



SECTION C - C  
SAWED JOINT



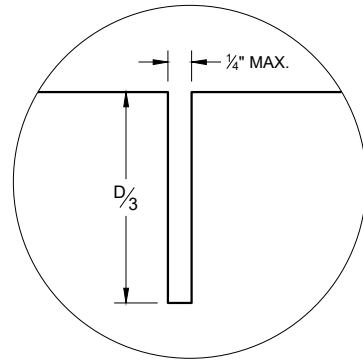
SECTION F - F  
CONTRACTION JOINT

### GENERAL NOTES

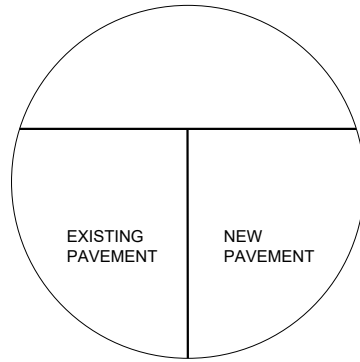
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

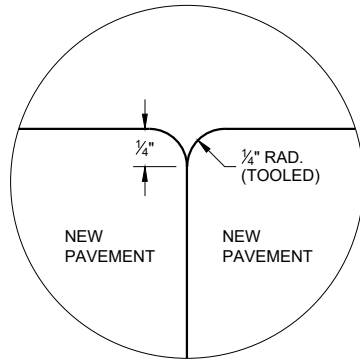
1. INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
2. APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



L1

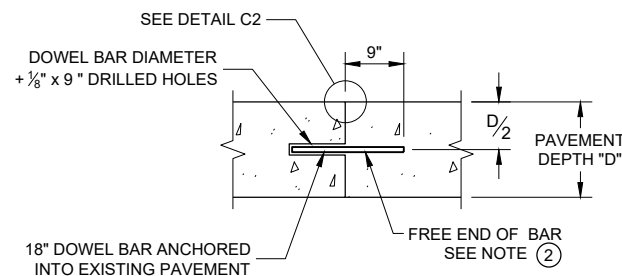


L2

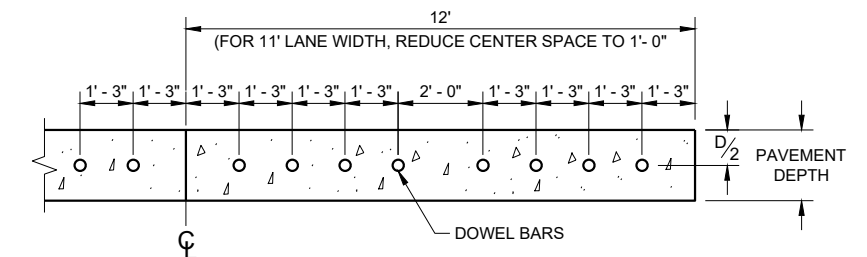


L3

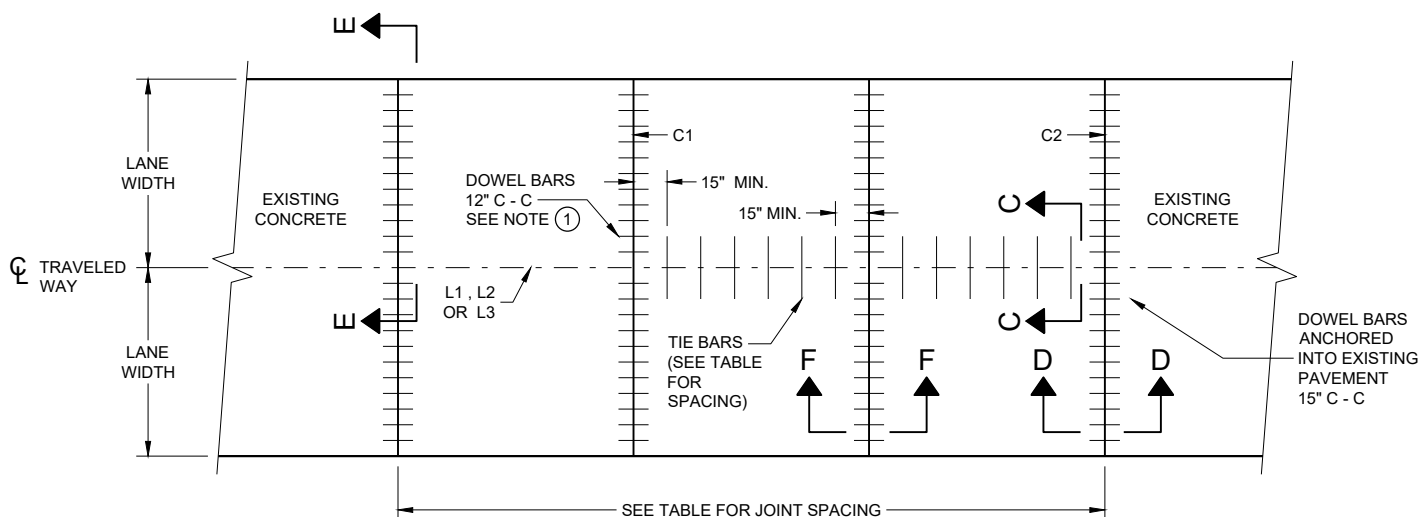
### LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E  
SPACING OF DOWEL BARS  
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW  
CONCRETE BASE  
CONTRACTION JOINT LOCATIONS

### TIE BAR TABLE

| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|--------------------|--------------|--------------------|----------------------|
| < 10 1/2"          | NO. 4        | 30"                | 36"                  |
| ≥ 10 1/2"          | NO. 5        | 36"                | 36"                  |
|                    | NO. 4 *      | 30"                | 24" **               |

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

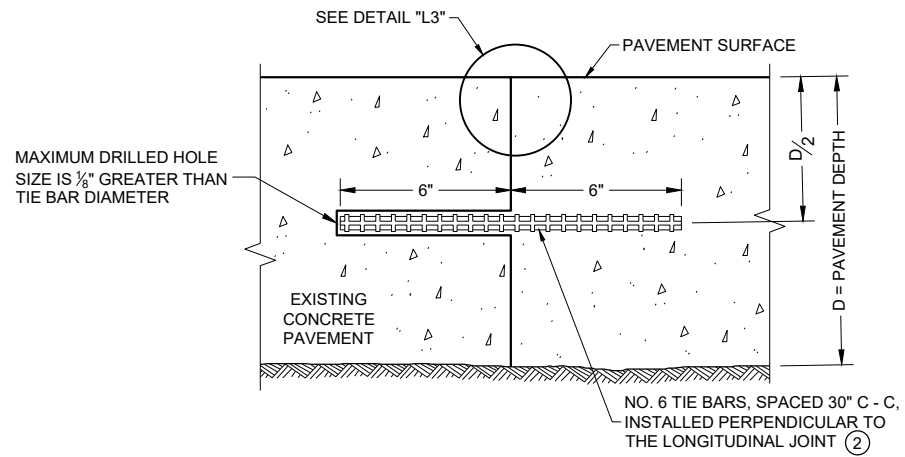
### PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|--------------------|--------------------|---------------------------|
| 6", 6 1/2"         | NONE               | 12'                       |
| 7", 7 1/2"         | 1"                 | 14'                       |
| 8" & ABOVE         | 1 1/4"             | 15'                       |

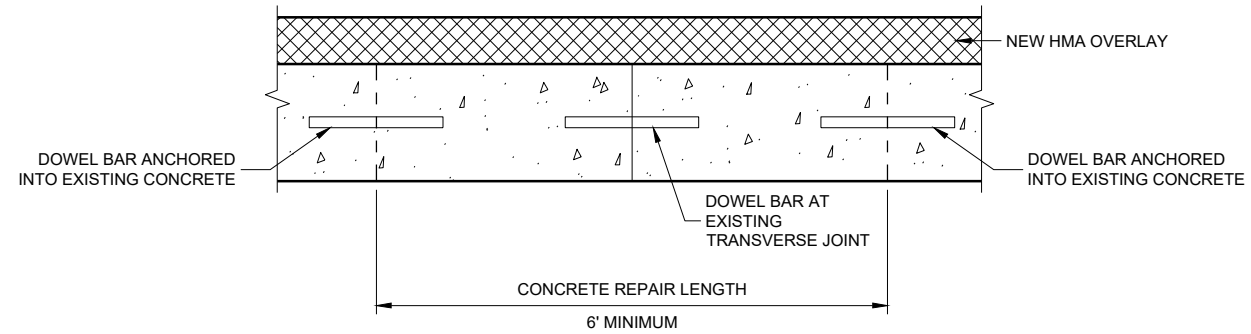
### CONCRETE BASE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

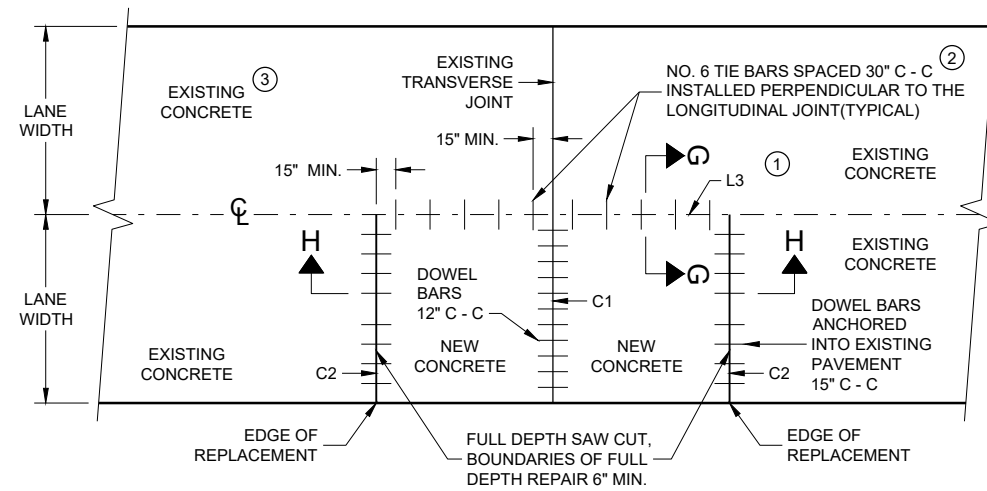




**SECTION G - G**  
**TIE BARS ANCHORED INTO EXISTING PAVEMENT**



**SECTION H - H**



**PLAN VIEW**  
**SINGLE LANE CONCRETE BASE REPAIR**

**GENERAL NOTES**

- ① USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
- ② ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ③ PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

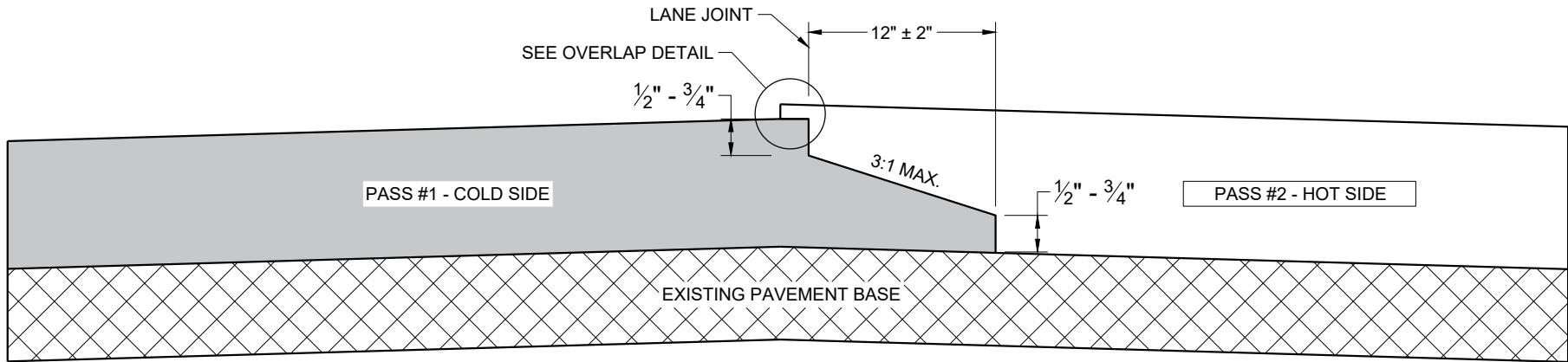
**CONCRETE BASE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

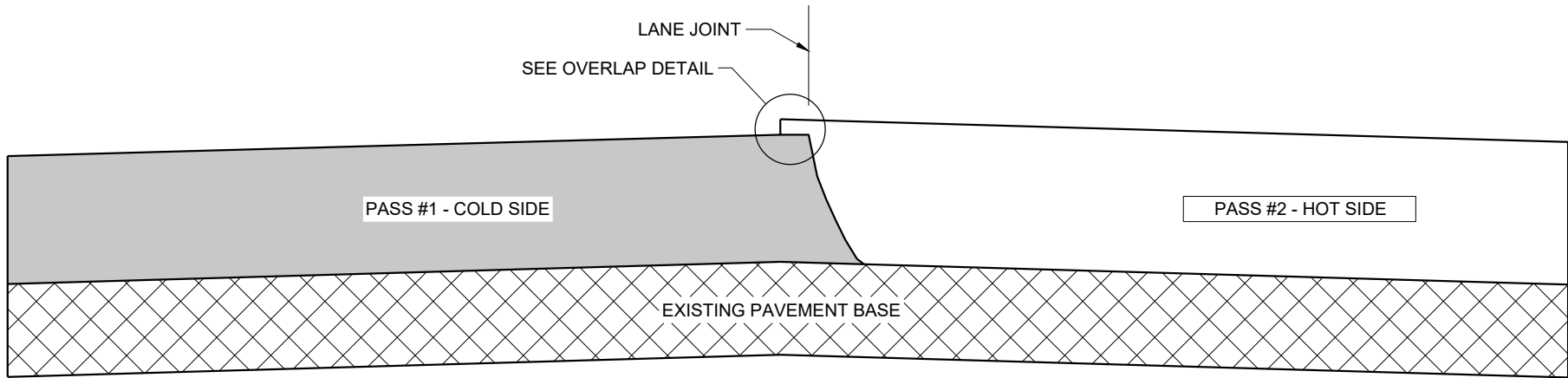
APPROVED  
November 2022 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR 236

FHWA

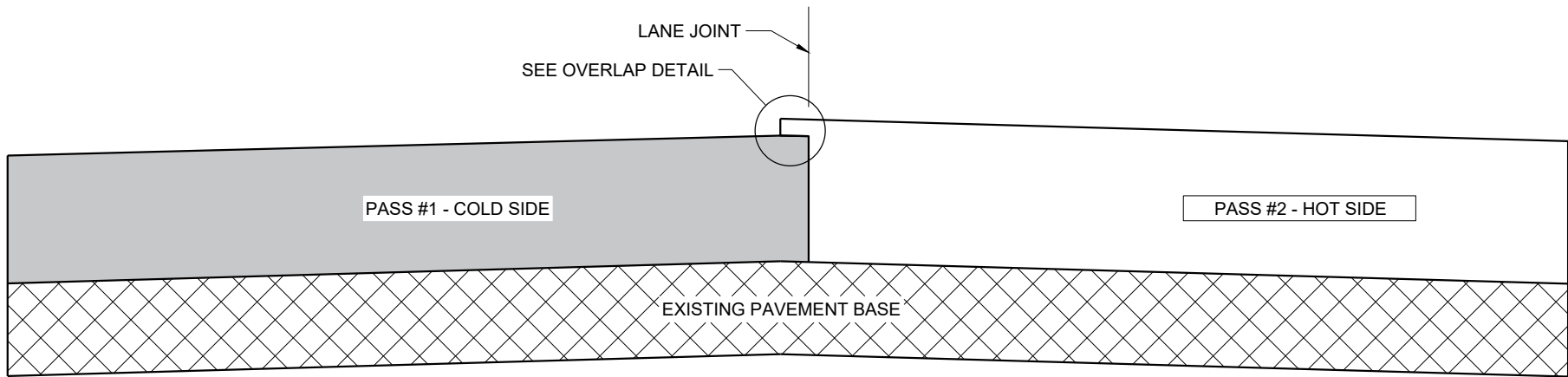




TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)

GENERAL NOTES

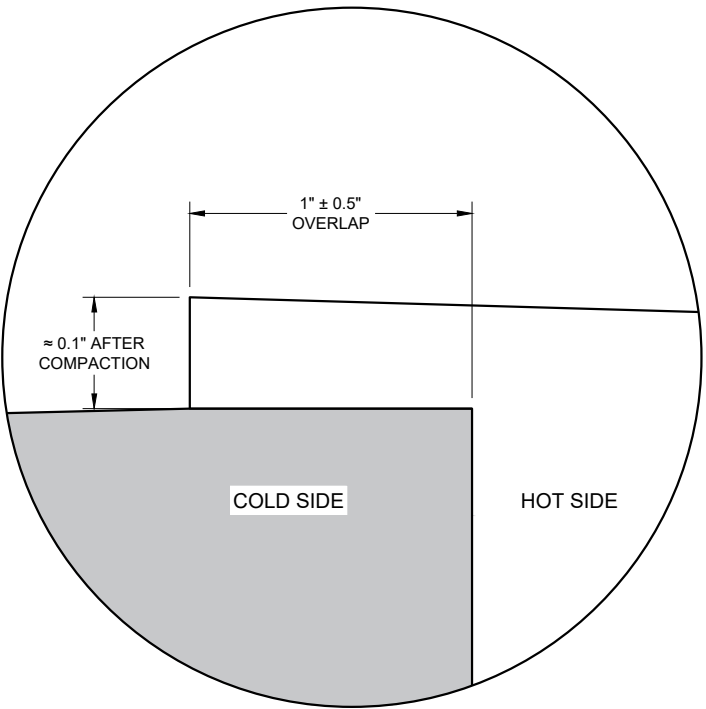
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

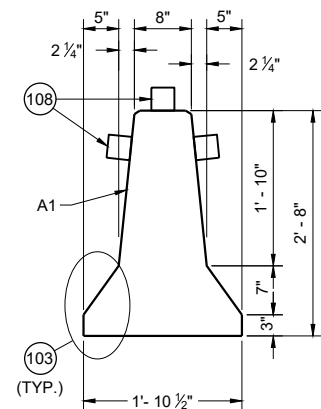
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

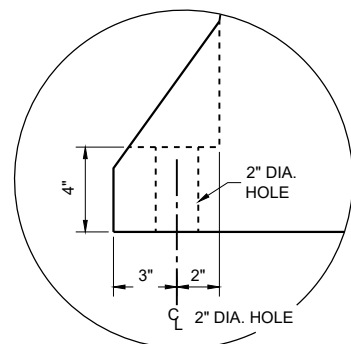
APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGIN 237

FHWA

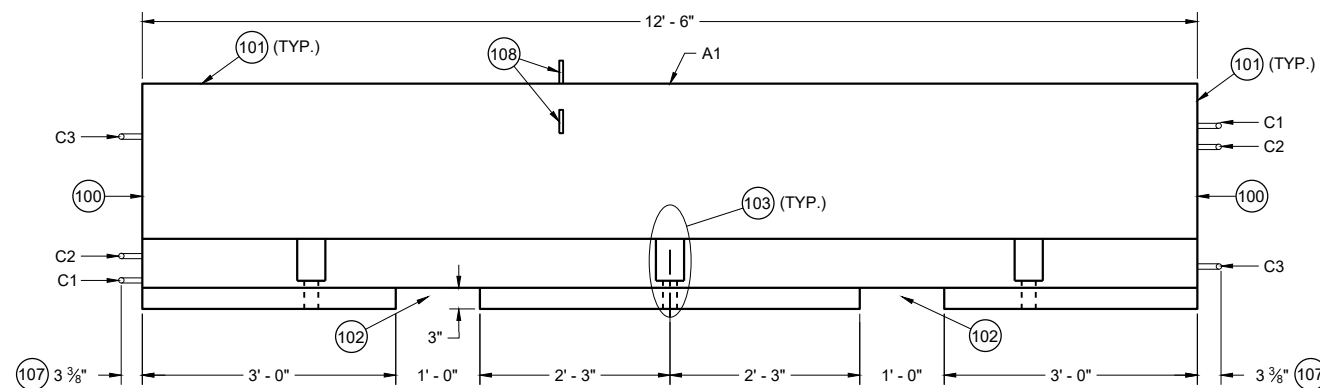
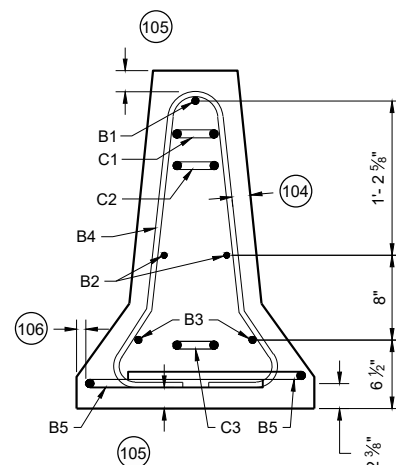




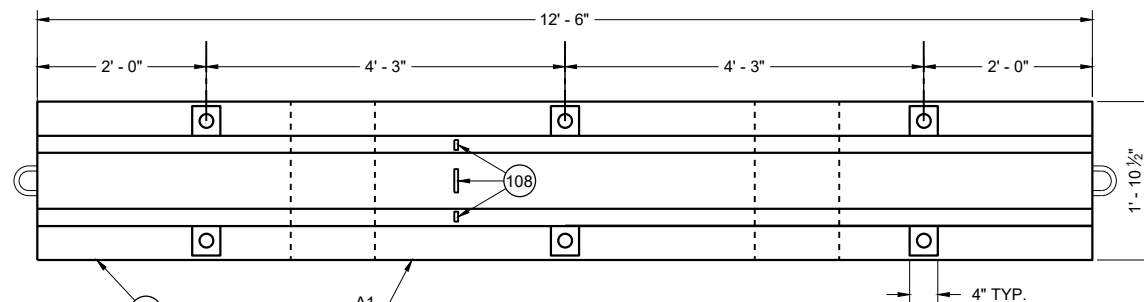
## CROSS SECTION



### ANCHOR BLOCK DETAIL

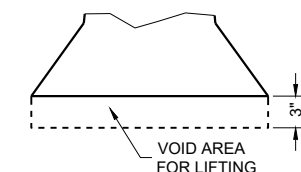


## PROFILE VIEW

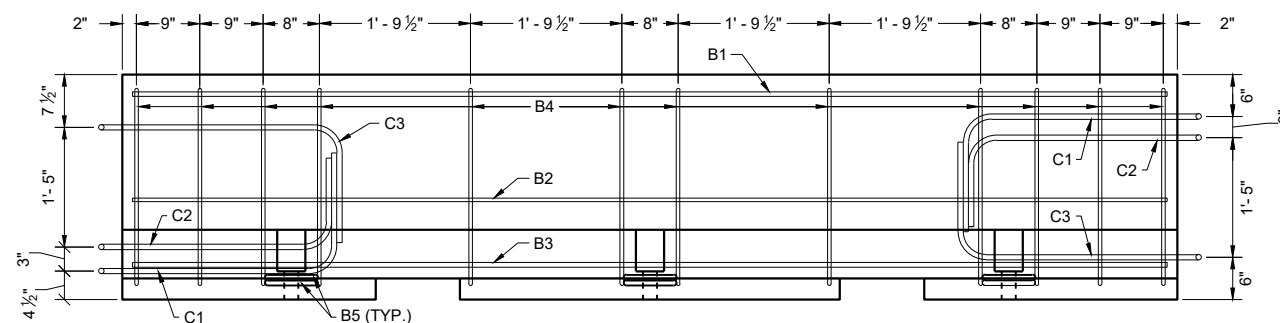
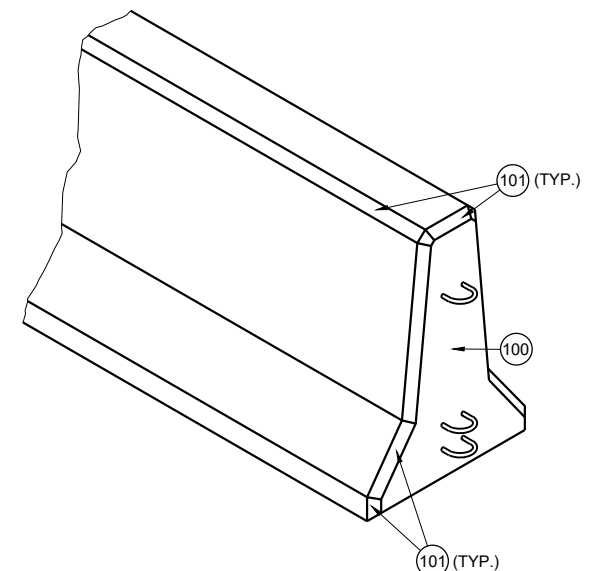


**PLAN VIEW**

**TEMPORARY BARRIER**



**LIFTING SLOT DETAIL  
(TYP.)**



**PROFILE VIEW**

**TEMPORARY BARRIER REINFORCEMENT**

## GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

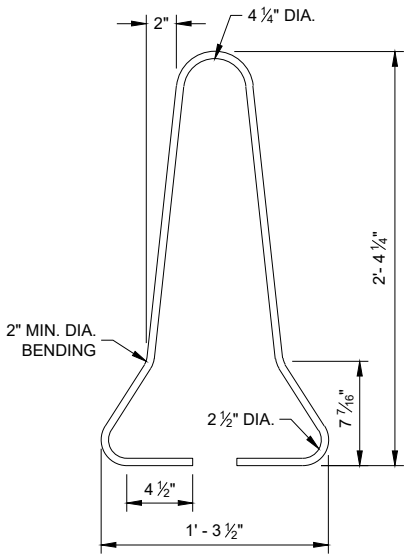
LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

- 100 PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:  
A. TYPE OF BARRIER: WI-CBTP  
B. MANUFACTURER  
C. DATE OF MANUFACTURE (MONTH AND YEAR)
- 101 1" OPTIONAL CHAMFER
- 102 SEE LIFTING SLOT DETAIL
- 103 SEE ANCHOR BLOCK DETAIL
- 104 1 3/4" MIN. CLEAR COVER
- 105 2" MIN. CLEAR COVER
- 106 1" MIN. CLEAR COVER
- 107 ± 1/8" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)
- 108 USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

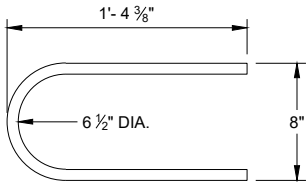
**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

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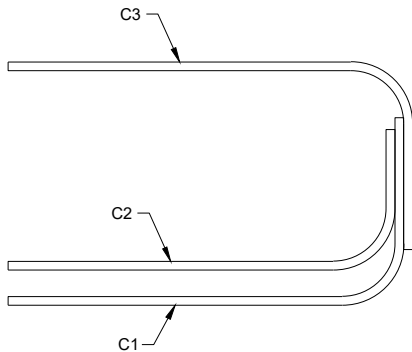




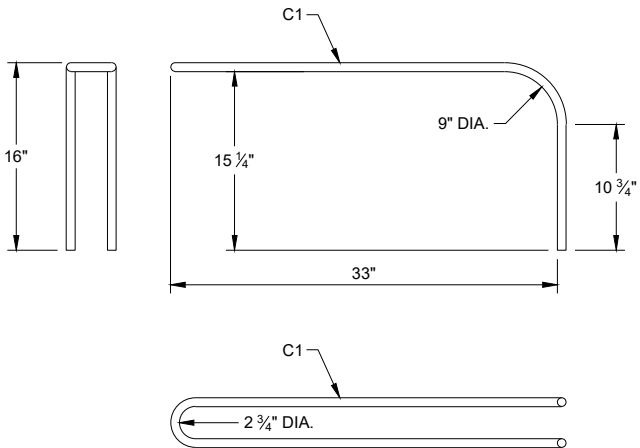
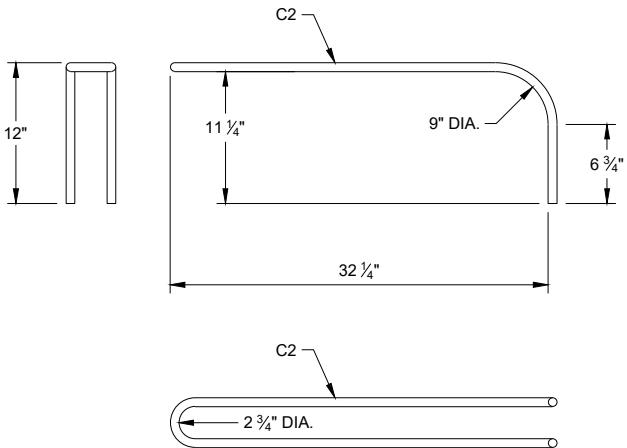
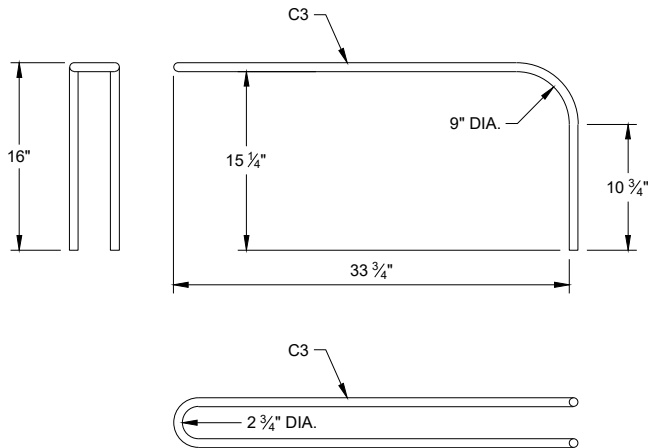
B4 BAR DETAIL



B5 BAR DETAIL

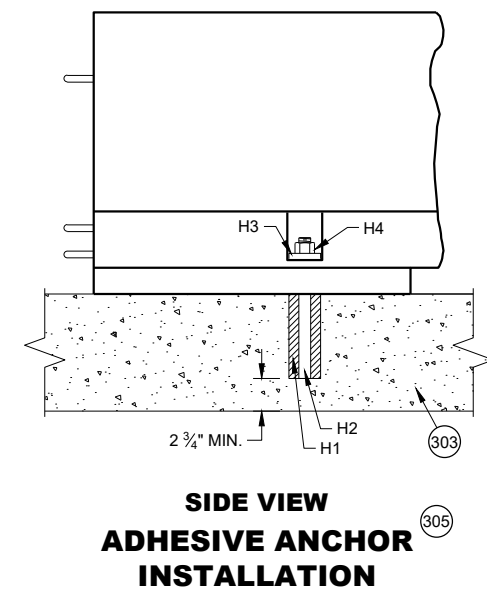
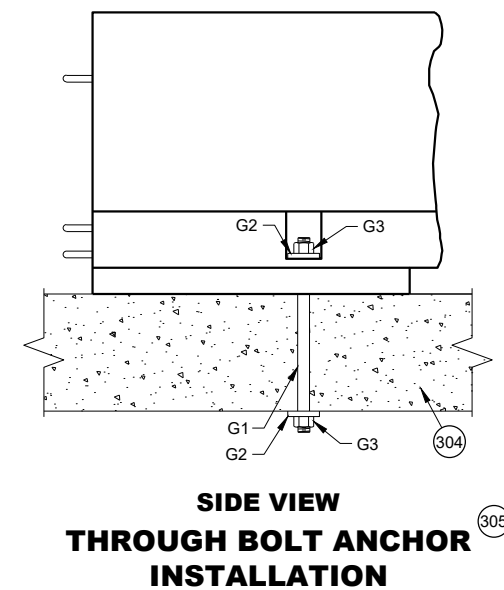
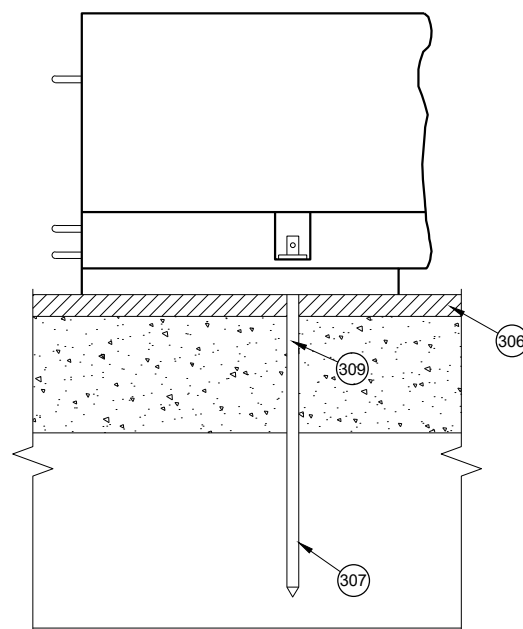
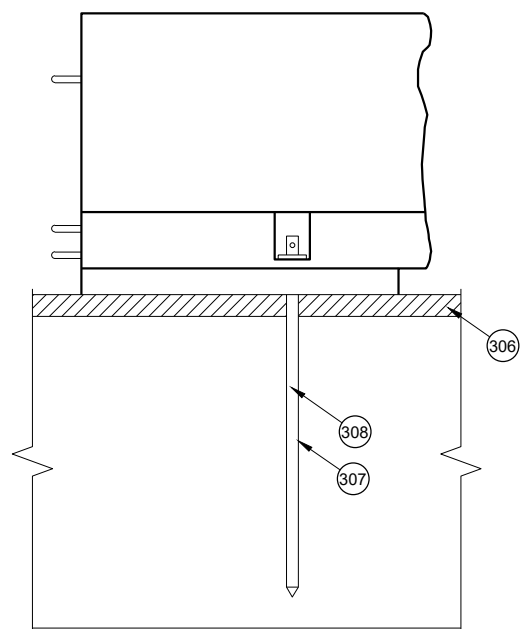
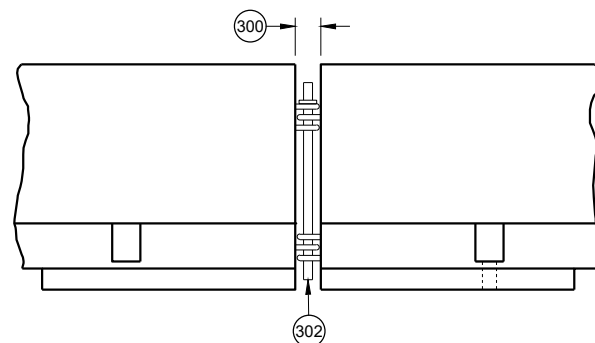
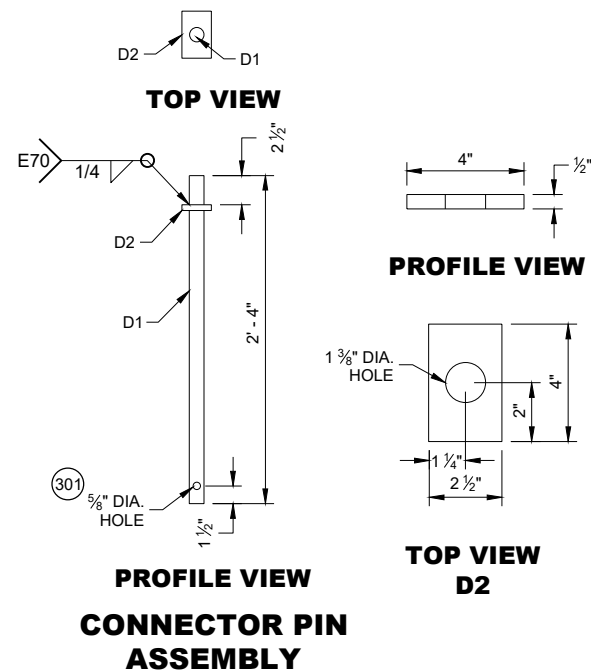


PROFILE VIEW  
LOOP BAR ASSEMBLY



C BAR DETAILS





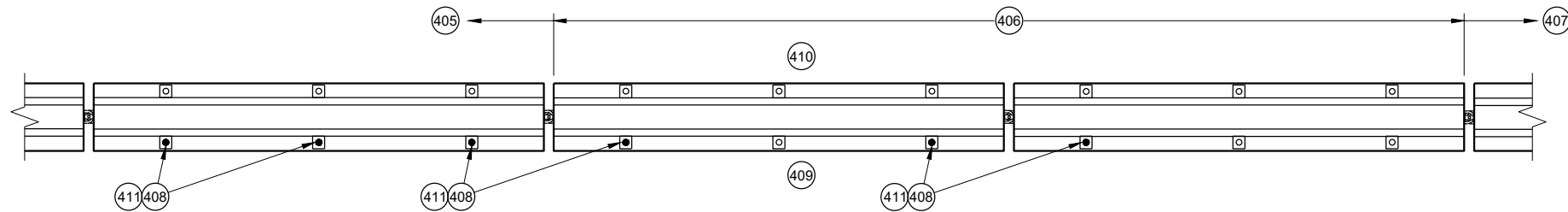
### GENERAL NOTES

- (300) SET WITH 3 5/8" WOOD BLOCK.
- (301) HOLE IS OPTIONAL.
- (302) CONNECTOR PIN ASSEMBLY.
- (303) CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.
- (304) CONCRETE DECK.
- (305) DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.
- (306) MINIMUM OF 2" OF ASPHALT.
- (307) ASPHALT ANCHOR PIN ASSEMBLY
- (308) IF DRILLING A PILOT HOLE, THE MAX. DIA. OF THE HOLE IS 3/4"
- (309) WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

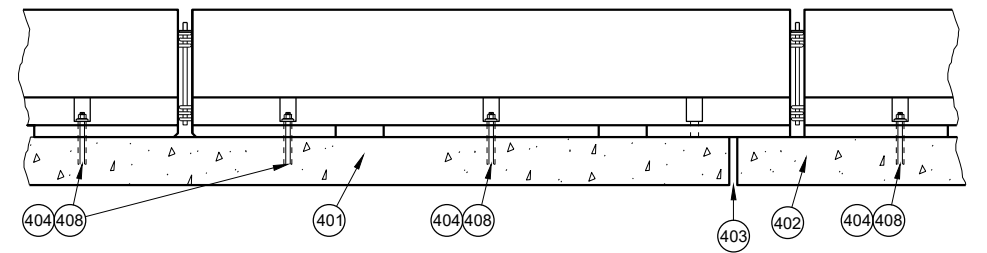
**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

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DEPARTMENT OF TRANSPORTATION 240

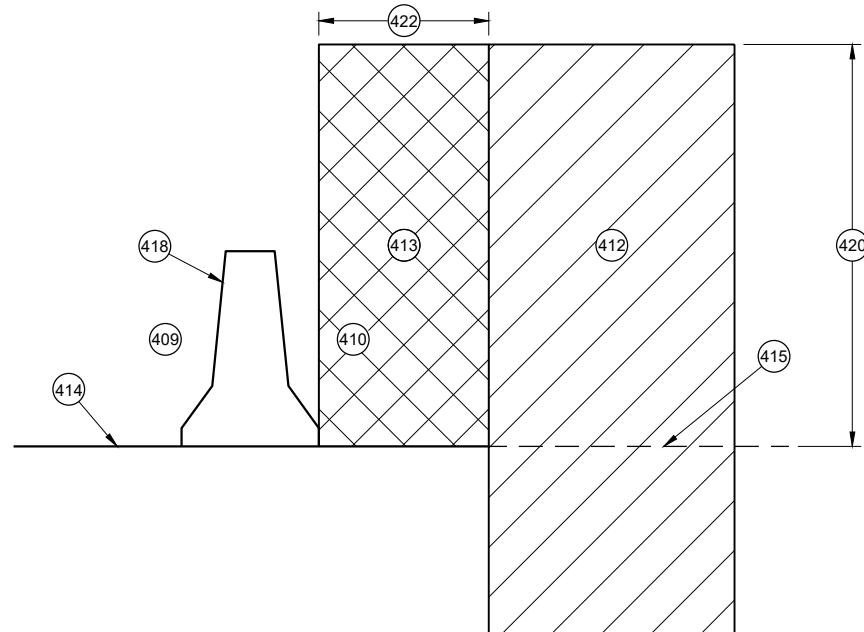




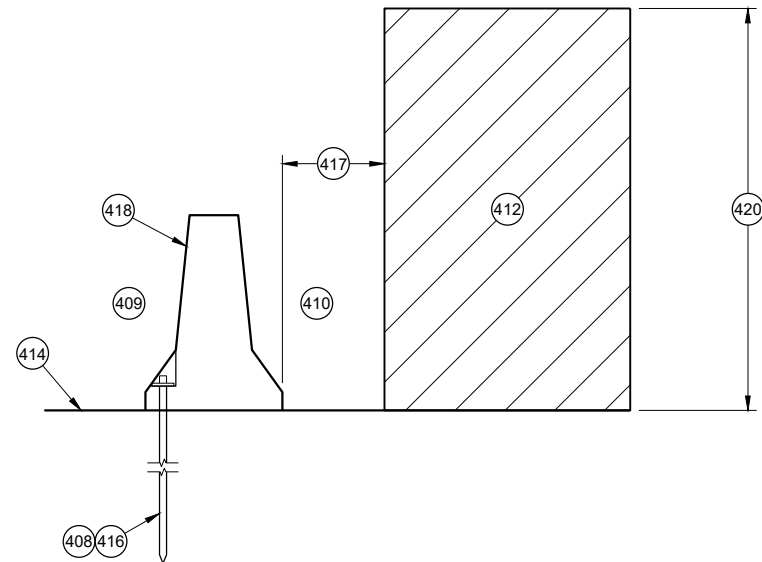
**PLAN VIEW**  
**TRANSITION FROM FREE STANDING TO ANCHORED BARRIER**



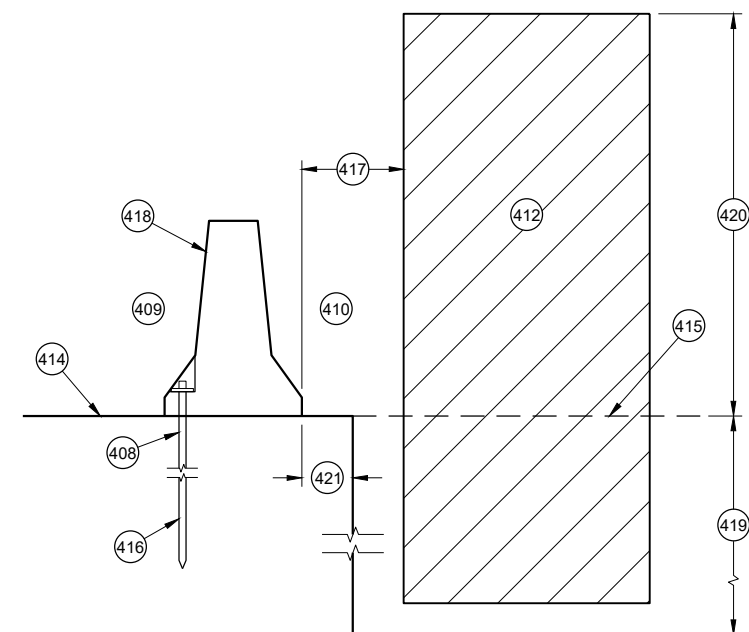
**PROFILE VIEW**  
**ANCHORED BARRIER NEAR EXPANSION JOINT**



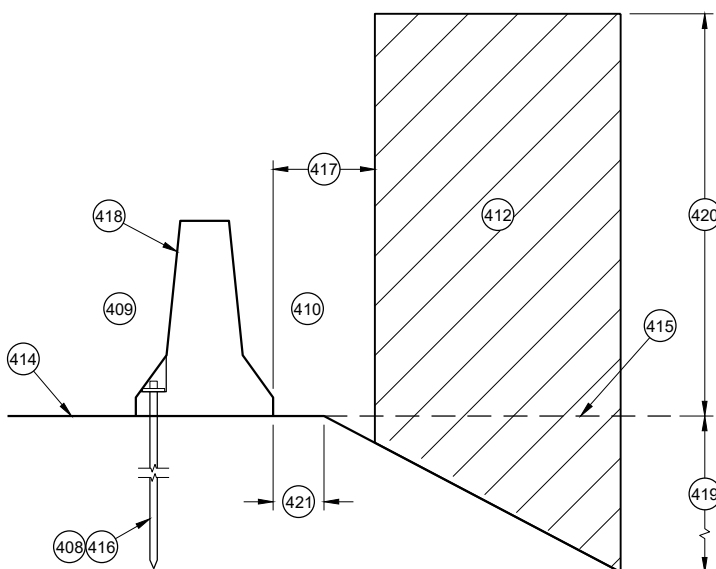
**CROSS SECTION**  
**FREE STANDING BARRIER**



**CROSS SECTION**  
**ANCHORED BARRIER FOR OBJECTS ABOVE  
THE GRADE LINE AND NEAR THE BARRIER**



**CROSS SECTION**  
**ANCHORED BARRIER NEAR VERTICAL DROP OFF**



**CROSS SECTION**  
**ANCHORED BARRIER NEAR A SLOPE**

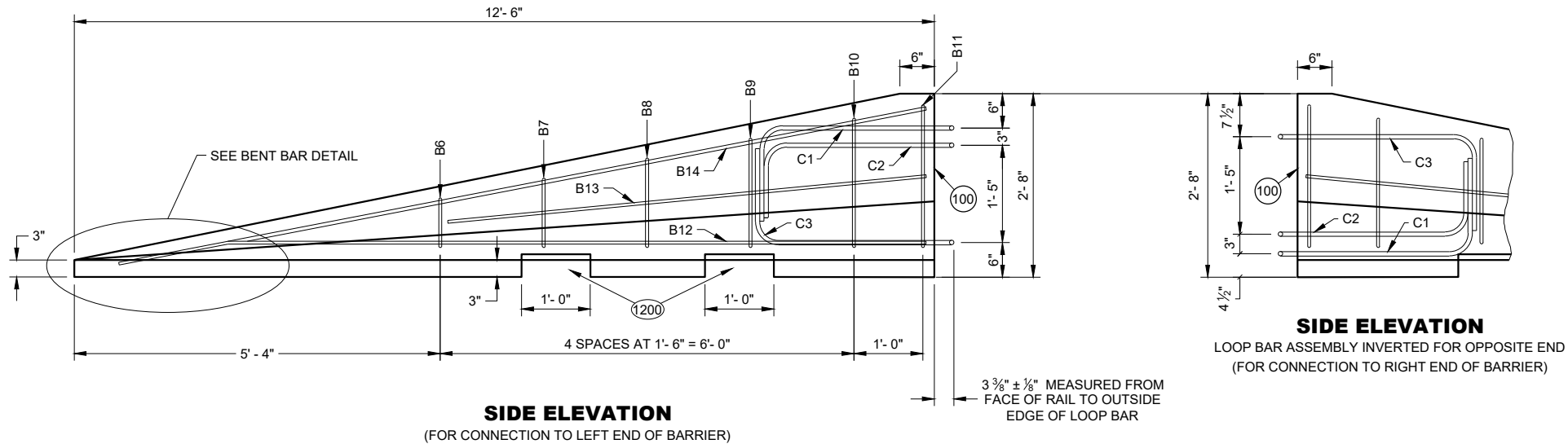
### GENERAL NOTES

- (400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.
- (401) CONCRETE DECK
- (402) CONCRETE DECK OR APPROACH SLAB.
- (403) EXPANSION JOINT
- (404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.
- (405) ANCHORED TEMPORARY BARRIER
- (406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING
- (407) FREE STANDING BARRIER
- (408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.
- (409) TRAFFIC SIDE
- (410) NON-TRAFFIC SIDE
- (411) ANCHOR LOCATION. SEE ANCHORING DETAILS.
- (412) WORK AREA
- (413) AREA FREE OF OBJECTS AND WORKERS
- (414) GRADE LINE
- (415) EXTENDED GRADE LINE
- (416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.
- (417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.
- (418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.
- (419) DEPTHS OF 3 FEET OR MORE.
- (420)  $Y = 6.5'$
- (421) OFFSET FROM BACK OF BARRIER EDGE:
  - CONCRETE PAVEMENT 0.5'
  - ASPHALT 0.5'
- (422) POSTED SPEED (MPH):
  - 45 OR GREATER 4.0'
  - 40 OR LOWER 2.0'

**CONCRETE BARRIER**  
**TEMPORARY PRECAST,**  
**12' - 6"**

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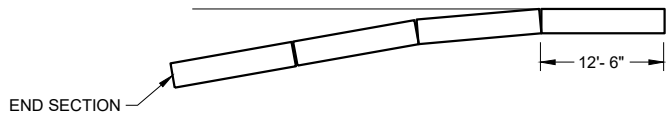


**SIDE ELEVATION**  
(FOR CONNECTION TO LEFT END OF BARRIER)

**SIDE ELEVATION**  
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END  
(FOR CONNECTION TO RIGHT END OF BARRIER)

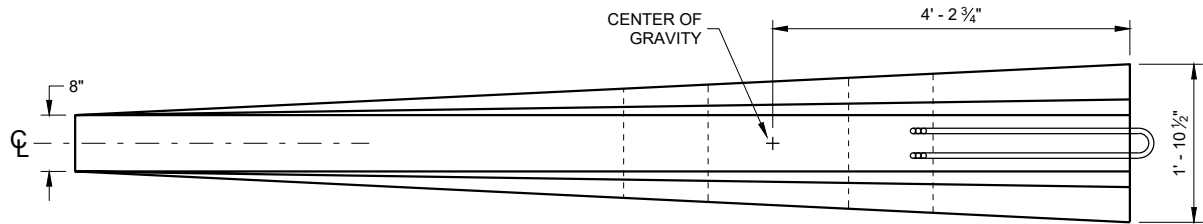
**GENERAL NOTES**

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

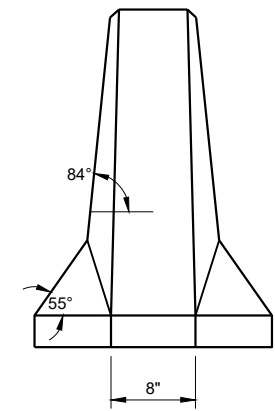


**FLARE AT BARRIER END**

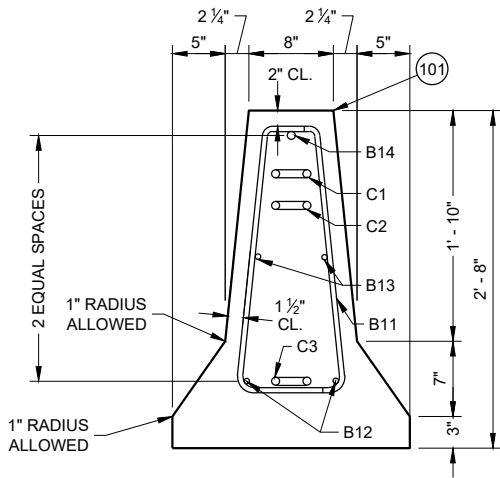
| POSTED SPEED, (MPH) | FLARE RATE |
|---------------------|------------|
| 40 OR LESS          | 6:1        |
| 45 OR GREATER       | 8:1        |



**PLAN VIEW**

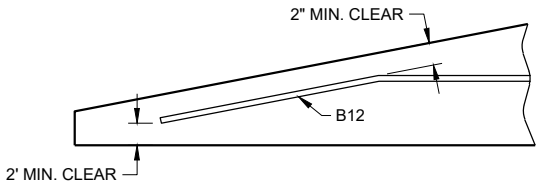
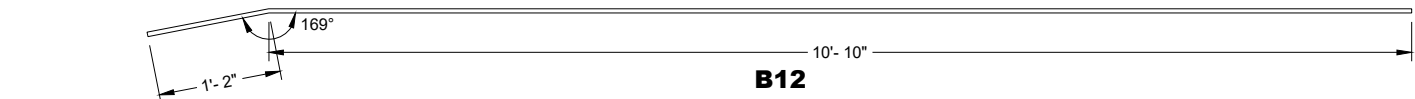


**FRONT ELEVATION**

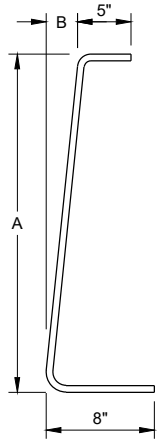


**END SECTION**

**DETAILS OF BARRIER TAPER SECTION**



**BENT BAR DETAIL**



| BAR | A          | B      |
|-----|------------|--------|
| B6  | 10"        | 1"     |
| B7  | 1'- 1"     | 1 1/4" |
| B8  | 1'- 5"     | 1 5/8" |
| B9  | 1'- 8"     | 1 7/8" |
| B10 | 2'- 0 1/2" | 2 3/8" |
| B11 | 2'- 3"     | 2 3/4" |

**B BARS**

2 OF EACH SIZE REQUIRED  
FOR STIRRUP ASSEMBLY

**CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

| PART | DESCRIPTION                          | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                          | NOTES                   |
|------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| A1   | PRECAST TEMPORARY BARRIER - CONCRETE | MIN. = f'c 5000 PSI                                                                                                                                                                                                                               |                         |
| B1   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 12'-2" |
| B2   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 12'-2" |
| B3   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 12'-2" |
| B4   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 6'-0"  |
| B5   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #6 REBAR, LENGTH 2'-11" |
| B6   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 1'-11" |
| B7   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-2"  |
| B8   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-6"  |
| B9   | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 2'-9"  |
| B10  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 3'-2"  |
| B11  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 3'-4"  |
| B12  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 12'-0" |
| B13  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #4 REBAR, LENGTH 7'-9"  |
| B14  | REBAR                                | STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR                                                                                                                                                                                                      | #5 REBAR, LENGTH 11'-9" |
| C1   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| C2   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| C3   | LOOP BAR                             | ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED                                                                                                                                                                                | ¾" DIA.                 |
| D1   | CONNECTION PIN - ROD                 | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    | 1 ¼" DIA.               |
| D2   | CONNECTION PIN - TOP PLATE           | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| G1   | BOLT THROUGH ANCHOR - THREADED ROD   | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC                                                              | 1 ⅝" DIA.               |
| G2   | BOLT THROUGH ANCHOR - WASHER, SQUARE | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| G3   | BOLT THROUGH ANCHOR - NUT            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                         |
| H1   | ADHESIVE ANCHOR - ADHESIVE           | ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                                                                    |                         |
| H2   | ADHESIVE ANCHOR - THREADED ROD       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC                                                               | 1 ⅝" DIA.               |
| H3   | ADHESIVE ANCHOR - WASHER, SQUARE     | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| H4   | ADHESIVE ANCHOR - NUT                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                         |
| J1   | ASPHALT ANCHOR PIN - ROD             | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    | 1 ½" DIA.               |
| J2   | ASPHALT ANCHOR PIN - STOP PLATE      | ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI                                                                                    |                         |
| K1   | THRIE BEAM RAIL                      | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                      | 12 GAUGE                |
| L1   | THRIE BEAM RAIL - TERMINAL           | AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER                                                                                                                                                                                                      | 12 GAUGE                |

| PART | DESCRIPTION                                                | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                               | NOTES             |
|------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| M1   | SPLICE BOLT                                                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                           | ⅝" DIA.           |
| M2   | SPLICE BOLT - NUT                                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 |                   |
| N1   | THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR               | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ¾" DIA. LENGTH 6" |
| N2   | THRIE BEAM RAIL TERMINAL - WASHER                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                            |                   |
| N3   | THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR     | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                            |                   |
| P1   | THRIE BEAM RAIL CONNECTION 1-BOLT                          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ¾" DIA.           |
| P2   | THRIE BEAM RAIL CONNECTION 1-WASHER                        | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                                 |                   |
| P3   | THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                            |                   |
| Q1   | BLOCK WOOD                                                 | SEE STANDARD SPEC. 614                                                                                                                                                                                                                                                 |                   |
| R1   | CAP - BOLT                                                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5 | ⅝" DIA.           |
| R2   | CAP- BOLT - WASHER                                         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1                                                                                                                 |                   |
| R3   | CAP - BOLT - MECHANICAL ANCHOR                             | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                              | 12 GAUGE          |
| S1   | CAP 42-INCH TOP PLATE                                      | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S2   | CAP 42-INCH END PLATE                                      | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S3   | CAP 42-INCH SIDE PLATE                                     | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S4   | CAP 42-INCH GUSSET 1                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S5   | CAP 42-INCH GUSSET 2                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S6   | CAP 42-INCH GUSSET 3                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |
| S7   | CAP 42-INCH GUSSET 4                                       | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                      | 12 GAUGE          |

6

SDD 14B07-16m

CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

243



BILL OF MATERIALS - CONCRETE BARRIER PRECAST

| PART | DESCRIPTION                          | MATERIALS SPECIFICATIONS                                                                                                                                                                          | NOTES    |
|------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| T1   | CAP 56-INCH TOP PLATE                | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T2   | CAP 56-INCH END PLATE                | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T3   | CAP 56-INCH SIDE PLATE 1             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T4   | CAP 56-INCH SIDE PLATE 2             | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T5   | CAP 56-INCH GUSSET 1                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T6   | CAP 56-INCH GUSSET 2                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T7   | CAP 56-INCH GUSSET 3                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T8   | CAP 42-INCH GUSSET 4                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T9   | CAP 42-INCH GUSSET 5                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T10  | CAP 42-INCH GUSSET 6                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T11  | CAP 42-INCH GUSSET 7                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T12  | CAP 42-INCH GUSSET 8                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T13  | CAP 42-INCH GUSSET 9                 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T14  | CAP 42-INCH GUSSET 10                | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T15  | CAP 42-INCH GUSSET 11                | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| T16  | CAP 42-INCH GUSSET 12                | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI | 12 GAUGE |
| U1   | GAP STIFFENER                        | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |
| U2   | GAP STIFFENER<br>- CONNECTOR PLATE 1 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |
| U3   | GAP STIFFENER<br>- CONNECTOR PLATE 2 | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI |          |

| PART | DESCRIPTION                                                  | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                       | NOTES   |
|------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| V1   | THRIE BEAM RAIL TERMINAL<br>MECHANICAL OR ADHESIVE<br>ANCHOR | MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.                                                                                                                                                      | ¾" DIA. |
| V2   | GAP STIFFENER - BOLT - NUT                                   | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                                        |         |
| W1   | TOE PLATE                                                    | AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI                                                                                                                                                                                                 |         |
| X1   | TOE PLATE<br>- CONNECTION BOLT                               | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT. | ¾" DIA. |
| X2   | TOE PLATE<br>- CONNECTION BOLT - WASHER                      | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                                               |         |
| X3   | TOE PLATE -<br>CONNECTION BOLT - NUT                         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                                              |         |

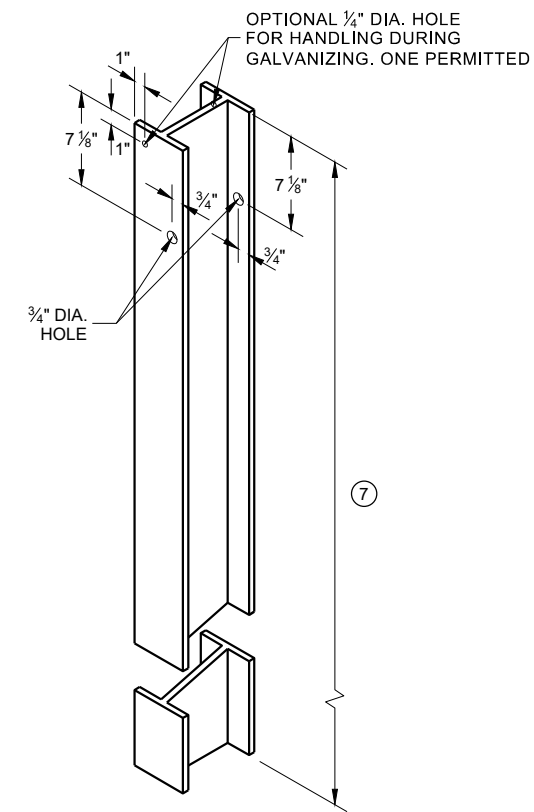
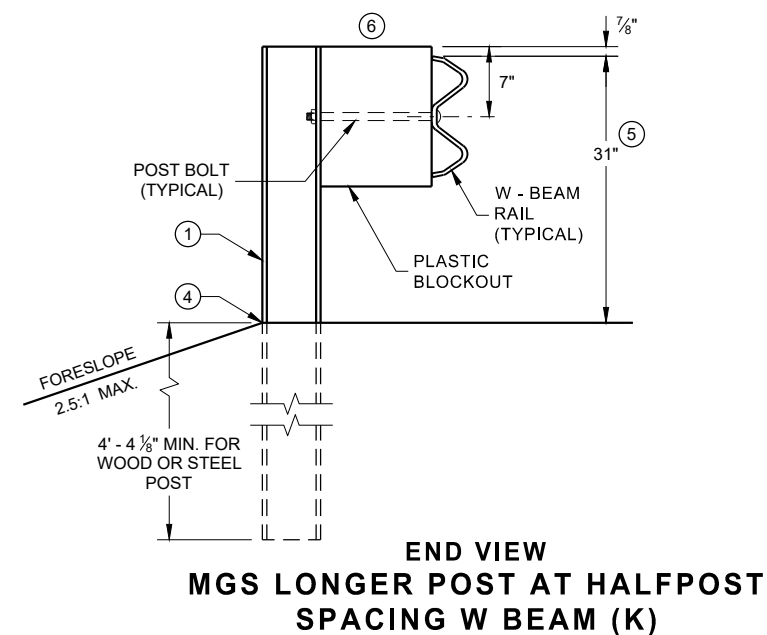
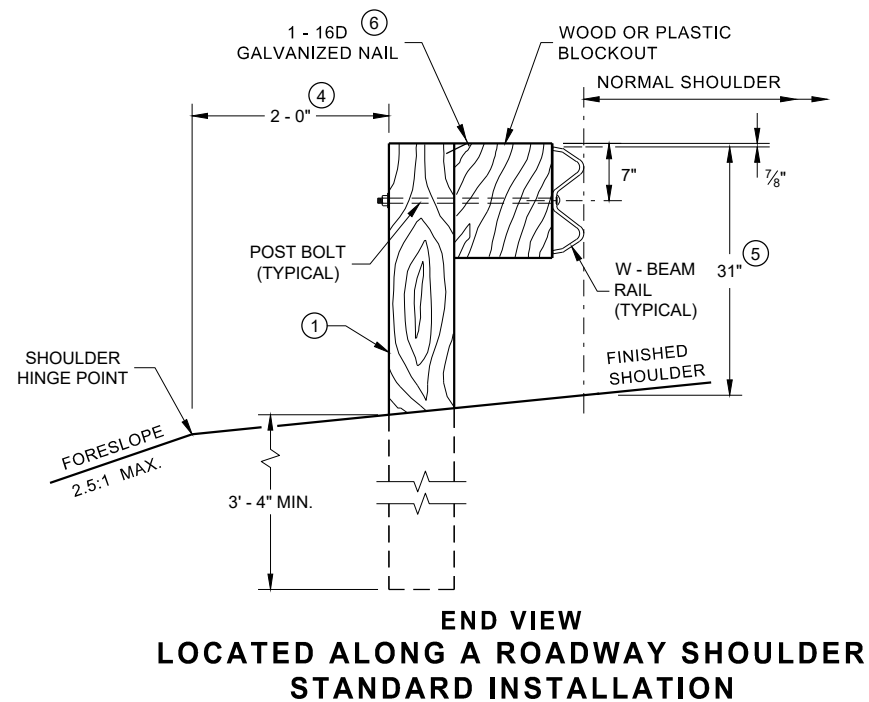
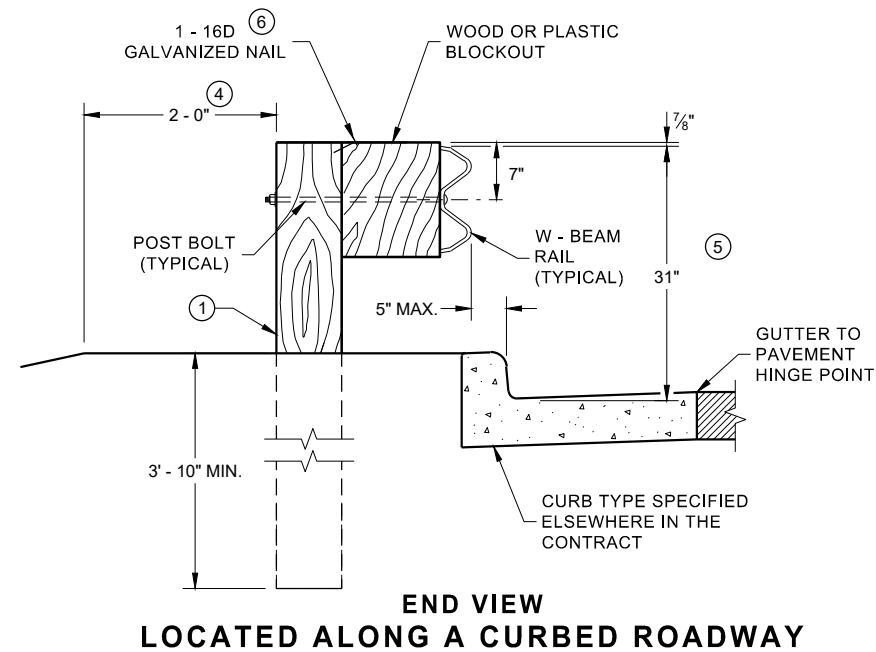
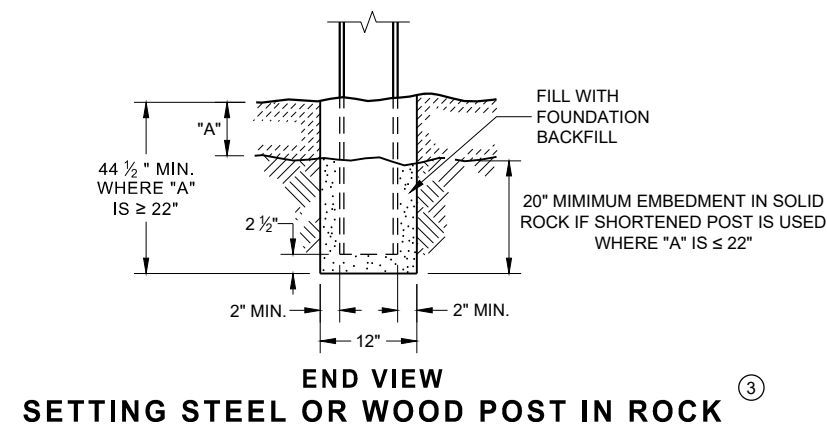
CONCRETE BARRIER  
TEMPORARY PRECAST,  
12' - 6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

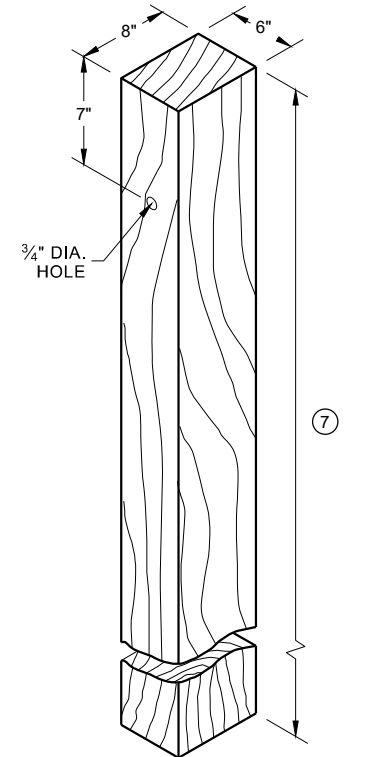
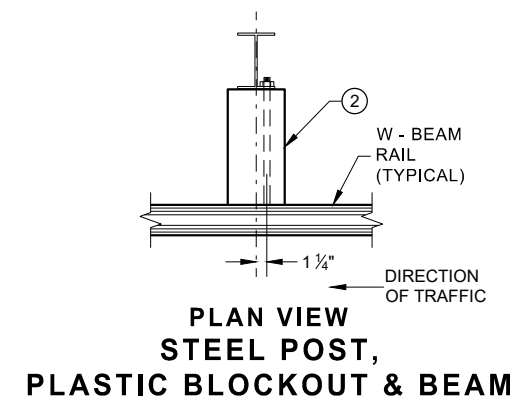
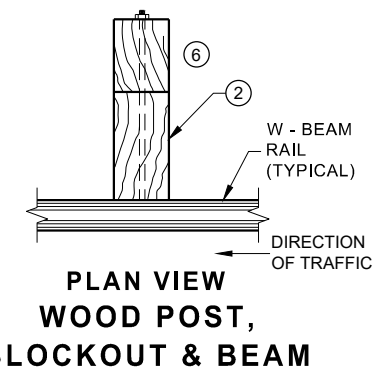
APPROVED  
February 2023  
DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVE ENGINEER 244  
FHWA



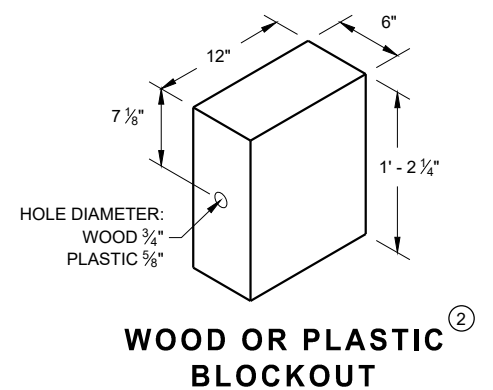
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS  $\pm 1"$ . FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".  
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



**STEEL POST & HOLE  
PUNCHING DETAIL  
(W 6 X 9) ①**

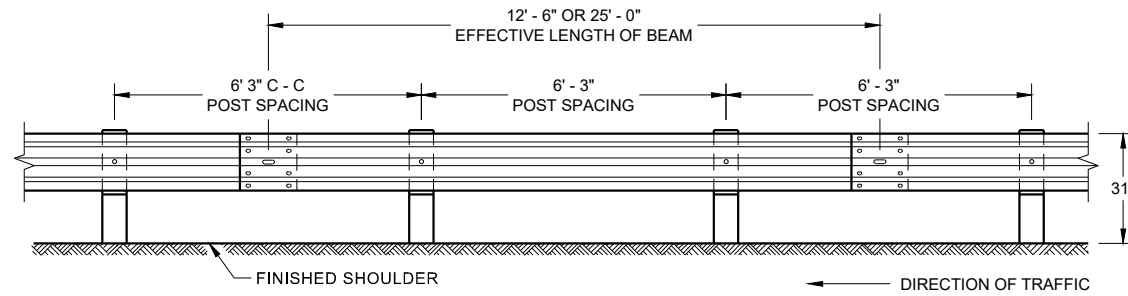


**WOOD POST (6" X 8") NOMINAL** <sup>(1)</sup>

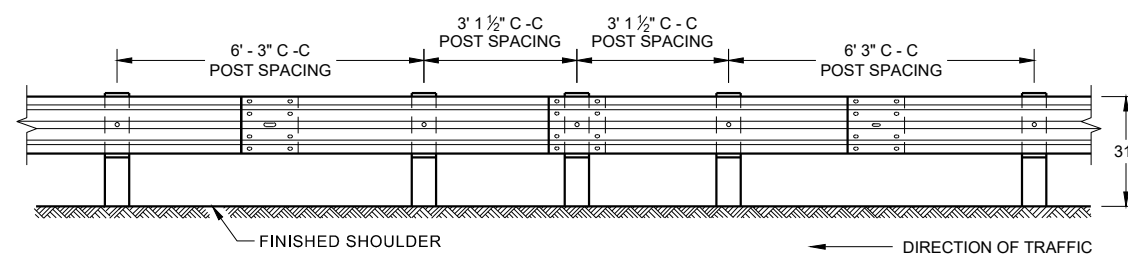


**WOOD OR PLASTIC  
BLOCKOUT**

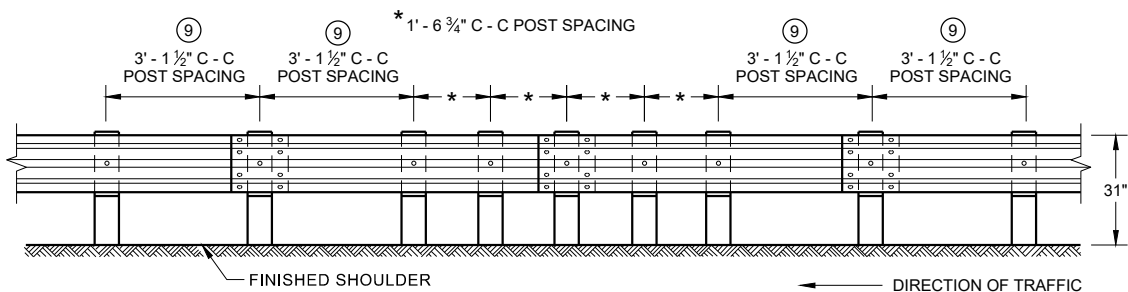




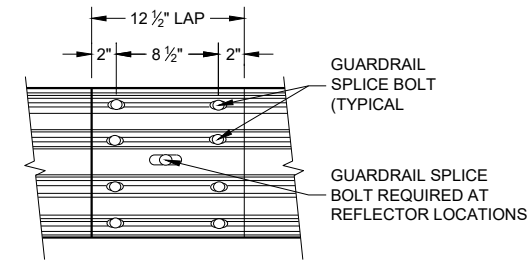
**FRONT VIEW  
POST SPACING STANDARD INSTALLATION**



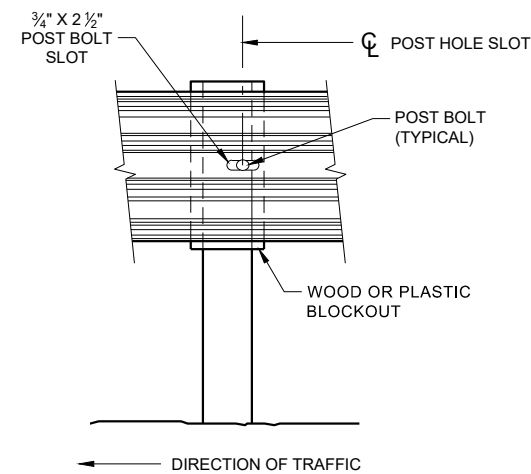
**FRONT VIEW  
HALF POST SPACING (HS) AND  
HALF POST SPACING WITH LONGER POSTS (K)**



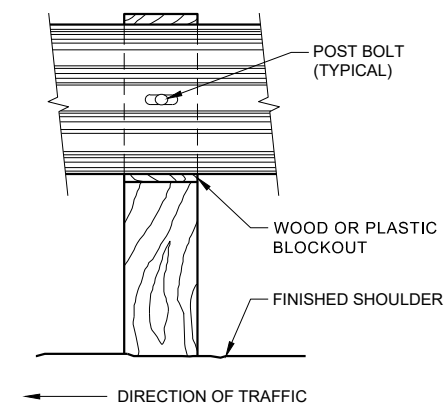
**FRONT VIEW  
QUARTER POST SPACING (QS)**



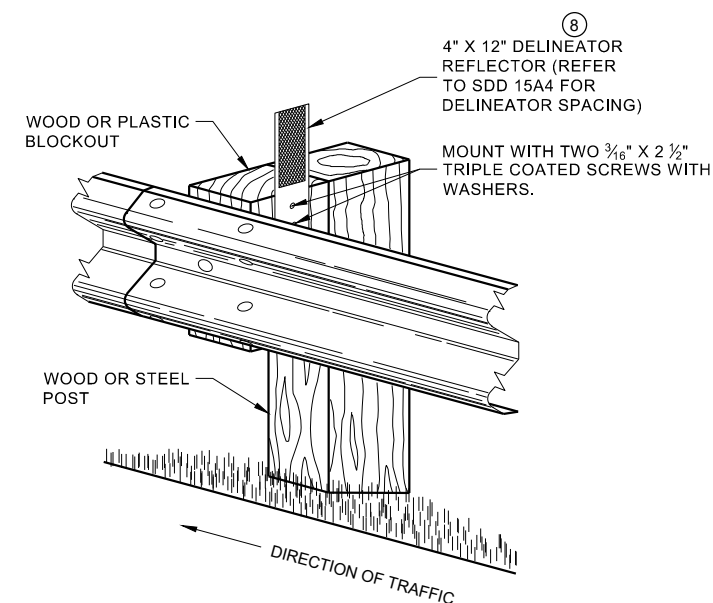
**FRONT VIEW  
MID-SPAN BEAM SPLICE**



**FRONT VIEW AT STEEL POST**



**FRONT VIEW AT WOOD POST**



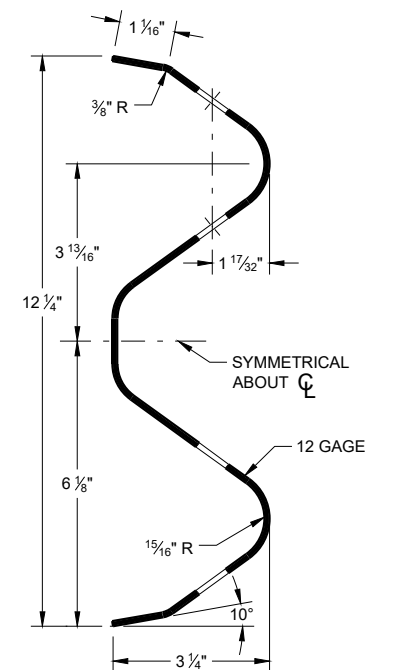
**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**

## GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



**SECTION THRU W-BEAM RAIL**

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

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DEPARTMENT OF TRANSPORTATION 246





IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

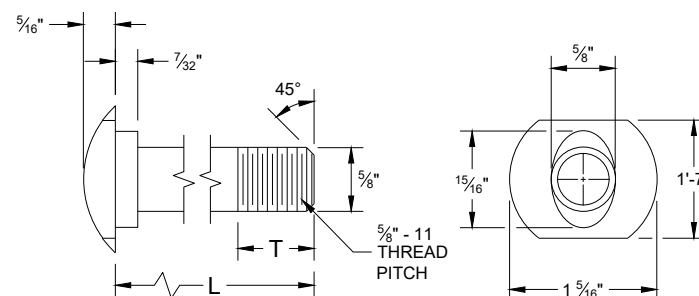


NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

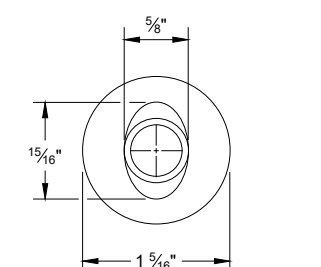
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF  $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN  $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

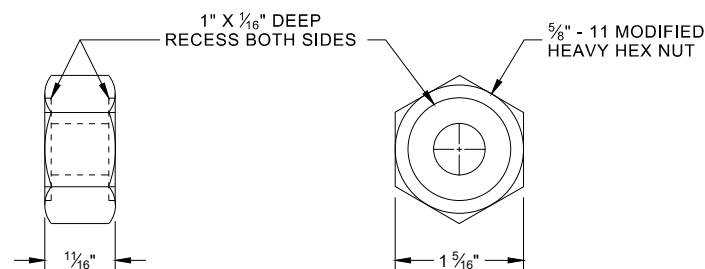


## POST BOLT TABLE

| L    | T (MIN.) |
|------|----------|
| 1 ¼" | 1 ⅛"     |
| 2"   | 1 ¾"     |
| 10"  | 4"       |
| 14"  | 4 ⅙"     |
| 18"  | 4"       |
| 21"  | 4 ⅙"     |
| 25"  | 4"       |

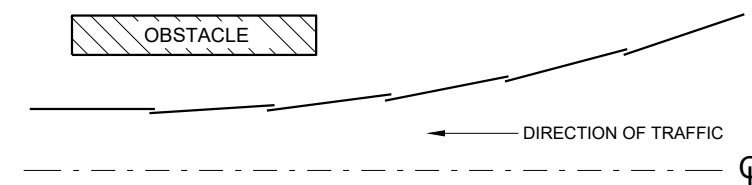


### ALTERNATE BOLT HEAD

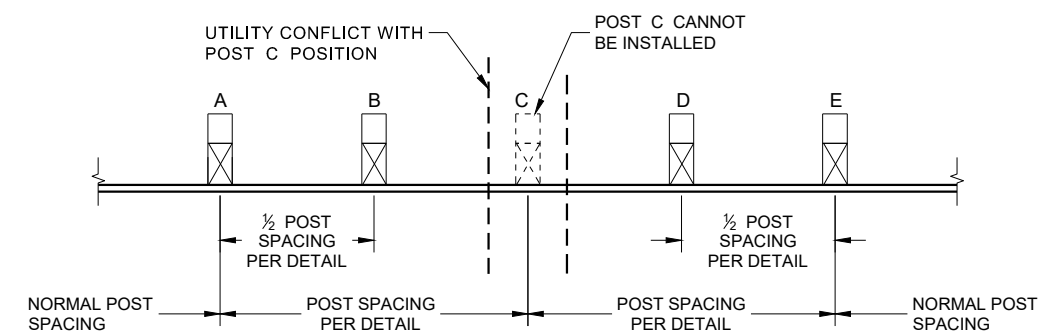


## POST BOLT, SPLICE BOLT AND RECESS NUT

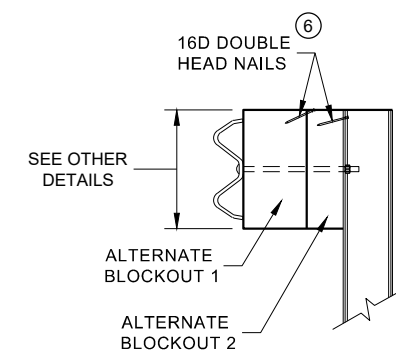
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



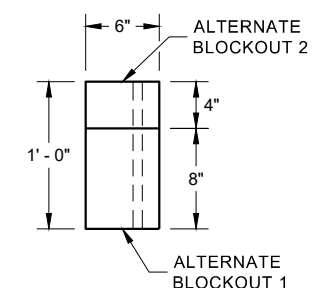
### PLAN VIEW BEAM LAPPING DETAIL



## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



### SIDE VIEW



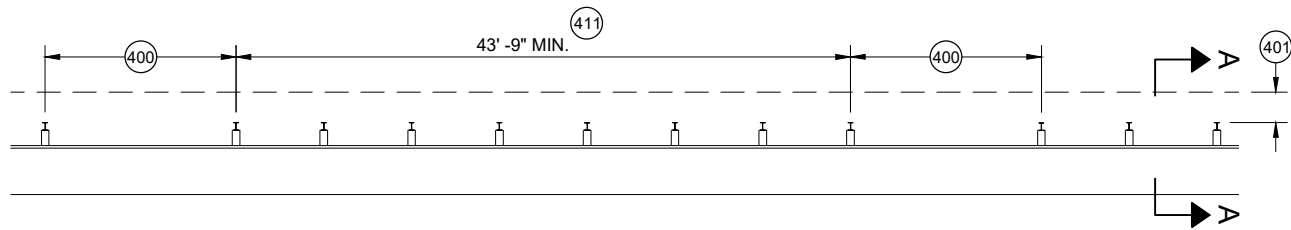
### PLAN VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL

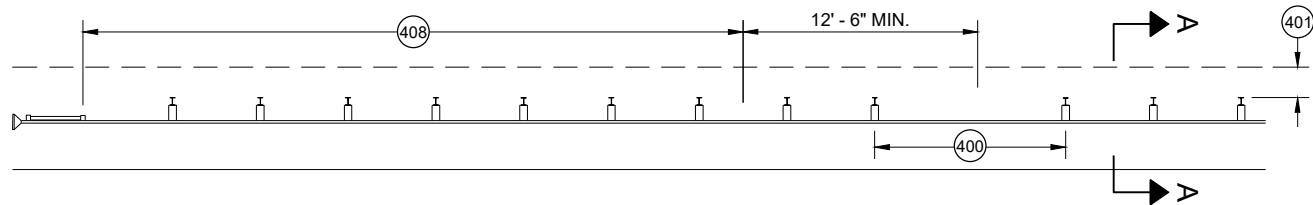
## MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 247

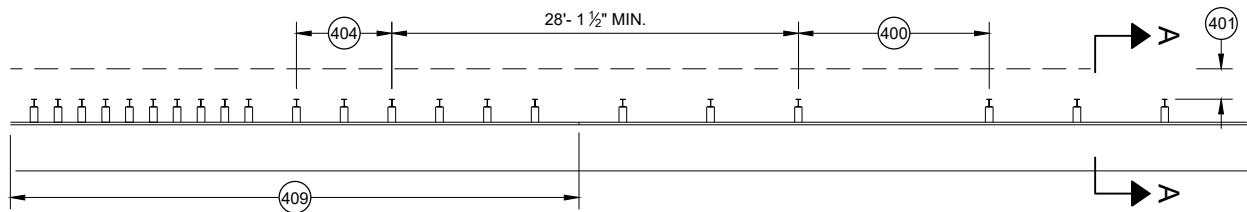




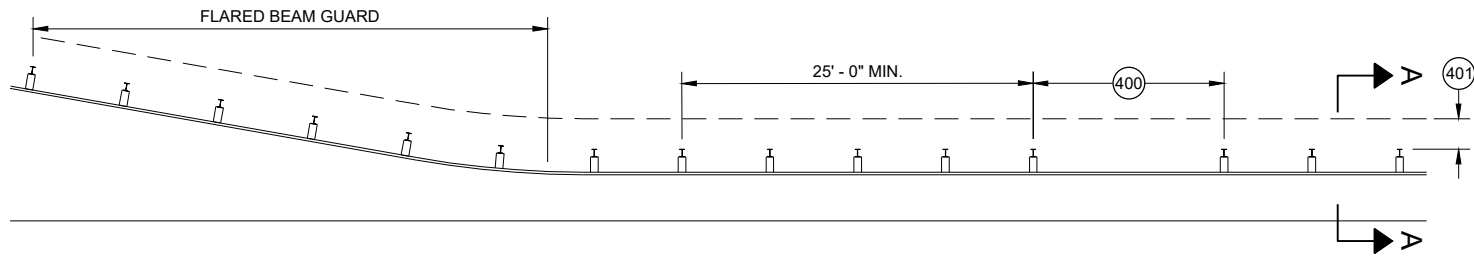
MISSING POST IN MGS GUARDRAIL



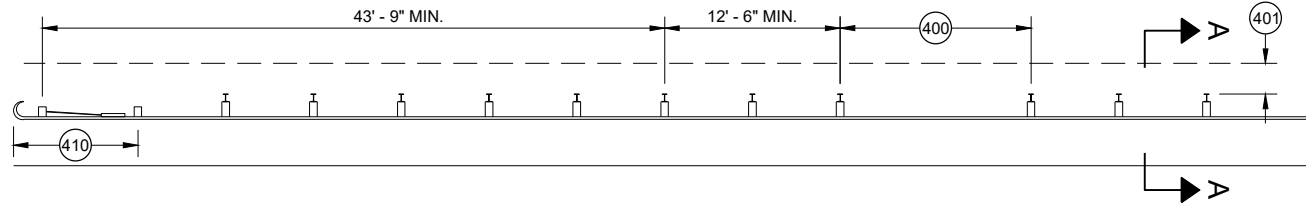
MISSING POST IN MGS GUARDRAIL NEAR EAT



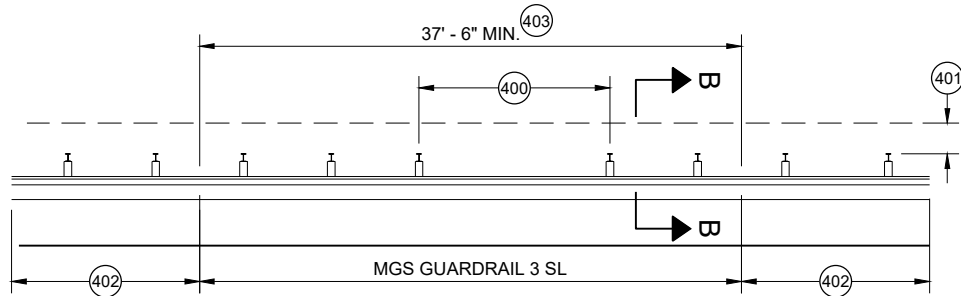
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

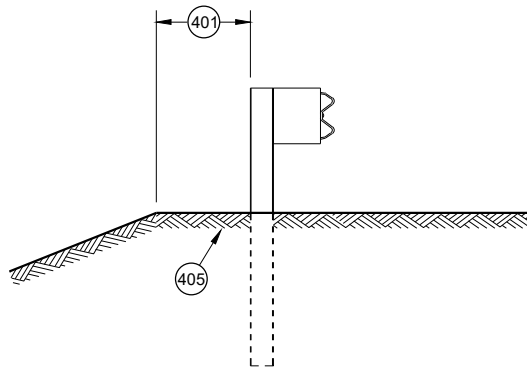


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

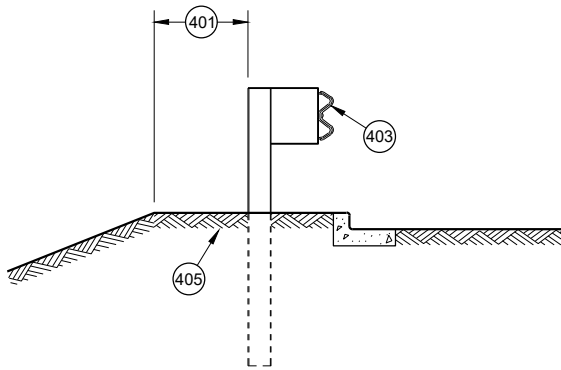


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2021  
DATE  
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

FHWA



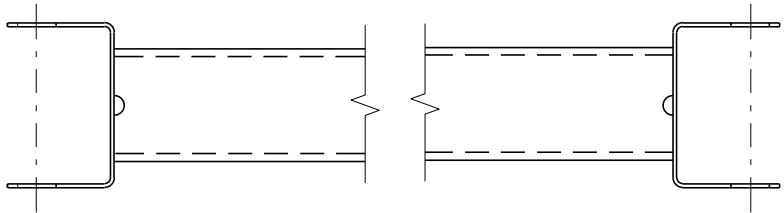
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

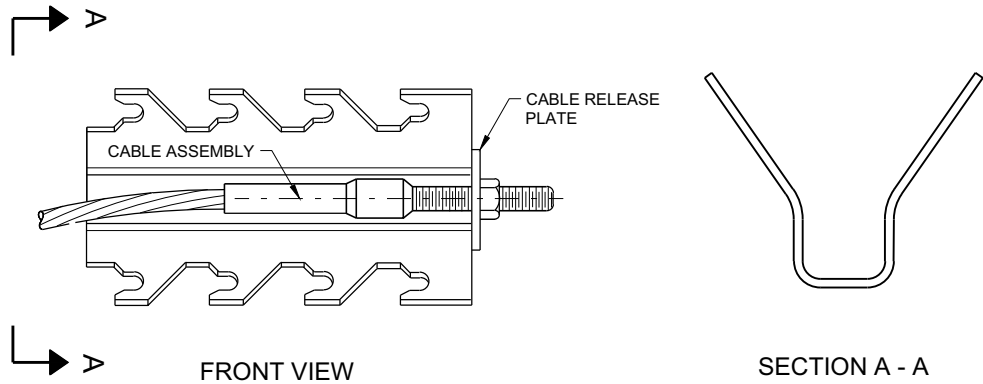
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 249



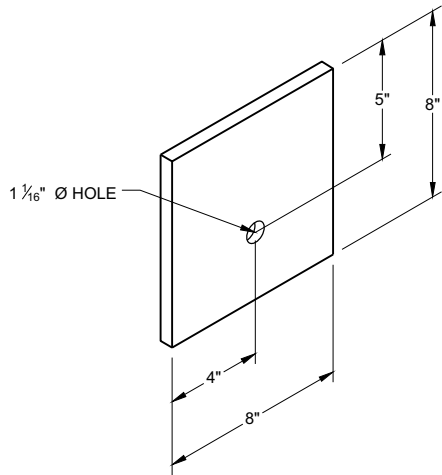


GENERIC GROUND STRUT<sup>⑨</sup> <sup>Ⓔ</sup>

| BILL OF MATERIALS |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| PART NO.          | DESCRIPTION<br>MATERIALS PROVIDED BY MGS EAT MANUFACTURER.<br>SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION. |
| ①                 | UPPER POST NO. 1 6" X 6" TUBE                                                                                  |
| ②                 | LOWER POST NO. 1                                                                                               |
| ③                 | WOOD CRT                                                                                                       |
| ④                 | WOOD BLOCKOUT                                                                                                  |
| ⑤                 | PIPE SLEEVE                                                                                                    |
| ⑥                 | BEARING PLATE                                                                                                  |
| ⑦                 | BCT CABLE ASSEMBLY                                                                                             |
| ⑧                 | ANCHOR CABLE BOX                                                                                               |
| ⑨                 | GROUND STRUT                                                                                                   |
| ⑩                 | PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.                                                                 |
| ⑪                 | STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED.<br>SECTIONS VARY IN LENGTH.                                  |
| ⑫                 | IMPACT HEAD                                                                                                    |
| ⑬                 | EAT MARKER POST - YELLOW<br>(SEE APPROVED PRODUCTS LIST)                                                       |
| ⑭                 | SOIL PLATE                                                                                                     |
| ⑮                 | UPPER POST NO. 2                                                                                               |
| ⑯                 | LOWER POST NO. 2                                                                                               |



GENERIC ANCHOR CABLE BOX<sup>⑨</sup> <sup>Ⓔ</sup>

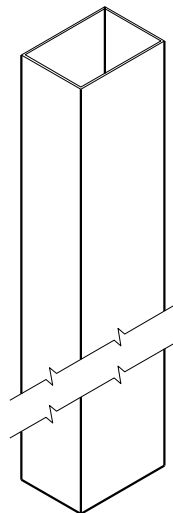


BEARING PLATE<sup>⑥</sup> <sup>Ⓔ</sup>

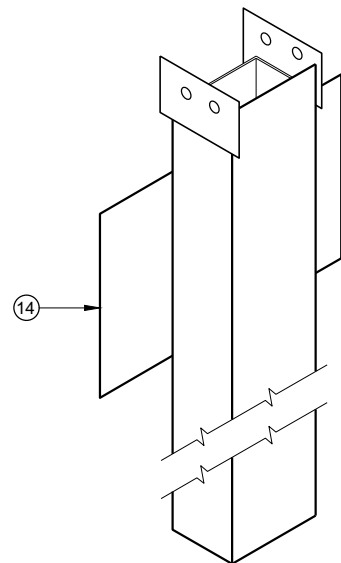
MIDWEST GUARDRAIL SYSTEM  
ENERGY ABSORBING TERMINAL  
(MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 250

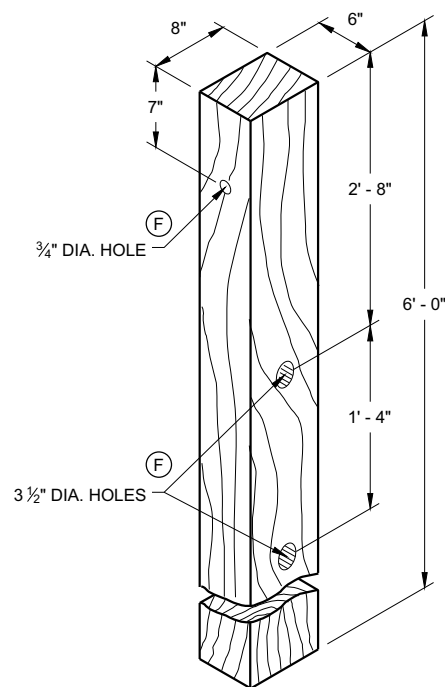




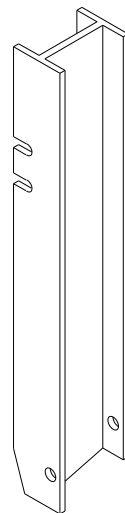
UPPER POST NO. 1 <sup>(1)</sup> (E)



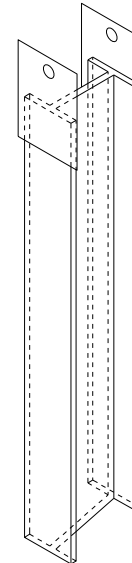
LOWER POST NO. 1 <sup>(2)</sup> (E)



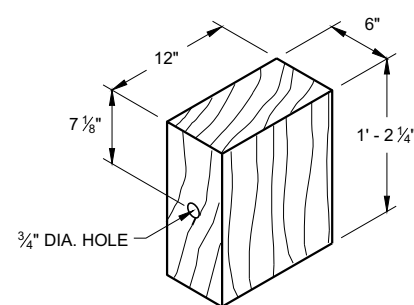
WOOD CRT POST <sup>(3)</sup> (E)  
POSTS NUMBER 3-9



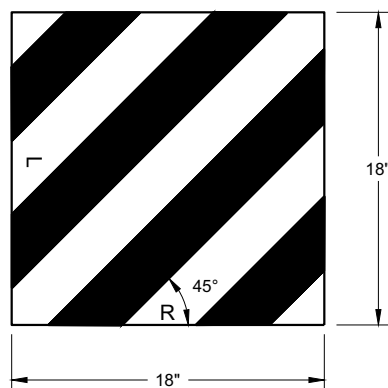
UPPER POST NO. 2 <sup>(15)</sup> (E)



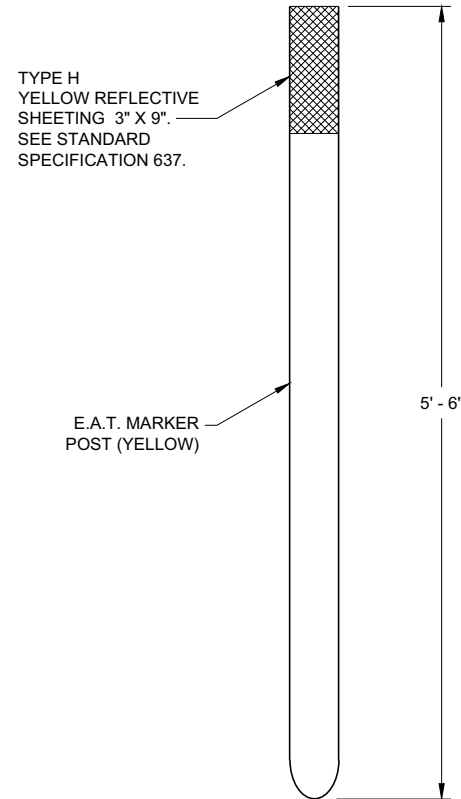
LOWER POST NO. 2 <sup>(16)</sup> (E)



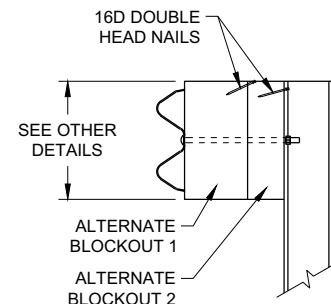
WOOD BLOCKOUT <sup>(4)</sup>  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



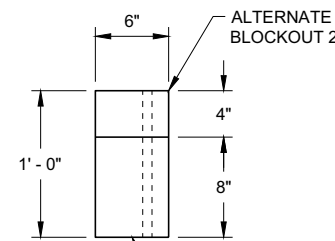
REFLECTIVE SHEETING DETAIL <sup>(E)</sup>



FRONT VIEW  
SIDE VIEW  
E.A.T. MARKER POST <sup>(13)</sup>



SIDE VIEW



TOP VIEW

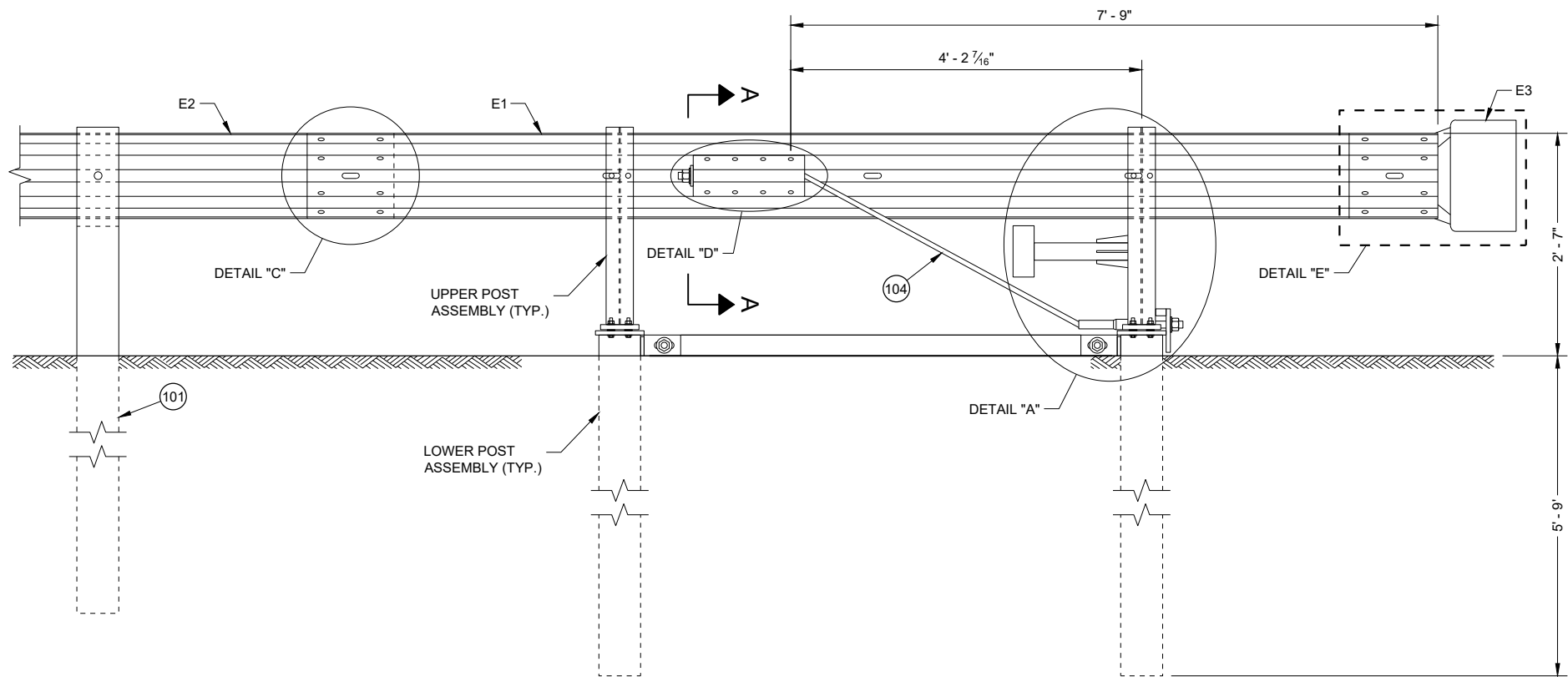
ALTERNATE WOOD  
BLOCKOUT DETAIL

**MIDWEST GUARDRAIL SYSTEM  
ENERGY ABSORBING TERMINAL  
(MGS)**

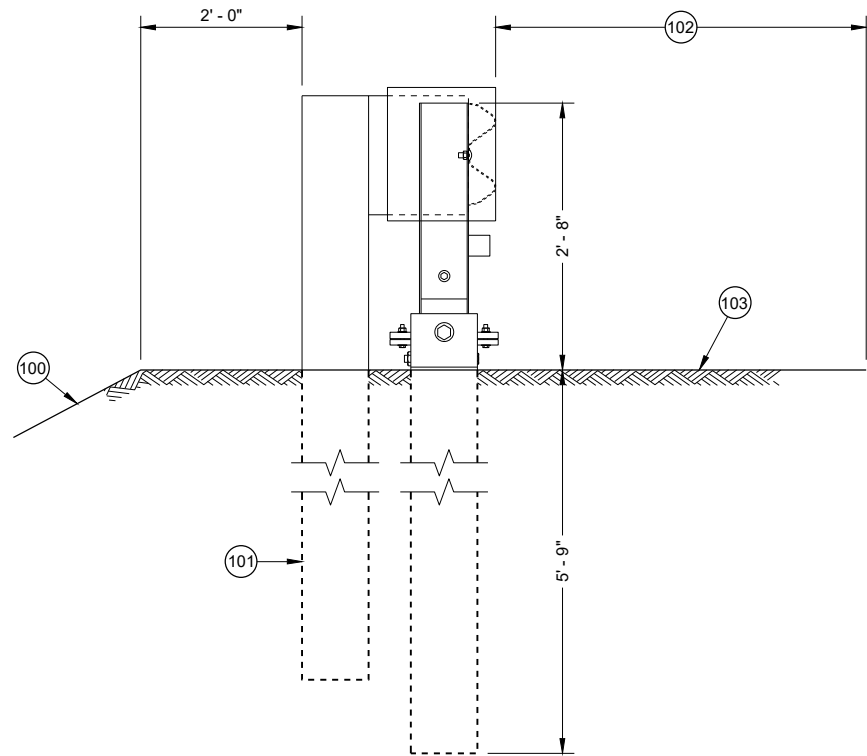
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018 DATE  
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR 251  
FHWA

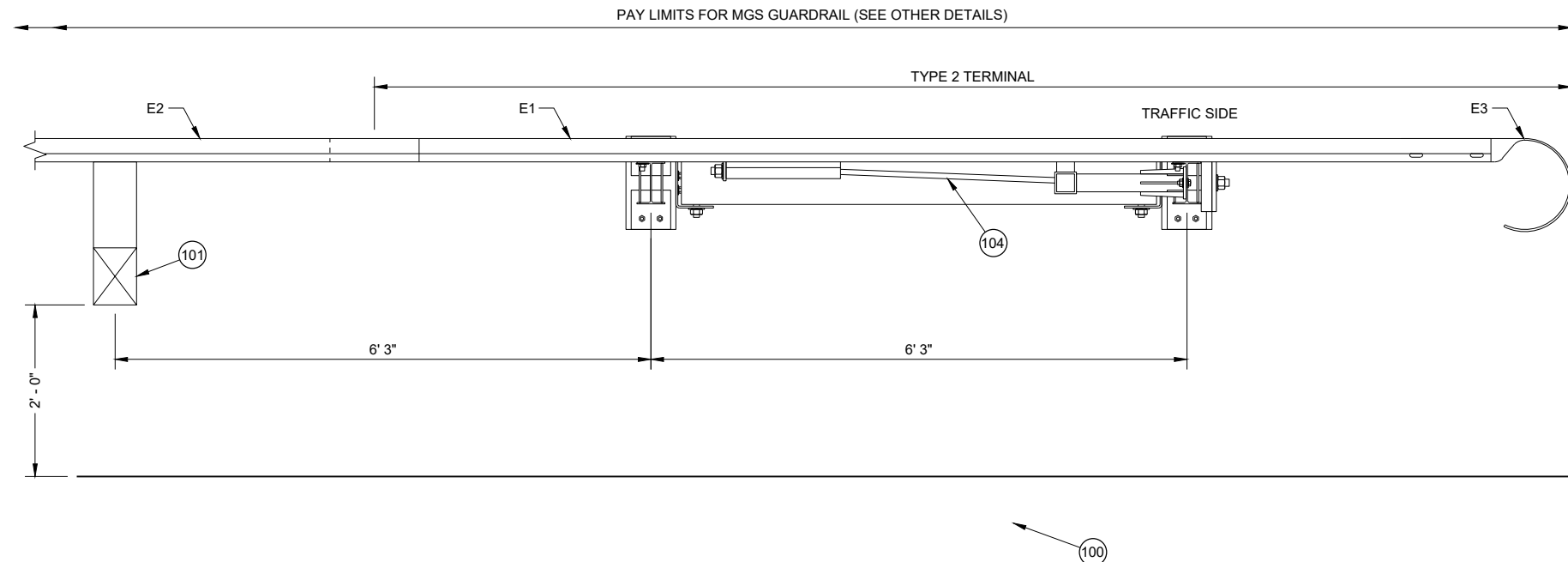




**BACK VIEW  
TYPE 2 TERMINAL**



**SIDE VIEW  
TYPE 2 TERMINAL**

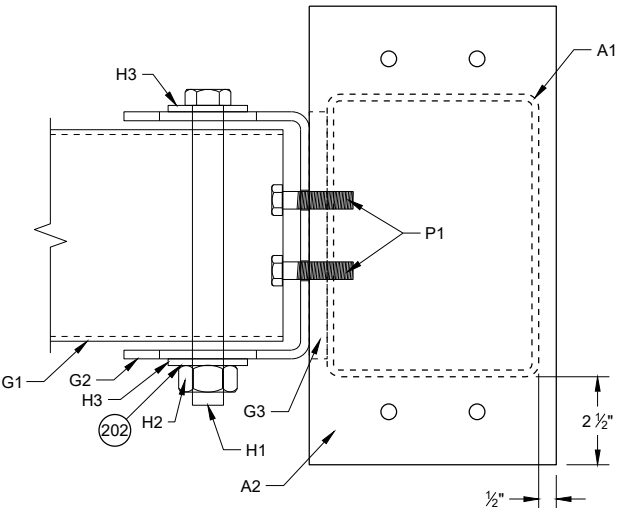
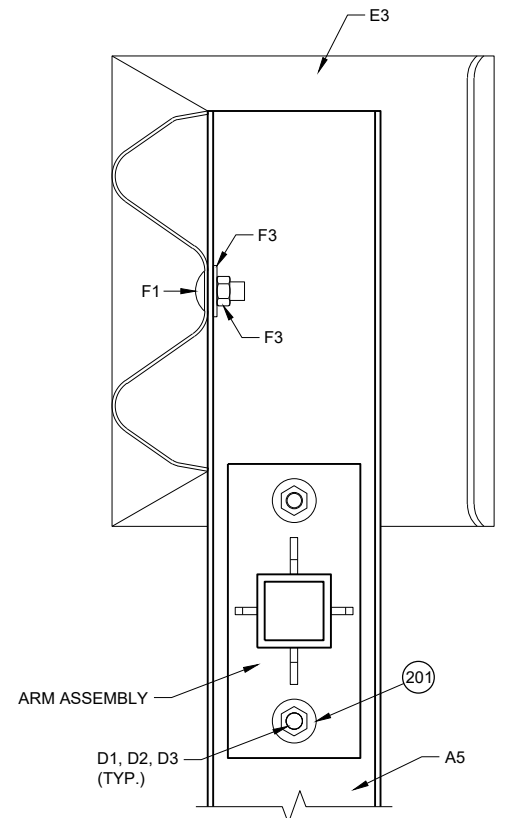
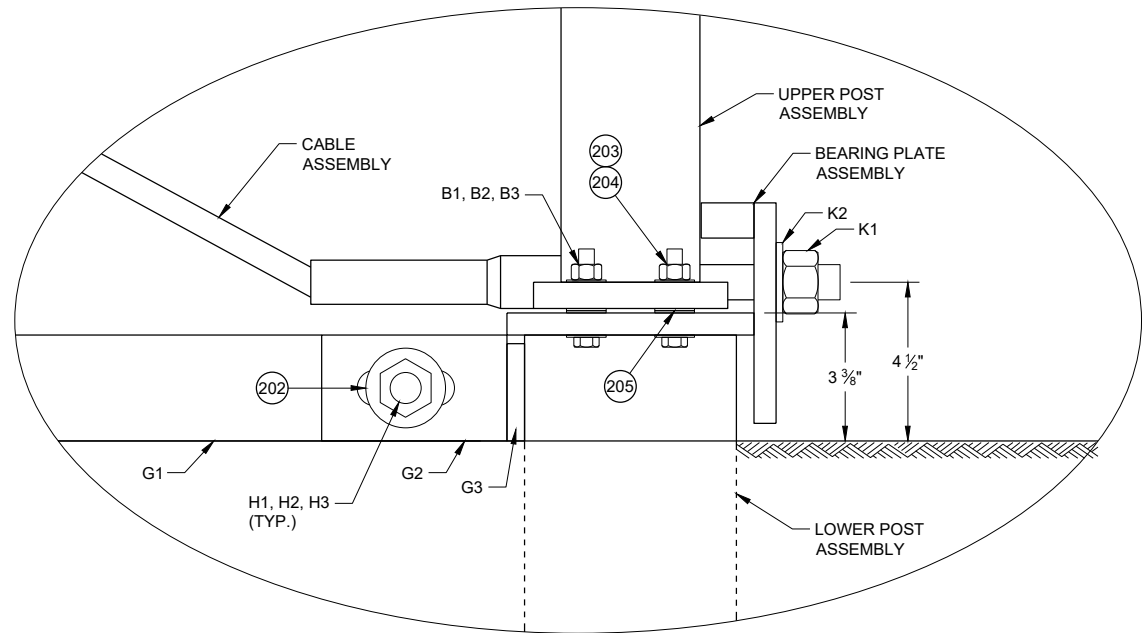
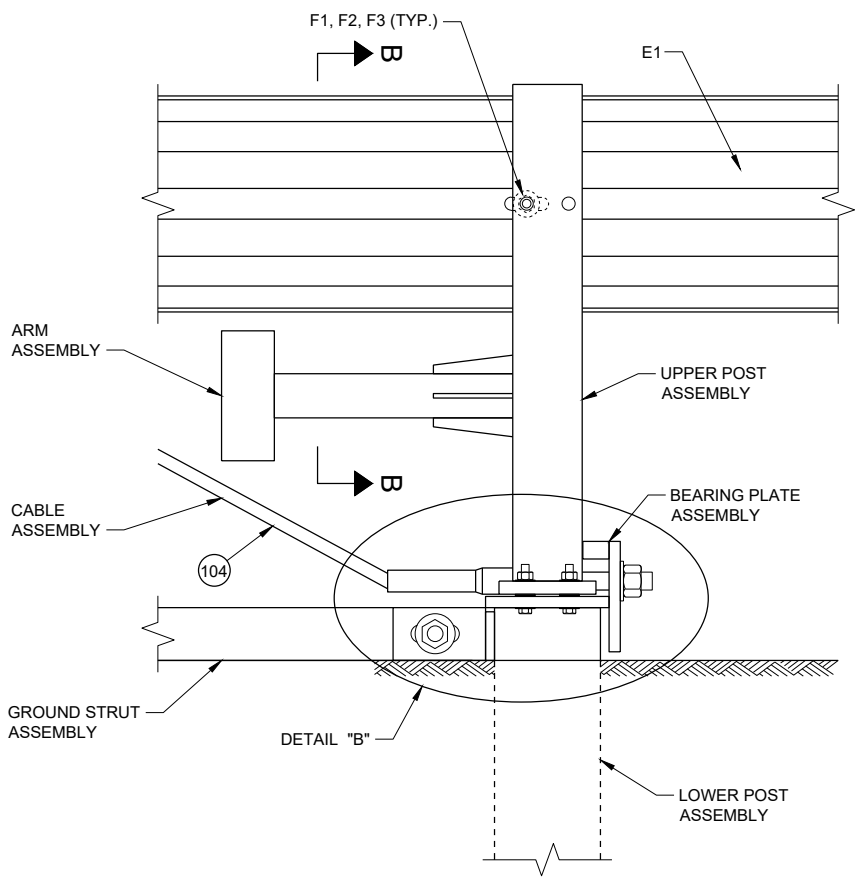


**TOP VIEW  
TYPE 2 TERMINAL**

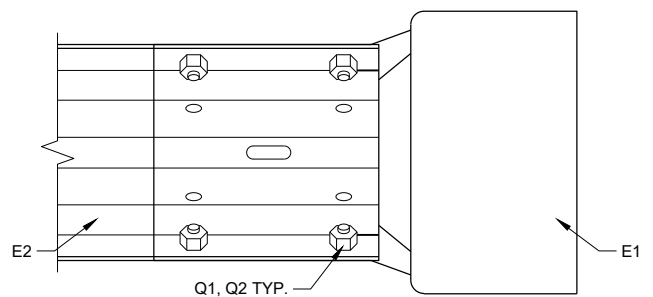
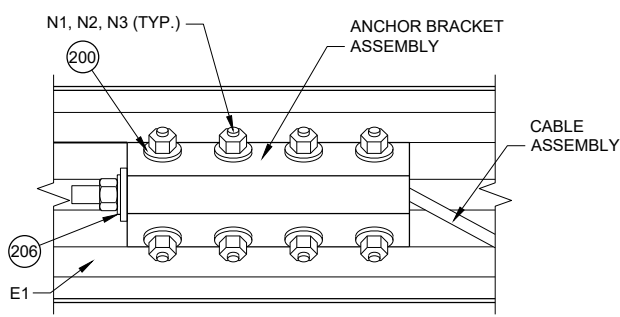
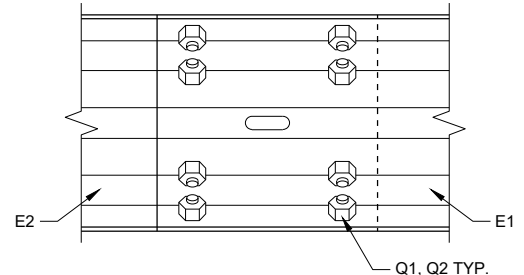
- GENERAL NOTES**
- 100 MAXIMUM SLOPE IS 2.5:1.
  - 101 SEE SDD 14B42 FOR MORE INFORMATION.
  - 102 SHOULDER
  - 103 MAXIMUM SLOPE IS 10:1.
  - 104 AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

|                                                               |
|---------------------------------------------------------------|
| <b>MIDWEST GUARDRAIL<br/>SYSTEM (MGS)<br/>TYPE 2 TERMINAL</b> |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION 252        |





**TOP VIEW  
GROUND STRUT  
CONNECTION DETAIL**



**GENERAL NOTES**

- 200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.
- 201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.
- 202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.
- 203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.
- 204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.
- 205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.
- 206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

**MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 253





(300) TAP FOR 1/2" AFTER GALVANIZATION



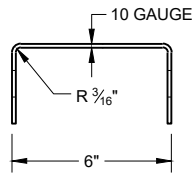
## ASSEMBLY DETAIL ISOMETRIC

## POST CONNECTION DETAIL

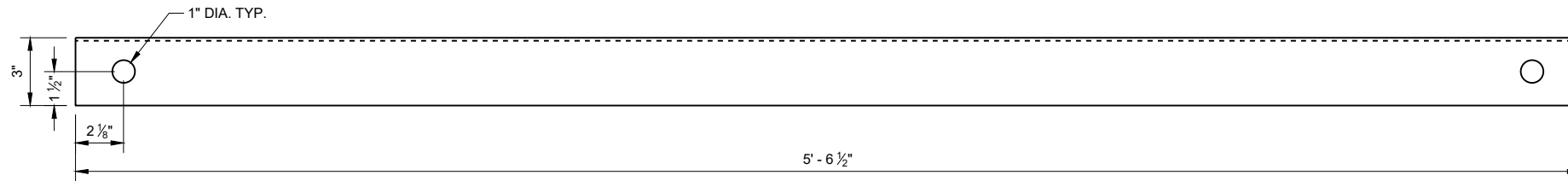
## MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 254



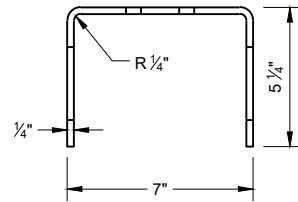


SIDE VIEW

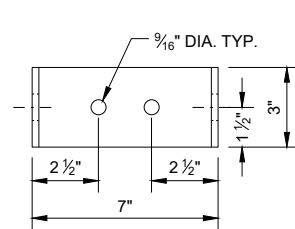


FRONT VIEW

GROUND STRUT CHANNEL (G1)

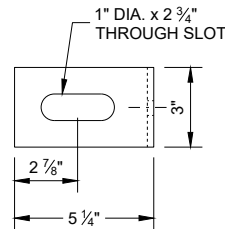


TOP VIEW



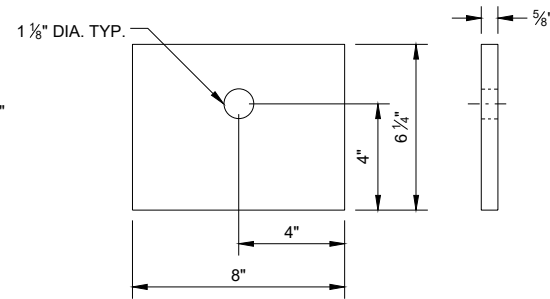
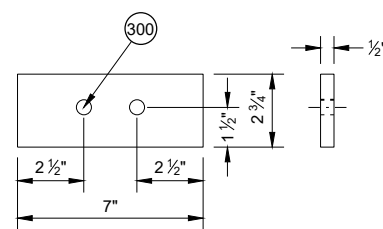
FRONT VIEW

GROUND STRUT CONNECTOR (G2)

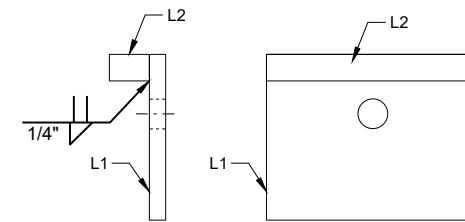


SIDE VIEW

GROUND STRUT PLATE (G3)



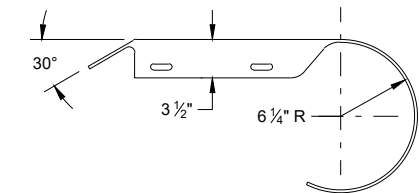
BEARING PLATE (L1)



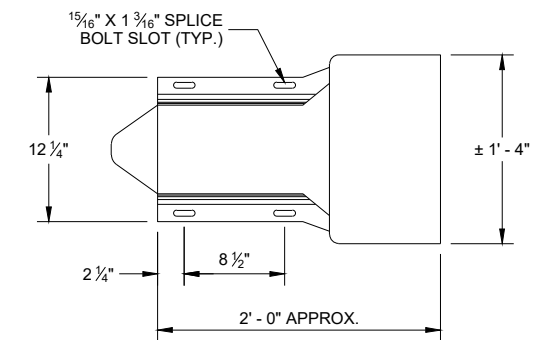
SIDE VIEW

FRONT VIEW

BEARING PLATE ASSEMBLY

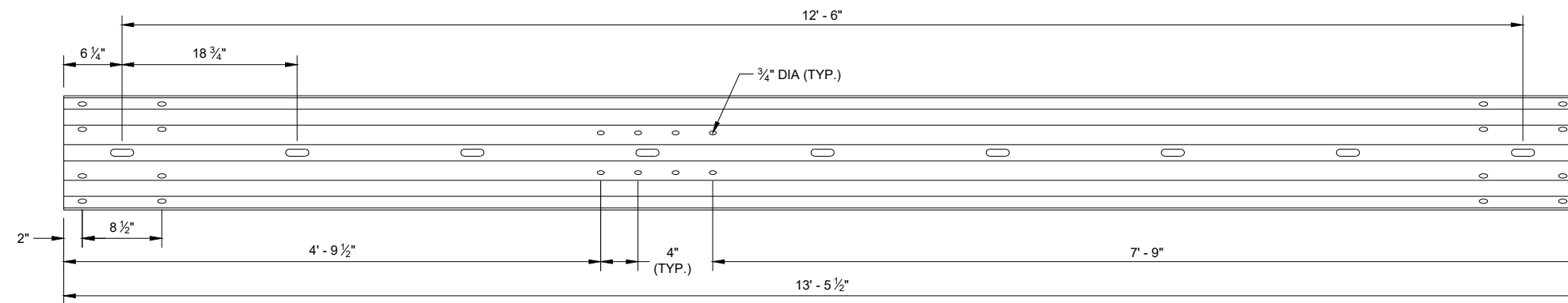


PLAN VIEW

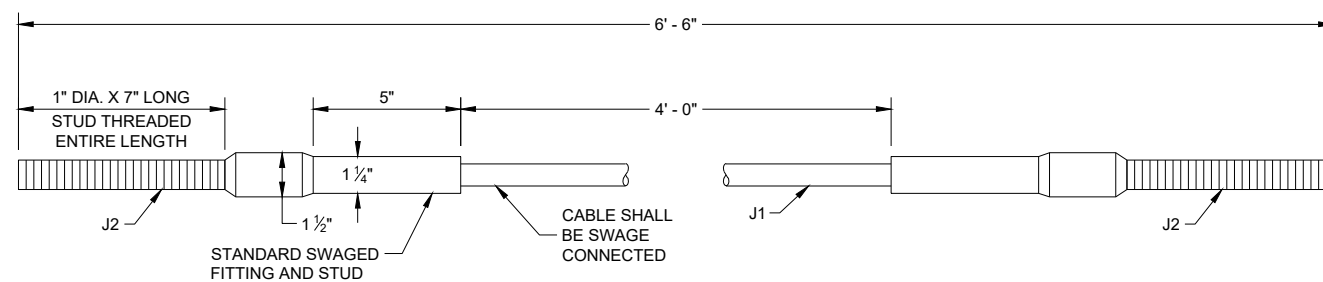


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)

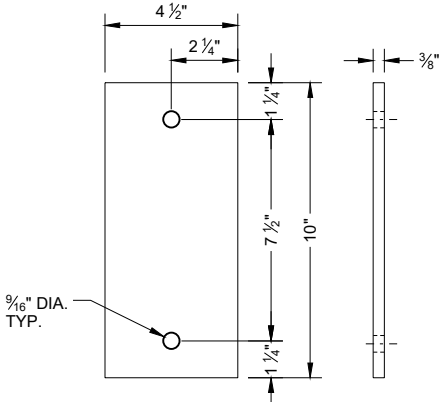


CABLE ASSEMBLY

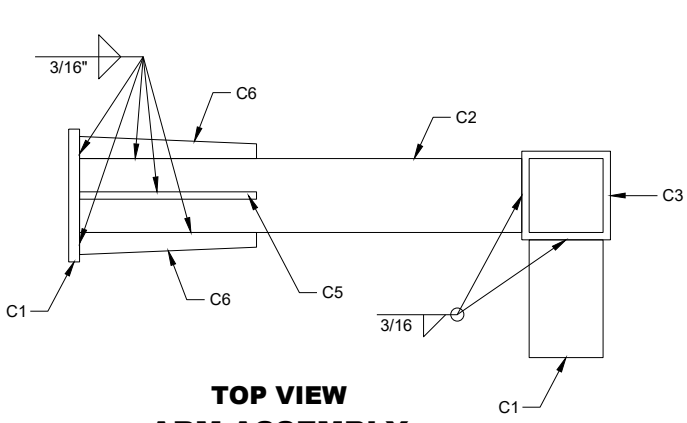
MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 255

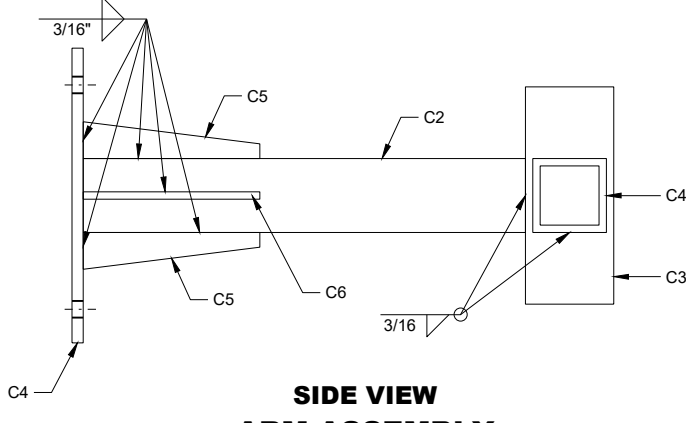




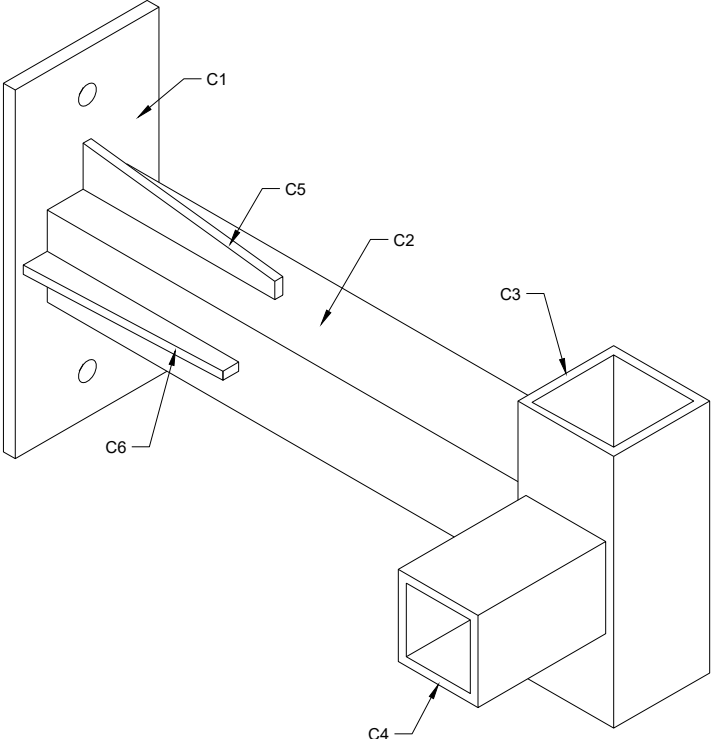
ARM PLATE (C1)



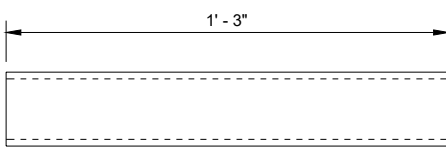
TOP VIEW  
ARM ASSEMBLY



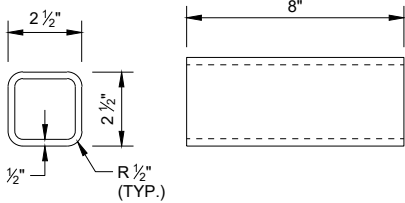
SIDE VIEW  
ARM ASSEMBLY



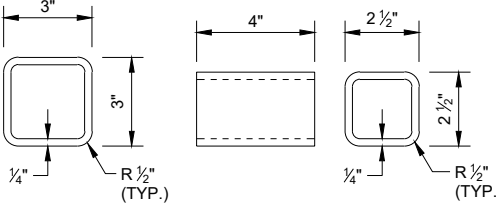
ISOMETRIC VIEW  
ARM ASSEMBLY



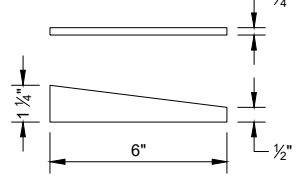
ARM TUBE 1 (C2)



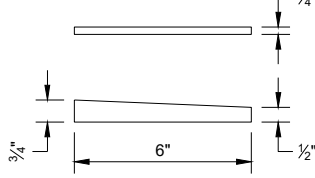
ARM TUBE 2 (C3)



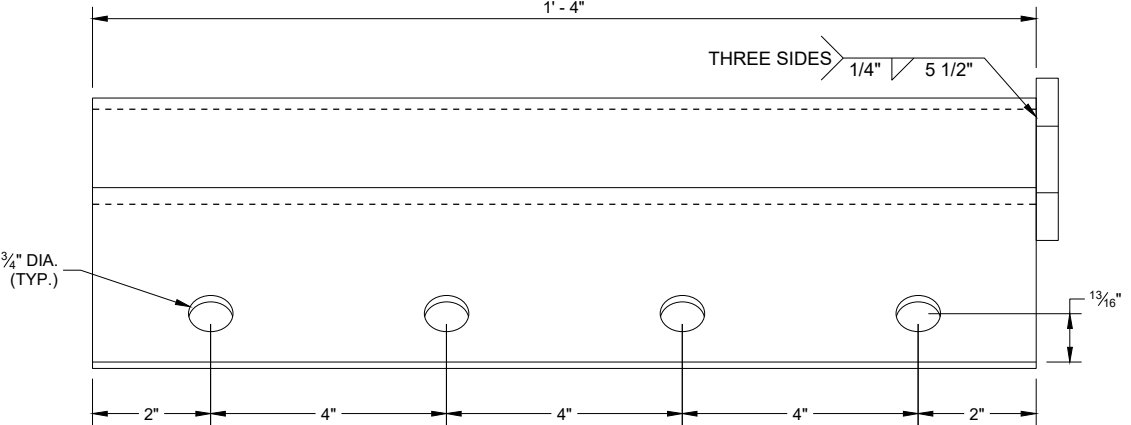
ARM TUBE 3 (C4)



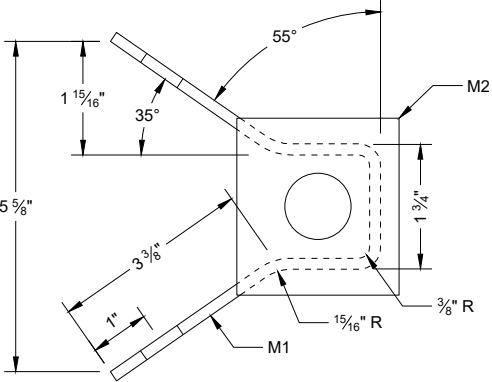
ARM GUSSET  
PLATE 1 (C5)



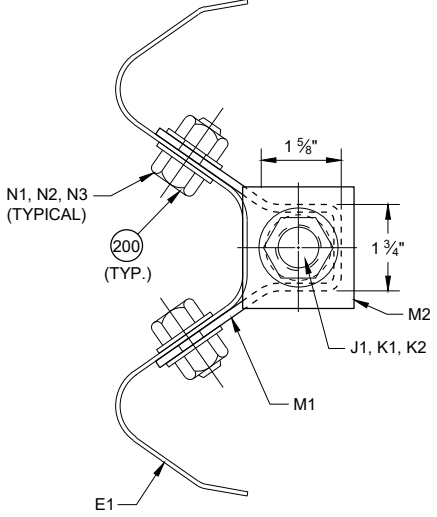
ARM GUSSET  
PLATE 2 (C6)



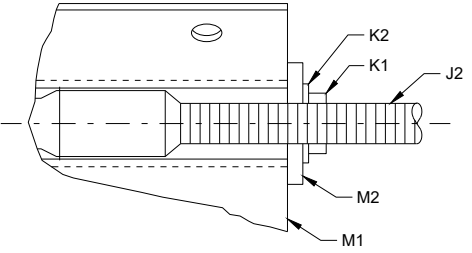
ANCHOR BRACKET (M1, M2)



ANCHOR BRACKET BEARING PLATE (M2)



SECTION A - A



MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

| PART | DESCRIPTION                   | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                              | NOTES                     |
|------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| A1   | TYPE 2 FOUNDATION TUBE        | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 8" x 6" x 3⁄16"        |
| A2   | LOWER PLATE                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 5⁄8" THICKNESS            |
| A3   | POST GUSSET                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| A4   | UPPER PLATE                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 3⁄4" THICKNESS            |
| A5   | TYPE 2 POST                   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5                                                                                                                                                        |                           |
| B1   | BREAKAWAY BOLT                | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT. | 7⁄16" DIA.                |
| B2   | BREAKAWAY BOLT WASHER         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 7⁄16" DIA.                |
| B3   | BREAKAWAY BOLT NUT            | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                     |                           |
| C1   | ARM ASSEMBLY PLATE            | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 3⁄8" THICKNESS            |
| C2   | ARM ASSEMBLY TUBE 1           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 8" x 6" x 3⁄16"        |
| C3   | ARM ASSEMBLY TUBE 2           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 3" x 3" x 1⁄4"         |
| C4   | ARM ASSEMBLY TUBE 3           | AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501                                                                                                                                                                                                                                                                                                               | TS 2 1⁄2" x 2 1⁄2" X 1⁄4" |
| C5   | ARM ASSEMBLY GUSSET PLATE 1   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| C6   | ARM ASSEMBLY GUSSET PLATE 2   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| D1   | ARM ASSEMBLY BOLT             | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                                                                                            | 1⁄2" DIA.                 |
| D2   | ARM ASSEMBLY WASHER           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 1⁄2" DIA.                 |
| D3   | ARM ASSEMBLY NUT              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                                   | 1⁄2" DIA.                 |
| E1   | TYPE 2 GUARD RAIL             | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| E2   | BEAM GUARD RAIL               | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| E3   | BEAM GUARD ROUNDED BUFFER END | AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER                                                                                                                                                                                                                                                                                                                 |                           |
| F1   | POST BOLT                     | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                                                                                            | 5⁄8" DIA.                 |
| F2   | POST BOLT WASHER              | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                                                                                           | 5⁄8" DIA.                 |
| F3   | POST BOLT NUT                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                                                                |                           |
| G1   | GROUND STRUT CHANNEL          | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄2" x 11 3⁄4" x 10 GAUGE |
| G2   | GROUND STRUT CONNECTOR        | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄4" THICKNESS            |
| G3   | GROUND STRUT PLATE            | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                                                                                        | 1⁄2" THICKNESS            |

MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 257



BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

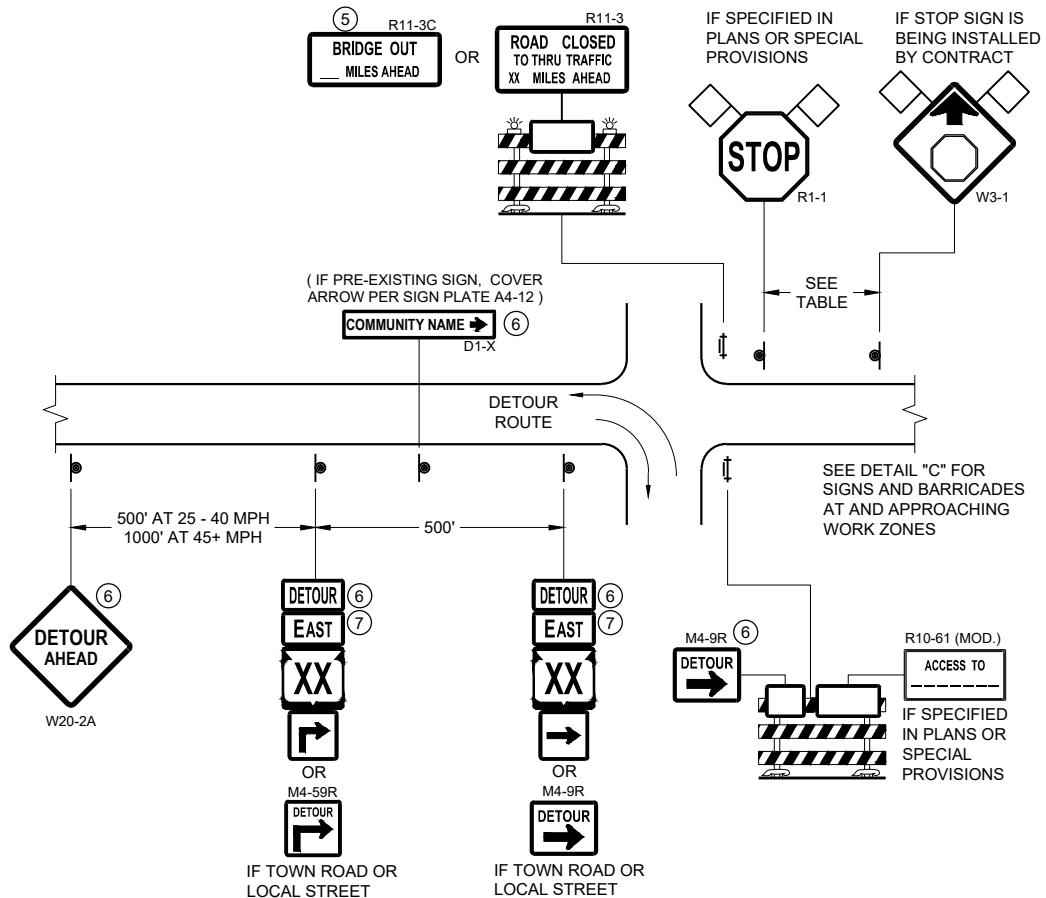
| PART | DESCRIPTION                 | MATERIALS SPECIFICATIONS                                                                                                                                                                                                                                                                                    | NOTES          |
|------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| H1   | GROUND STRUT BOLT           | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                               | 7/8" DIA.      |
| H2   | GROUND STRUT BOLT WASHER    | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1<br>F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                               | 7/8" DIA.      |
| H3   | GROUND STRUT BOLT NUT       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                          |                |
| J1   | BCT CABLE                   | AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS)<br>TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS                                                                              | 3/4" DIA.      |
| J2   | BCT CABLE                   | UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE<br>STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE<br>FOR ALLOY EYEBOLTS." |                |
| K1   | CABLE ASSEMBLY NUT          | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                      | 1" DIA.        |
| K2   | CABLE ASSEMBLY WASHER       | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1                                                                                                                                                                                              | 1" DIA.        |
| L1   | BEARING PLATE               | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 5/8" THICKNESS |
| L2   | BEARING PLATE FLANGE        | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 1" THICKNESS   |
| M1   | BEAM GUARD ANCHOR BRACKET   | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           |                |
| M2   | BEAM GUARD ANCHOR END PLATE | AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709<br>MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI                                                                                                           | 3/8" THICKNESS |
| N1   | ANCHOR BRACKET BOLT         | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                             | 5/8" DIA.      |
| N2   | ANCHOR BRACKET BOLT WASHER  | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1<br>F436 TYPE 1 (HARDEN WASHER ONLY)                                                                                                                               | 5/8" DIA.      |
| N3   | ANCHOR BRACKET BOLT NUT     | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                       |                |
| P1   | FOUNDATION TUBE BOLT        | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                                       | 1/2" DIA.      |
| Q1   | SPLICE BOLT                 | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36                                                                             |                |
| Q2   | SPLICE NUT                  | HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC<br>OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5                                 | 5/8" DIA.      |

MIDWEST GUARDRAIL  
SYSTEM (MGS)  
TYPE 2 TERMINAL

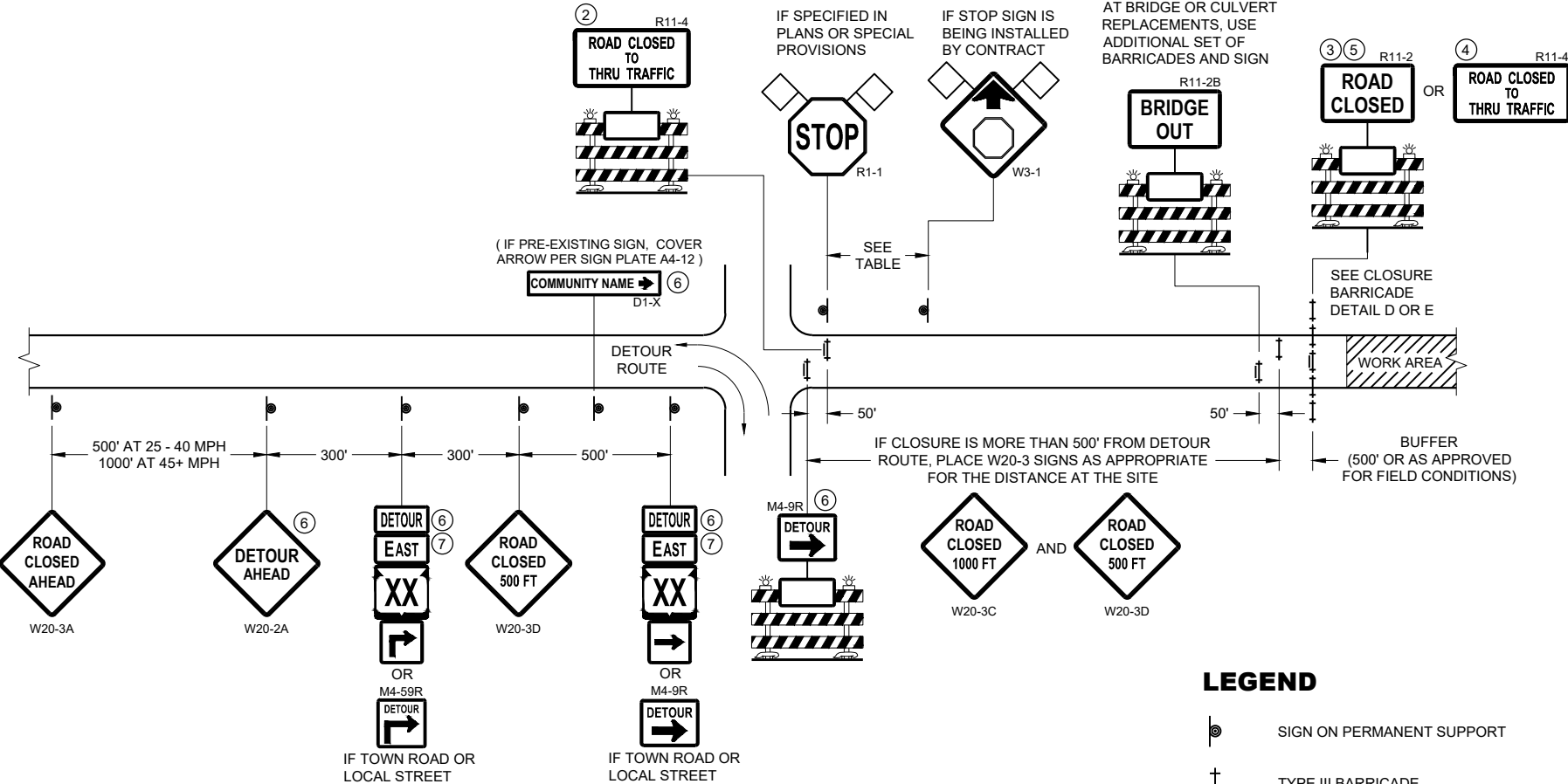
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVE 258  
ENGINEER  
FHWA





**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )



**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE LESS THAN ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

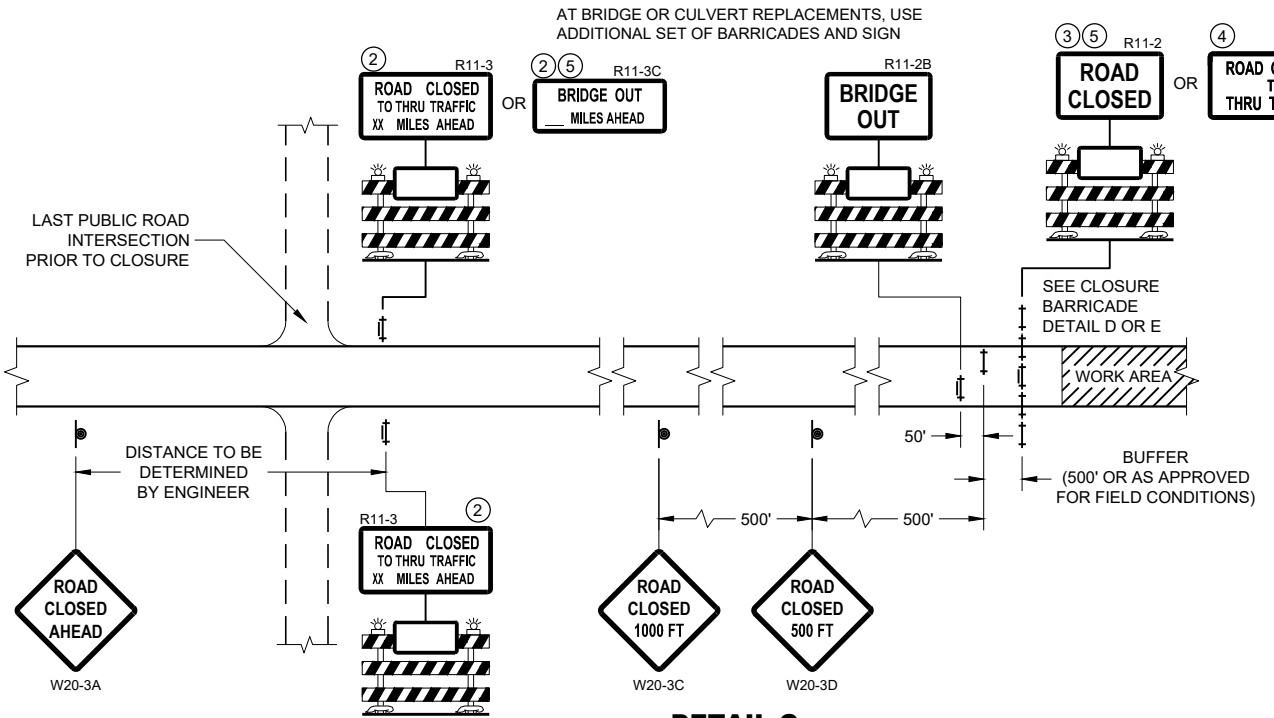
**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

**DETOUR** M4 - 8  
**EAST** M3 - X  
**XX** OR **XX** OR **COUNTY X**  
M1 - 4 M1 - 6 M1 - 5A  
**→** OR **→**  
M05 - 1 M06 - 1

| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|-------------------|--------------------------------------------|
| 25                | 200                                        |
| 30                | 200                                        |
| 35                | 350                                        |
| 40                | 350                                        |
| 45                | 500                                        |
| 50                | 550                                        |
| 55                | 750                                        |

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦



**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

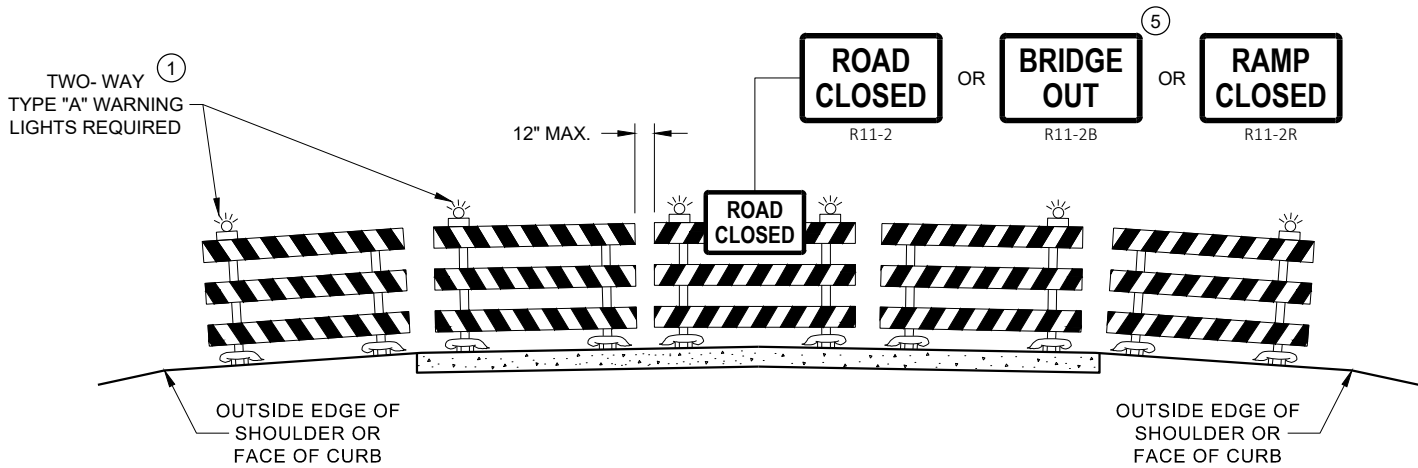
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

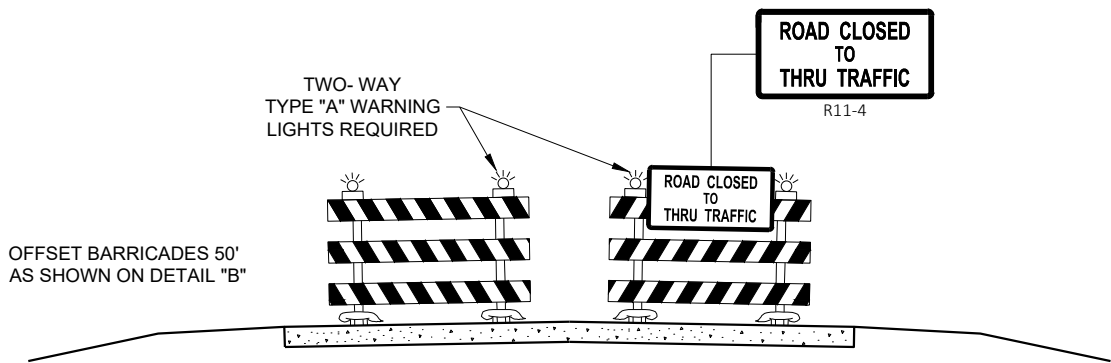
APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 259

FHWA





**DETAIL D**  
**ROAD CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**



**DETAIL E**  
**LANE CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

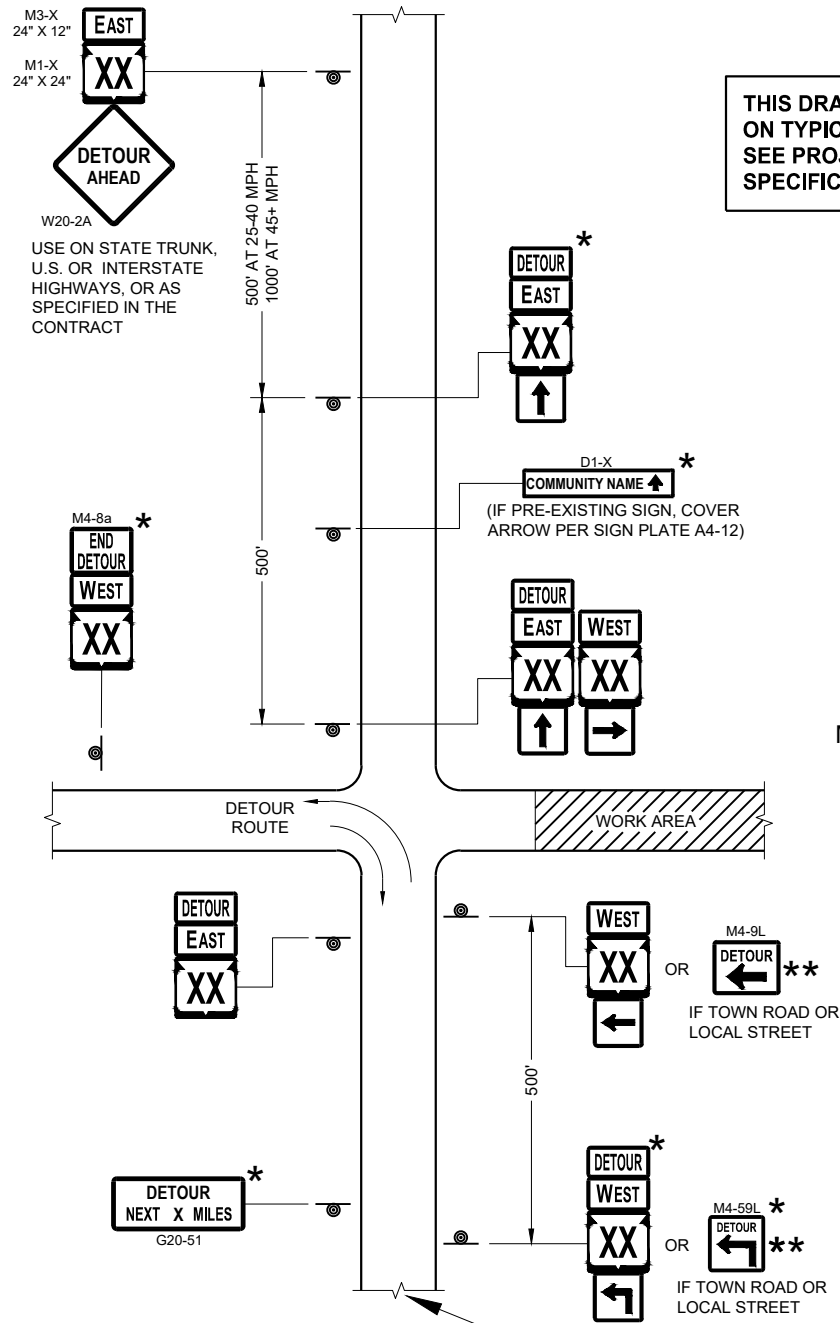
**BARRICADES AND SIGNS**  
**FOR**  
**VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 260

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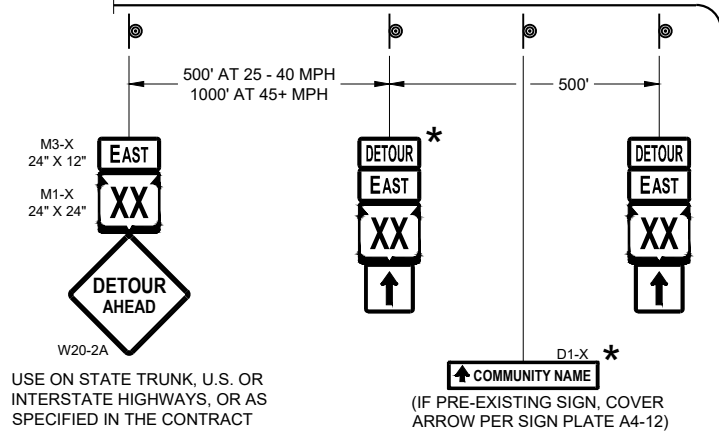




SEE SPECIFIC PROJECT DETOUR  
SIGNING DETAIL SHEETS AND  
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE  
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.  
SEE PROJECT DETOUR SIGNING SHEETS FOR  
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F  
DETOUR SIGNING

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST M4 - 8
- DETOUR WEST M3 - X
- DETOUR AHEAD M1 - 4 OR M1 - 6 OR M1 - 5A
- DETOUR NEXT X MILES M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

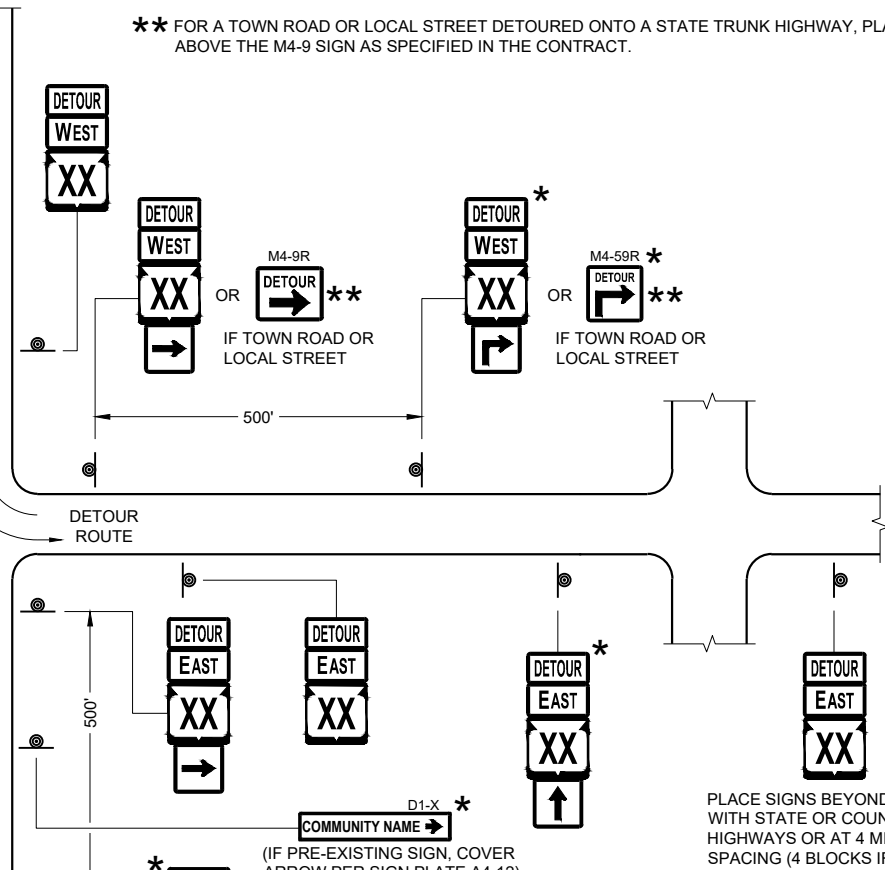
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



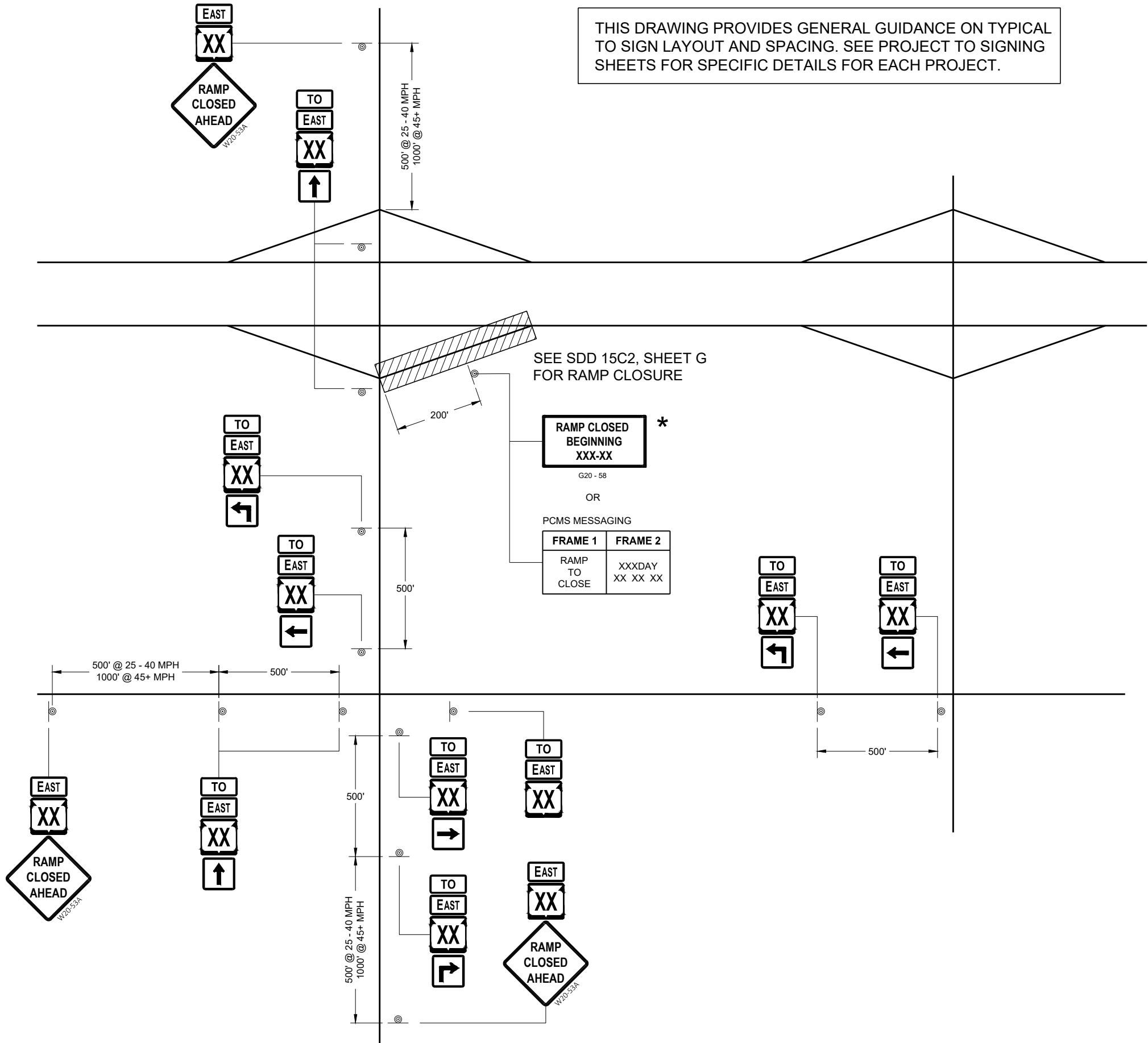
PLACE SIGNS BEYOND INTERSECTIONS  
WITH STATE OR COUNTY TRUNK  
HIGHWAYS OR AT 4 MILE MAXIMUM  
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING  
FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 261  
FHWA





LEGEND

⊙ SIGN ON PERMANENT SUPPORT

TO MO4 - 5  
EAST M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND TO SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- SIGNS THAT SHALL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- SIGN SIZES SHALL BE AS FOLLOW:  
M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).  
MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).  
M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).  
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).  
W20 - 53A SHALL BE 48" X 48"

\* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP  
LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 262

FHWA



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

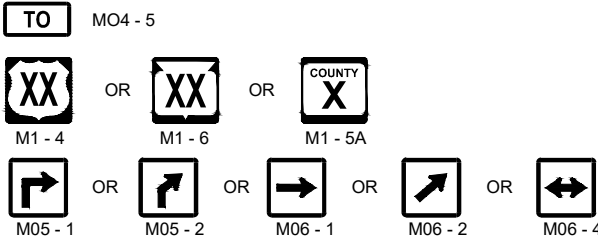
## LEGEND



## SIGN ON PERMANENT SUPPORT



## PORTABLE CHANGEABLE MESSAGE SIGN



## GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET. CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL " IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT SHALL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOW:  
MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).  
M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).  
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

① ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

# OFF RAMP LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 263

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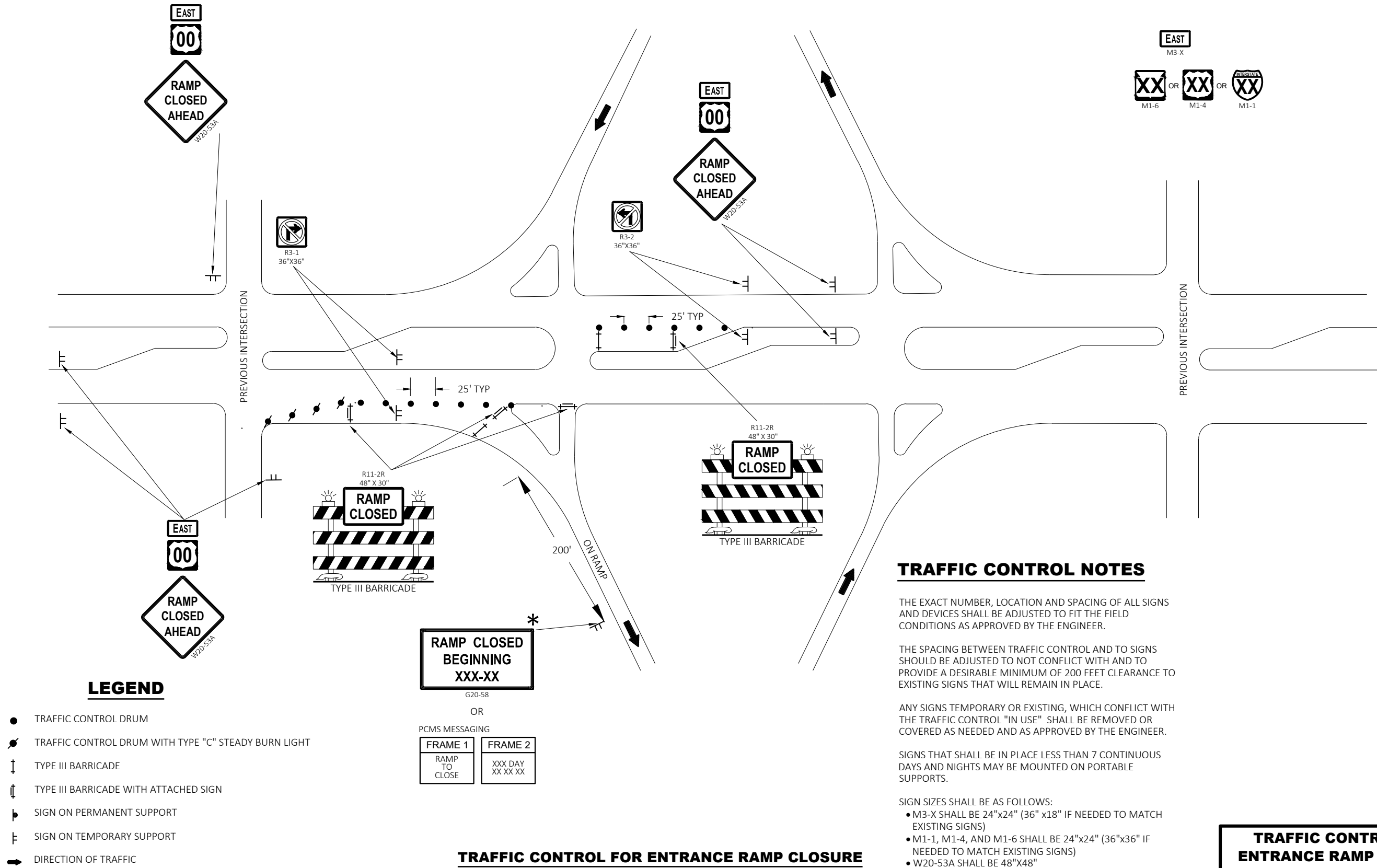
WORK ZONE ENGINEER 263

6

**SDD 15C02 - 09e**

6

**SDD15C02 - 09e**

**TRAFFIC CONTROL FOR  
ENTRANCE RAMP CLOSURE**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

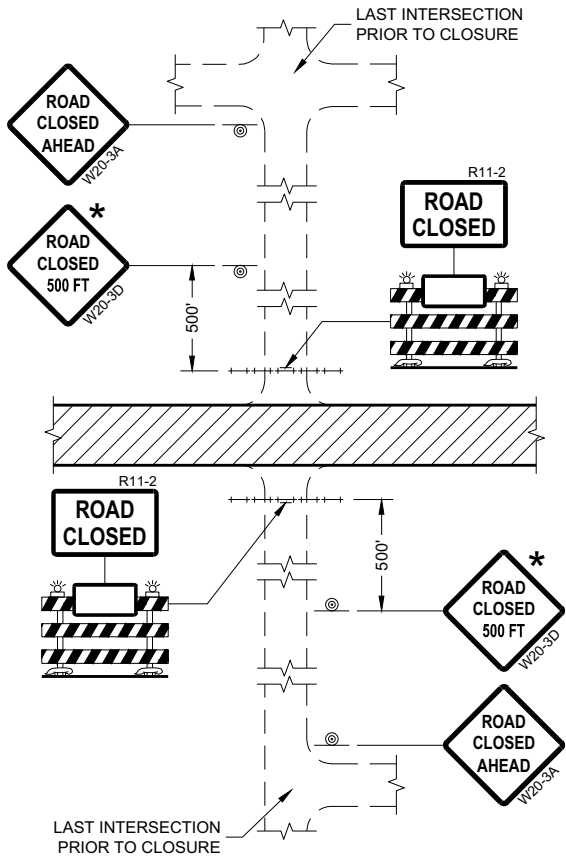
APPROVED

May 2023  
DATE/S/ Andrew Heidtke  
WORK ZONE ENGINEER

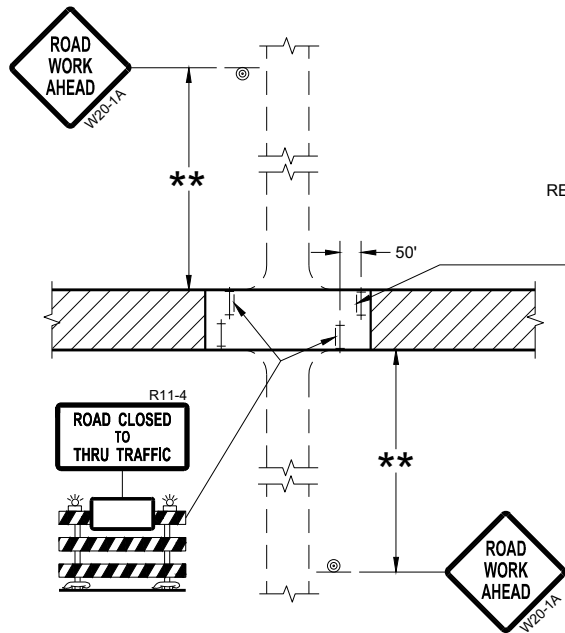
264

FHWA

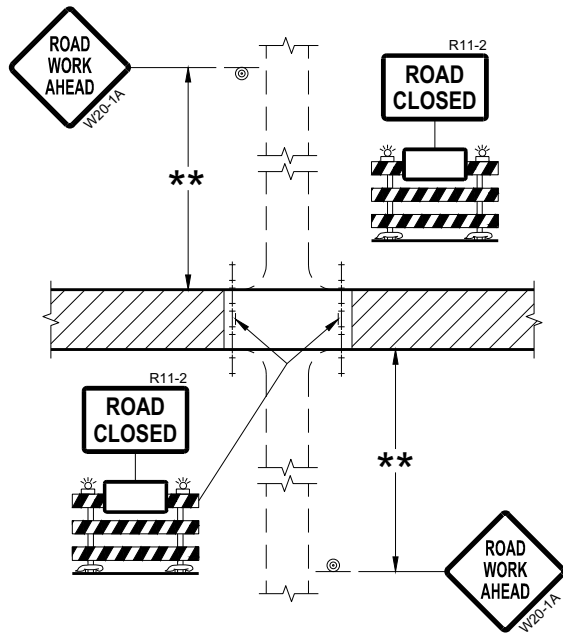




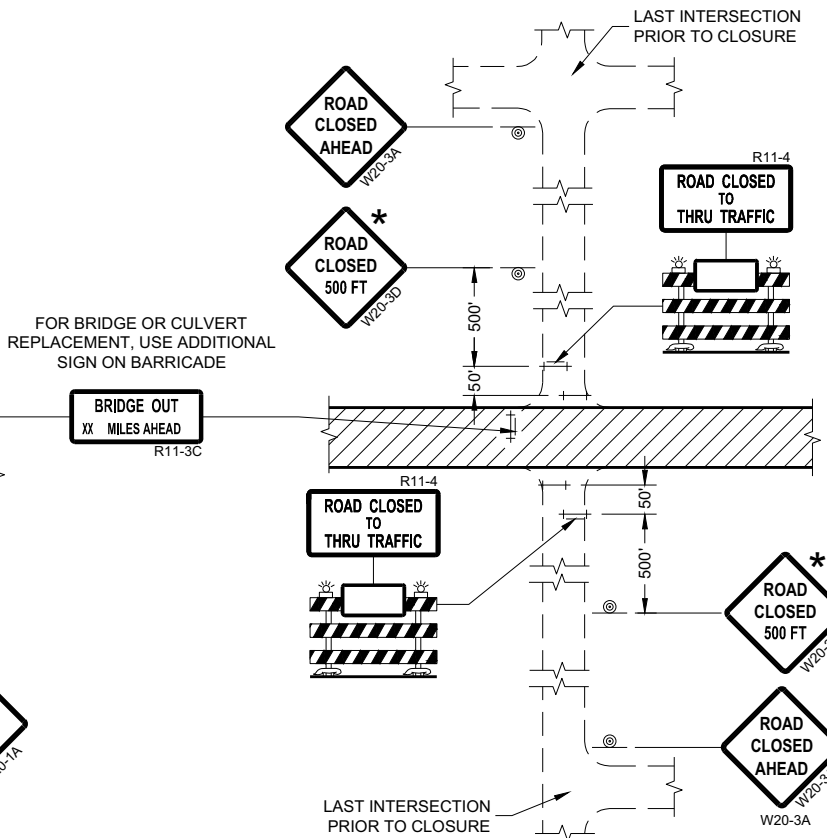
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

### GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

### LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

### BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 265

FHWA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

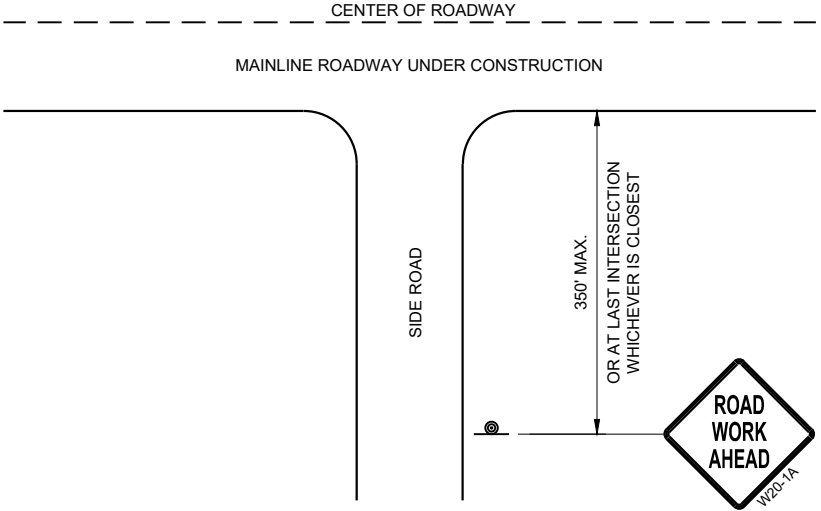
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

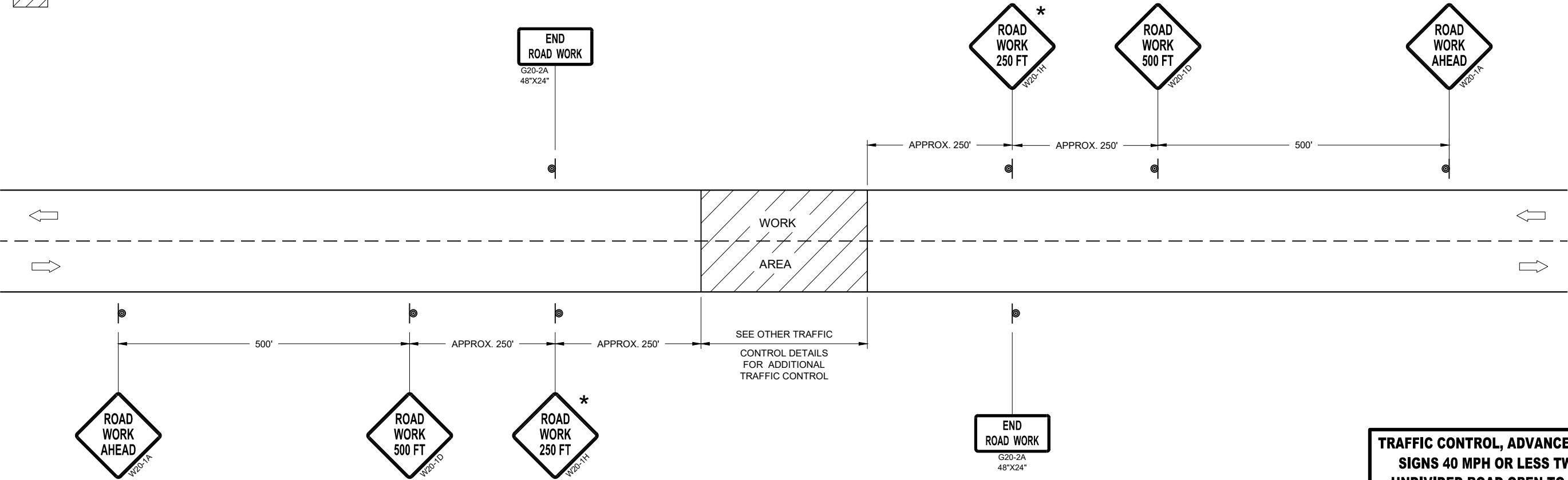
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL



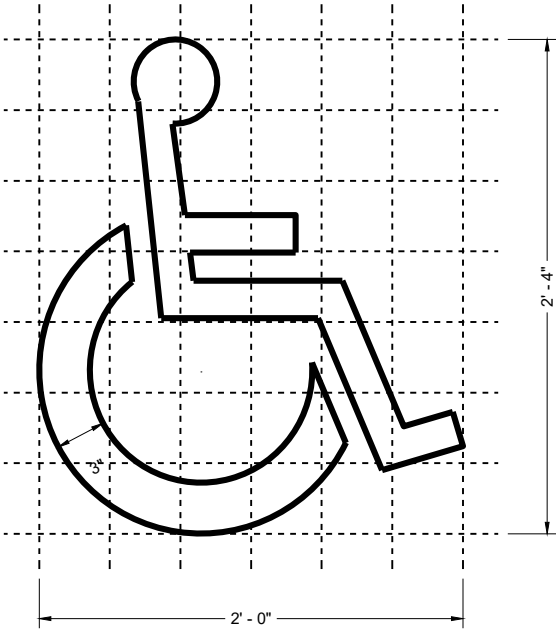
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 40 MPH OR LESS TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC

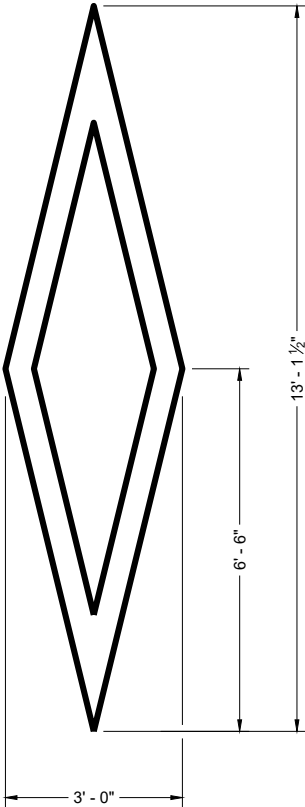
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 266  
FHWA





HANDICAP SYMBOL

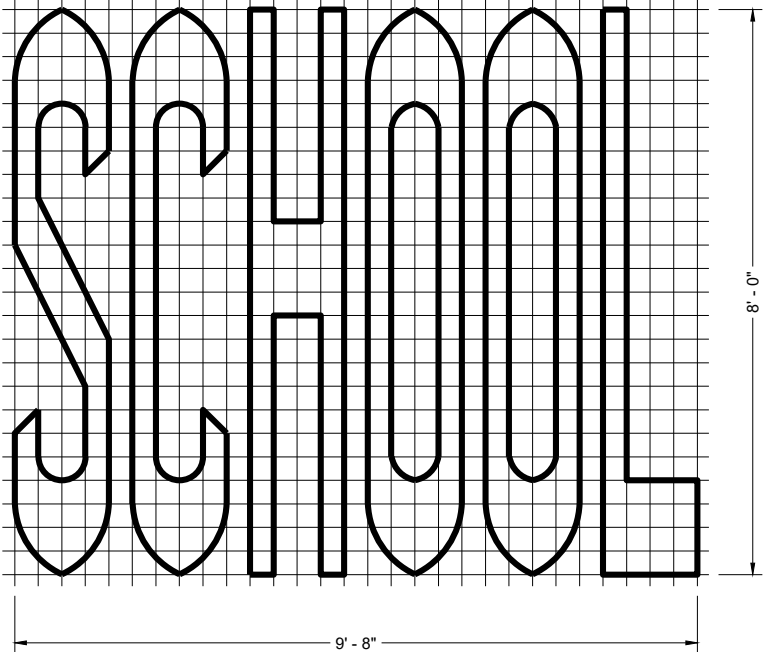
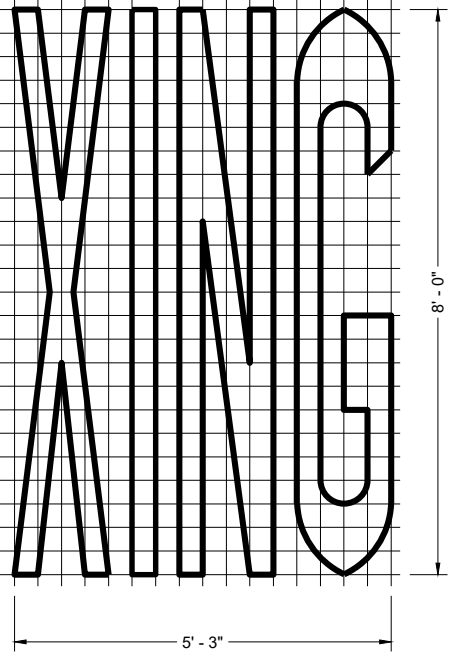
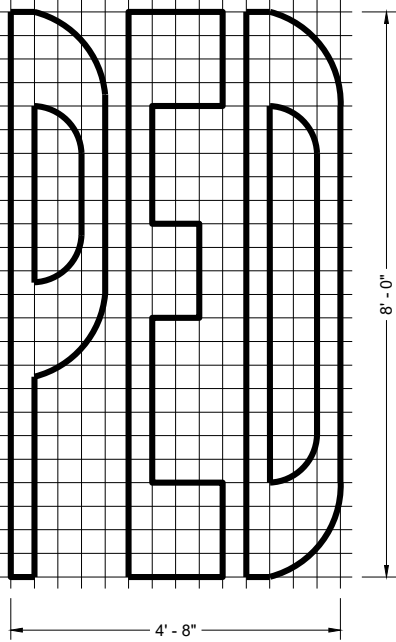
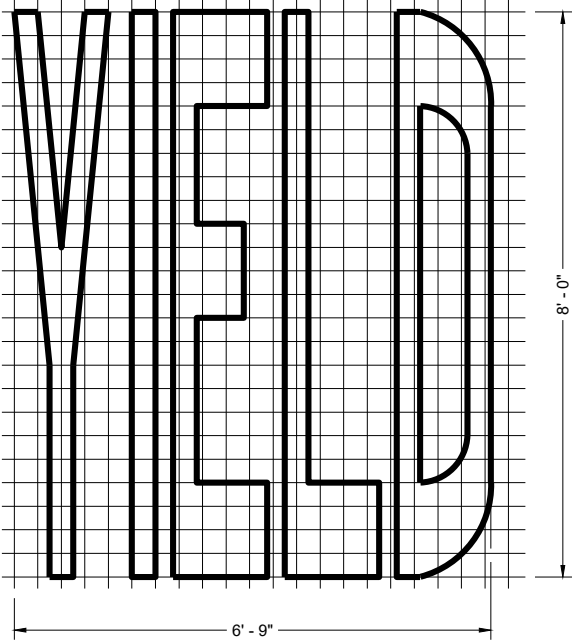
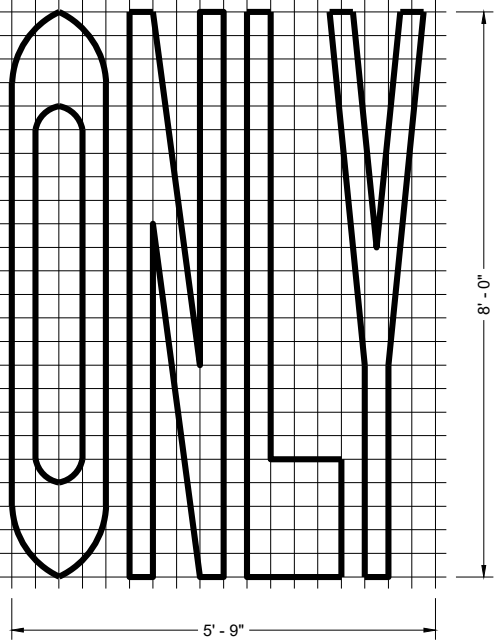
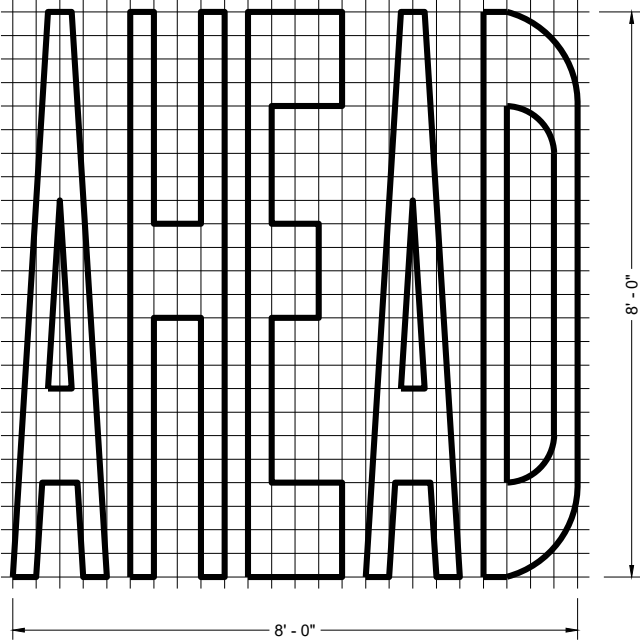
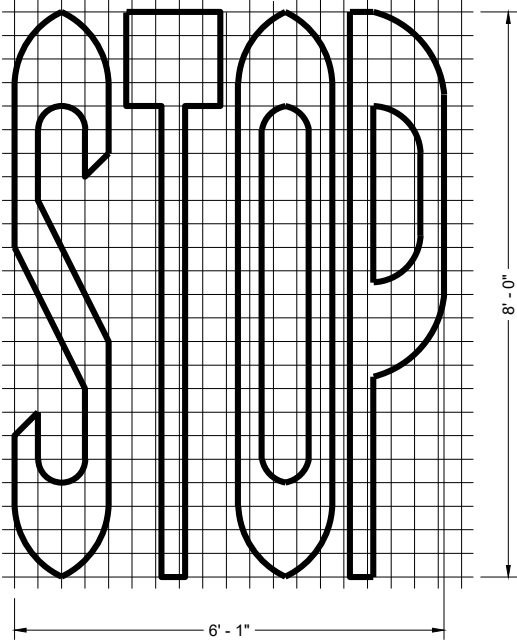


PREFERENTIAL  
LANE SYMBOL

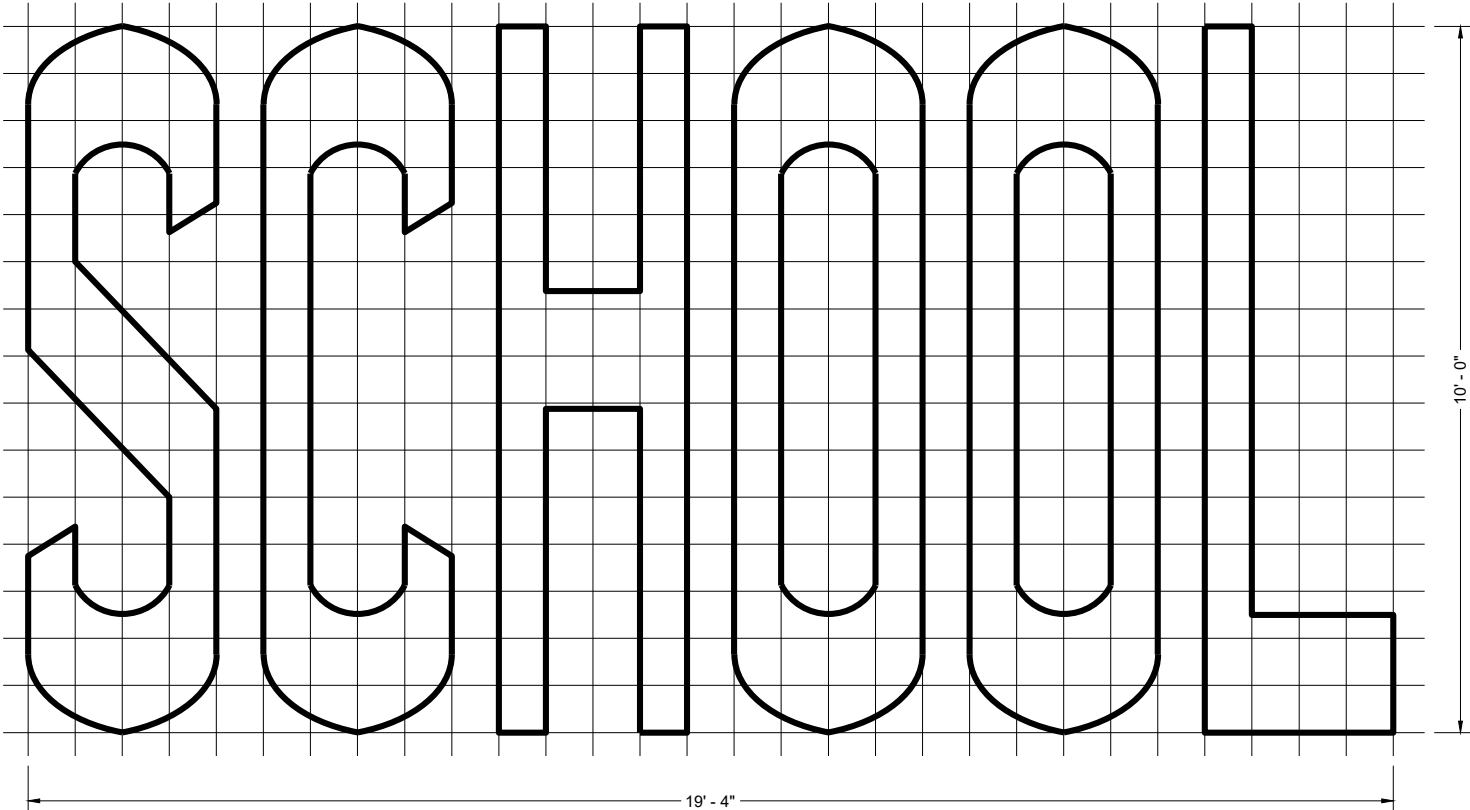
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

|                                                    |                                                         |
|----------------------------------------------------|---------------------------------------------------------|
| PAVEMENT MARKING SYMBOLS                           |                                                         |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                         |
| APPROVED<br>November 2024<br>DATE                  | /S/ Matthew Rauch<br>STATE SIGNING AND MARKING ENGINEER |
| FHWA                                               |                                                         |



SINGLE LANE



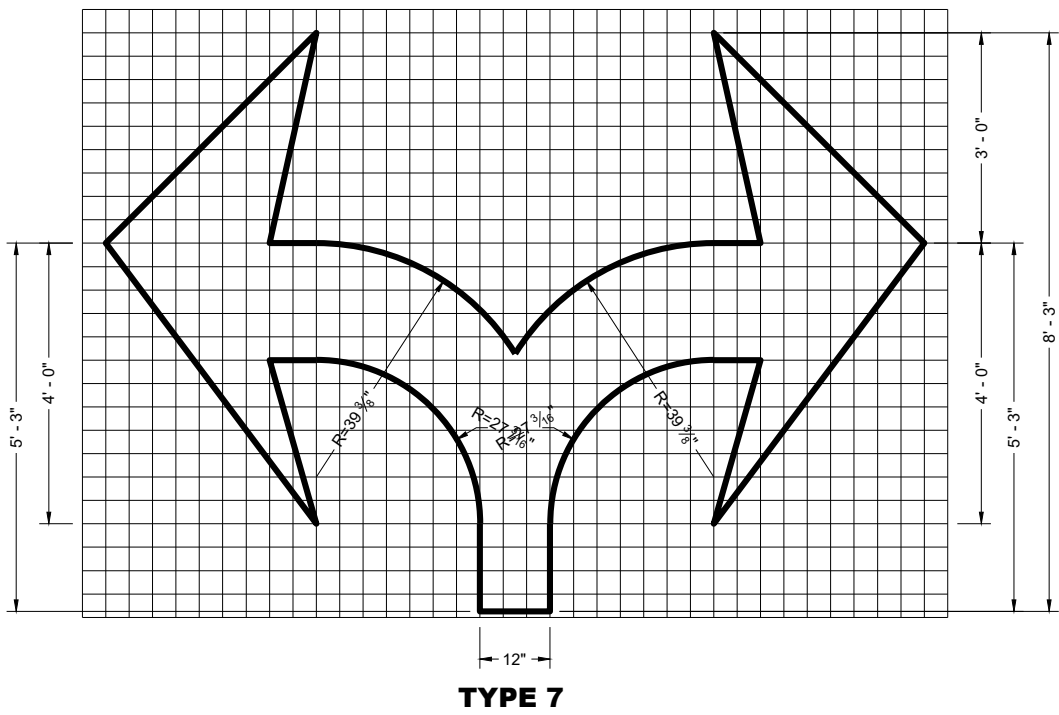
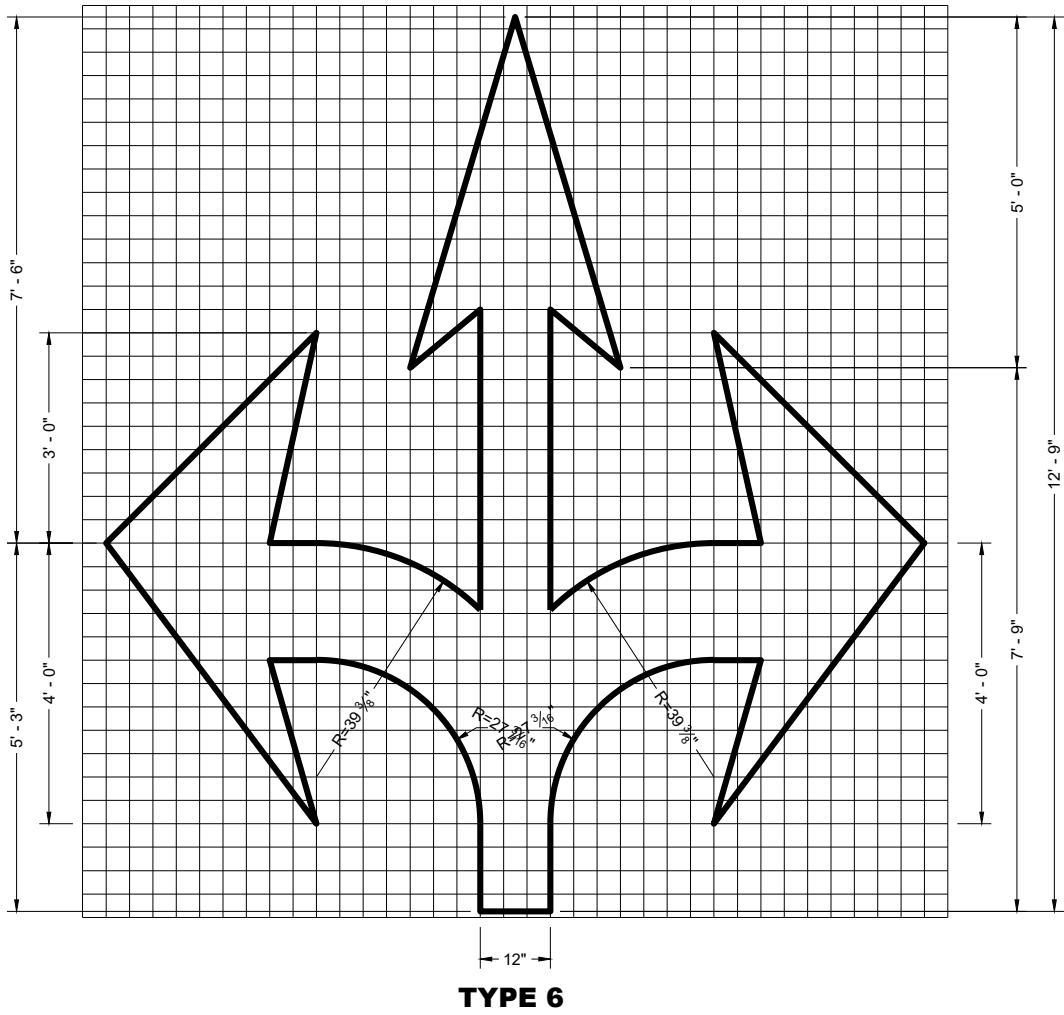
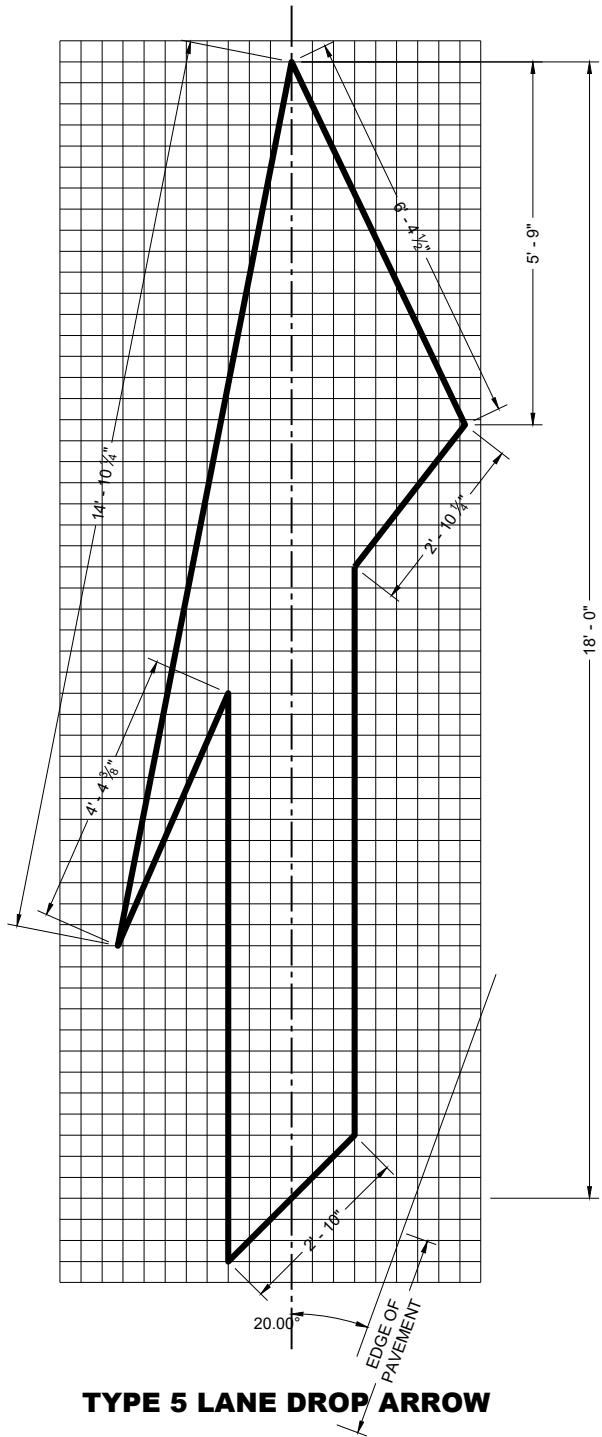
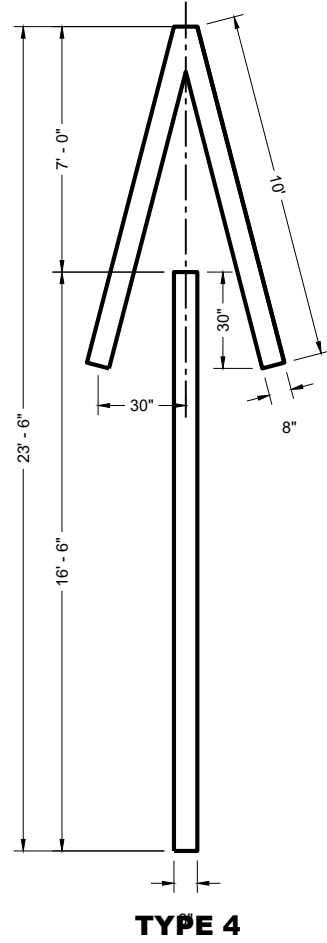
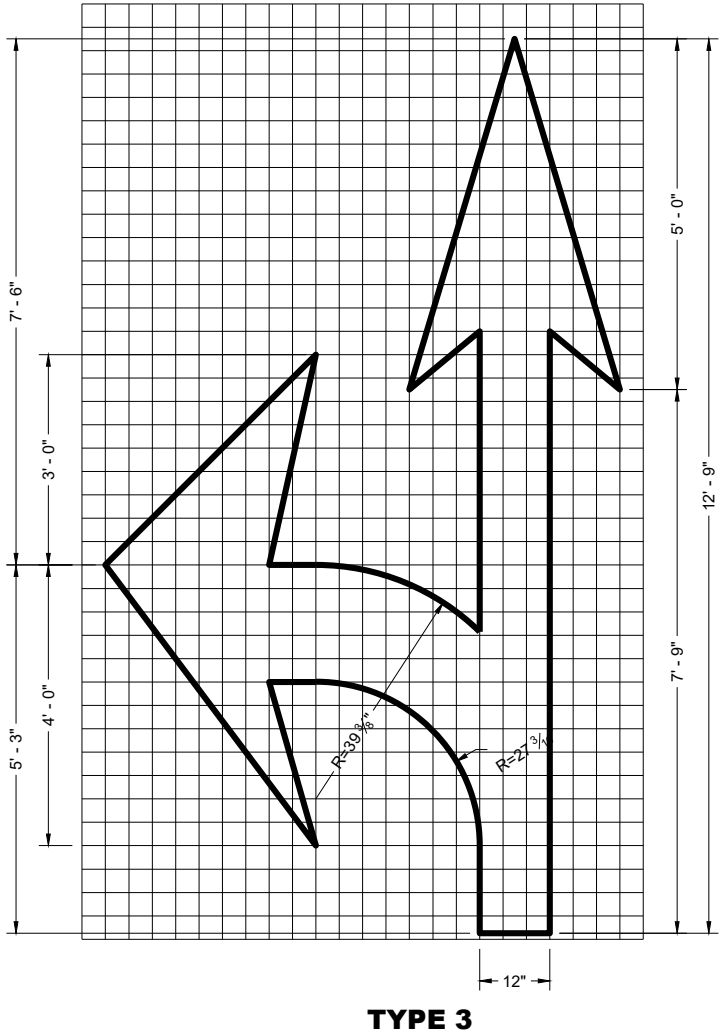
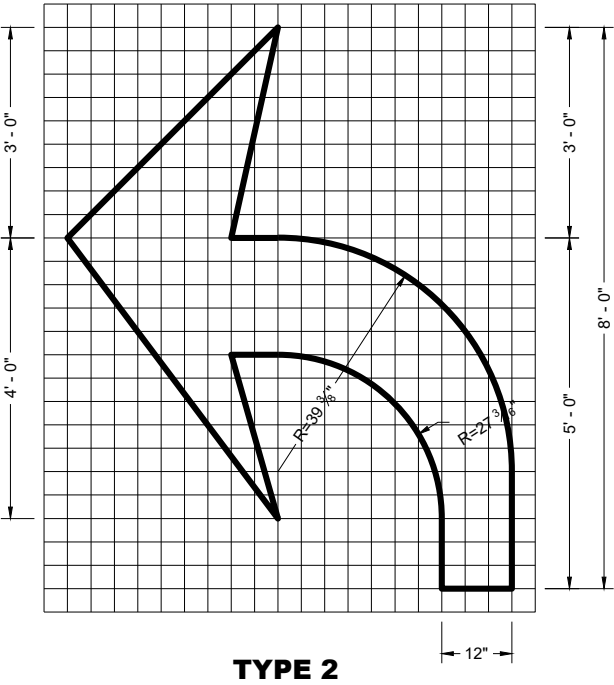
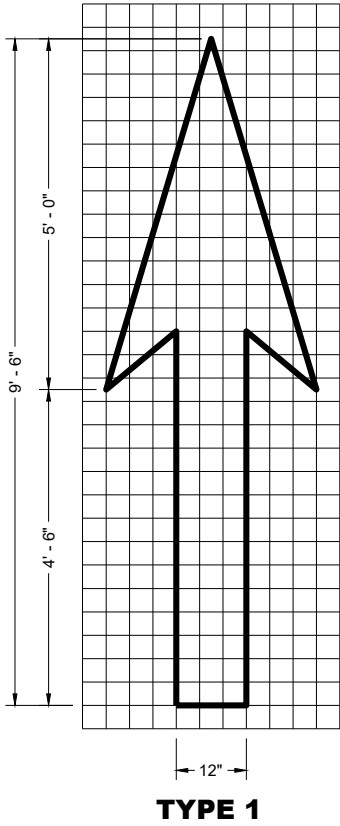
TWO - LANE

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

| PAVEMENT MARKING WORDS                             |                                                         |
|----------------------------------------------------|---------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                         |
| APPROVED<br>November 2024<br>DATE                  | /S/ Matthew Rauch<br>STATE SIGNING AND MARKING ENGINEER |
| FHWA                                               | 268                                                     |





GENERAL NOTES

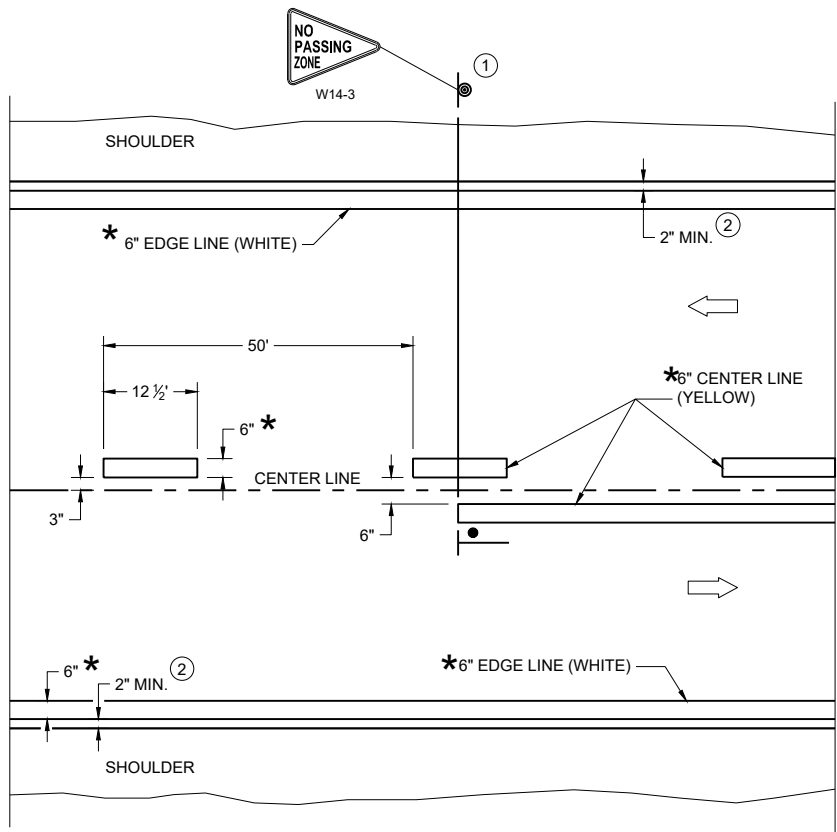
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

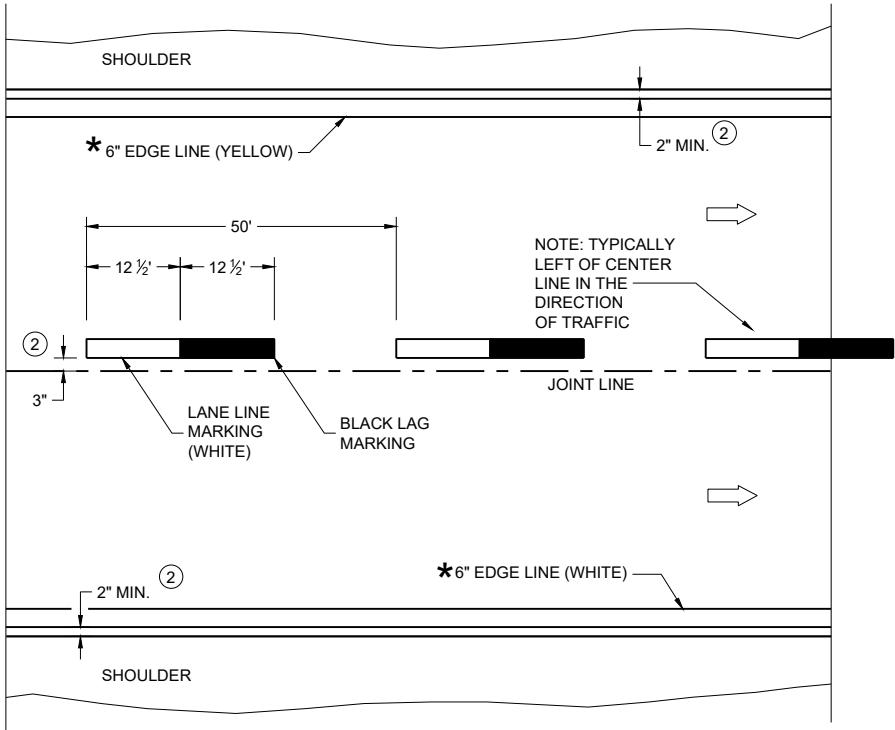
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

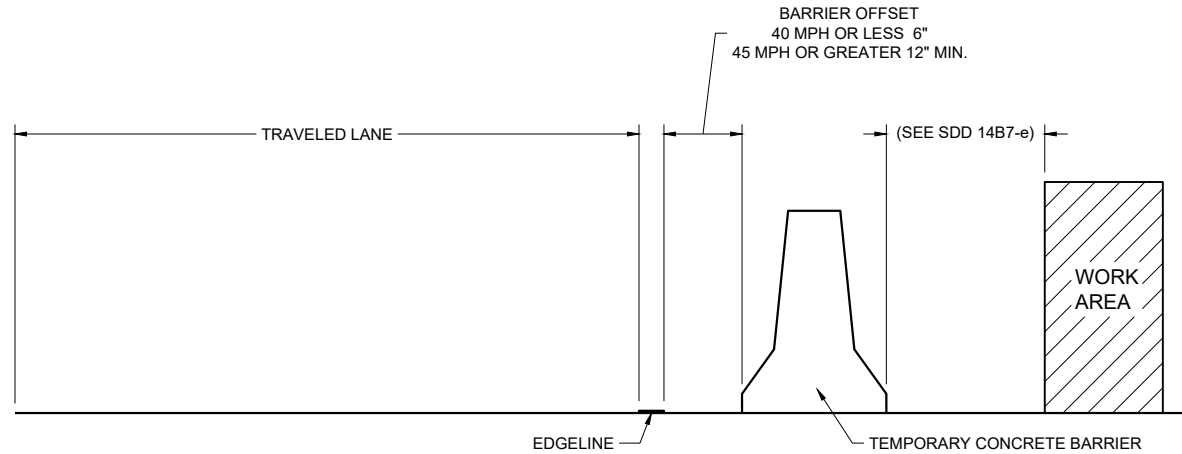
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

| PERMANENT LONGITUDINAL PAVEMENT MARKINGS           |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                           |
| APPROVED<br>May 2023<br>DATE                       | /S/ Jeannie Silver<br>Statewide Pavement Marking Engineer |
| FHWA                                               | 270                                                       |





TEMPORARY BARRIER OFFSET FROM EDGE LINE

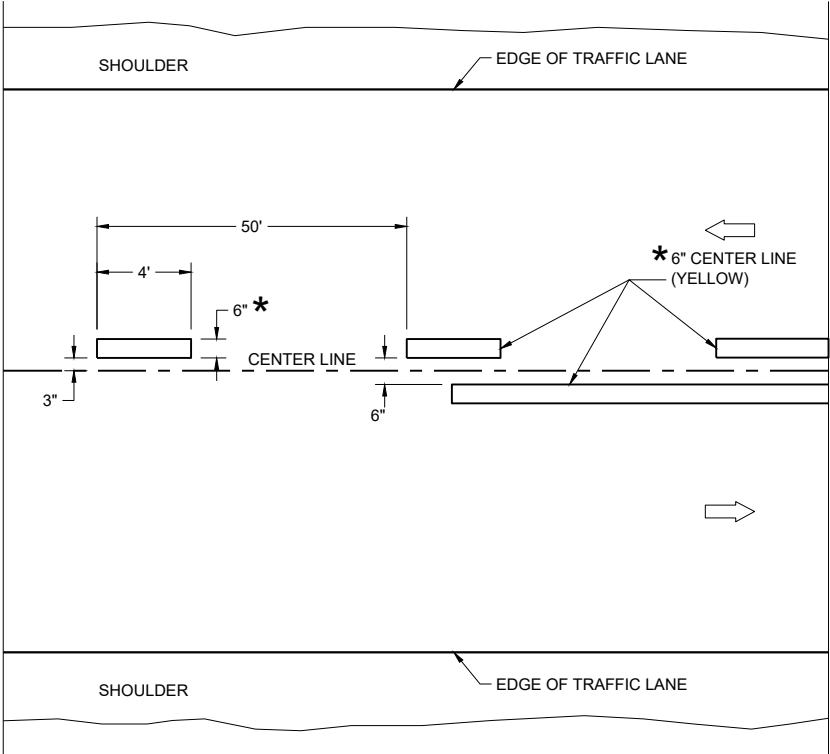
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

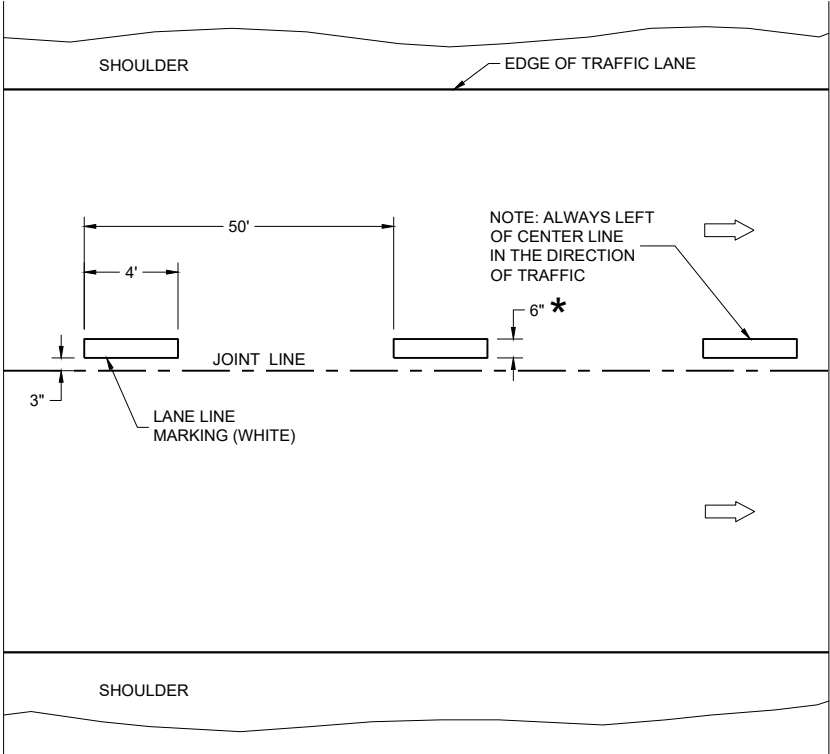
LEGEND

➡ DIRECTION OF TRAFFIC

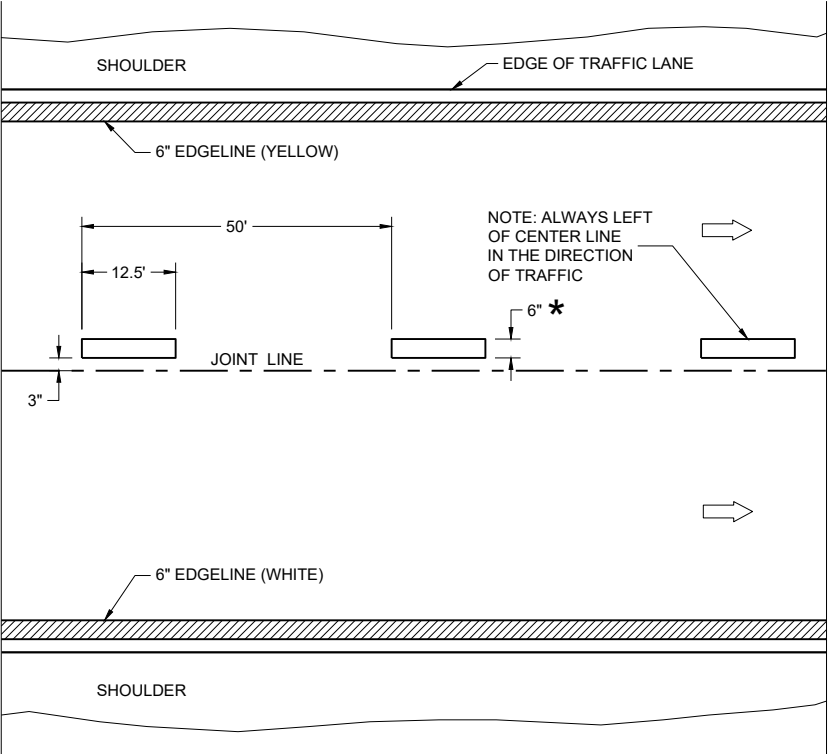
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



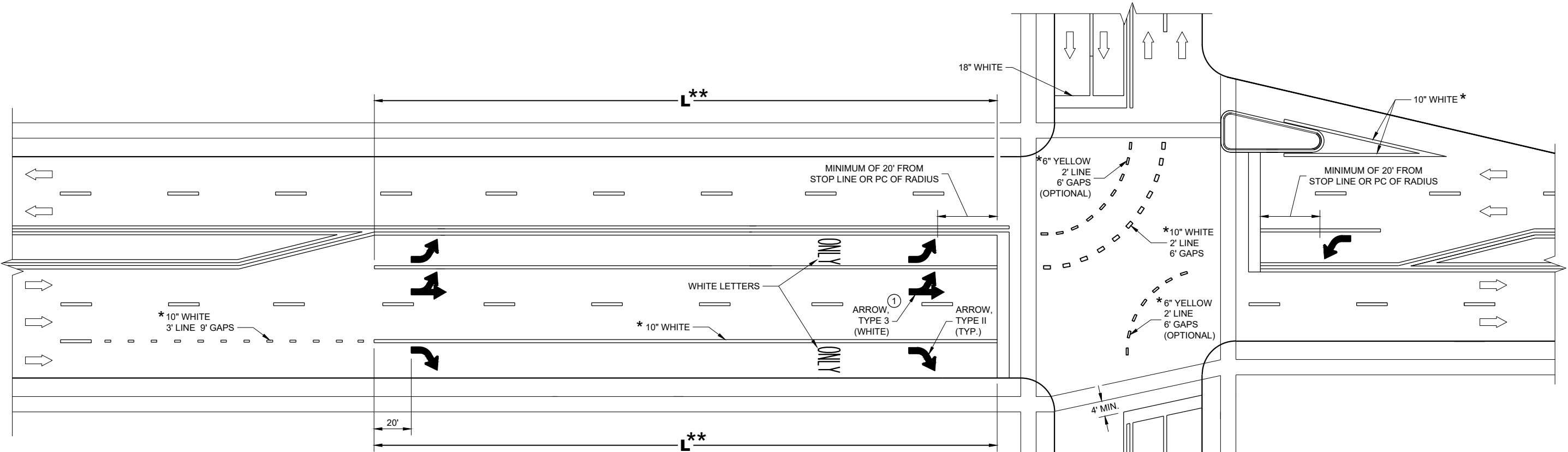
ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

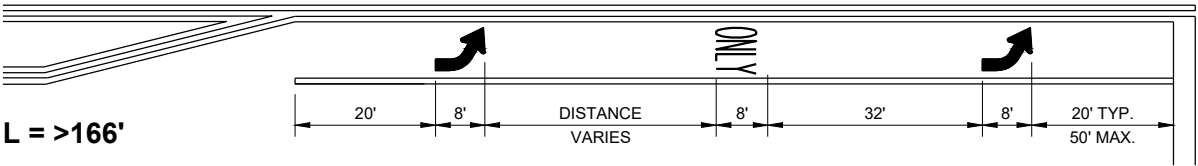
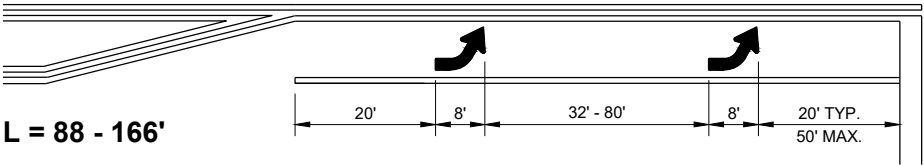
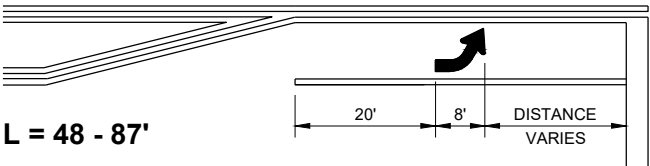
TEMPORARY PAVEMENT MARKING

| TEMPORARY LONGITUDINAL PAVEMENT MARKING            |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                           |
| APPROVED<br>May 2023<br>DATE                       | /S/ Jeannie Silver<br>Statewide Pavement Marking Engineer |
| FHWA                                               | 271                                                       |



TURN LANE OPTIONS

LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



\*\* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

→ DIRECTION OF TRAFFIC

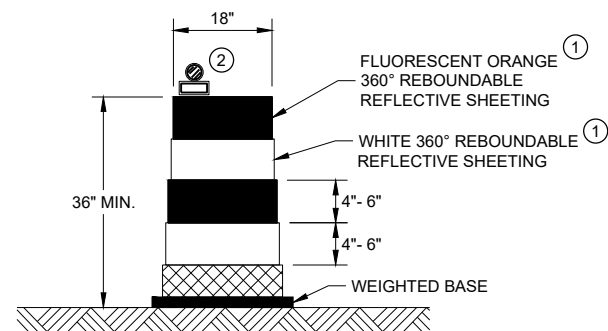
**L** = LENGTH OF TURN BAY

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING  
(TURN LANES)

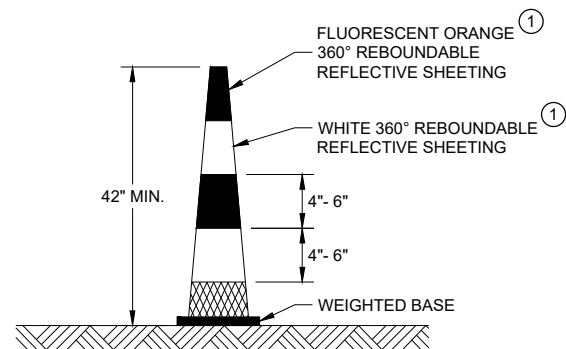
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 272





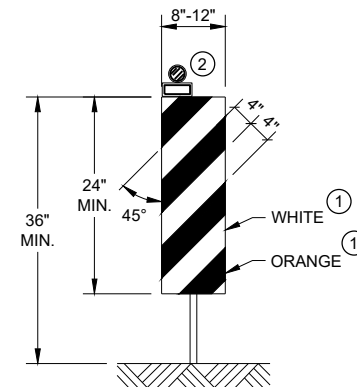
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



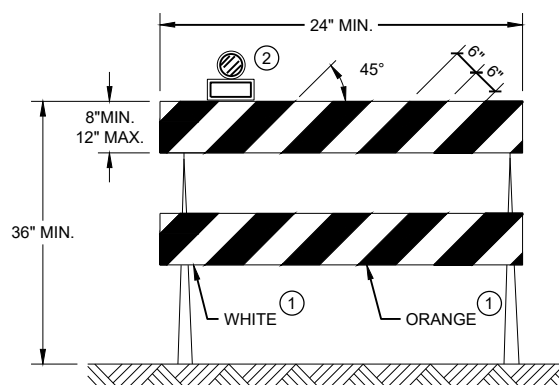
**42" CONE**

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"



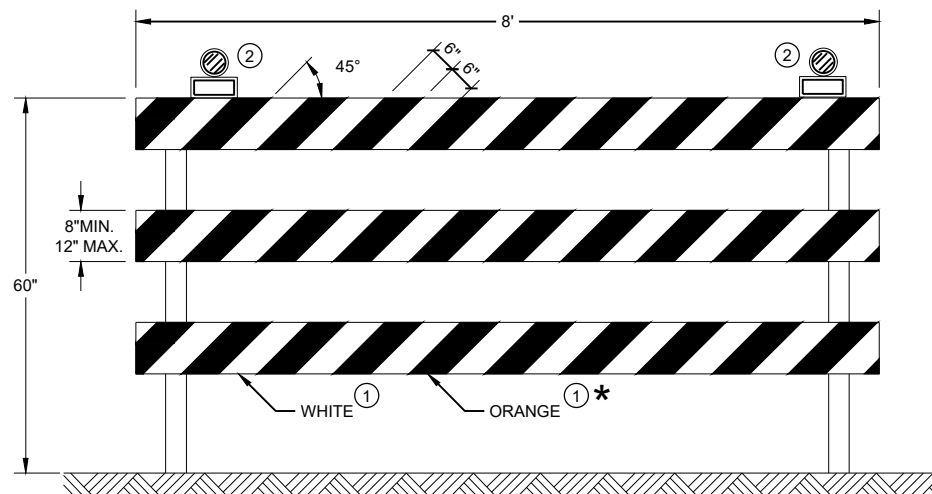
**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE III BARRICADE**

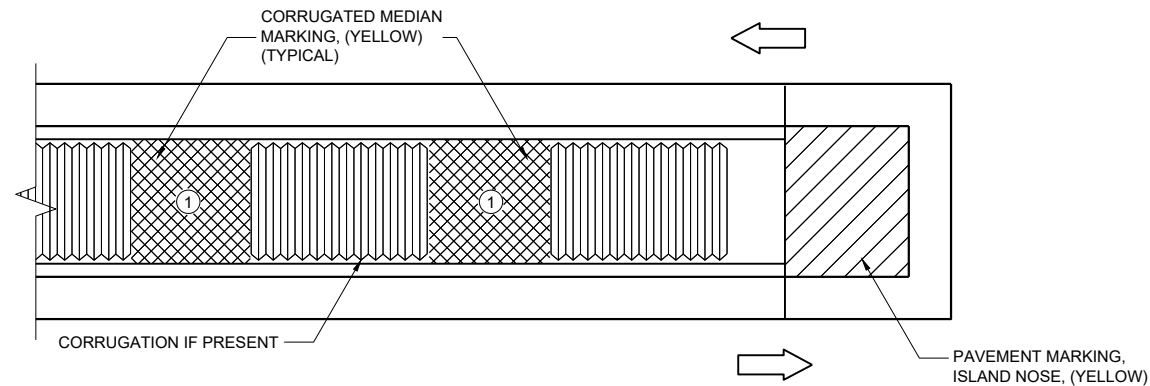
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

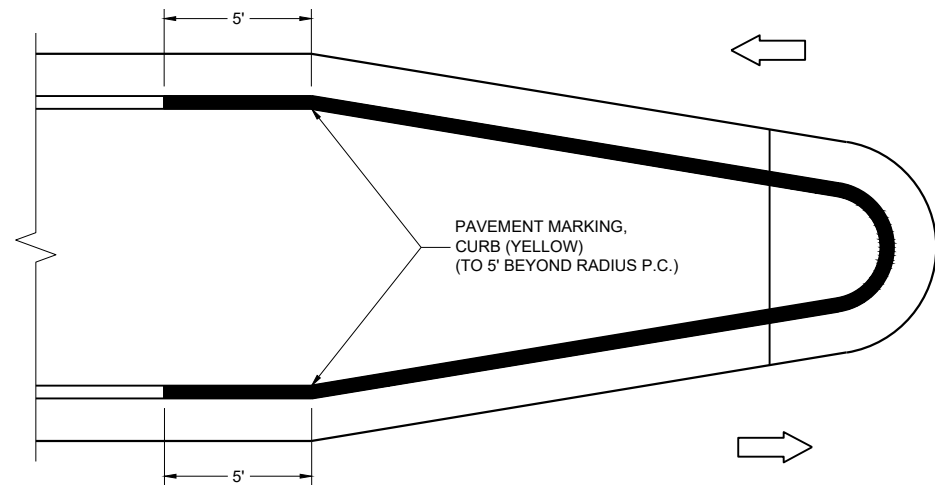
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

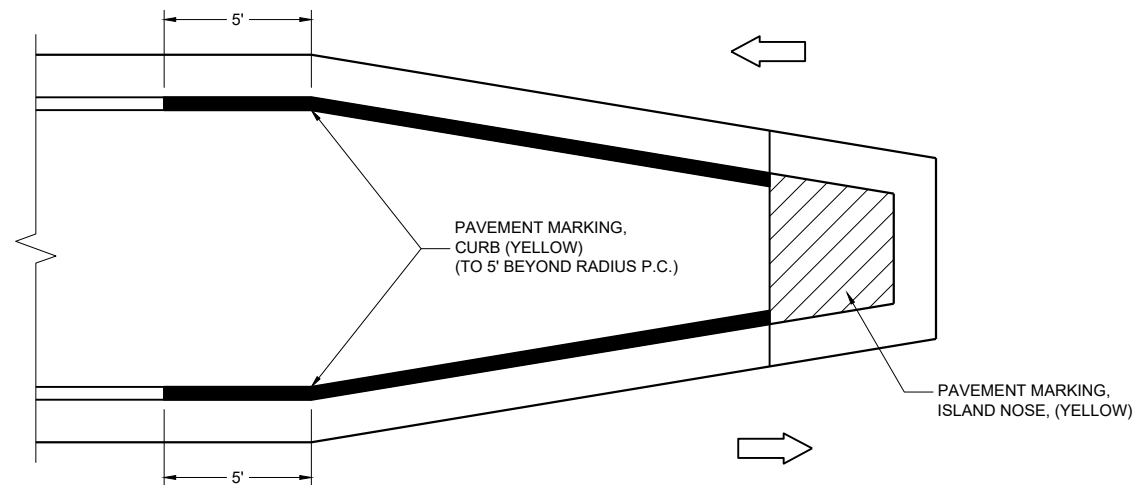
| CHANNELIZING DEVICES<br>DRUMS, CONES, BARRICADES<br>AND VERTICAL PANELS |                                              |
|-------------------------------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                      |                                              |
| APPROVED<br>November 2022<br>DATE                                       | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 273 |
| FHWA                                                                    |                                              |



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



**MEDIAN ISLAND WITH SLOPED NOSE**

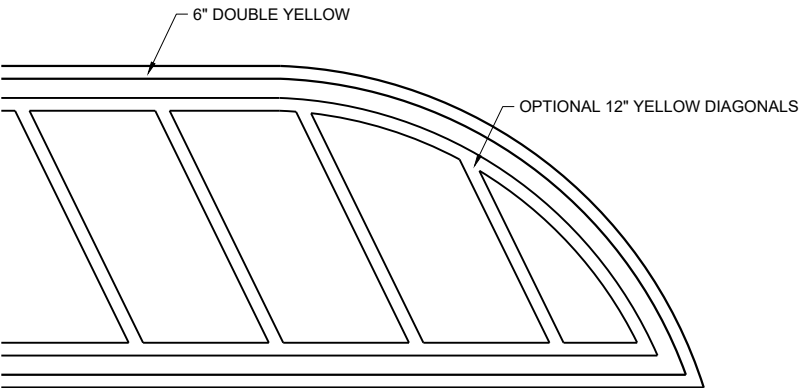
**TYPICAL PLACEMENT OF  
PAVEMENT MARKING ON MEDIAN ISLANDS**

**GENERAL NOTES**

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL



**FLUSH MEDIAN ISLAND NOSE**

**PAVEMENT MARKINGS,  
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer



| REQUIREMENTS FOR EDGE LINES |                               |             |
|-----------------------------|-------------------------------|-------------|
| POSTED SPEED                | IS THERE CONTINUOUS LIGHTING? |             |
|                             | YES                           | NO          |
| ≤ 30 MPH                    | NO                            | OPTIONAL    |
| 35 OR 40 MPH                | OPTIONAL                      | RECOMMENDED |
| ≥ 45 MPH                    | RECOMMENDED                   | REQUIRED    |

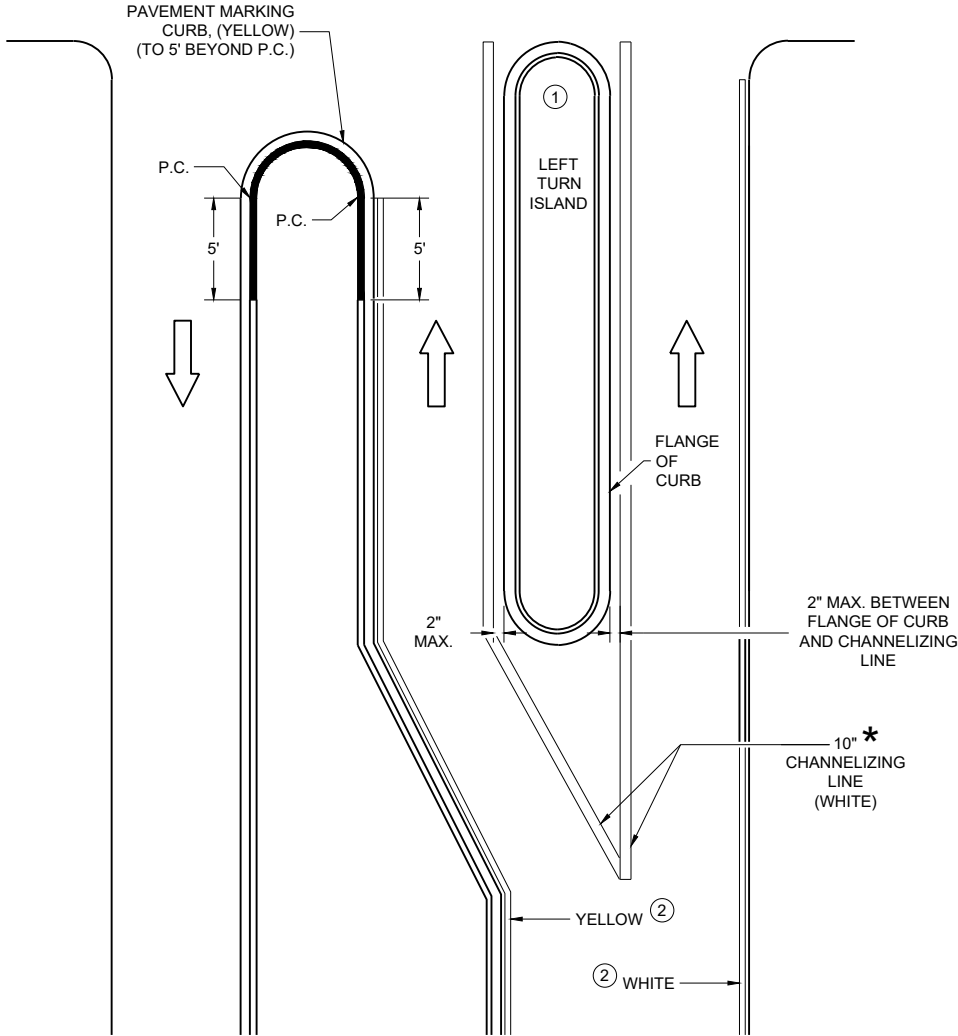
\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

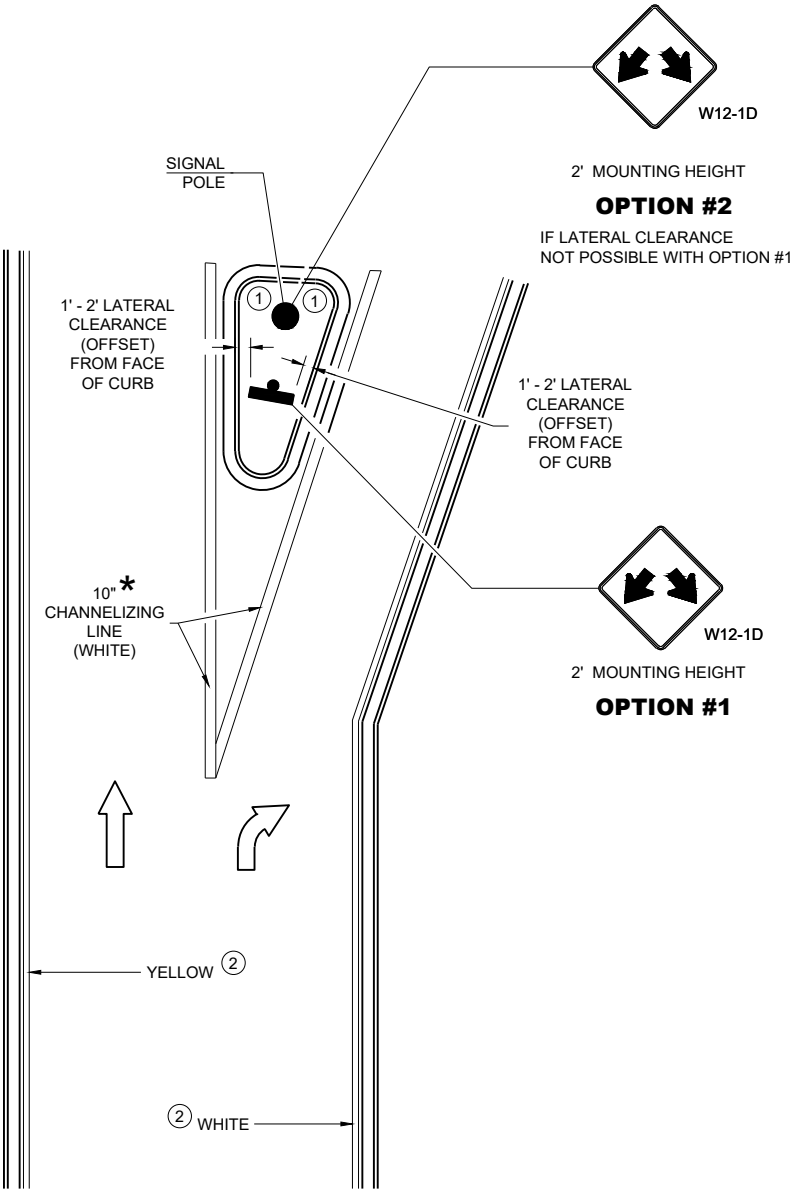
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.  
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.
- ③ CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

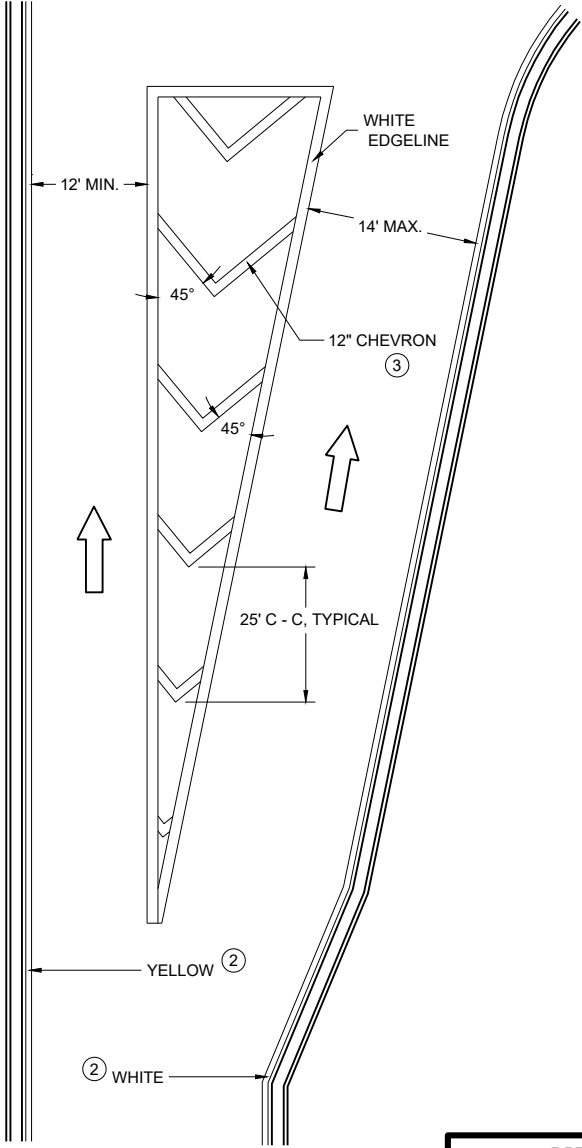
 DIRECTION OF TRAVEL



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

**MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer

FHWA 275

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC
- 

FLASHING ARROW PANEL (MERGE)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

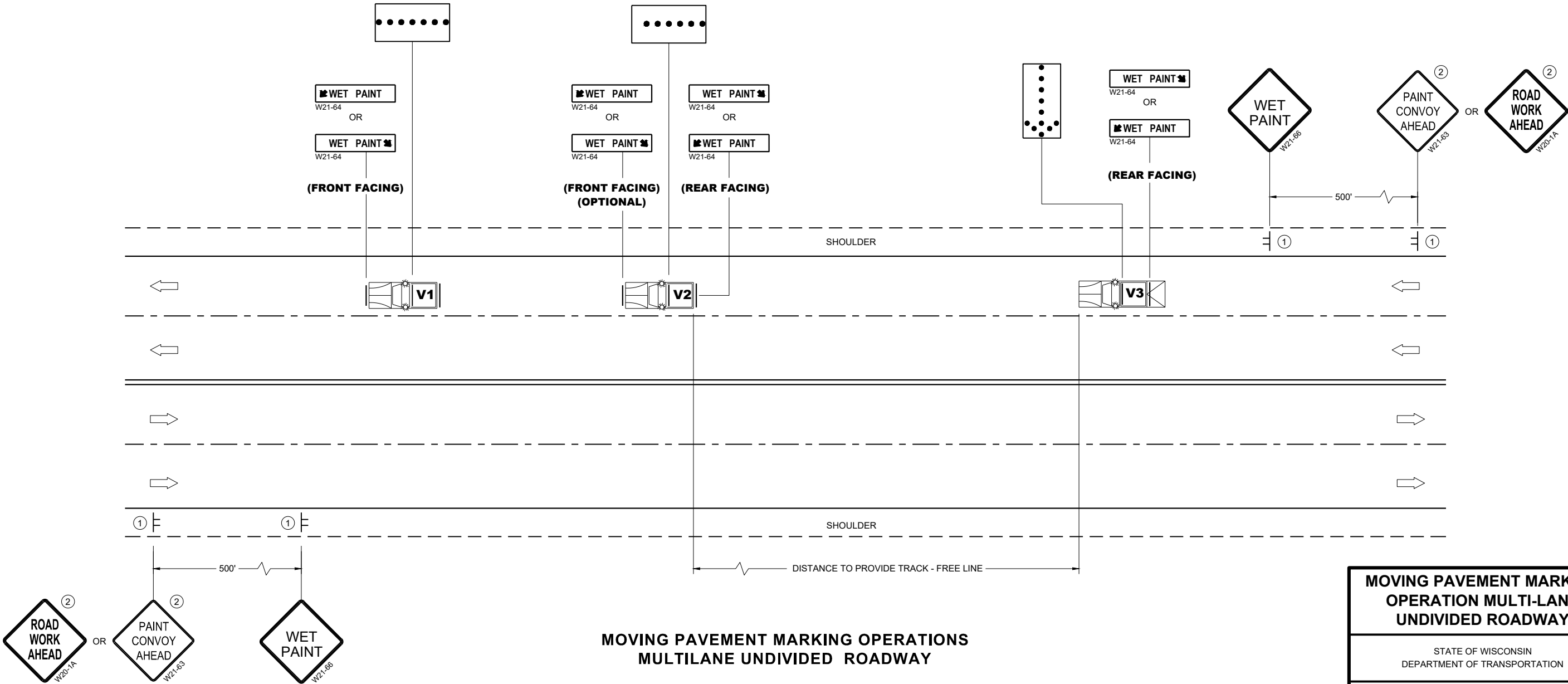
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING  
OPERATION MULTI-LANE  
UNDIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

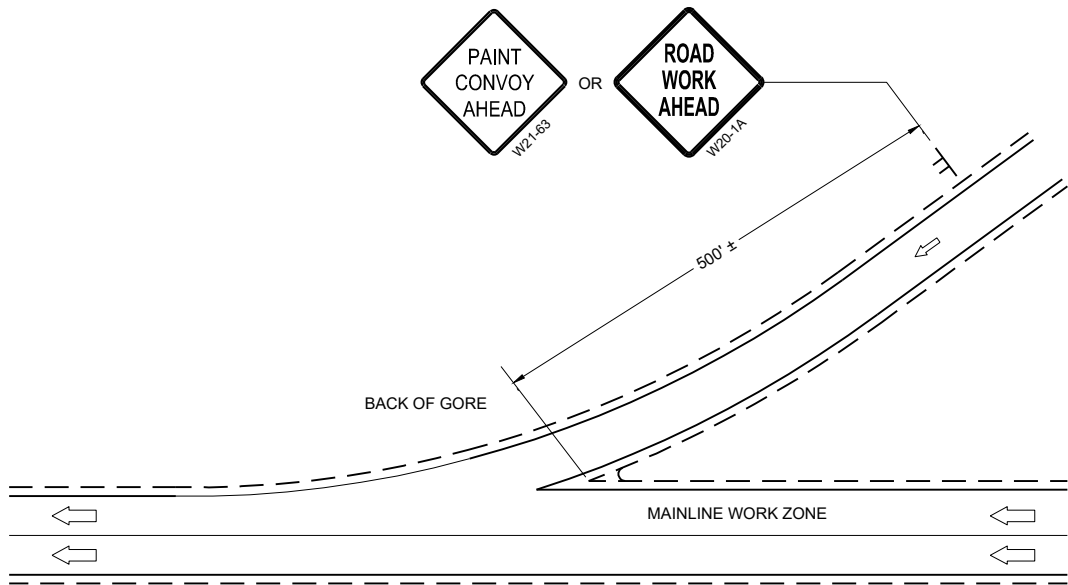
APPROVED  
March 2024 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

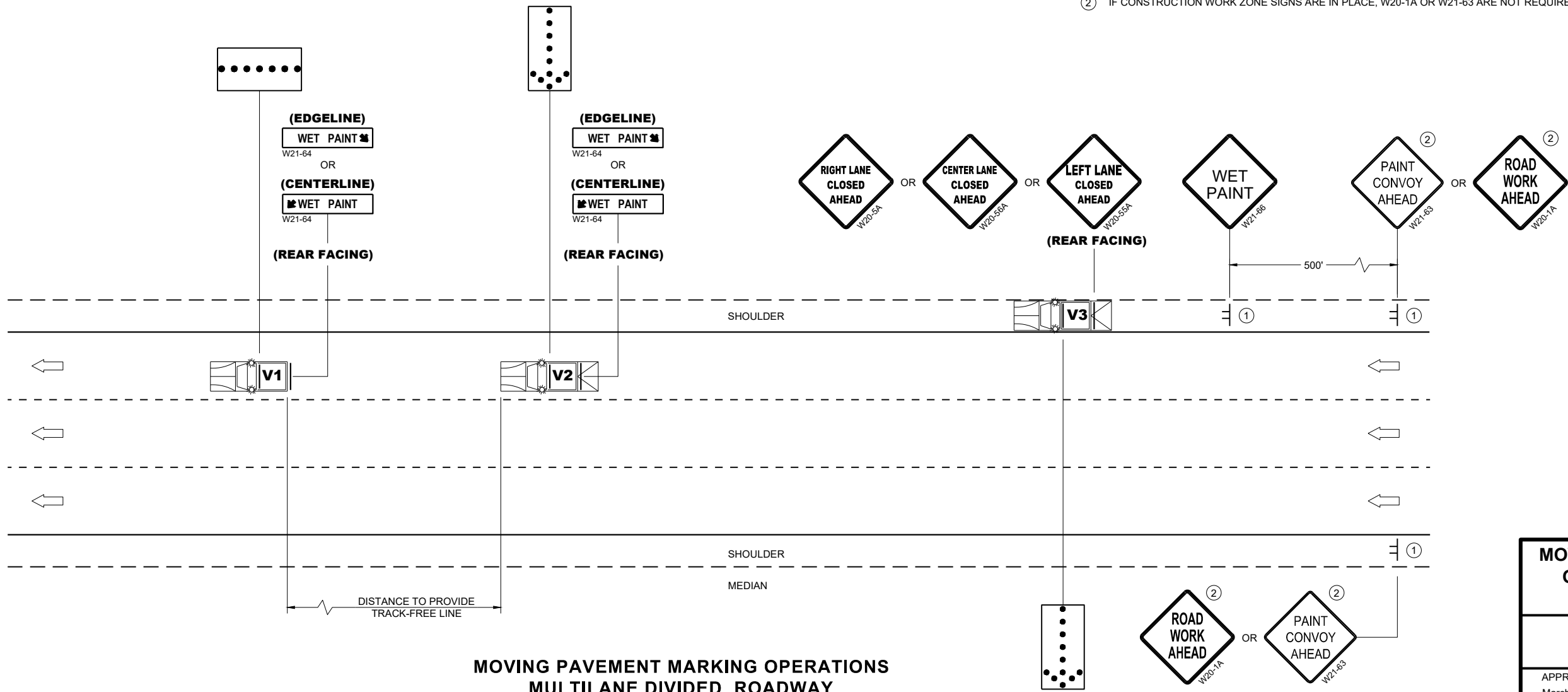
IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

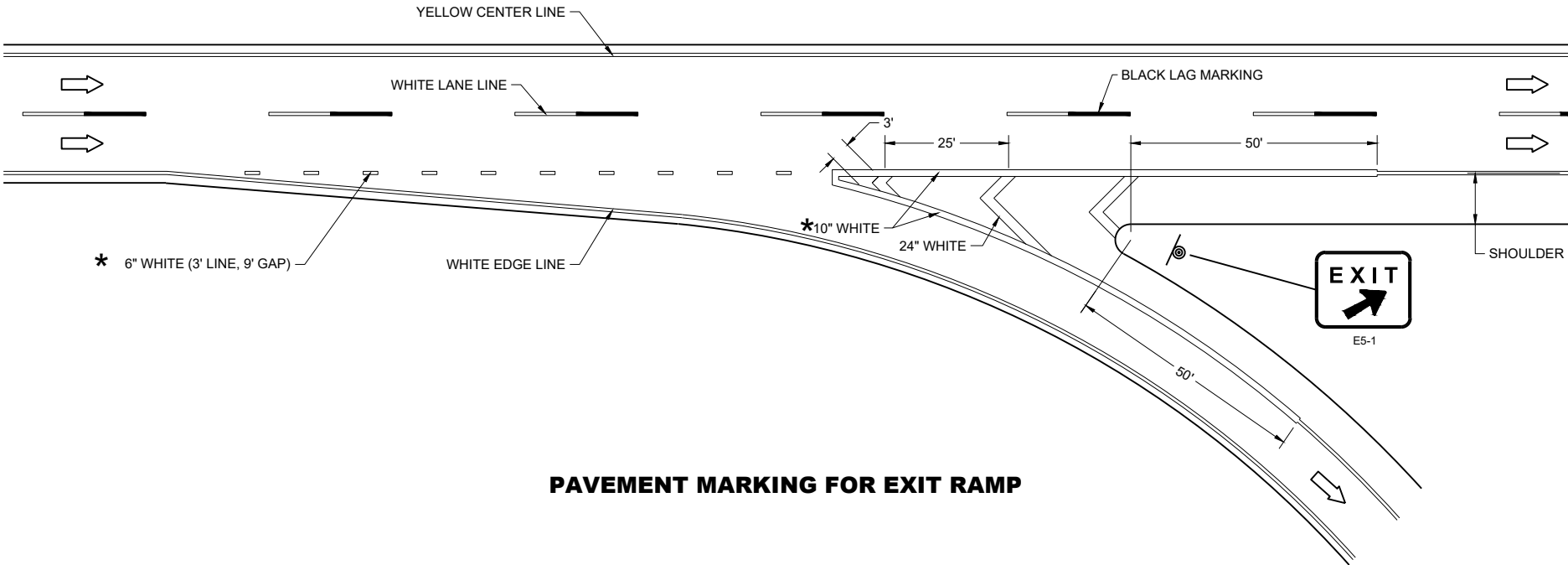


**MOVING PAVEMENT MARKING  
OPERATION MULTI-LANE  
DIVIDED ROADWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2024 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA 277



PAVEMENT MARKING FOR EXIT RAMP

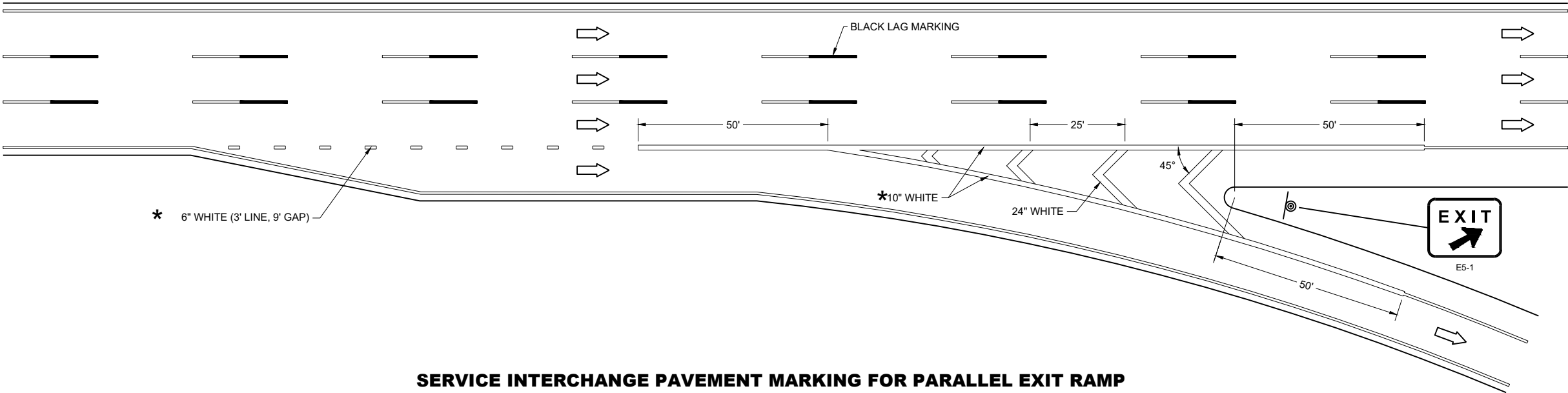
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAVEL

\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

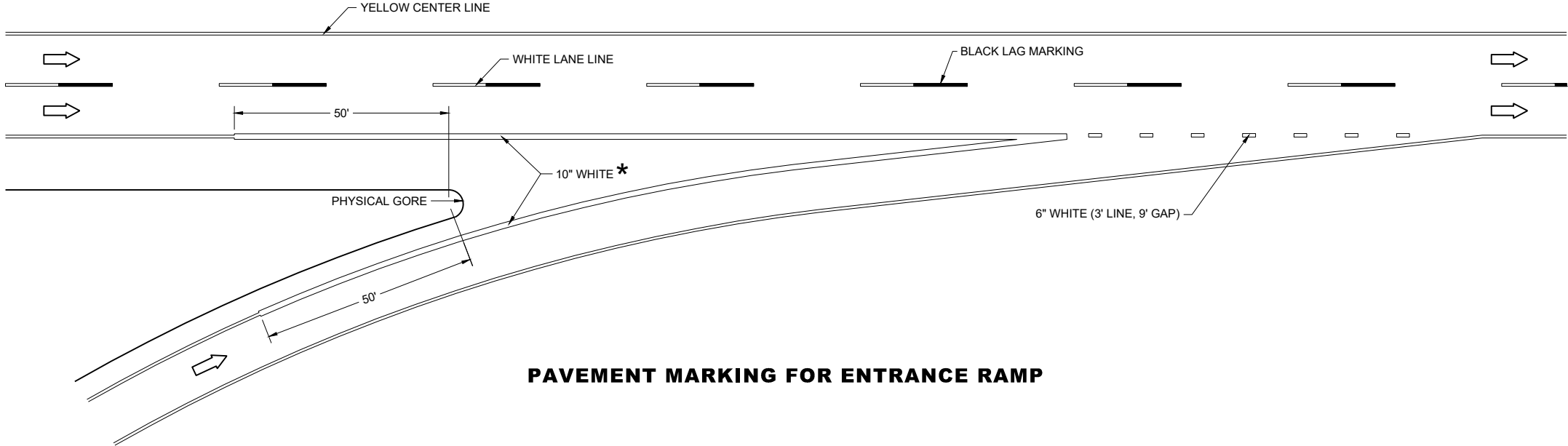


SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

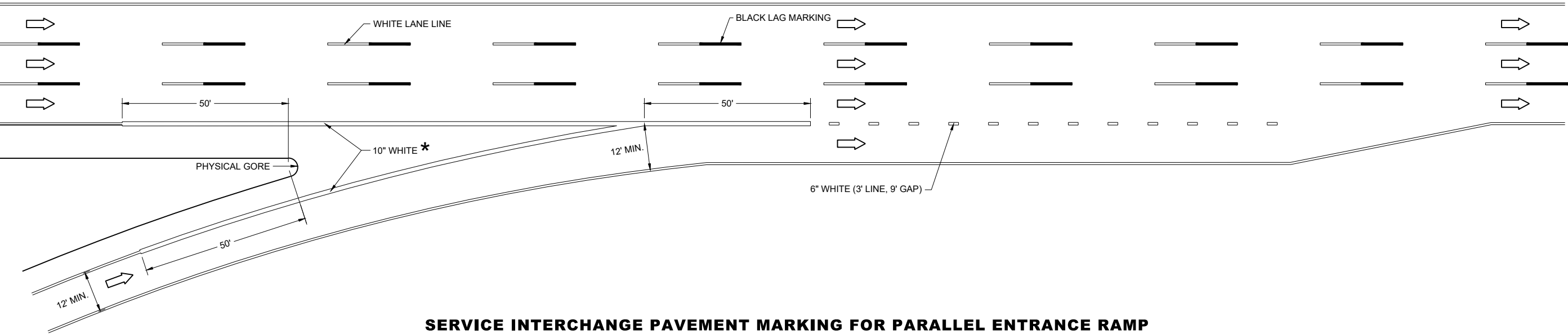
PAVEMENT MARKING,  
EXIT RAMP AND  
PARALLEL EXIT RAMP

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

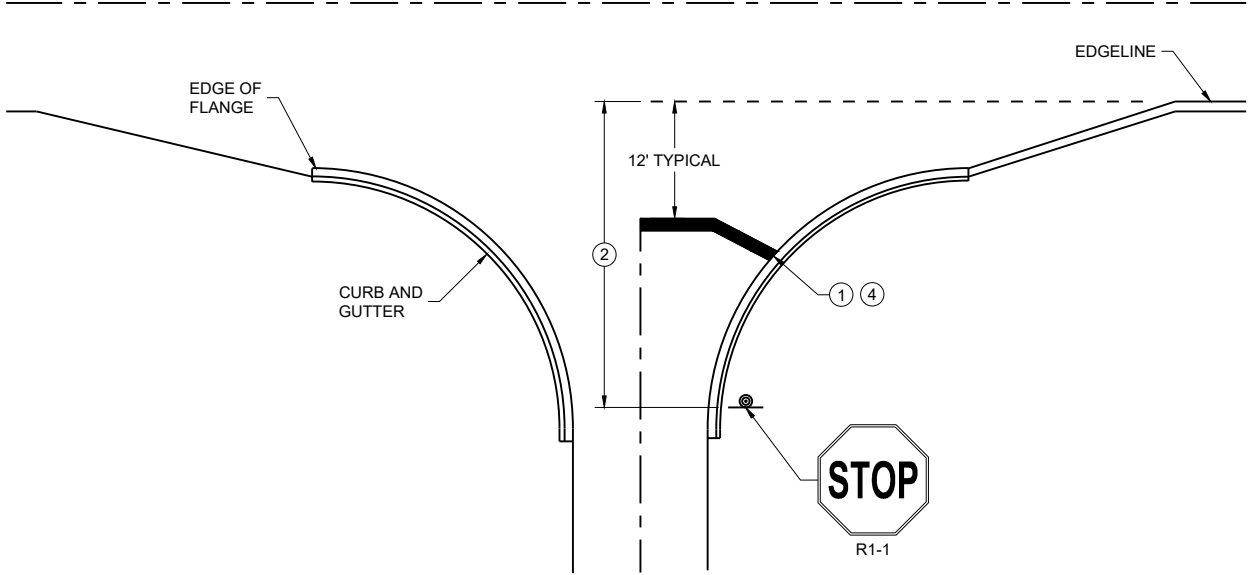
LEGEND

DIRECTION OF TRAVEL

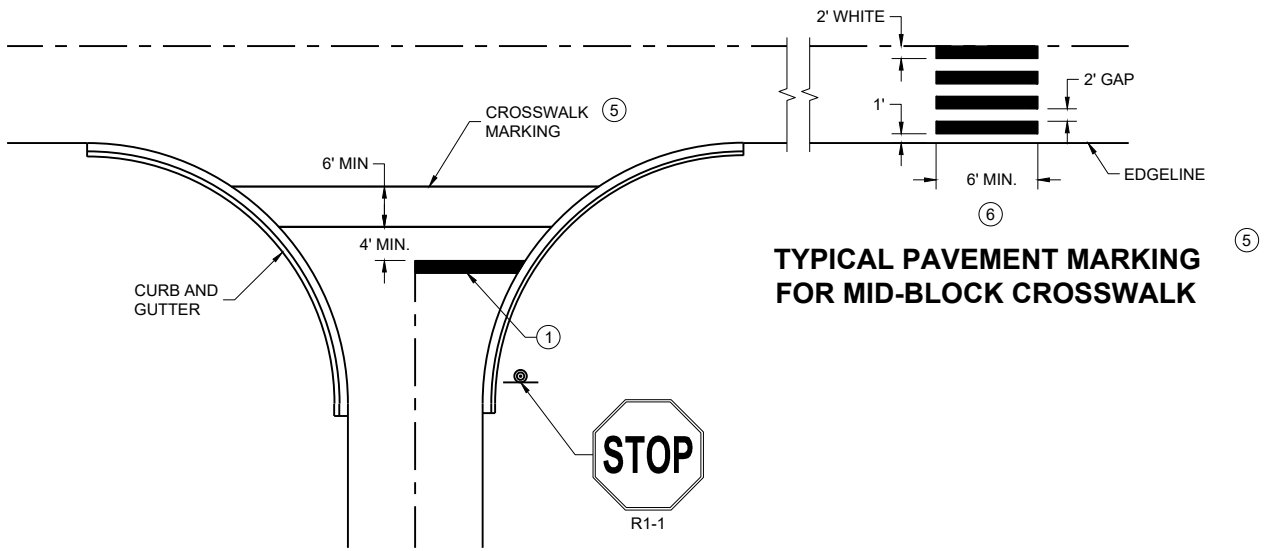
\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING,  
ENTRANCE RAMP AND  
PARALLEL ENTRANCE RAMP

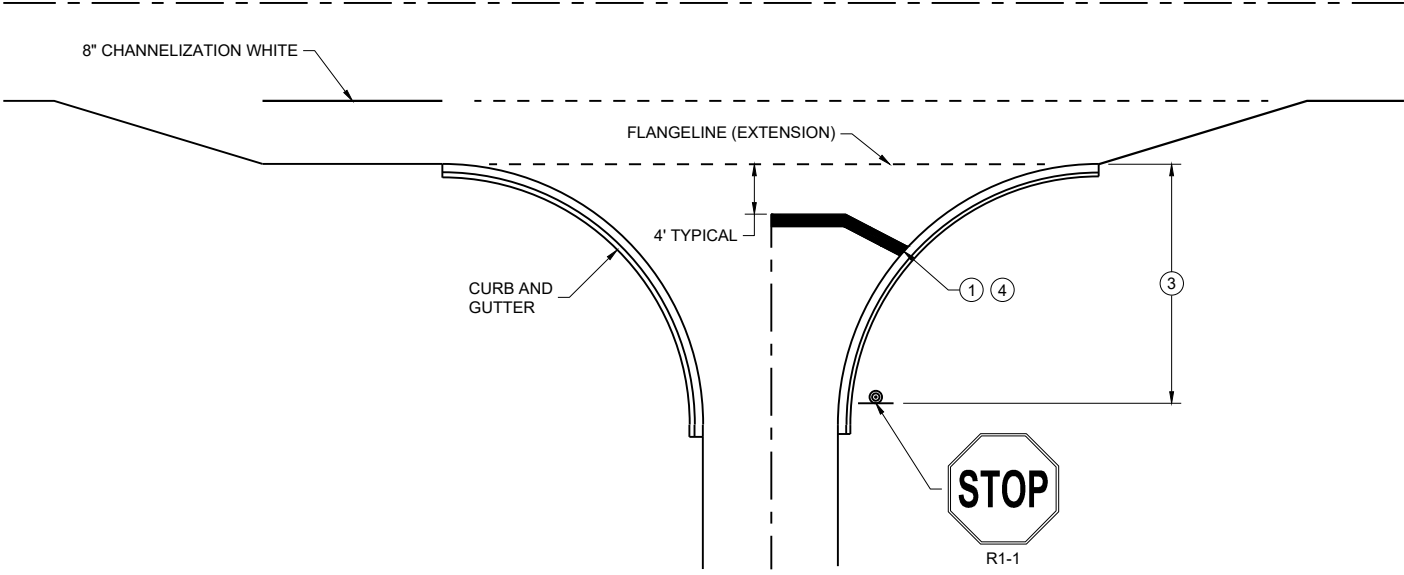
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



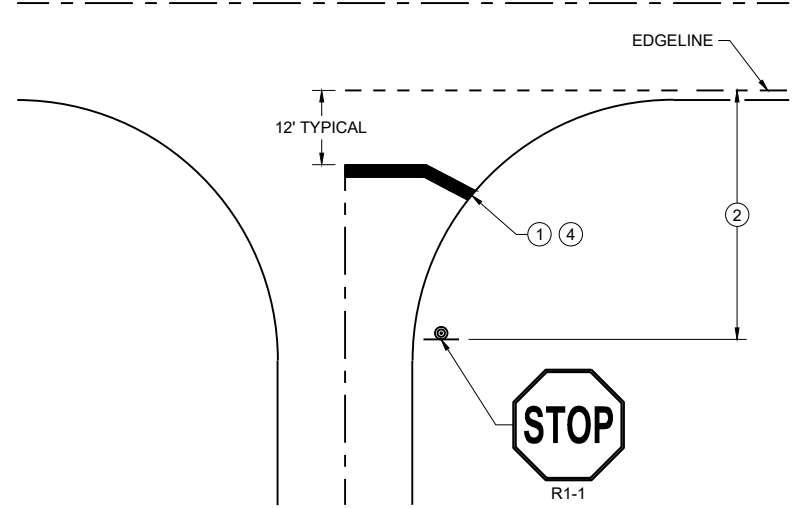
TYPICAL STOP LINE PAVEMENT MARKING  
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR  
SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING  
FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING  
WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- 4 MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- 5 LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

|                                                    |                                                            |
|----------------------------------------------------|------------------------------------------------------------|
| STOP LINE AND CROSSWALK<br>PAVEMENT MARKING        |                                                            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                            |
| APPROVED<br>March 2024<br>DATE                     | /S/ Matthew Rauch<br>STATE SIGNING AND MARKING<br>ENGINEER |

FHWA 280



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

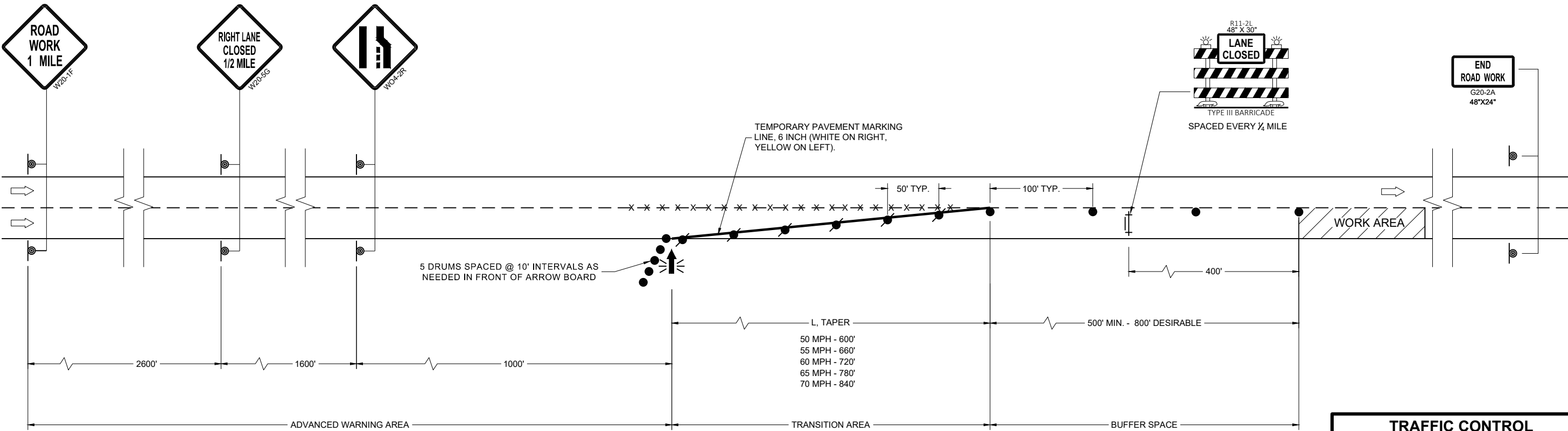
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD

6



6

SDD 15D12-13a

|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| TRAFFIC CONTROL<br>LANE CLOSURE                    |                                          |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                          |
| APPROVED<br>March 2024<br>DATE                     | /S/ Andrew Heidtke<br>Work Zone Engineer |
| FHWA                                               |                                          |

SDD 15D12-13a

|                                                                                   |                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------|
|  | SIGN ON TEMPORARY SUPPORT                            |
|  | TRAFFIC CONTROL DRUM                                 |
|  | TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT |
|  | TYPE III BARRICADE                                   |
|  | TYPE III BARRICADE WITH ATTACHED SIGN                |
|  | TYPE "A" WARNING LIGHT (FLASHING)                    |
|  | REMOVING PAVEMENT MARKINGS                           |
|  | DIRECTION OF TRAFFIC                                 |
|  | WORK AREA                                            |
|  | CONNECTED ARROW BOARD                                |
|  | WZ START LOCATION MARKER                             |
|  | WZ END LOCATION MARKER                               |

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

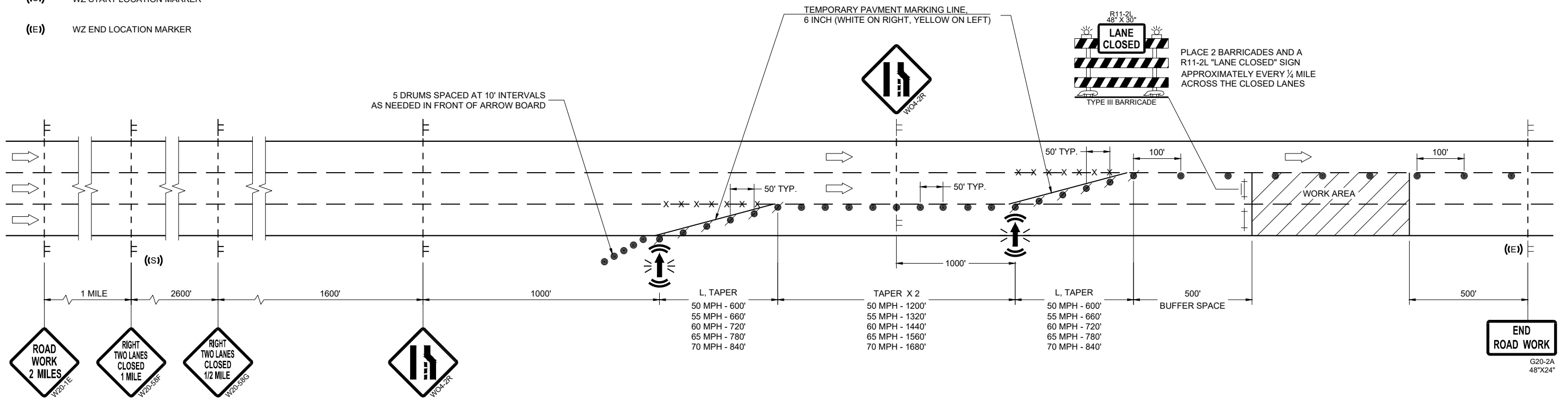
WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.



|                                                    |                                                 |
|----------------------------------------------------|-------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                 |
| APPROVED<br><u>November 2024</u><br>DATE           | <u>/S/ Andrew Heidtke</u><br>WORK ZONE ENGINEER |



LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

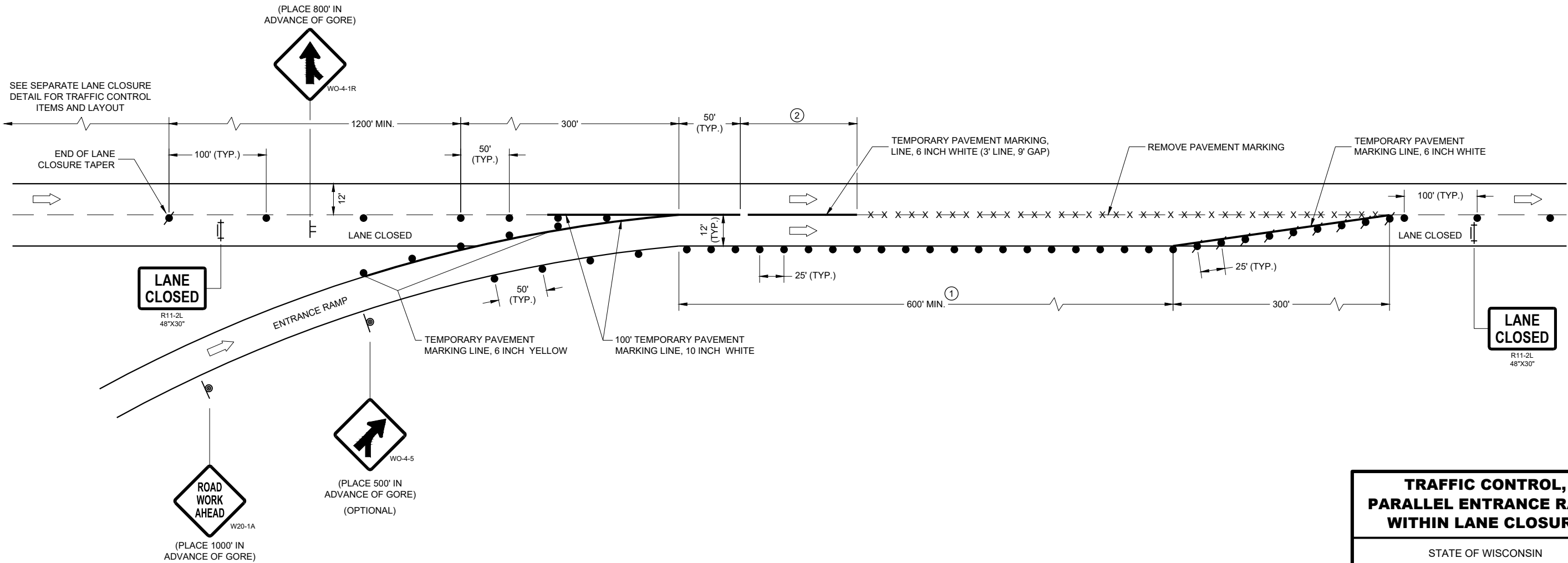
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



**TRAFFIC CONTROL,  
PARALLEL ENTRANCE RAMP  
WITHIN LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 283

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

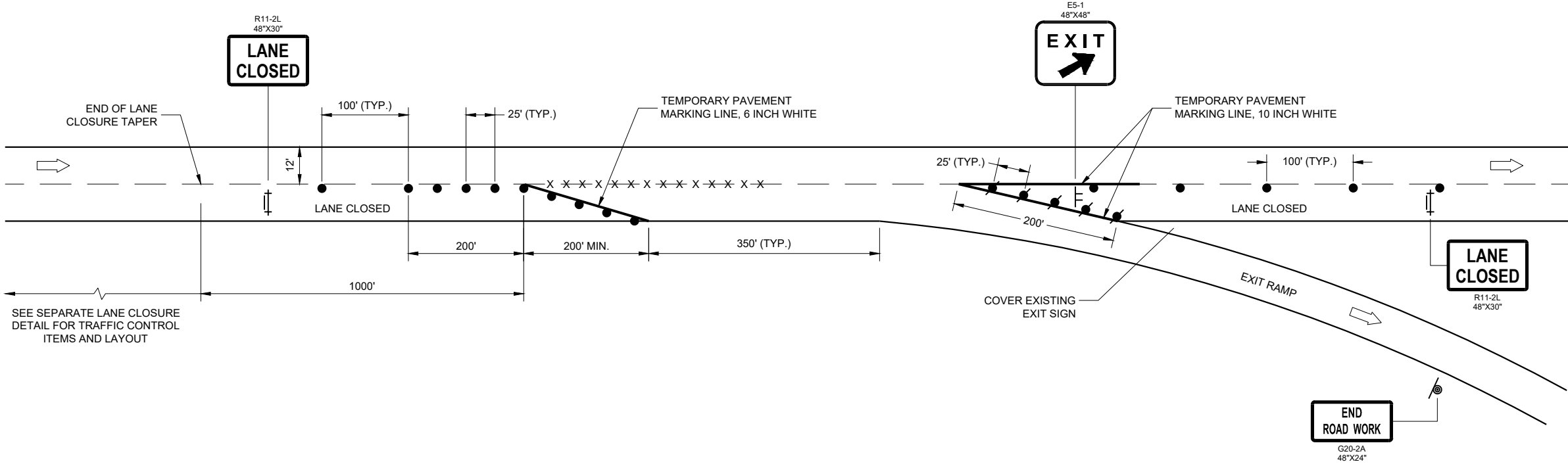
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



**TRAFFIC CONTROL,  
PARALLEL EXIT RAMP  
WITHIN LANE CLOSURE**

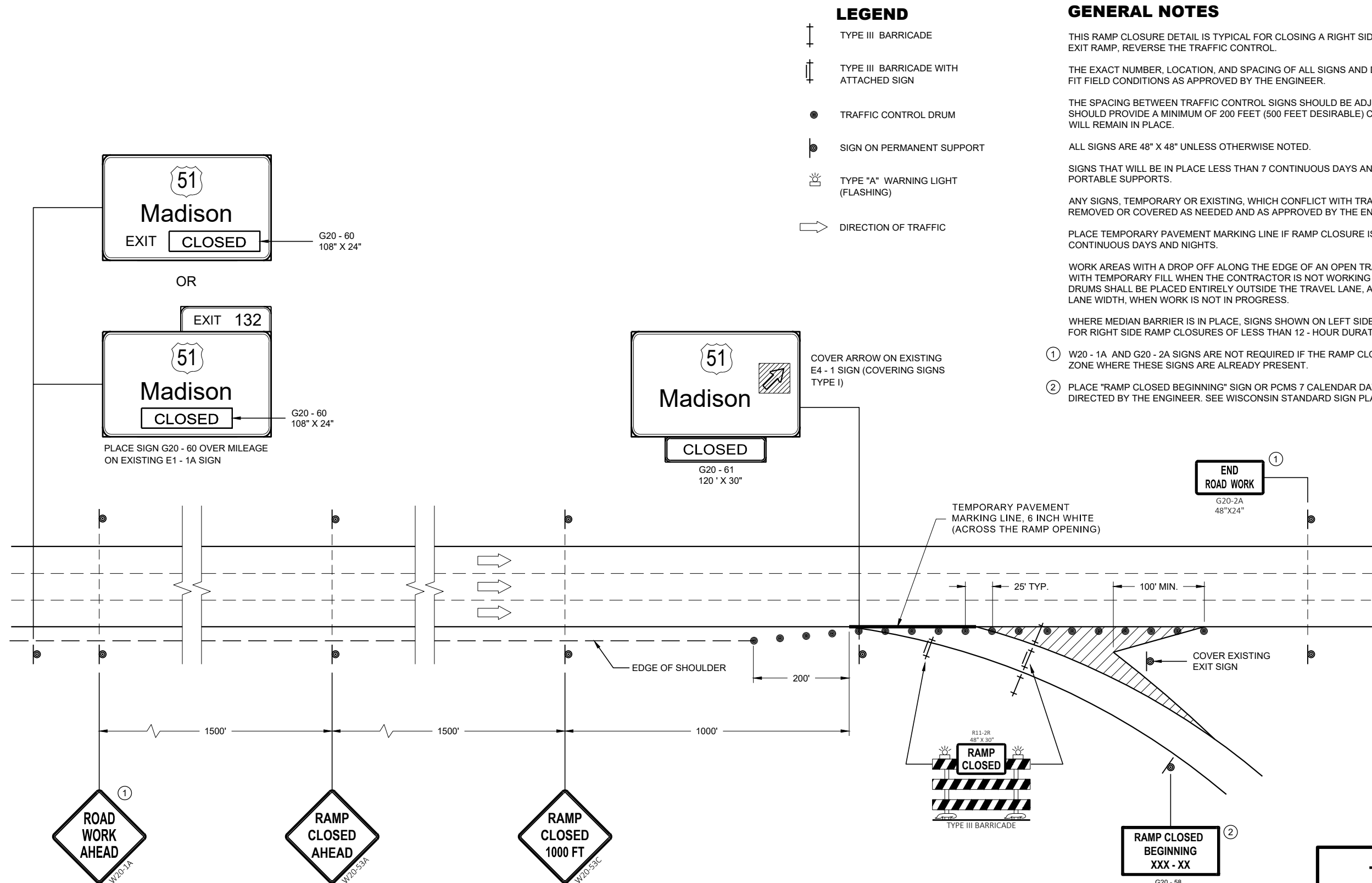
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER 284

FHWA





**LEGEND**

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

**GENERAL NOTES**

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

① W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

② PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

**TRAFFIC CONTROL,  
EXIT RAMP CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE

/S/ Andrew Heidtke  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

285

FHWA

|                                                                                   |                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------|
|  | SIGN ON PERMANENT SUPPORT                            |
|  | TRAFFIC CONTROL DRUM                                 |
|  | TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT |
|  | TYPE III BARRICADE WITH ATTACHED SIGN                |
|  | TYPE "A" WARNING LIGHT (FLASHING)                    |
|  | REMOVING PAVEMENT MARKINGS                           |
|  | DIRECTION OF TRAFFIC                                 |
|  | WORK AREA                                            |
|  | CONNECTED ARROW BOARD                                |
|  | WZ START LOCATION MARKER                             |
|  | WZ END LOCATION MARKER                               |

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

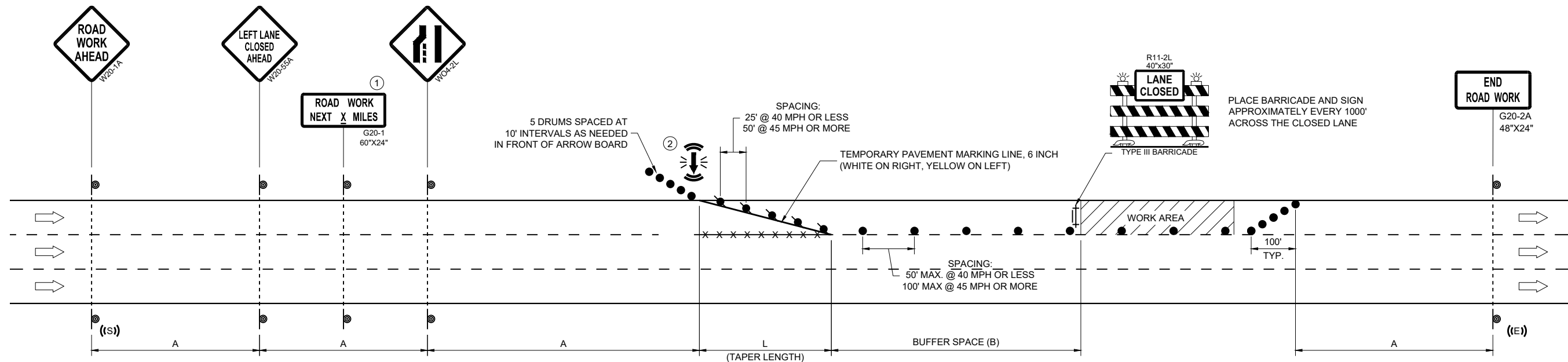
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | TAPER LENGTH<br>(12 FT. LANE)<br>(L) FEET | BUFFER<br>SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------|
| 25                                                    | 200'                                        | 125'                                      | 55'                         |
| 30                                                    | 200'                                        | 180'                                      | 85'                         |
| 35                                                    | 350'                                        | 245'                                      | 120'                        |
| 40                                                    | 350'                                        | 320'                                      | 170'                        |
| 45                                                    | 500'                                        | 540'                                      | 220'                        |

APPROVED  
November 2024  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER



|                                                                                   |                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------|
|  | SIGN ON PERMANENT SUPPORT                            |
|  | TRAFFIC CONTROL DRUM                                 |
|  | TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT |
|  | TYPE III BARRICADE WITH ATTACHED SIGN                |
|  | TYPE "A" WARNING LIGHT (FLASHING)                    |
|  | REMOVING PAVEMENT MARKINGS                           |
|  | DIRECTION OF TRAFFIC                                 |
|  | WORK AREA                                            |
|  | CONNECTED ARROW BOARD                                |
|  | WZ START LOCATION MARKER                             |
|  | WZ END LOCATION MARKER                               |

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

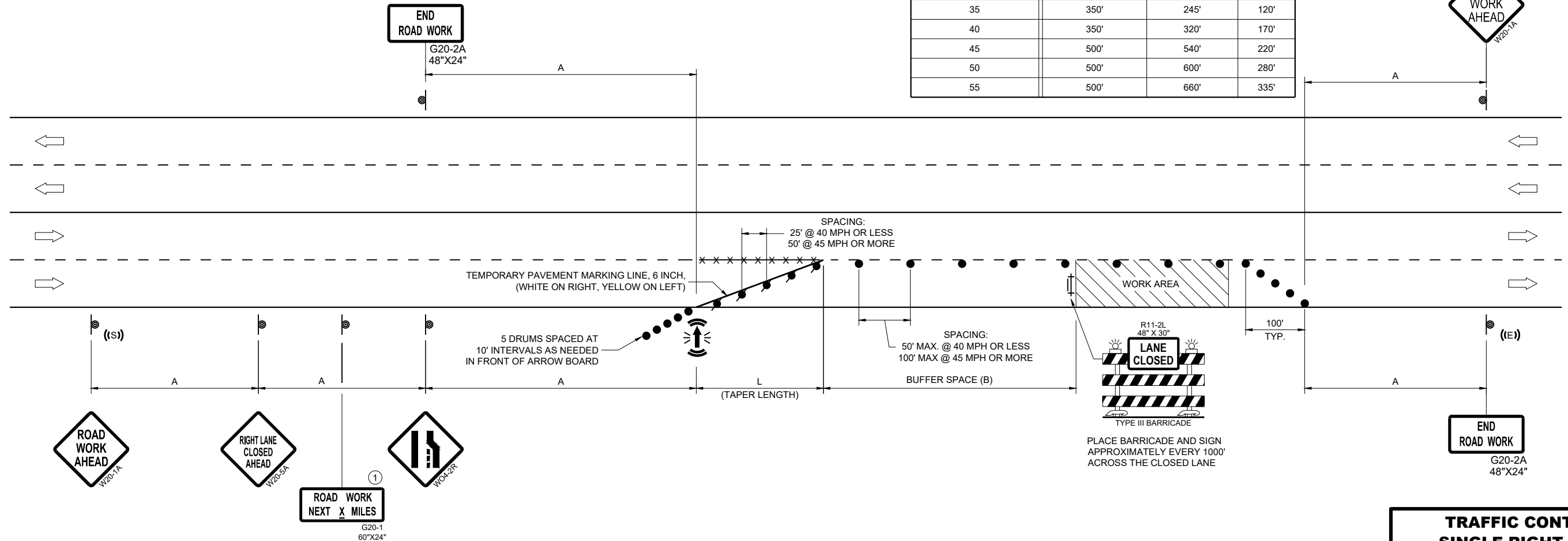
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE

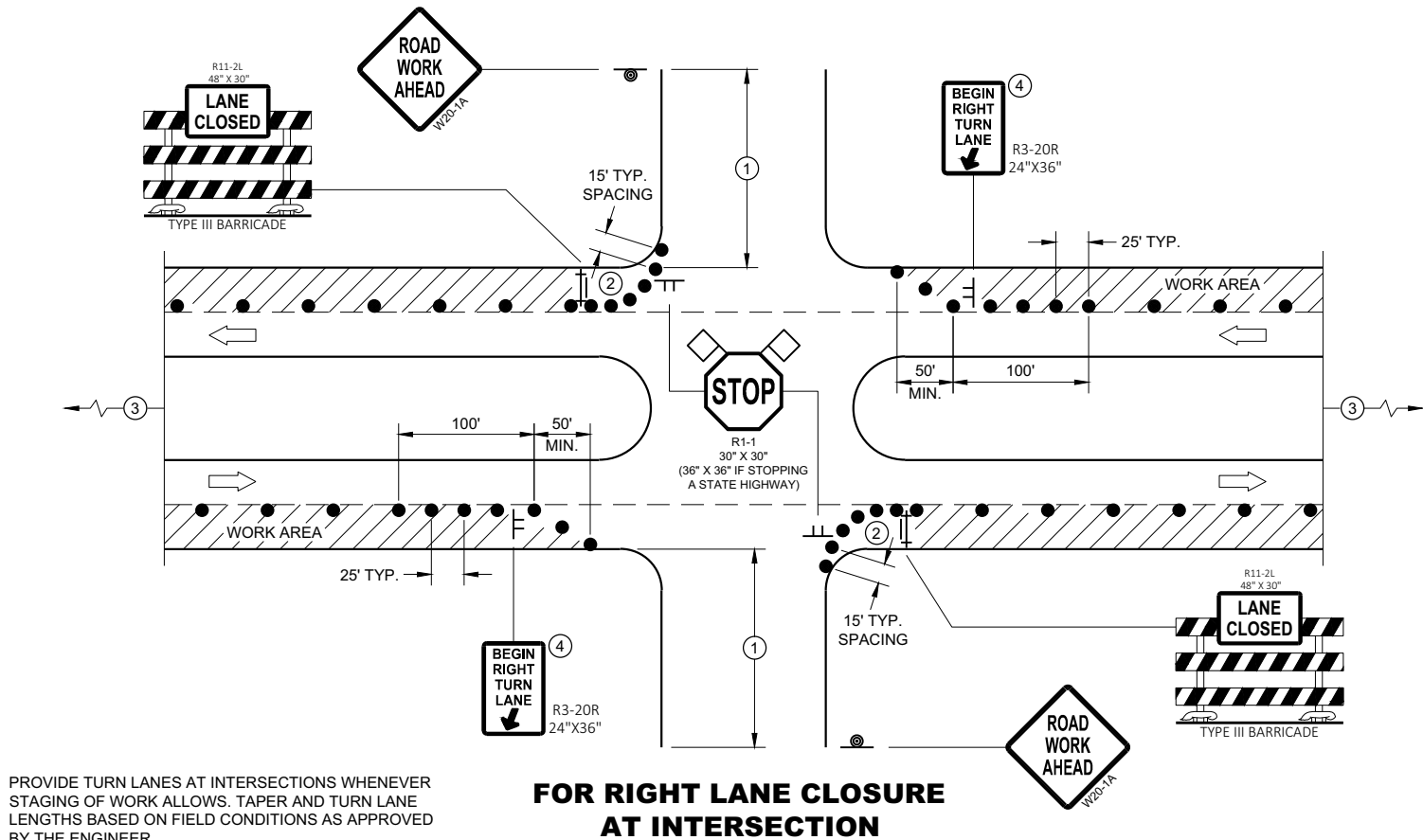
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | TAPER LENGTH<br>(12 FT. LANE)<br>(L) FEET | BUFFER<br>SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------|
| 25                                                    | 200'                                        | 125'                                      | 55'                         |
| 30                                                    | 200'                                        | 180'                                      | 85'                         |
| 35                                                    | 350'                                        | 245'                                      | 120'                        |
| 40                                                    | 350'                                        | 320'                                      | 170'                        |
| 45                                                    | 500'                                        | 540'                                      | 220'                        |
| 50                                                    | 500'                                        | 600'                                      | 280'                        |
| 55                                                    | 500'                                        | 660'                                      | 335'                        |



APPROVED  
November 2024  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**FOR RIGHT LANE CLOSURE AT INTERSECTION**

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

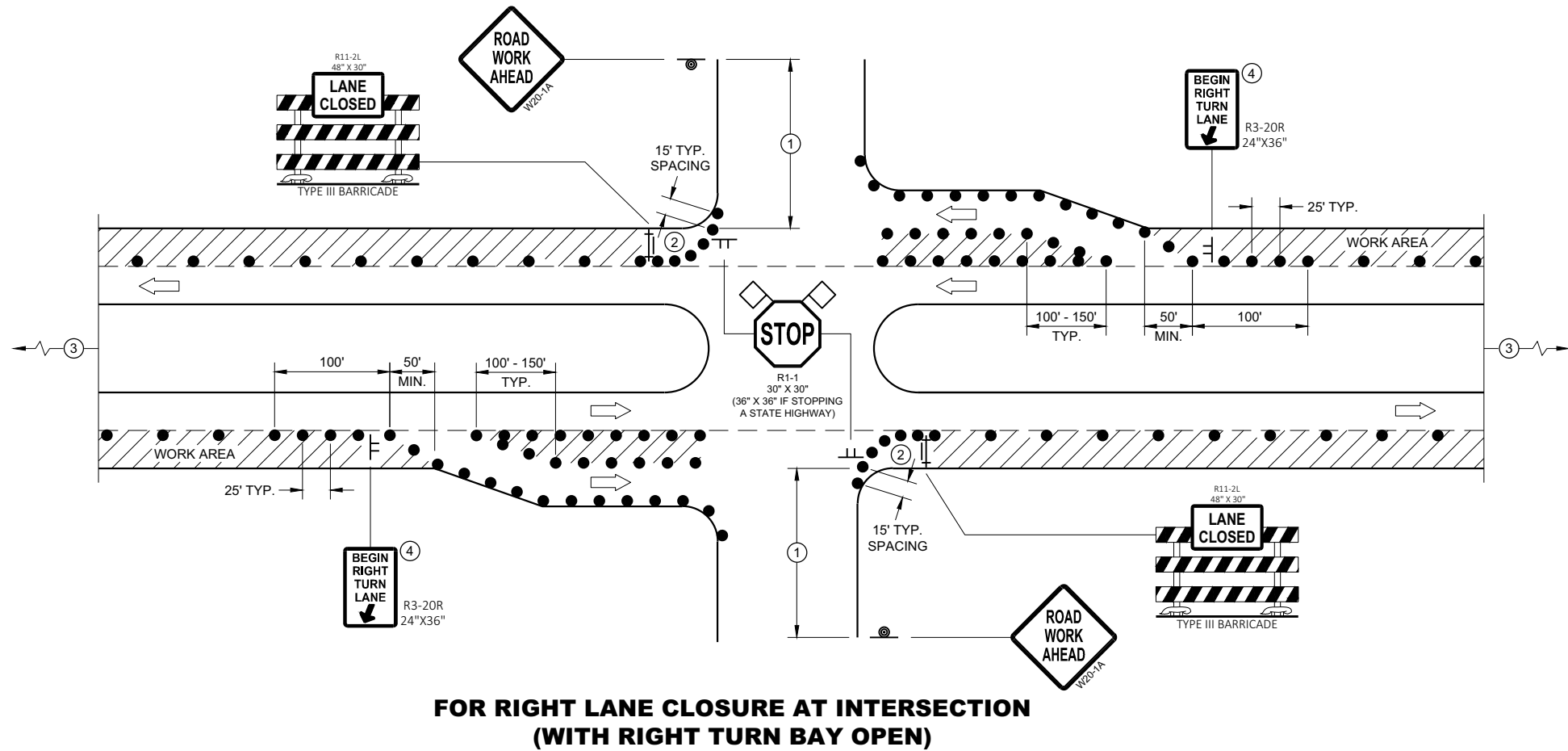
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



**FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)**

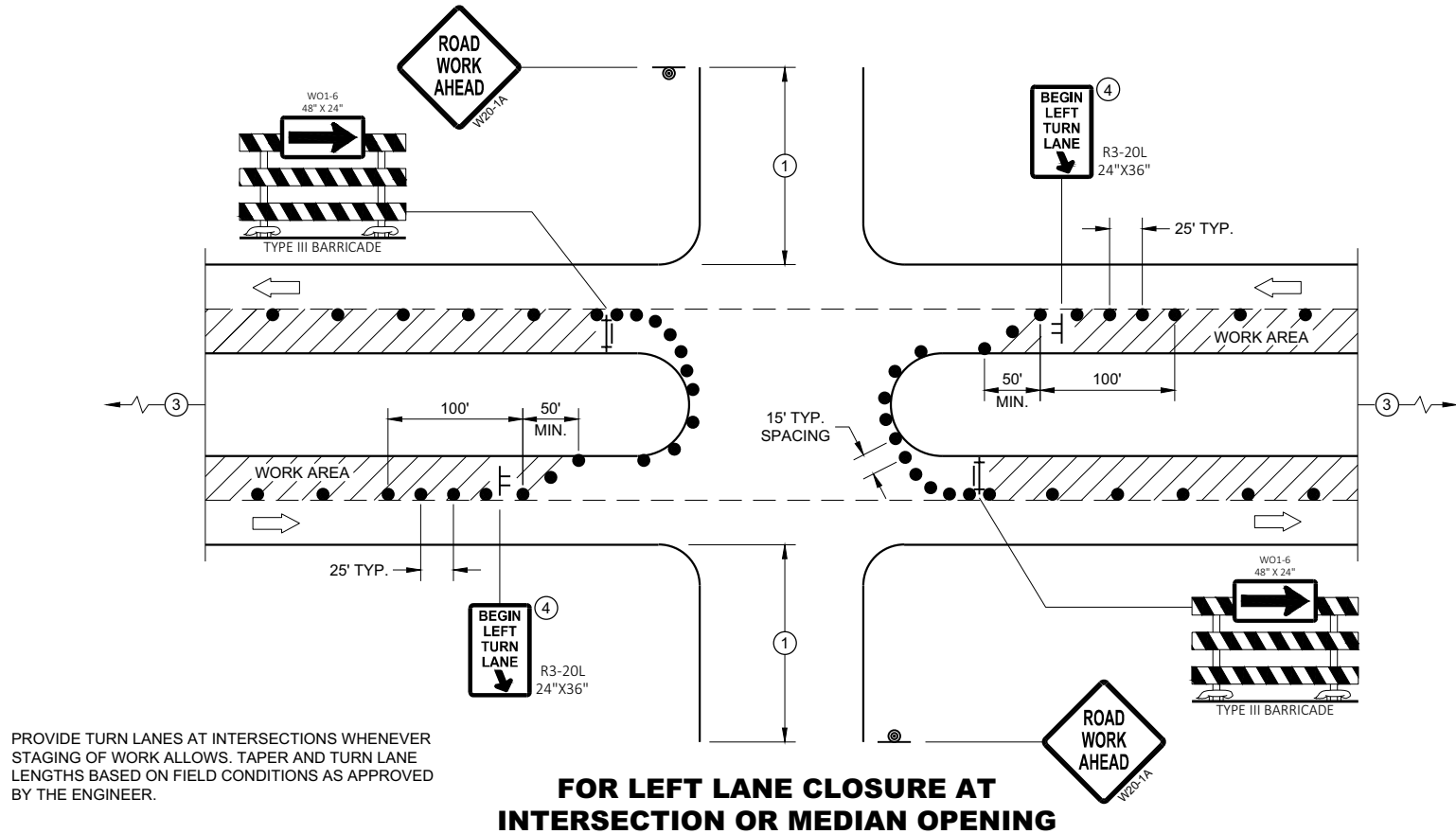
**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
RIGHT LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 288





### GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

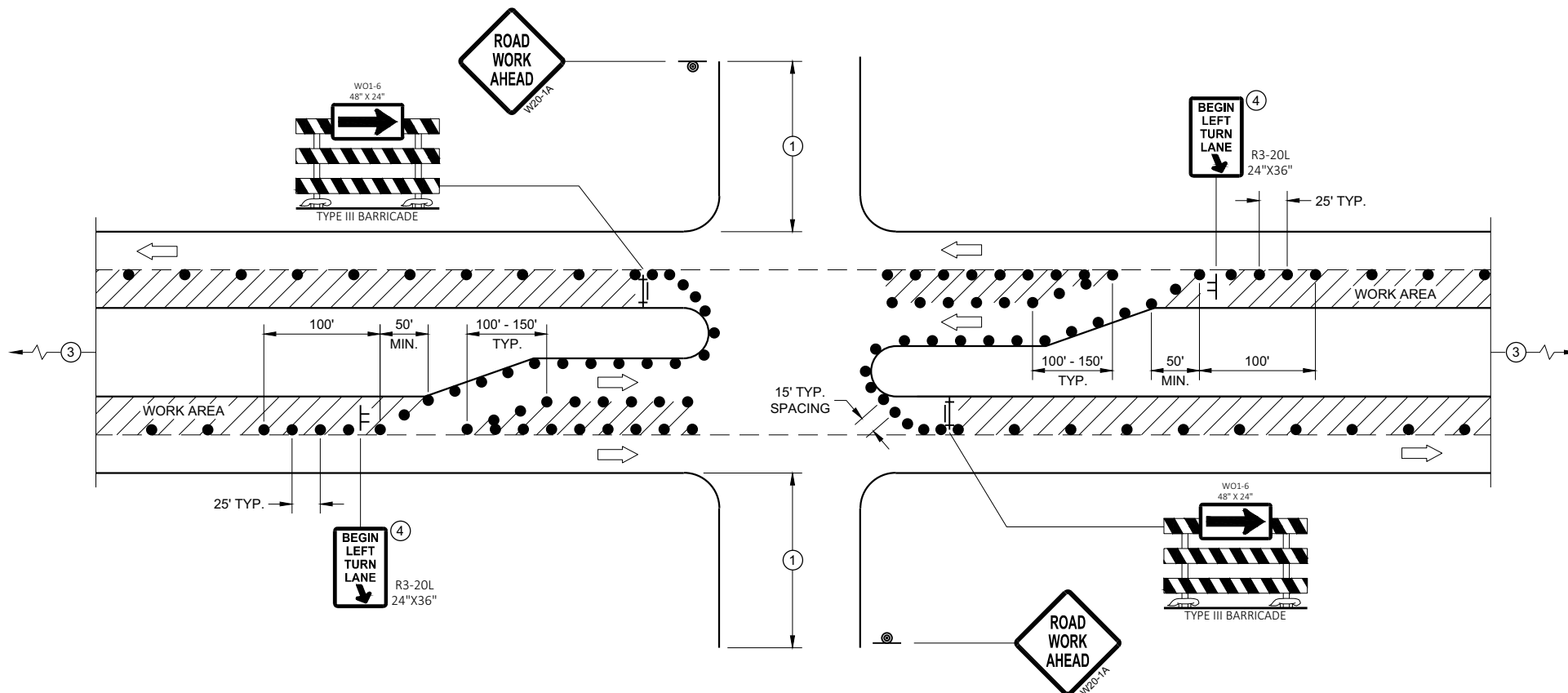
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

### LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

### FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



### TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 289  
FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45 MPH, USE SDD 15D14.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

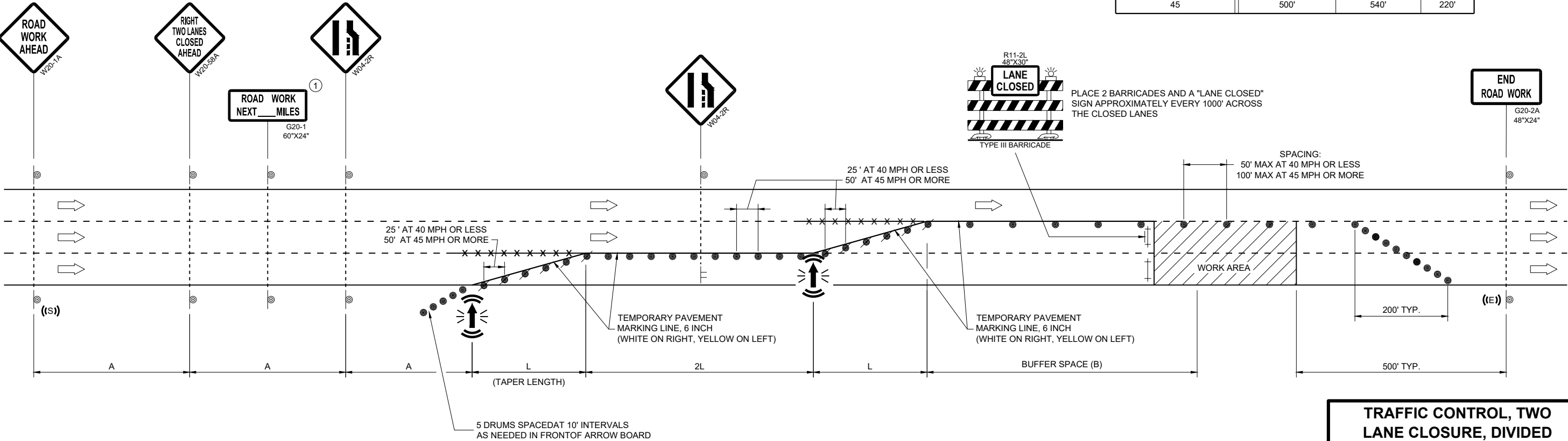
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | TAPER LENGTH<br>(12 FT. LANE)<br>(L) FEET | BUFFER SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|-------------------------------------------|--------------------------|
| 25                                                    | 200'                                        | 125'                                      | 55'                      |
| 30                                                    | 200'                                        | 180'                                      | 85'                      |
| 35                                                    | 350'                                        | 245'                                      | 120'                     |
| 40                                                    | 350'                                        | 320'                                      | 170'                     |
| 45                                                    | 500'                                        | 540'                                      | 220'                     |



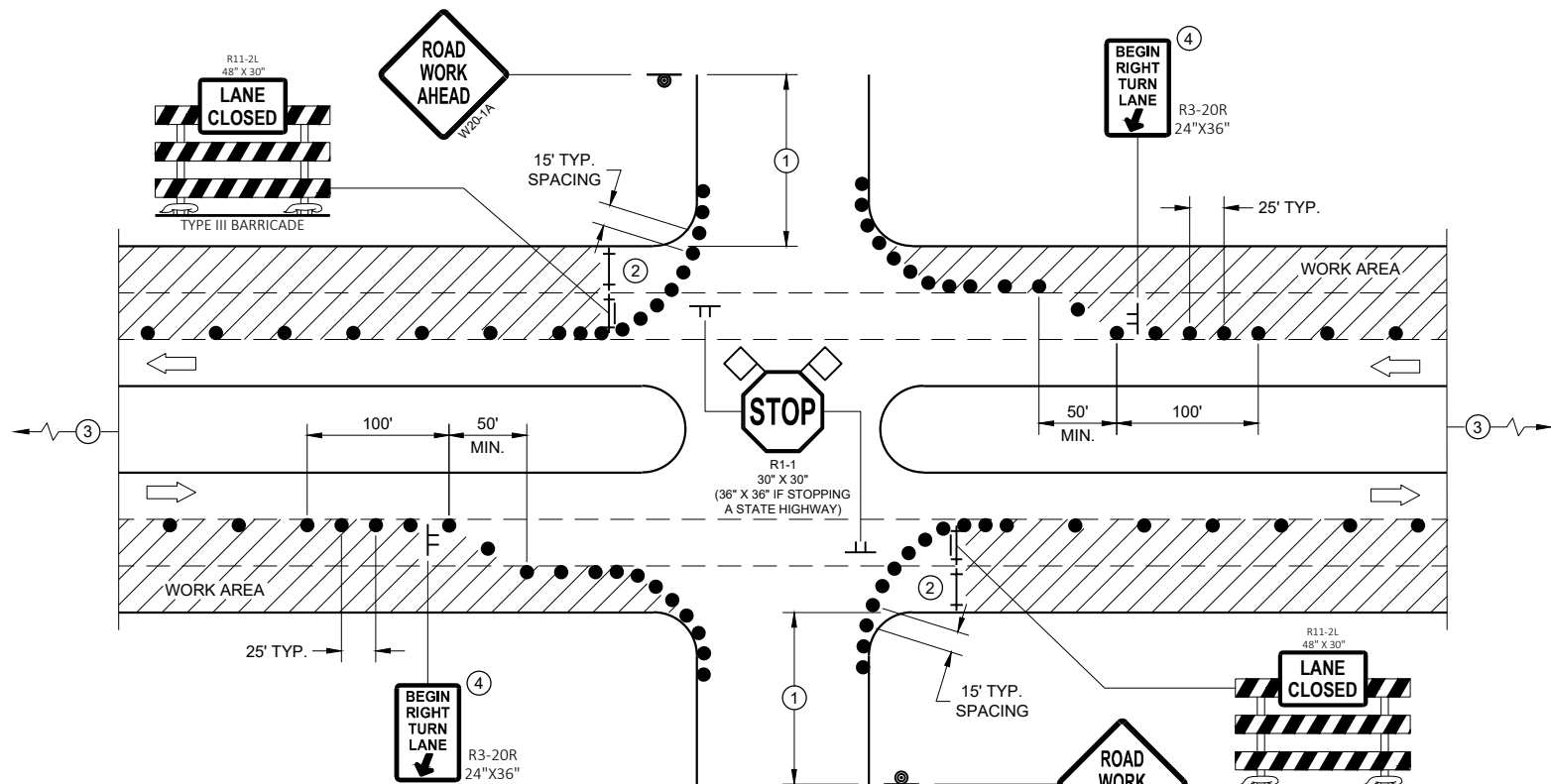
TRAFFIC CONTROL, TWO LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

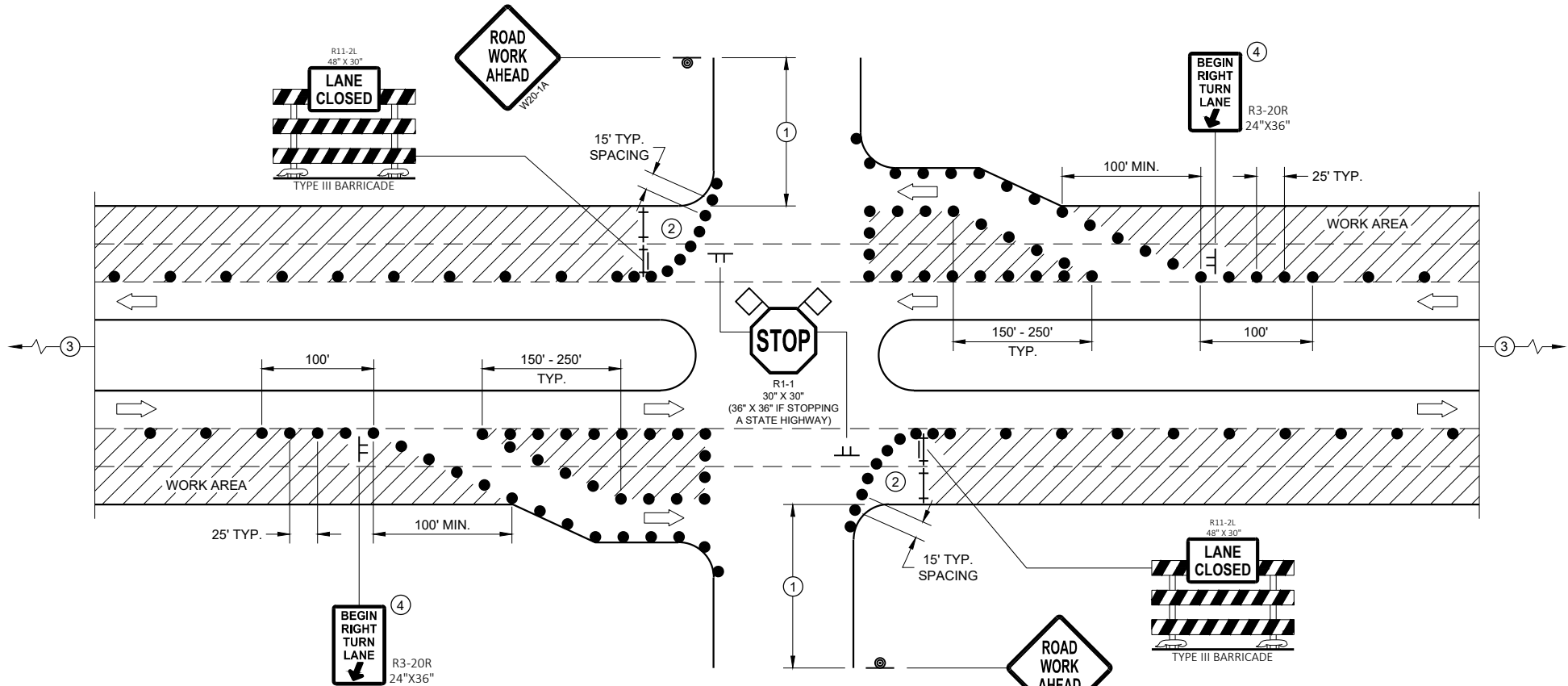
FHWA





PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR RIGHT TWO LANES  
CLOSED AT INTERSECTION



FOR RIGHT TWO LANES CLOSED AT  
INTERSECTION (WITH RIGHT TURN BAY OPEN)

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

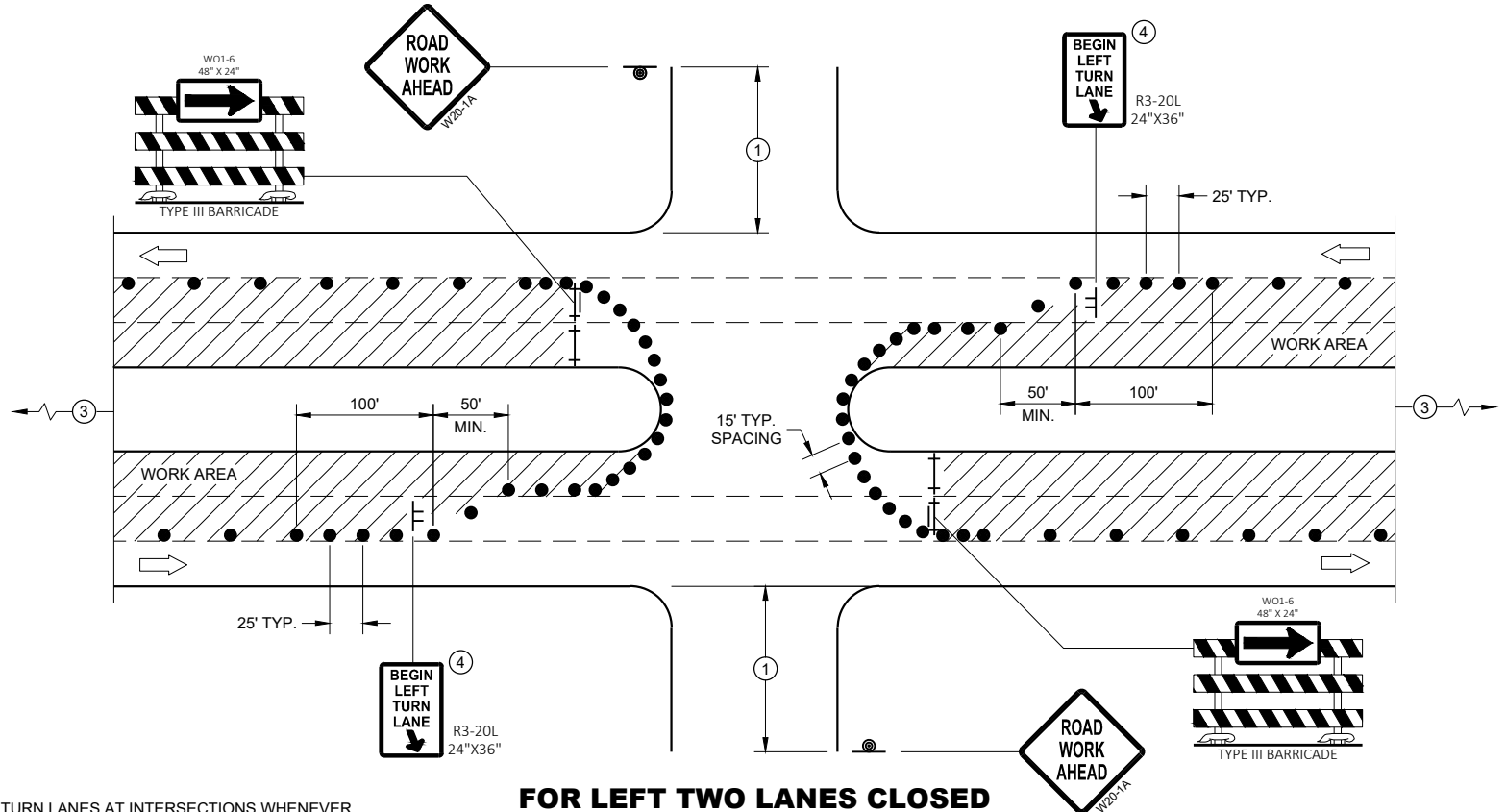
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

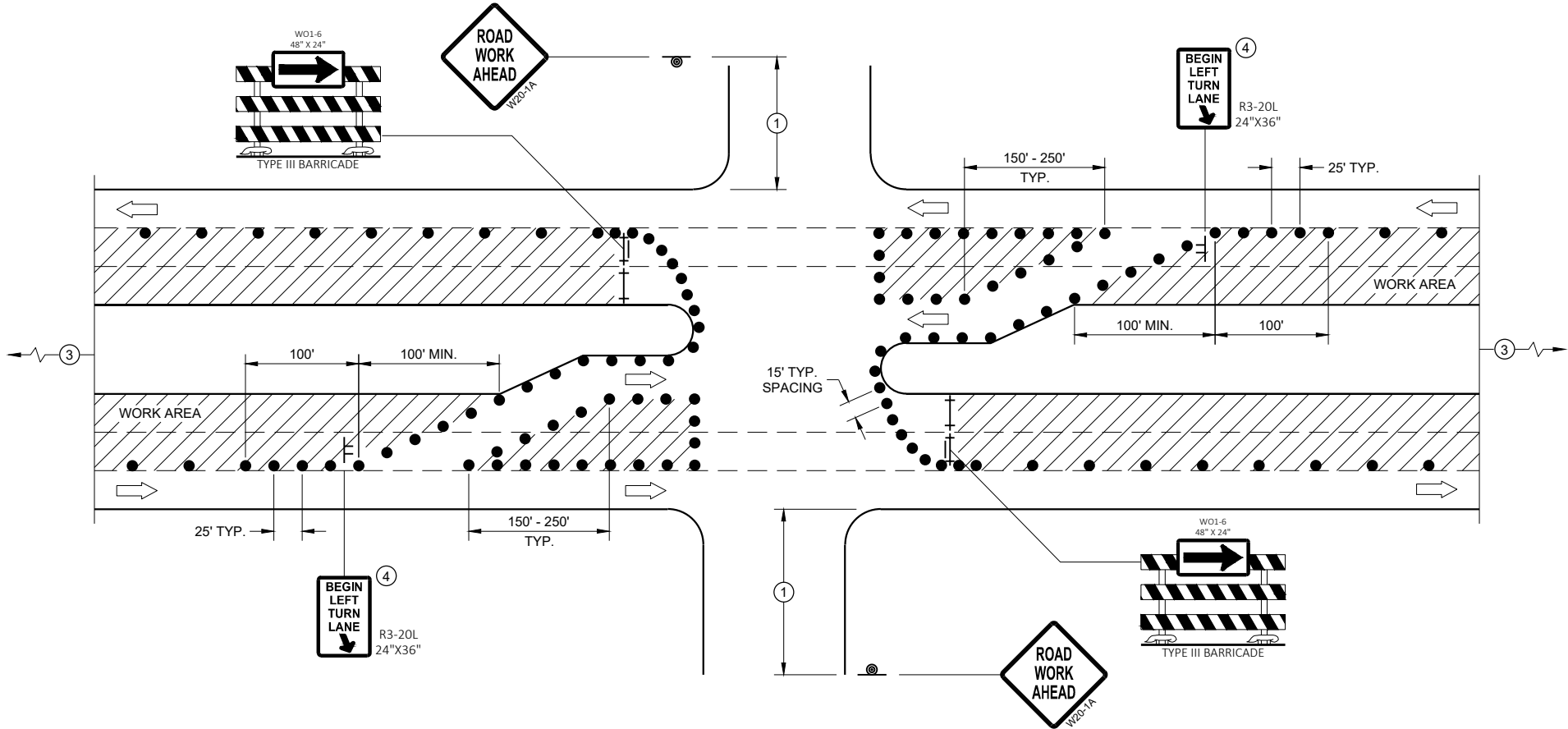
TRAFFIC CONTROL,  
INTERSECTION WITHIN  
TWO RIGHT LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**FOR LEFT TWO LANES CLOSED  
AT INTERSECTION OR MEDIAN BREAK**



**FOR LEFT TWO LANES CLOSED AT INTERSECTION  
OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)**

**GENERAL NOTES**

ALL SIGNS ARE 48\"/>

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN  
TWO LEFT LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2021 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 292  
FHWA



LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

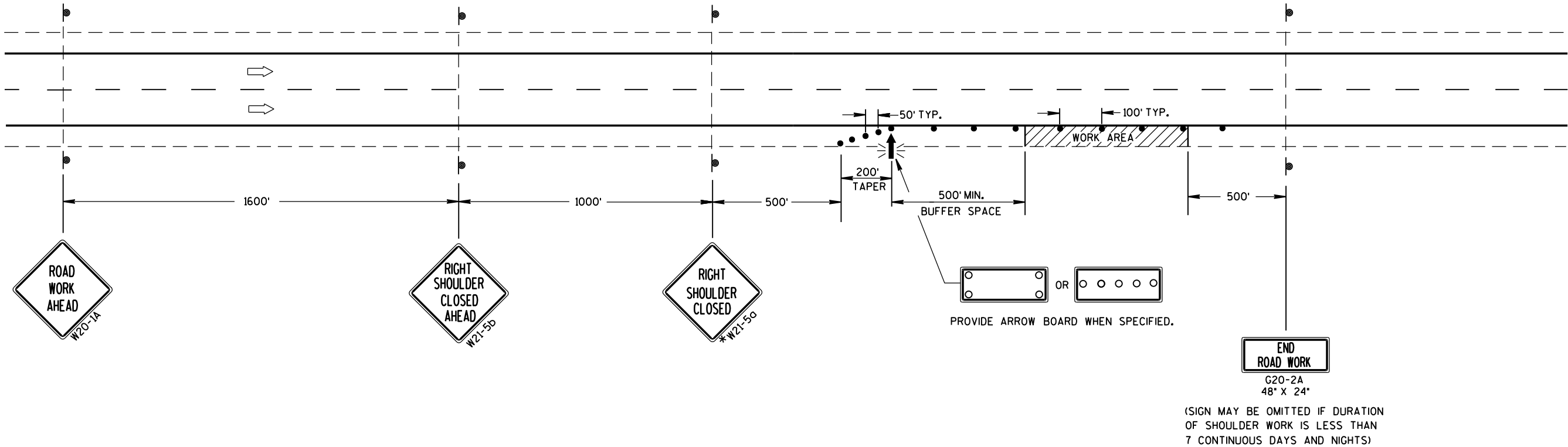
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CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

\*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL  
SHOULDER CLOSURE ON DIVIDED  
ROADWAY, SPEEDS GREATER  
THAN 40 MPH

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2016 /S/ Peter Amakobe Atepe  
DATE STATEWIDE WORK ZONE SAFETY ENGINEER  
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

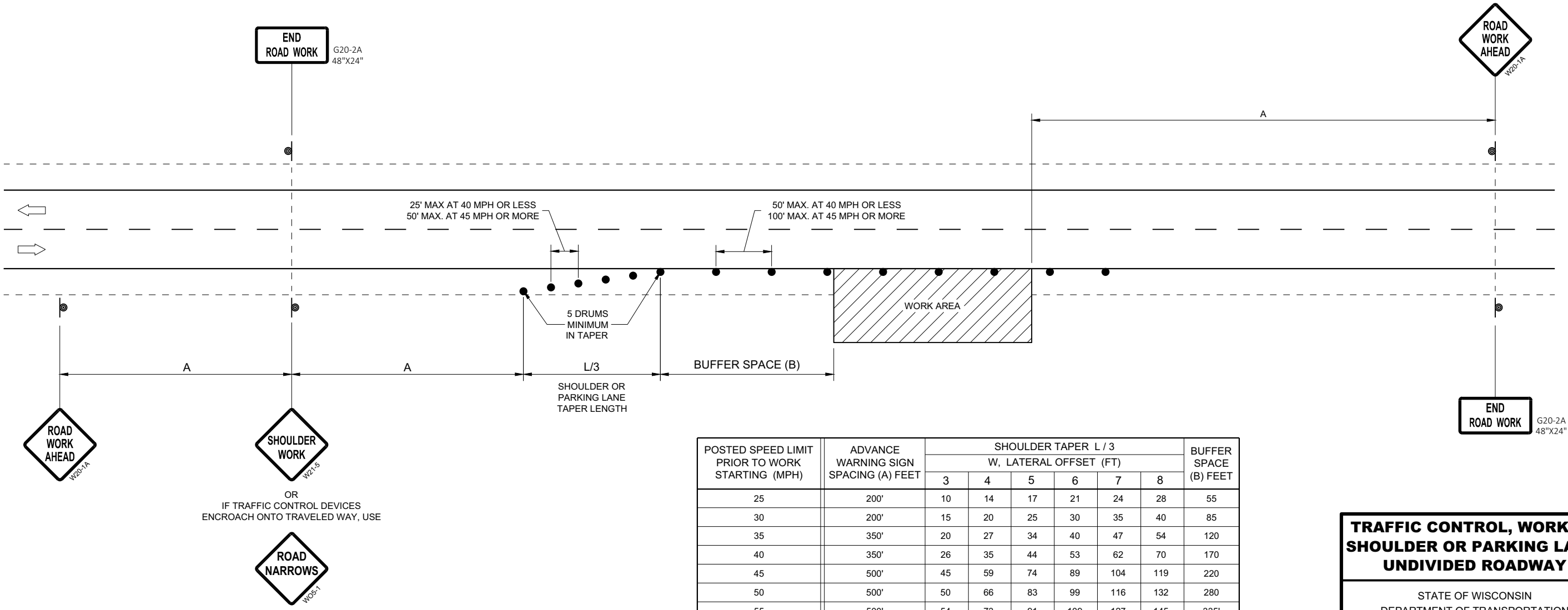
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

SDD 15D28 - 04



| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | SHOULDER TAPER L / 3<br>W, LATERAL OFFSET (FT) |    |    |     |     |     | BUFFER<br>SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|------------------------------------------------|----|----|-----|-----|-----|-----------------------------|
|                                                       |                                             | 3                                              | 4  | 5  | 6   | 7   | 8   |                             |
| 25                                                    | 200'                                        | 10                                             | 14 | 17 | 21  | 24  | 28  | 55                          |
| 30                                                    | 200'                                        | 15                                             | 20 | 25 | 30  | 35  | 40  | 85                          |
| 35                                                    | 350'                                        | 20                                             | 27 | 34 | 40  | 47  | 54  | 120                         |
| 40                                                    | 350'                                        | 26                                             | 35 | 44 | 53  | 62  | 70  | 170                         |
| 45                                                    | 500'                                        | 45                                             | 59 | 74 | 89  | 104 | 119 | 220                         |
| 50                                                    | 500'                                        | 50                                             | 66 | 83 | 99  | 116 | 132 | 280                         |
| 55                                                    | 500'                                        | 54                                             | 73 | 91 | 109 | 127 | 145 | 335'                        |

TRAFFIC CONTROL, WORK ON  
SHOULDER OR PARKING LANE,  
UNDIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020  
DATE

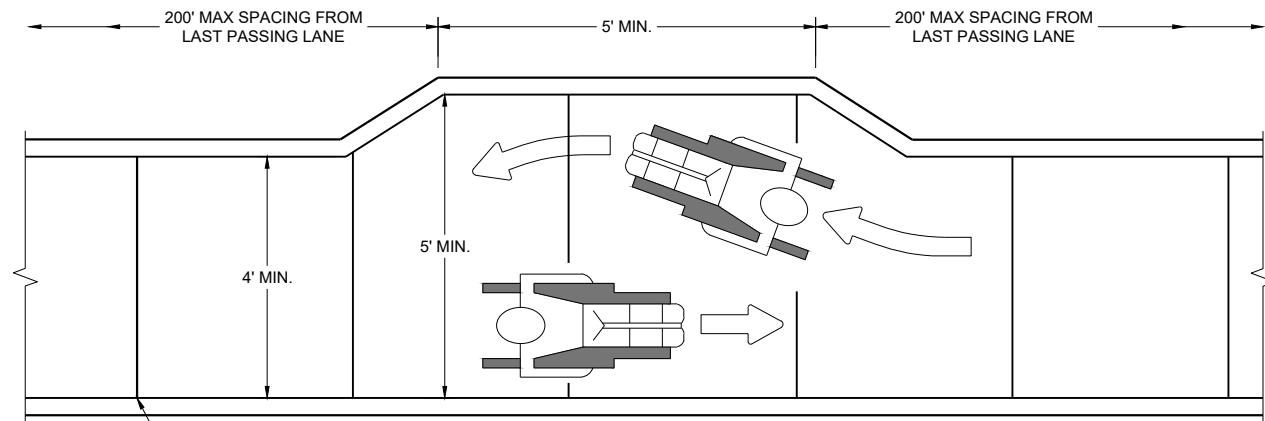
/S/ Andrew Heidtke  
STATEWIDE WORK ZONE T  
SAFETY ENGINEER 294

FHWA

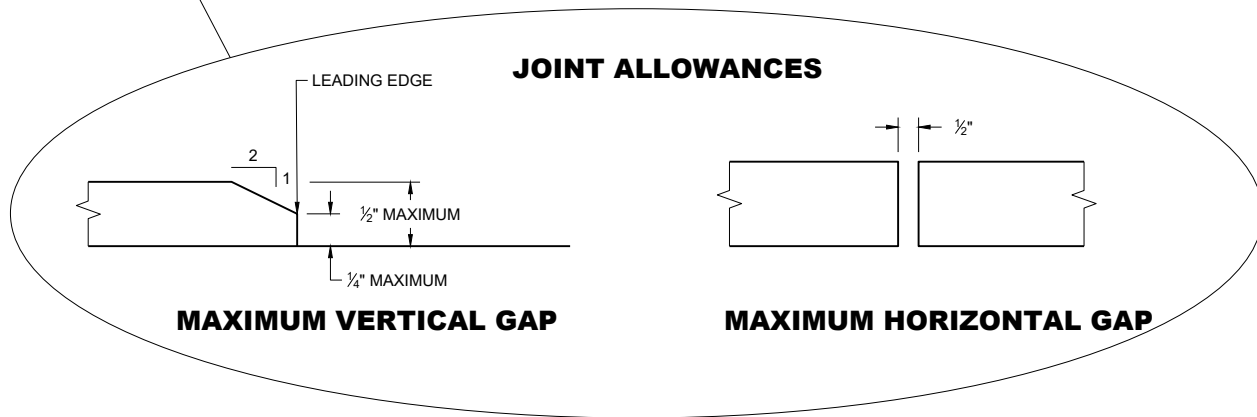
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SDD 15D28 - 04



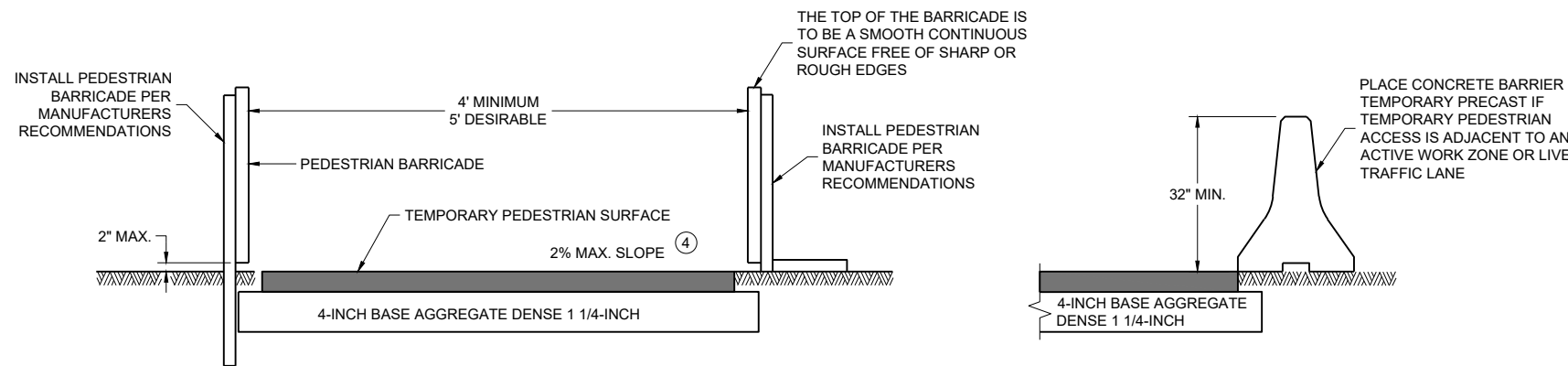


NARROW SIDEWALK PASSING DETAIL



MAXIMUM VERTICAL GAP

MAXIMUM HORIZONTAL GAP



TEMPORARY PEDESTRIAN ACCESS

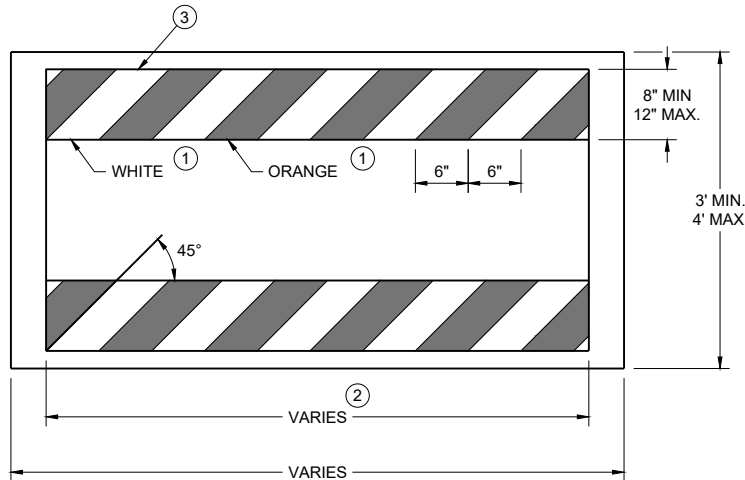
GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

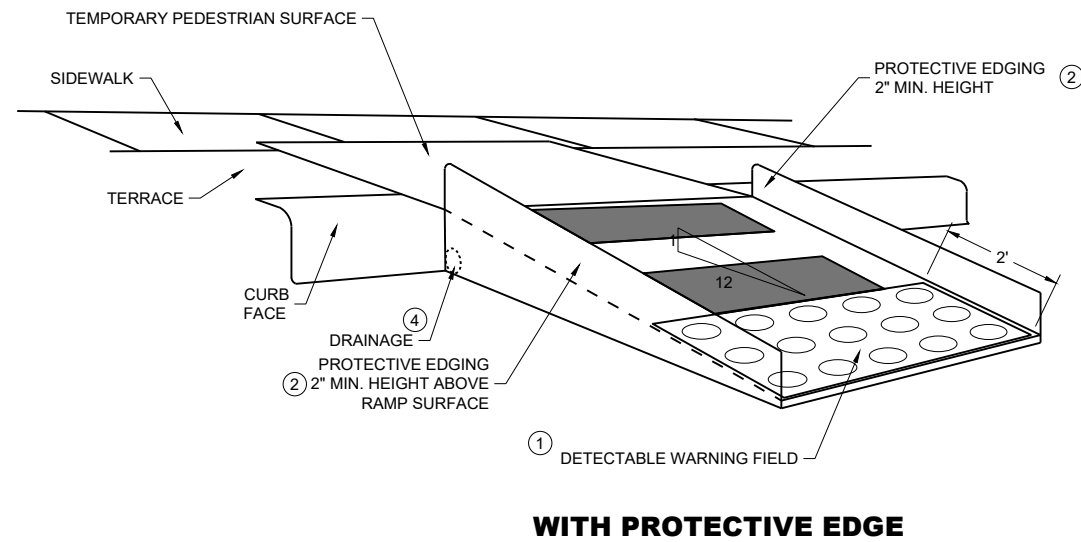
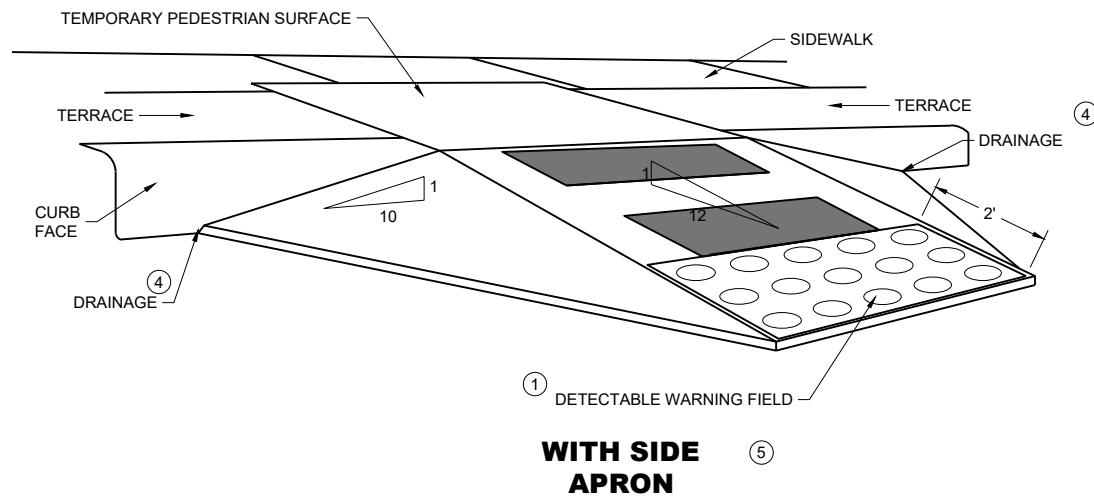
- ④ WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



TEMPORARY PEDESTRIAN BARRICADE \*

TRAFFIC CONTROL,  
PEDESTRIAN  
ACCOMMODATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**TEMPORARY CURB RAMP PERPENDICULAR TO CURB**

### GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

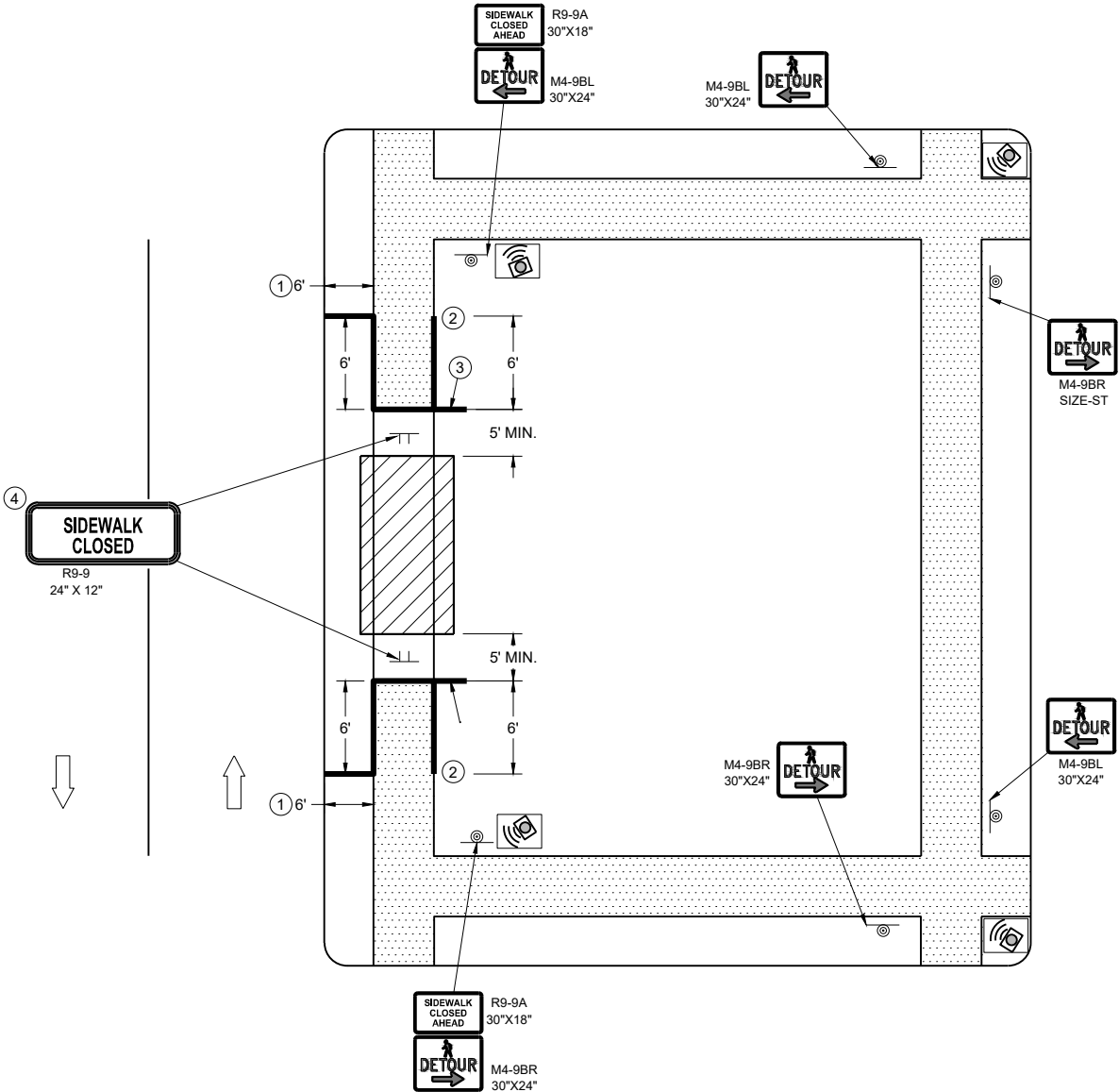
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.



LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

LEGEND

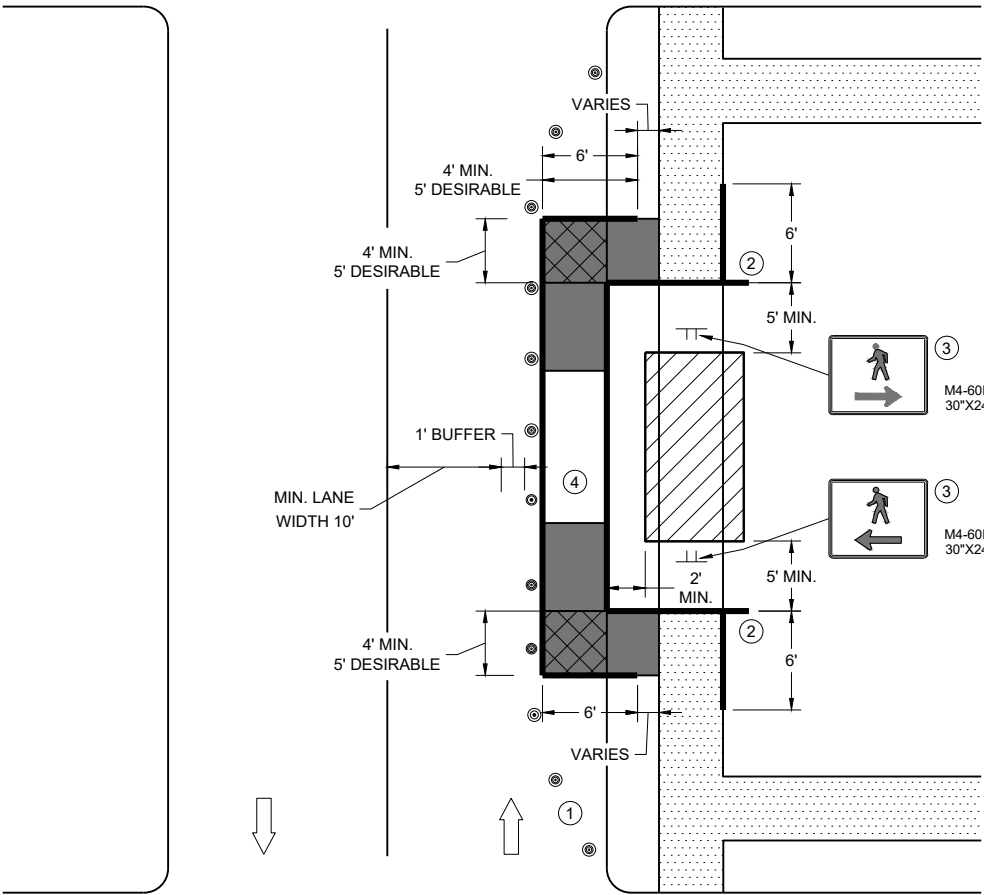
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
- ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
- ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



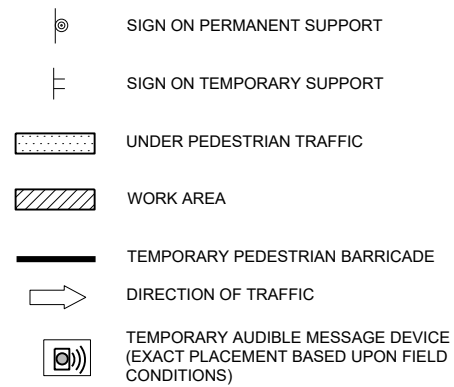
SIDEWALK BYPASS, SINGLE SIDE

TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



## LEGEND



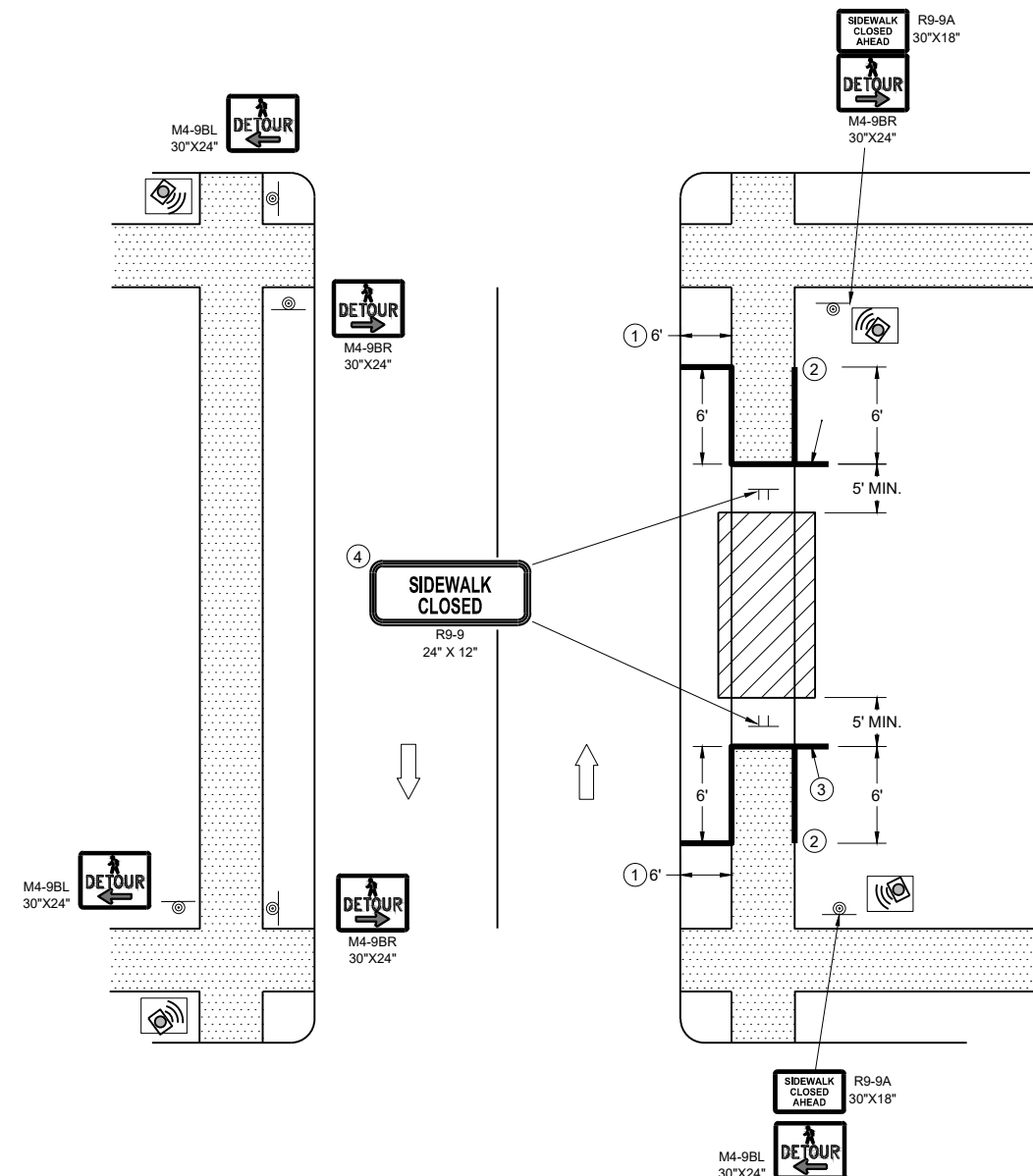
## GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

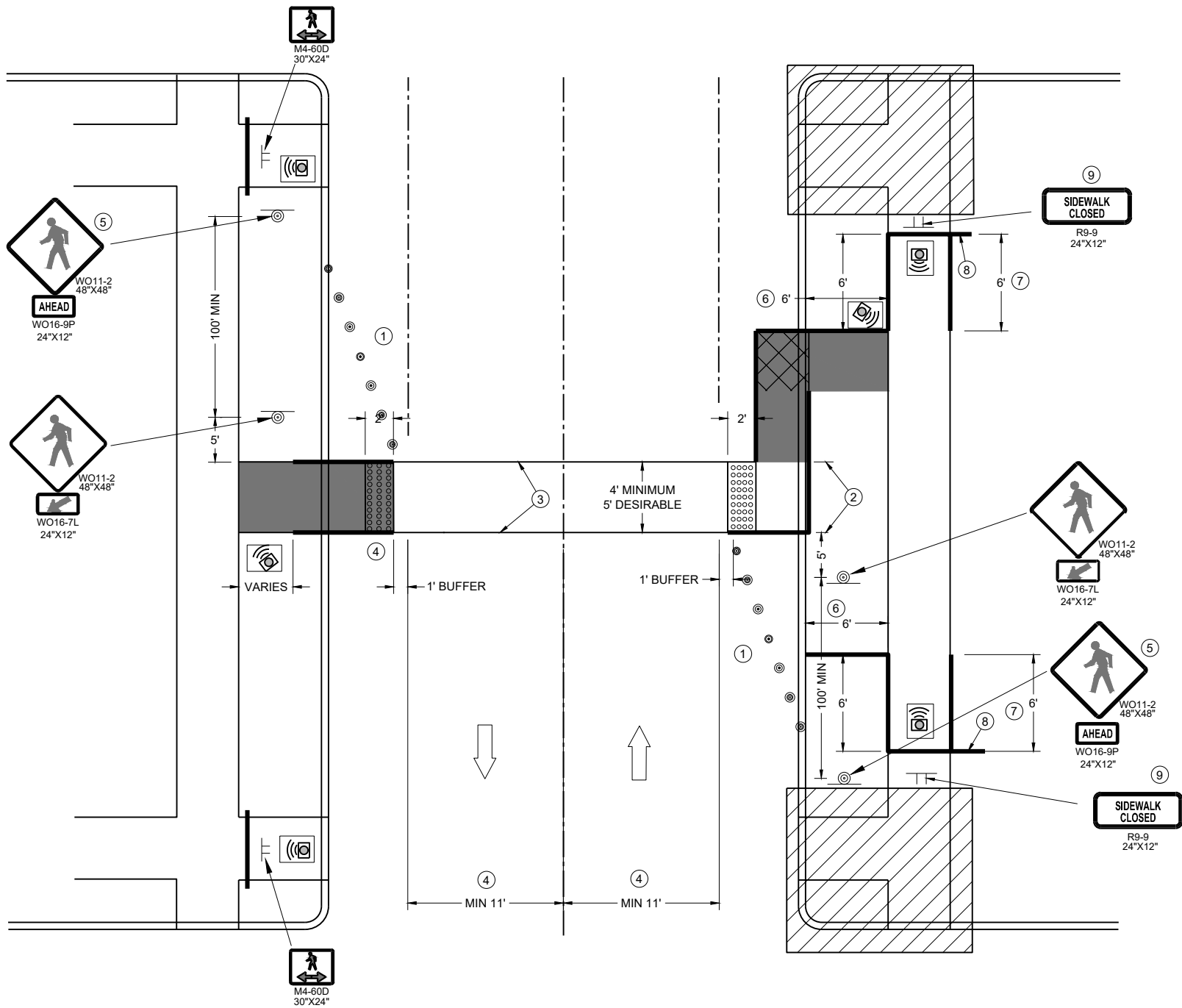
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



### **SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES**

**TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.  
SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② 4 FEET MINIMUM, 5 FEET DESIRABLE.
- ③ WHITE 6" TEMPORARY PAVEMENT MARKING.
- ④ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMP MAY NEED TO BE UTILIZED.
- ⑤ IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- ⑥ IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ⑦ PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ⑧ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ⑨ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- ① TRAFFIC CONTROL DRUM
- ② SIGN ON TEMPORARY SUPPORT
- ③ TEMPORARY CURB RAMP
- ④ TEMPORARY DETECTABLE WARNING FIELD
- ⑤ TEMPORARY PEDESTRIAN SURFACE "A"
- ⑥ TEMPORARY PEDESTRIAN SURFACE "B"
- ⑦ WORK AREA
- ⑧ TEMPORARY PEDESTRIAN BARRICADE
- ⑨ DIRECTION OF TRAFFIC
- ⑩ TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS PART OF A DAYTIME ONLY OPERATION.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

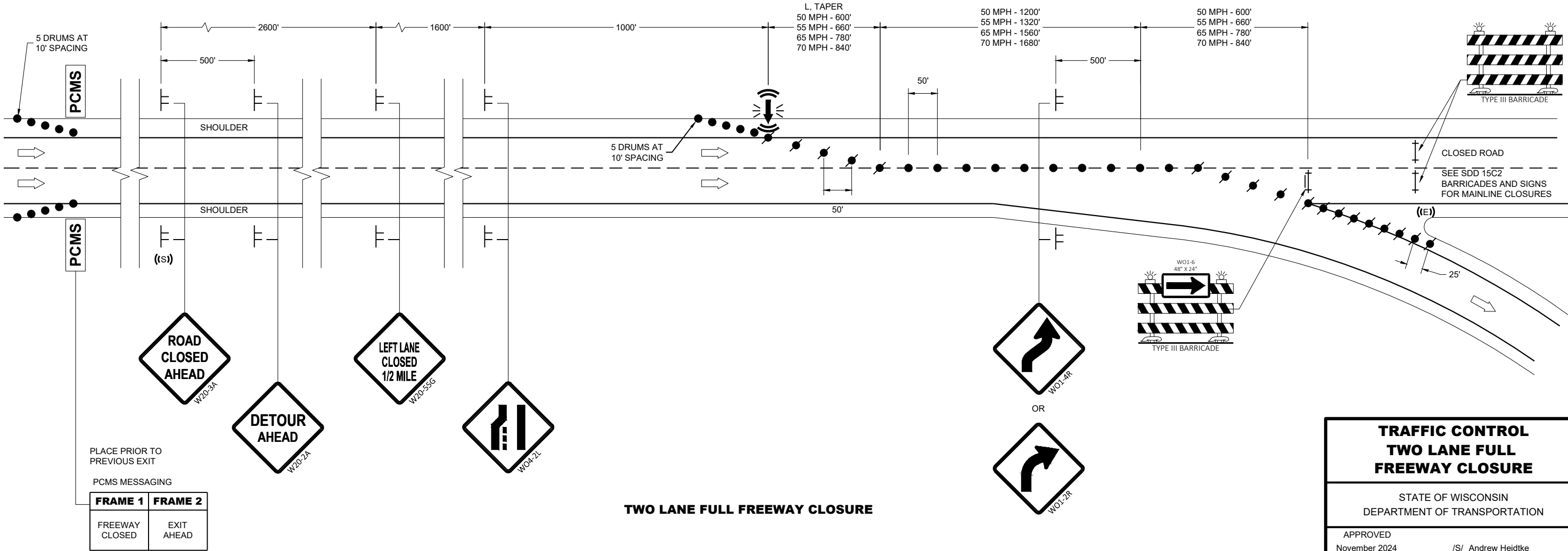
PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

TWO LANE FULL FREEWAY CLOSURE

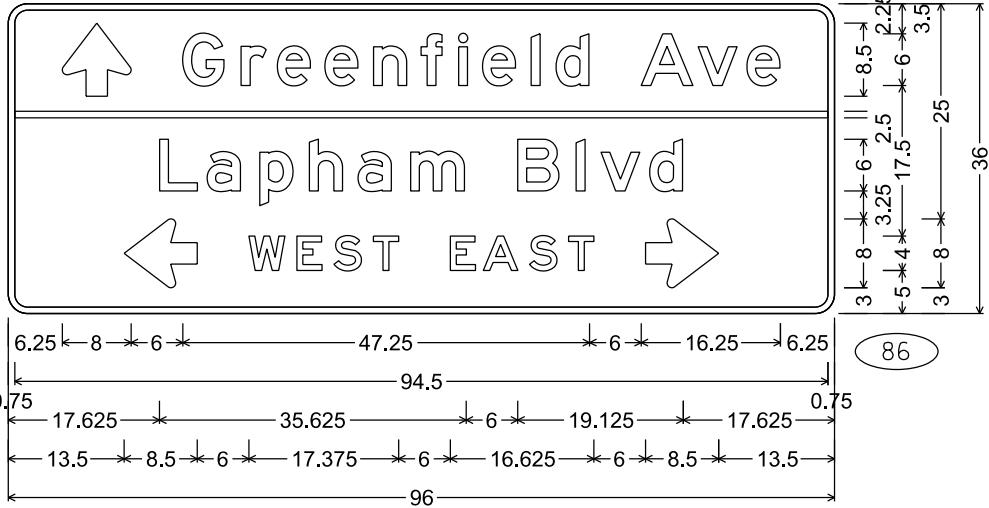


TRAFFIC CONTROL  
TWO LANE FULL  
FREEWAY CLOSURE

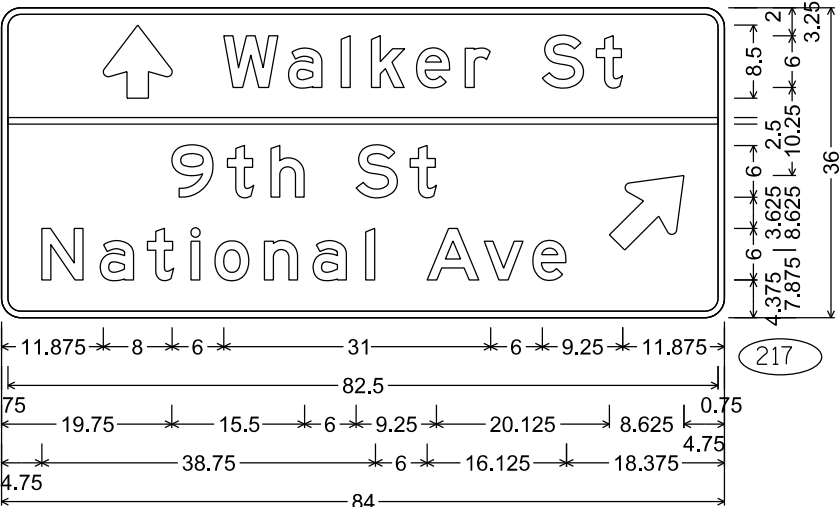
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2024 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

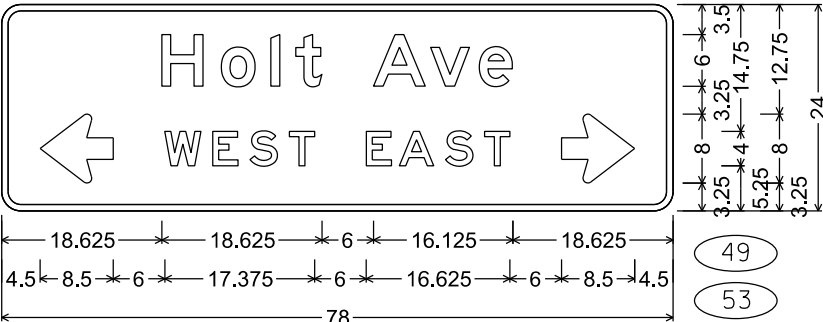
FHWA



D1-60A; 2.250" Radius, 0.750" Border



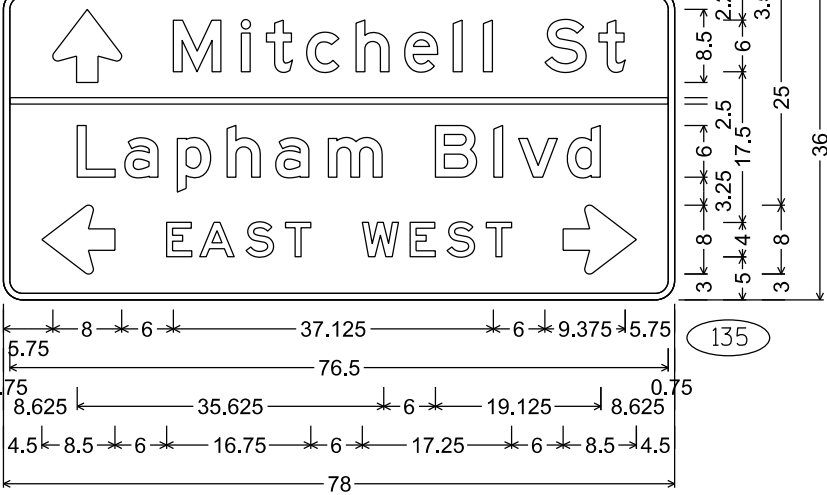
D1-3; 2.250" Radius, 0.750" Border



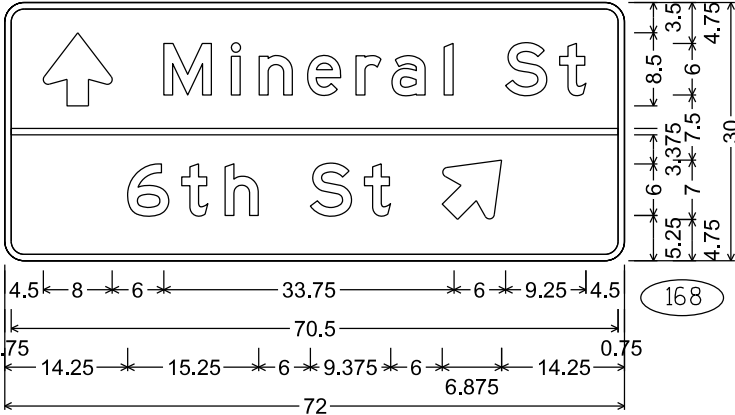
D1-60; 2.250" Radius, 0.750" Border



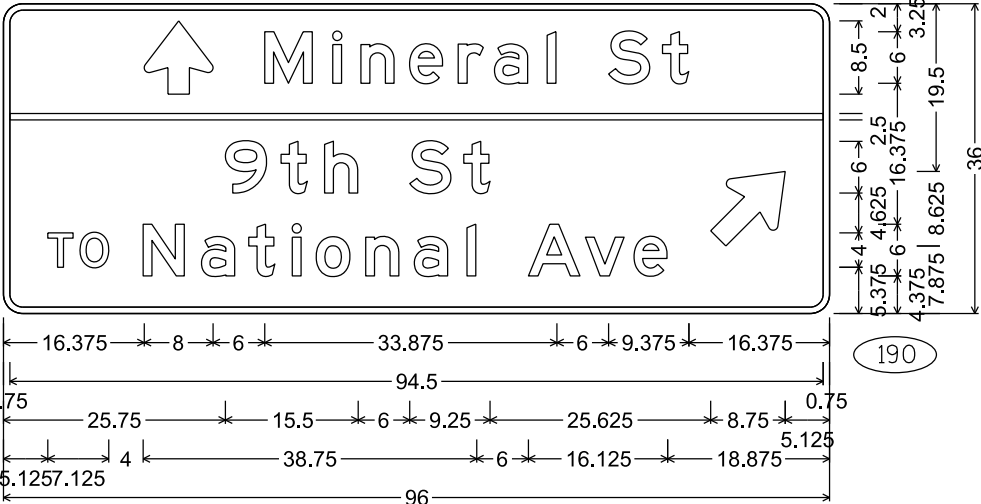
D1-1; 2.250" Radius, 0.750" Border



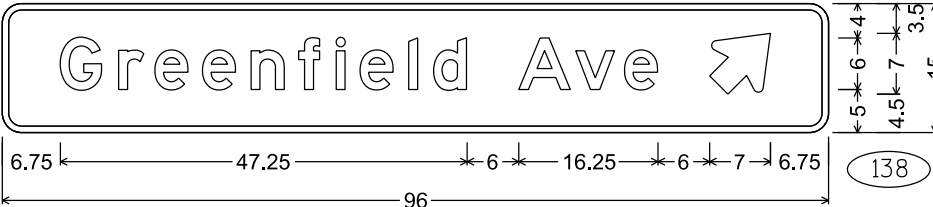
D1-60A; 2.250" Radius, 0.750" Border



D1-2; 2.250" Radius, 0.750" Border



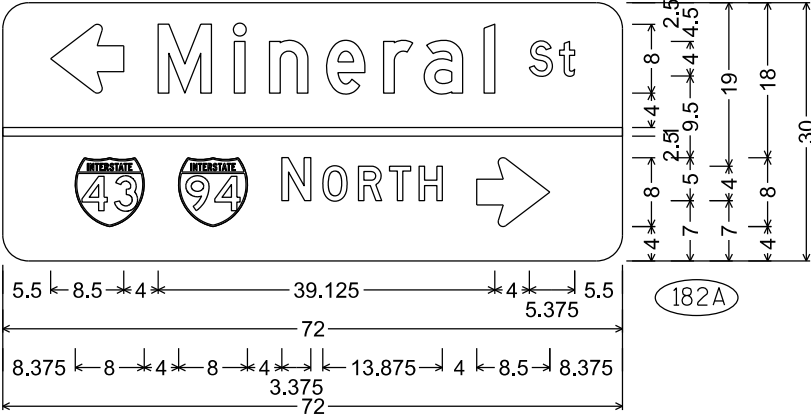
D1-3; 2.250" Radius, 0.750" Border



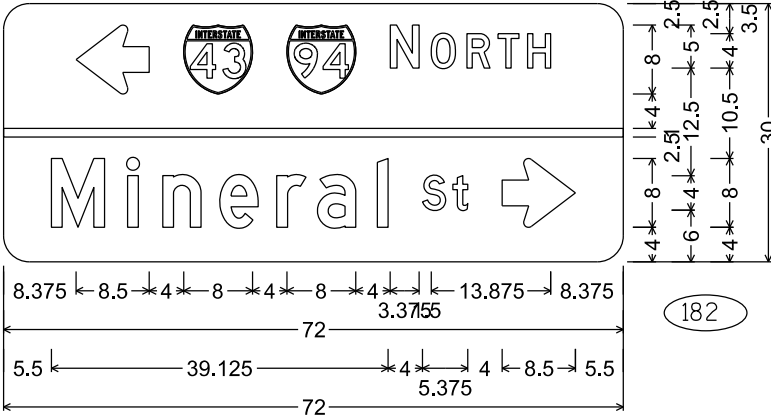
D1-1; 2.250" Radius, 0.750" Border

NOTES

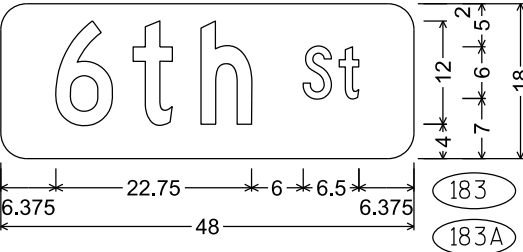
- 1. Signs are Type II - Type H Reflective
- 2. Color:  
Background - Green  
Message - White
- 3. Message Series - E or as noted



M1-94S; 3.000" Radius, No border,  
"NORTH", D; "Mineral", D; "St", D



M1-94S; 3.000" Radius, No border,  
"NORTH", D; "Mineral", D; "St", D

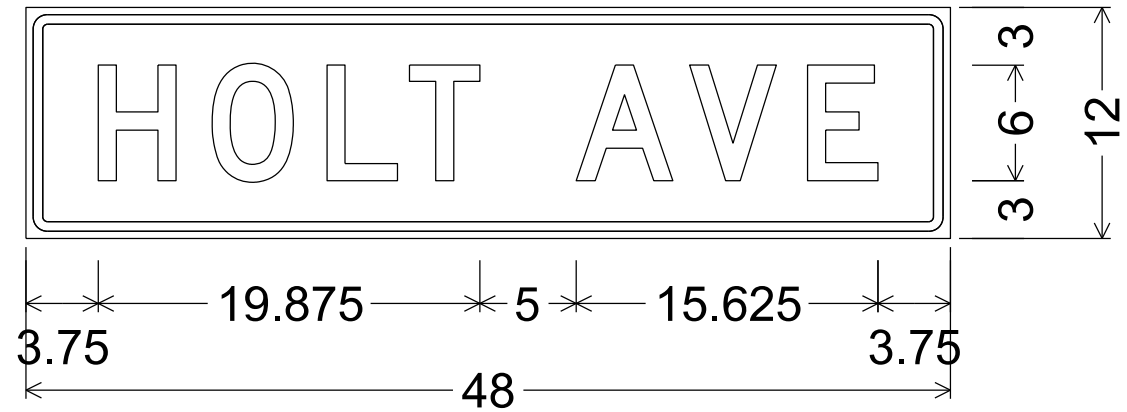


M1-94H; 3.000" Radius, No border,  
"6th", C; "St", C

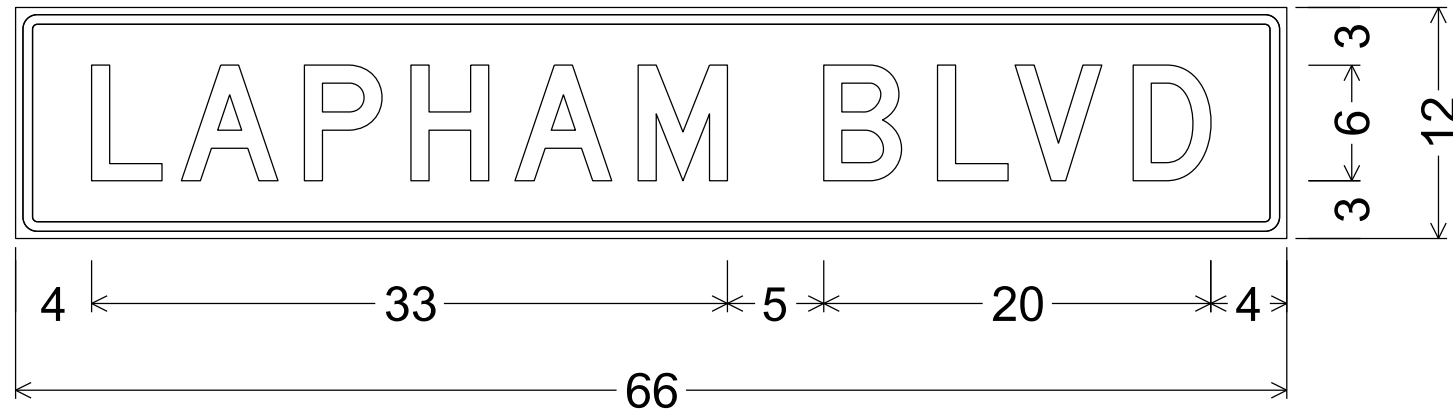


NOTES

- 1. Fixed Message Signs Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - D



1.125" Radius, 0.500" Border, 0.375" Indent



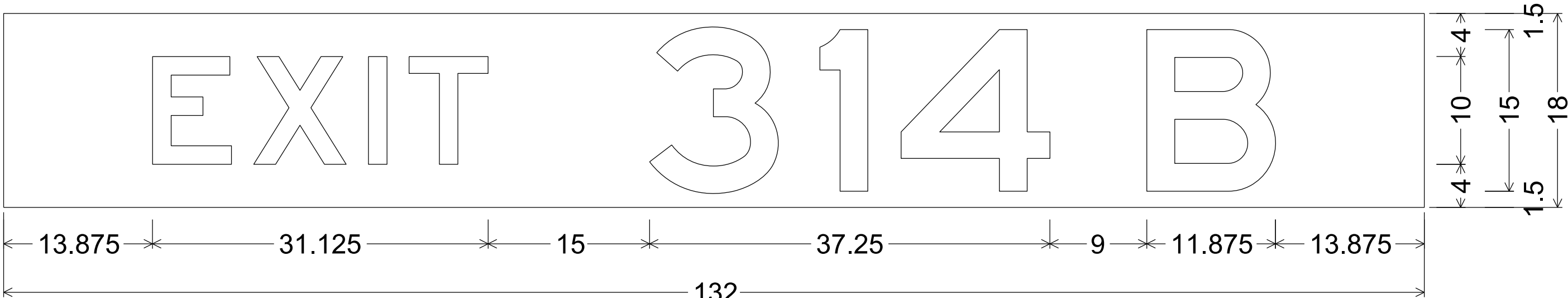
1.125" Radius, 0.500" Border, 0.375" Indent

7

7

NOTES

- 1. Fixed Message Sign Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - E



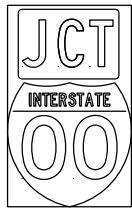
No border

7

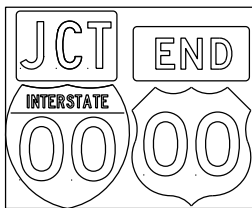
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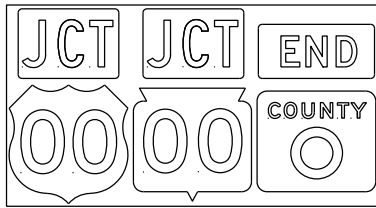
TYPICAL ASSEMBLIES



J1-1



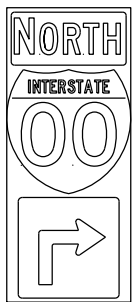
J1-2



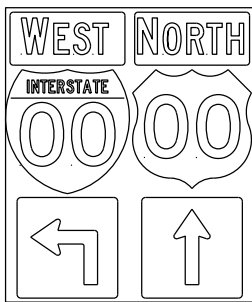
J1-3



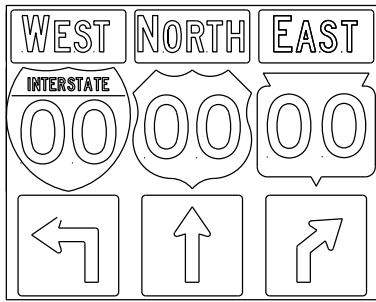
JR1-1



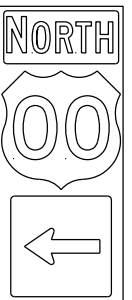
J2-1



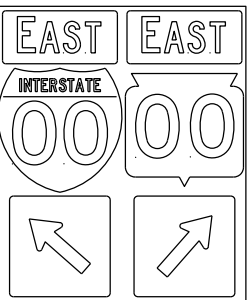
J2-2



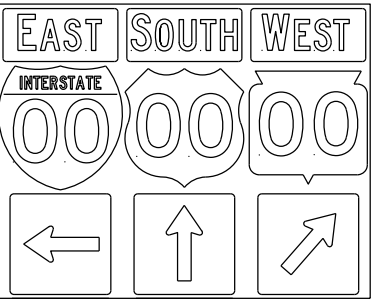
J2-3



J3-1



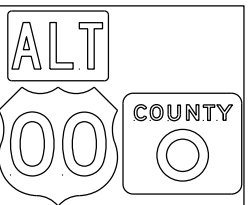
J3-2



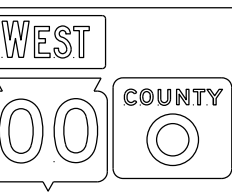
J3-3



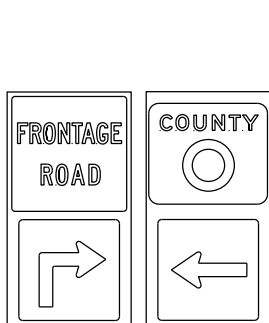
J4-1



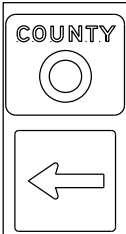
J4-2



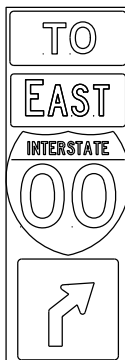
J4-2



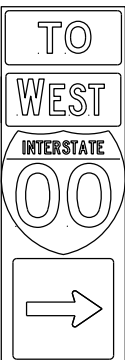
J12-1



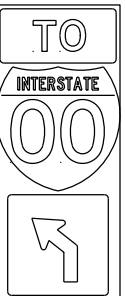
J13-1



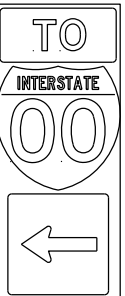
J32-1



J33-1



J22-1



J23-1



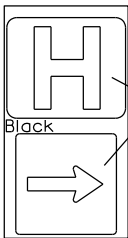
JR13-1



JR23-1



JR99-1

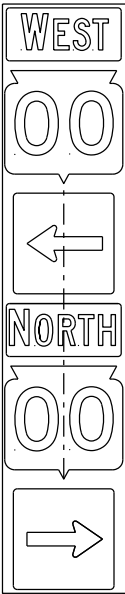
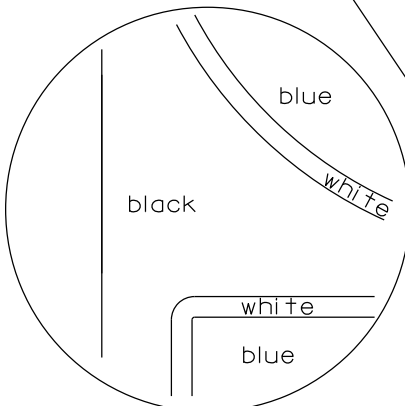


JH-1

Blue Background

Black

blue background with interstate

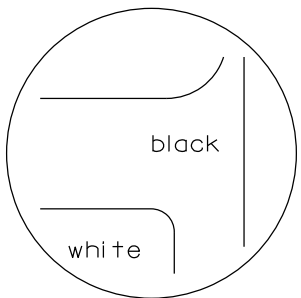
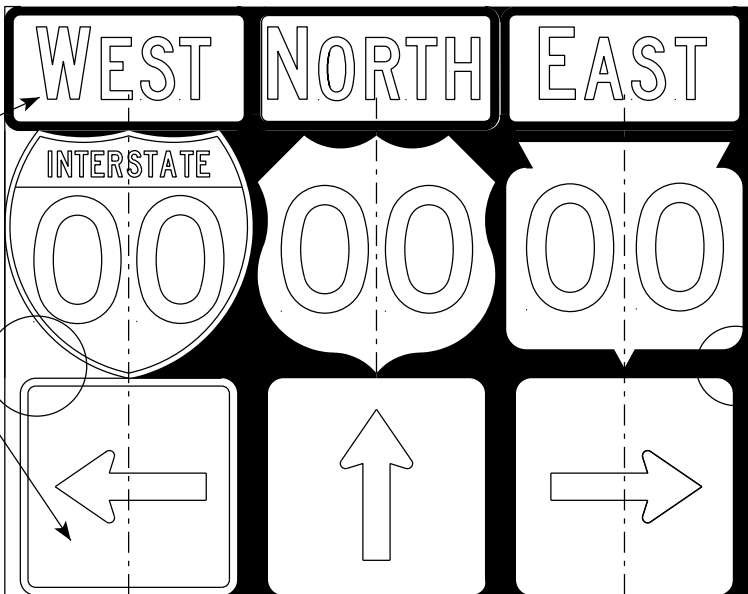


JV

( Typical Vertical J-Assembly  
See Note 10 and 11)

NOTES

1. Signs are Type II - Type H Reflective
2. Color:  
Background - Black Non-reflective  
Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
6. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
7. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
8. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.



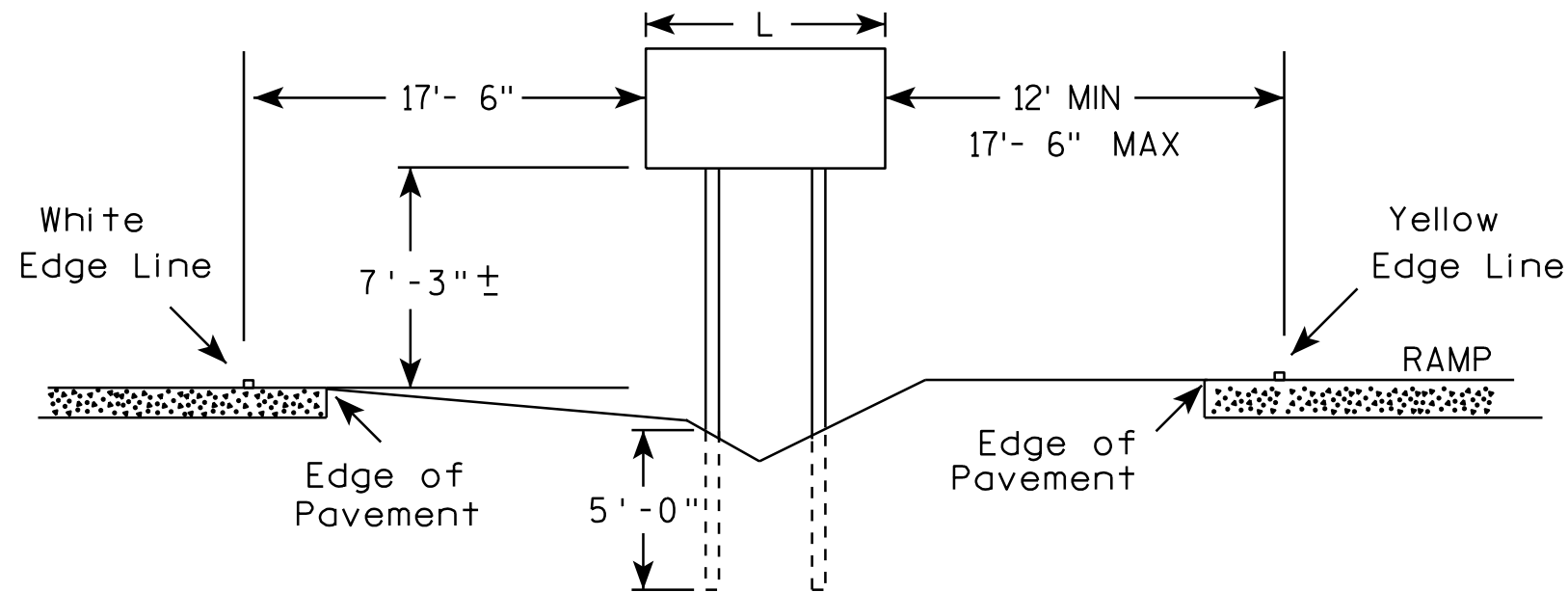
black background

ROUTE MARKERS & COMPONENTS  
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

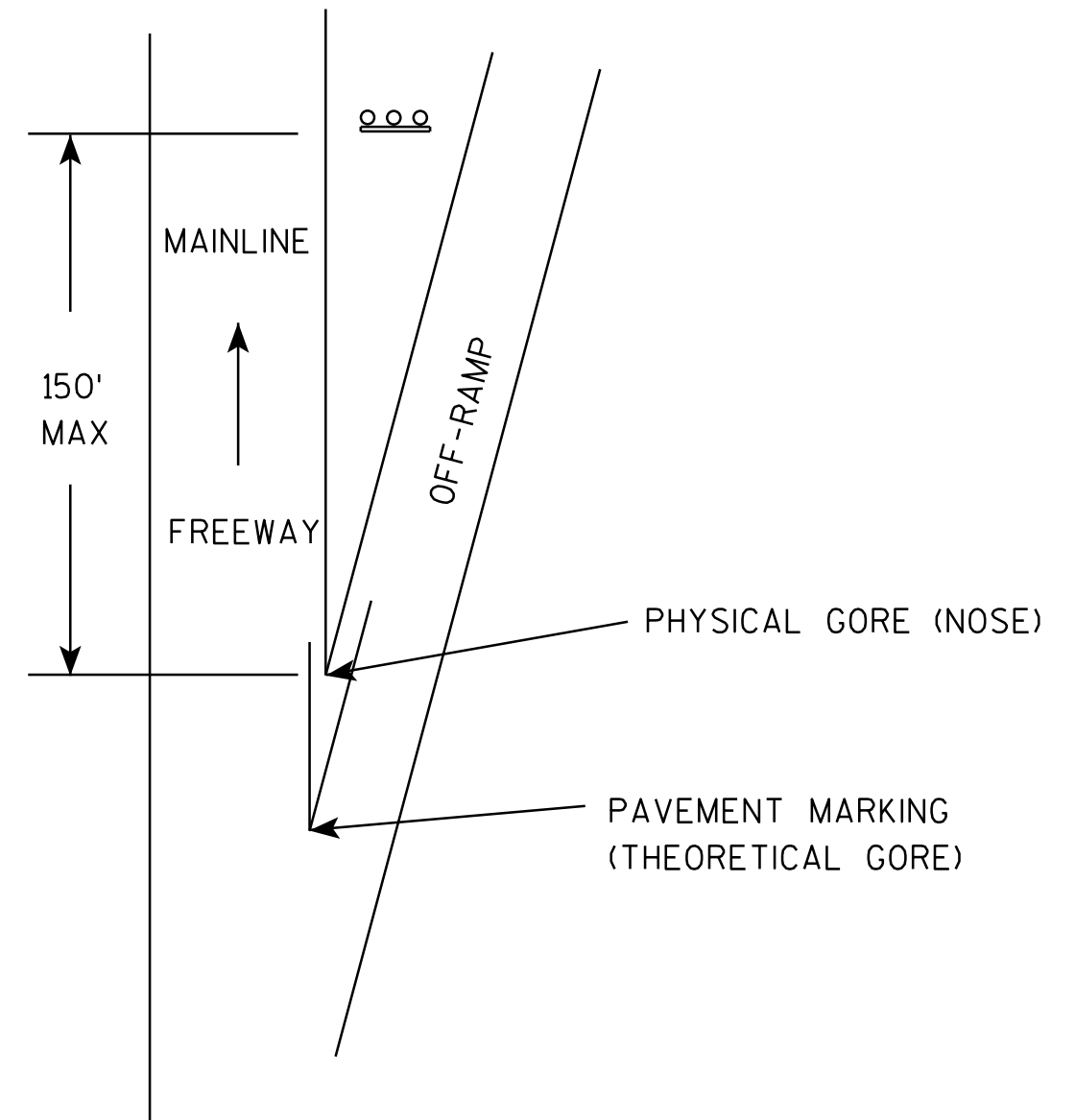
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/7/23 PLATE NO. A2-1S.10



#### GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The ( $\pm$ ) tolerance for the mounting height is 3 inches.



TYPICAL INSTALLATION  
OF TYPE II SIGNS ON  
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/06/14 PLA 306 A4-2.3

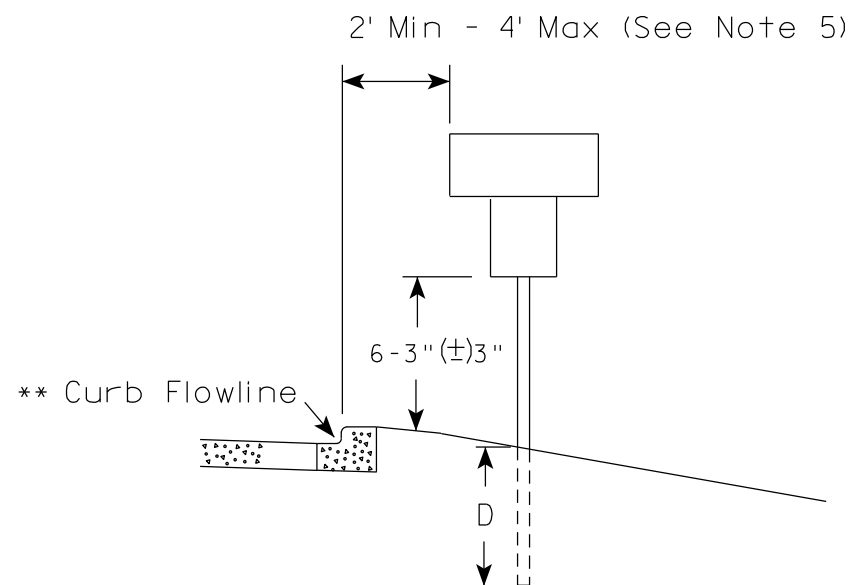
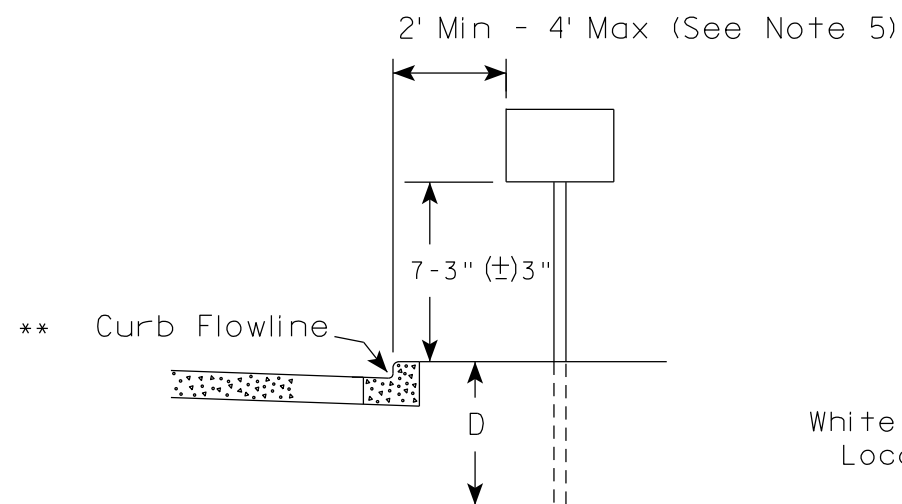
PROJECT NO:

SHEET NO:

E

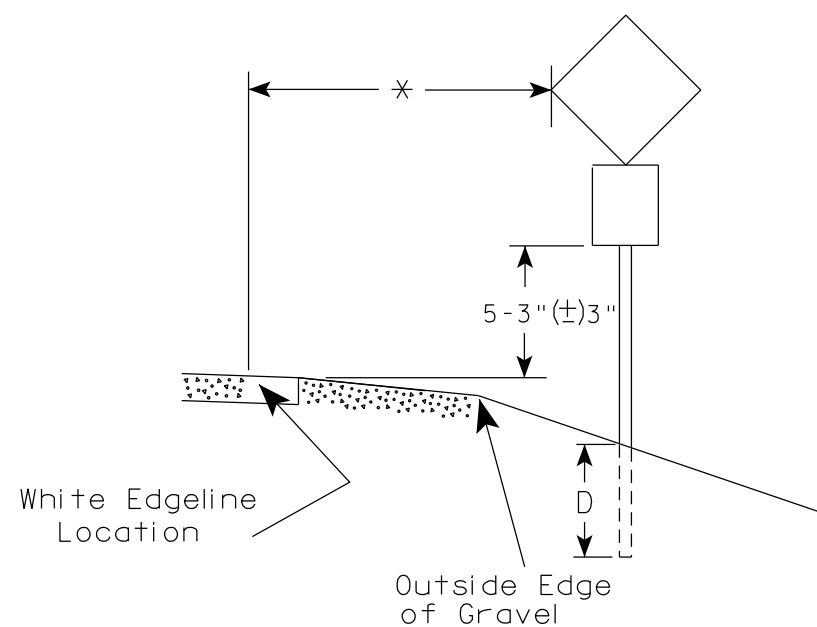
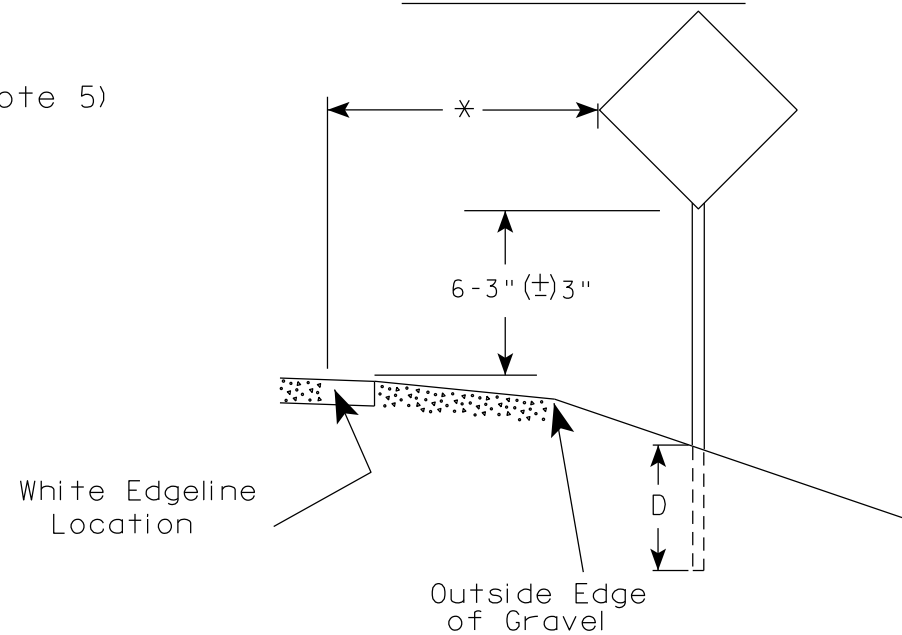


## URBAN AREA



\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

## RURAL AREA (See Note 2)



\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

| Area of Sign Installation<br>( Sq. Ft. ) | D<br>( Min ) |
|------------------------------------------|--------------|
| 20 or Less                               | 4'           |
| Greater than 20                          | 5'           |

## GENERAL NOTES

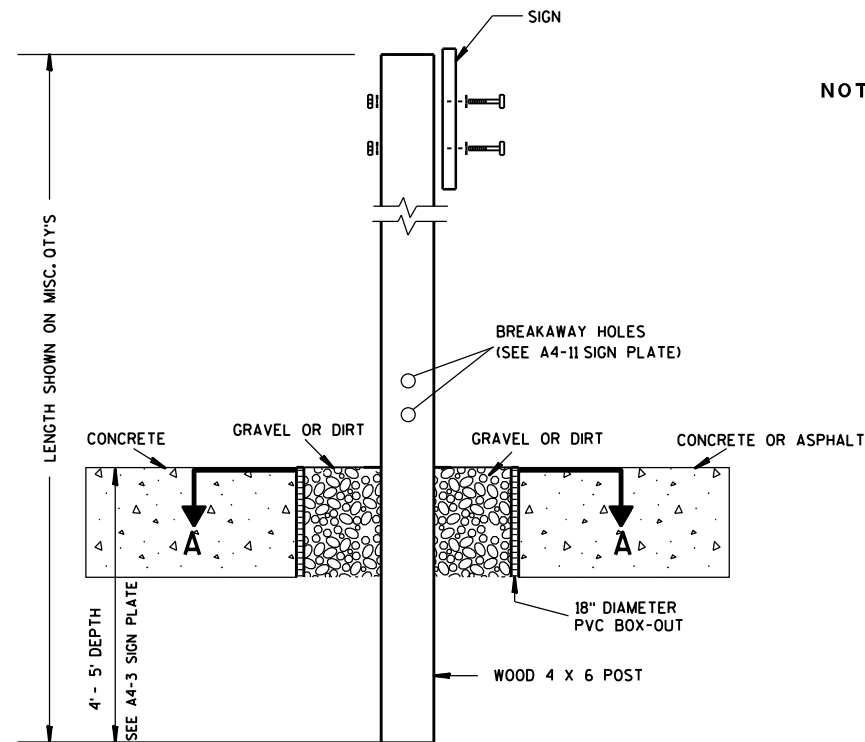
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
- For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

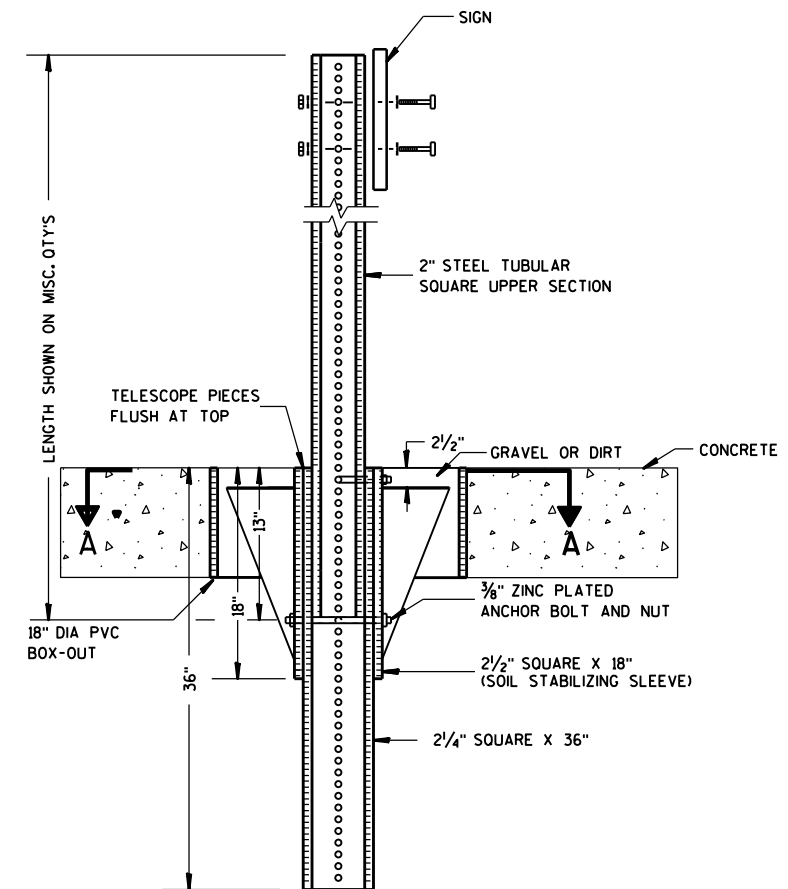
DATE 12/6/23 PLATE NO. A4-3.23



### ELEVATION VIEW

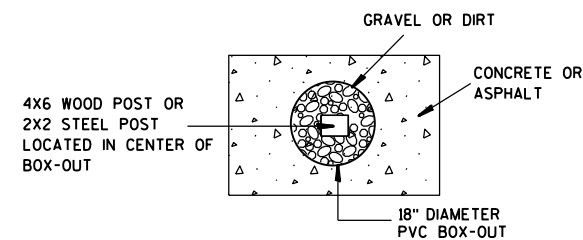
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



### ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



### PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST  
BOX-OUTS  
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLAT 308 A4-3B.1

PROJECT NO:

HWY:

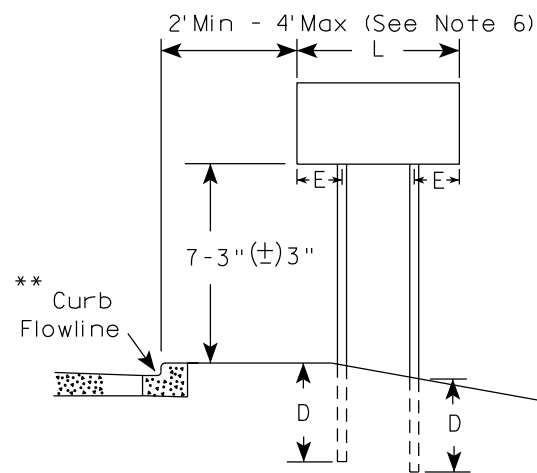
COUNTY:

SHEET NO:

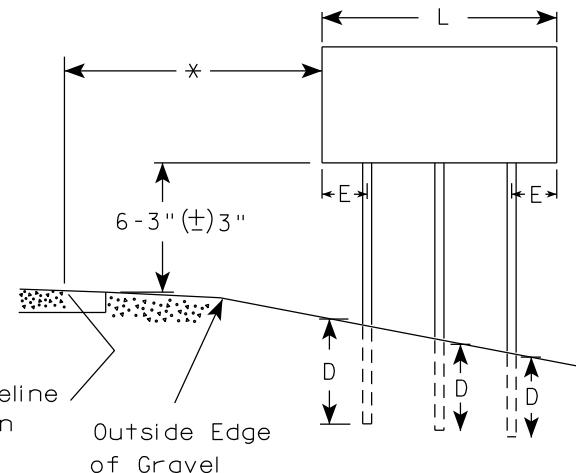
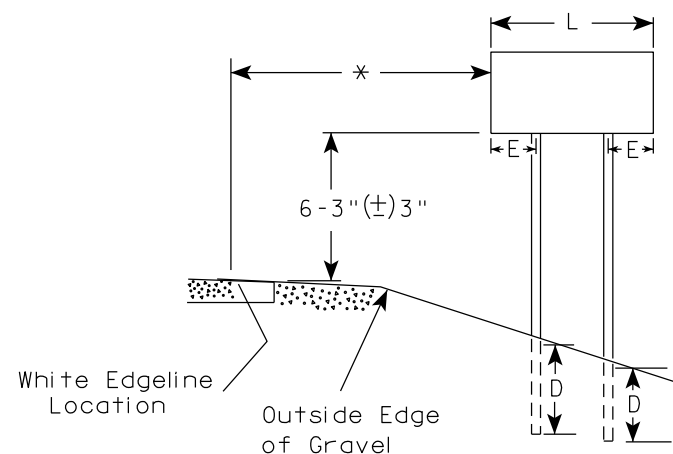
E



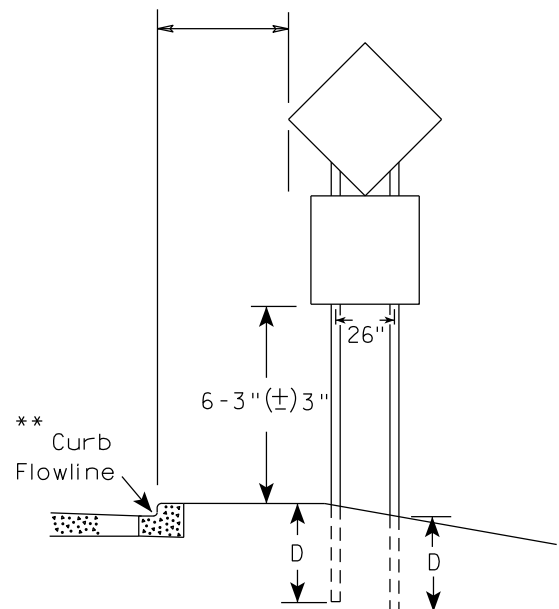
URBAN AREA



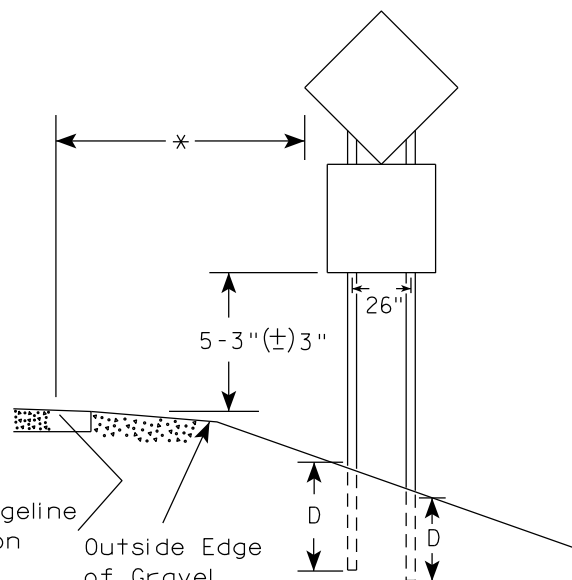
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\*\*\*

| SIGN SHAPE OTHER THAN DIAMOND<br>(TWO POSTS REQUIRED) |     |
|-------------------------------------------------------|-----|
| L                                                     | E   |
| Greater than 48"<br>Less than 60"                     | 12" |
| 60" to 108"                                           | L/5 |

| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 108"<br>to 144"                            | 12" |

POST EMBEDMENT DEPTH

| Area of Sign<br>Installation<br>( Sq.Ft. ) | D<br>( Min ) |
|--------------------------------------------|--------------|
| 20 or Less                                 | 4'           |
| Greater than 20                            | 5'           |

TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 12/6/23 PLATE NO. A4-4.16

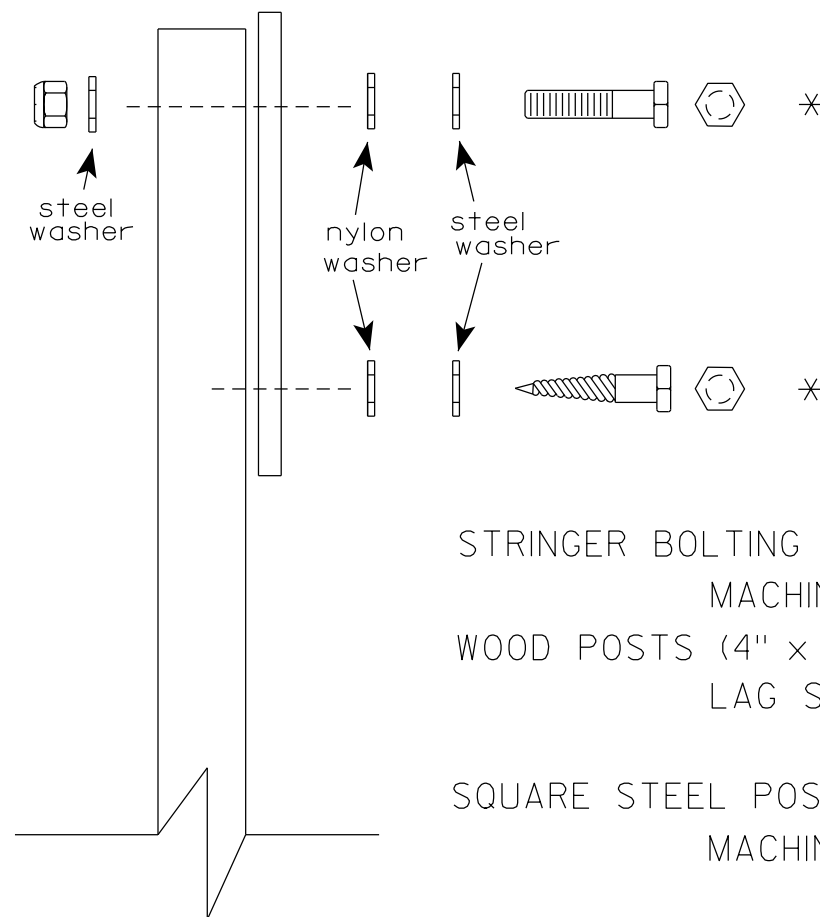
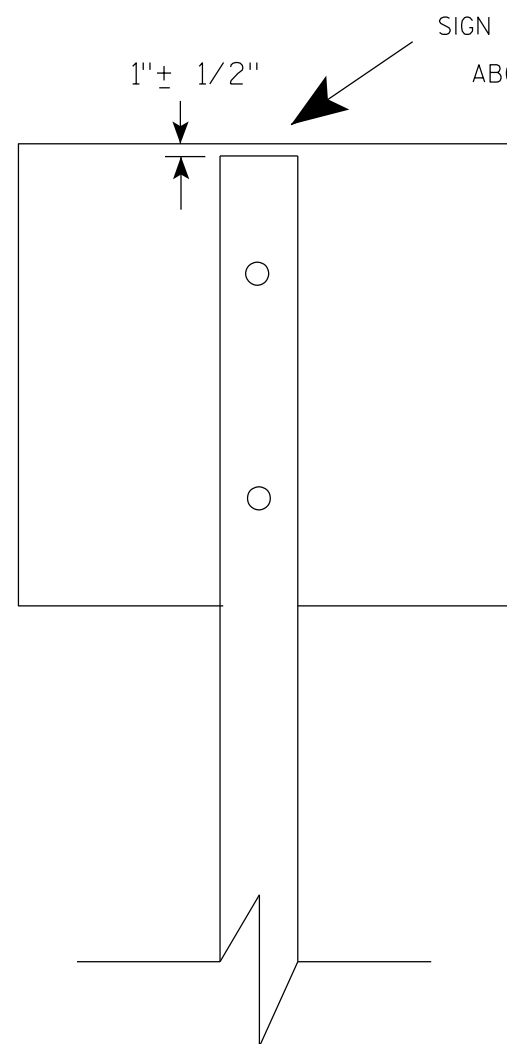
GENERAL NOTES

- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

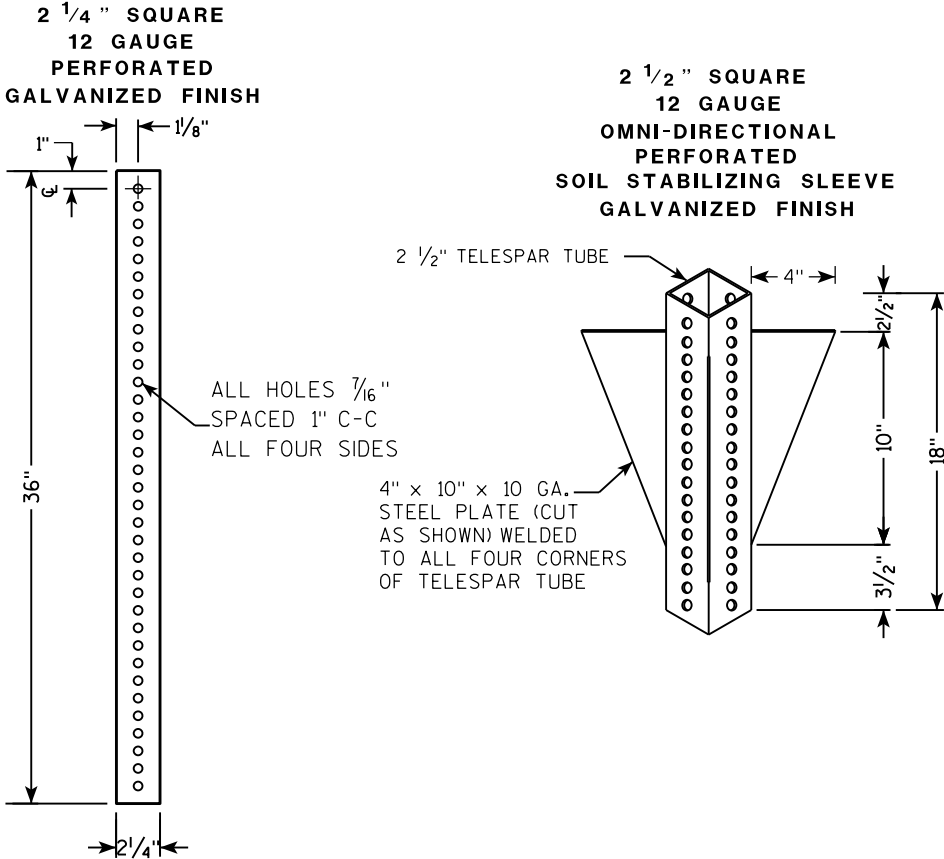
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
  - 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

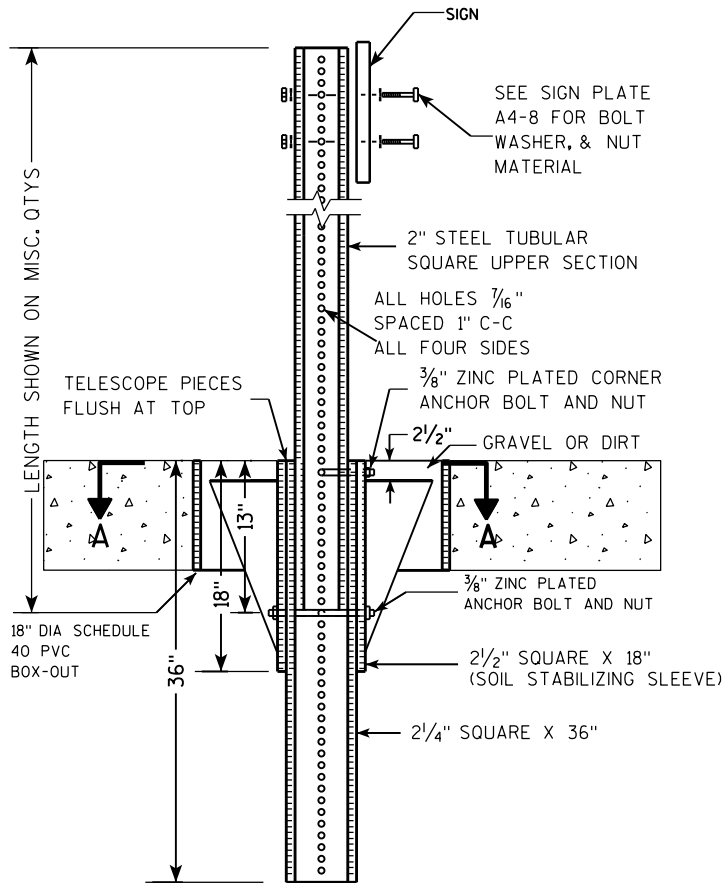
|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS  |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 4/1/2020                    | PLATE NO. A4-8.9                                      |



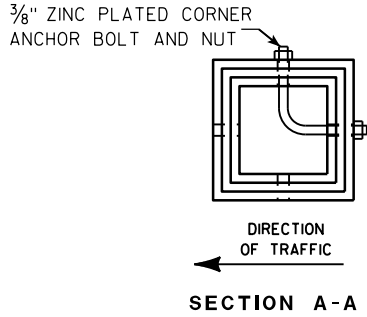
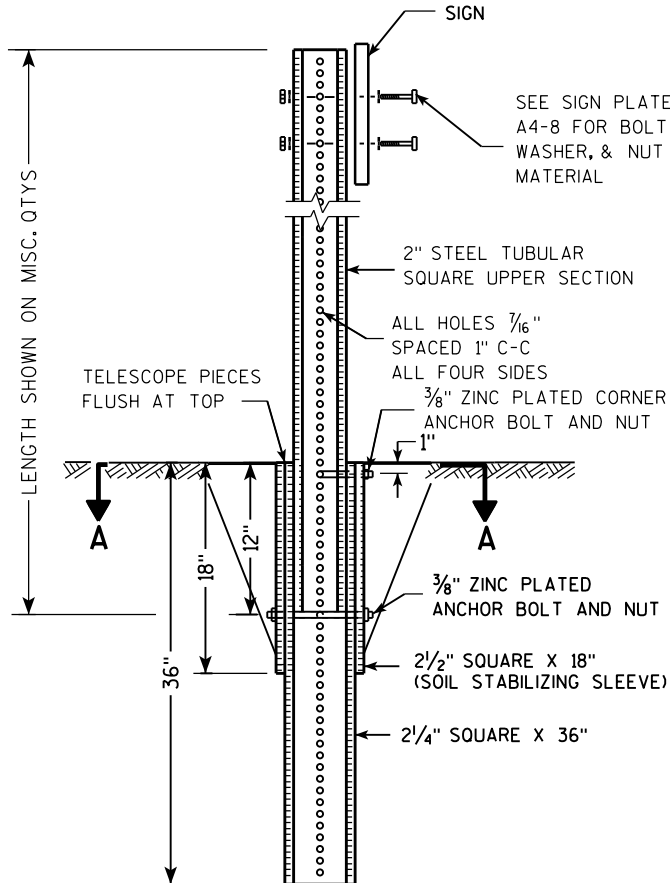
TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM



DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



| Area of Sign Installation (Sq. Ft.)      | Number of Required Posts |
|------------------------------------------|--------------------------|
| 9 or less                                | 1                        |
| Greater than 9 less than or equal to 18  | 2                        |
| Greater than 18 less than or equal to 27 | 3                        |

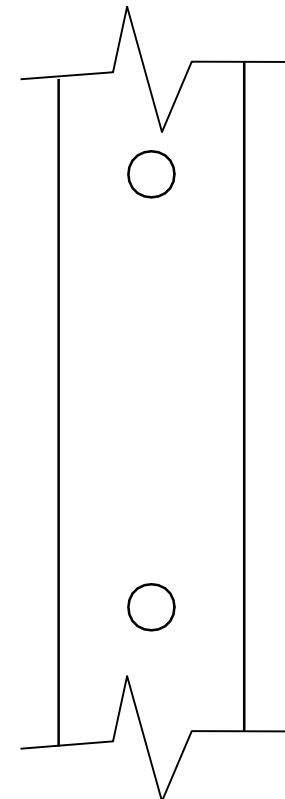
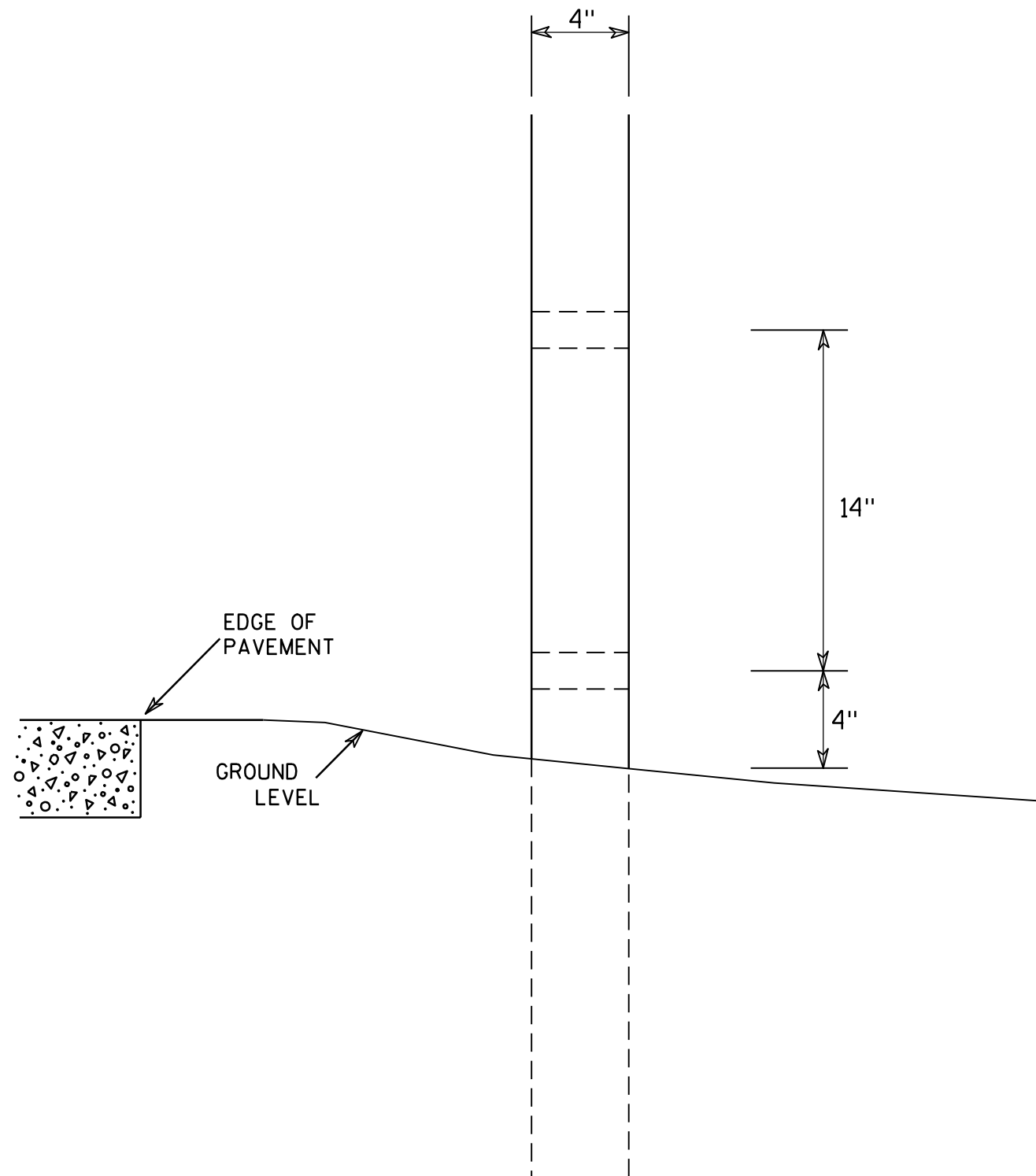
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLAT 311 14-9.9



SIDE VIEW

# GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

## 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

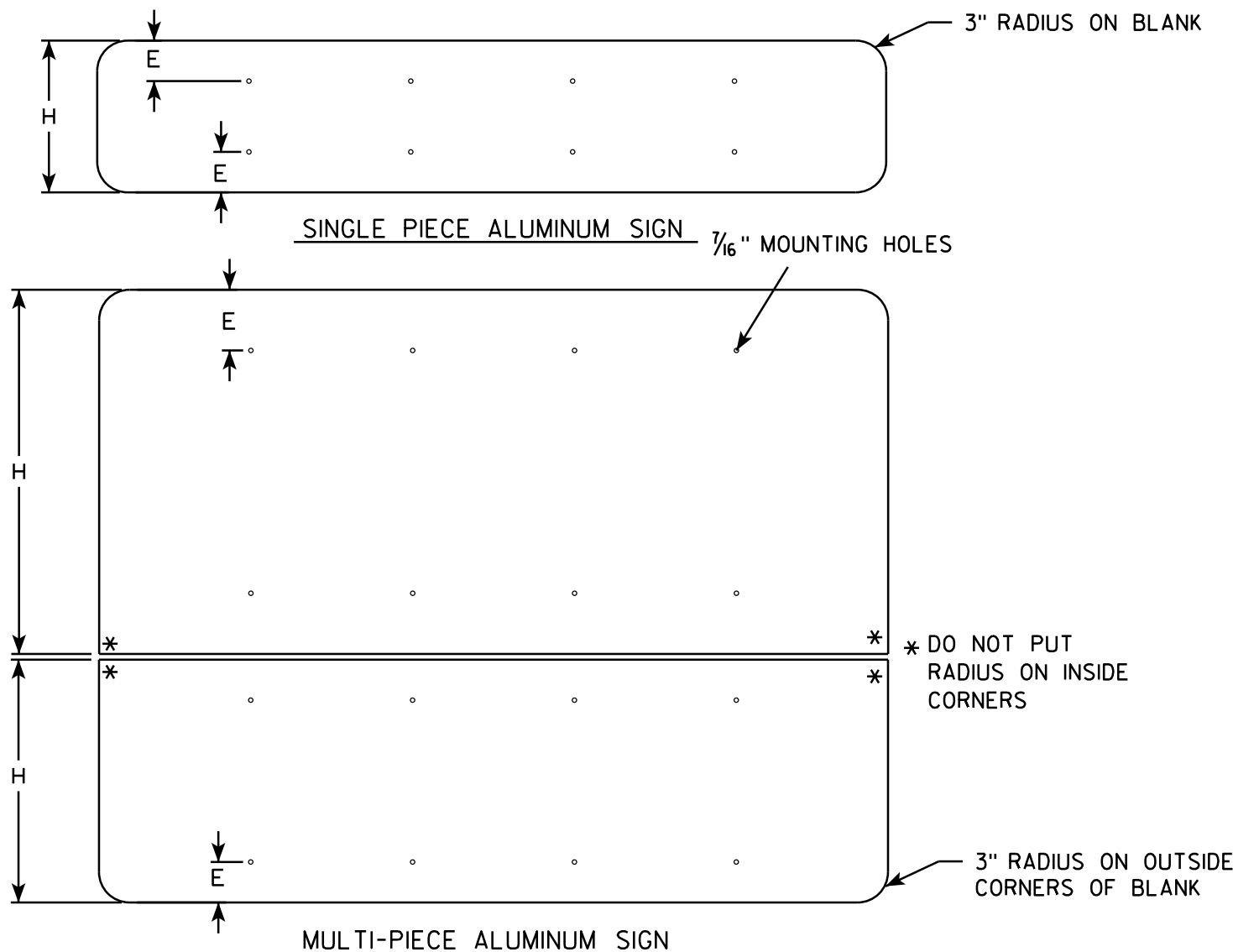
HWY:

COUNTY:

SHEET NO: 312

E

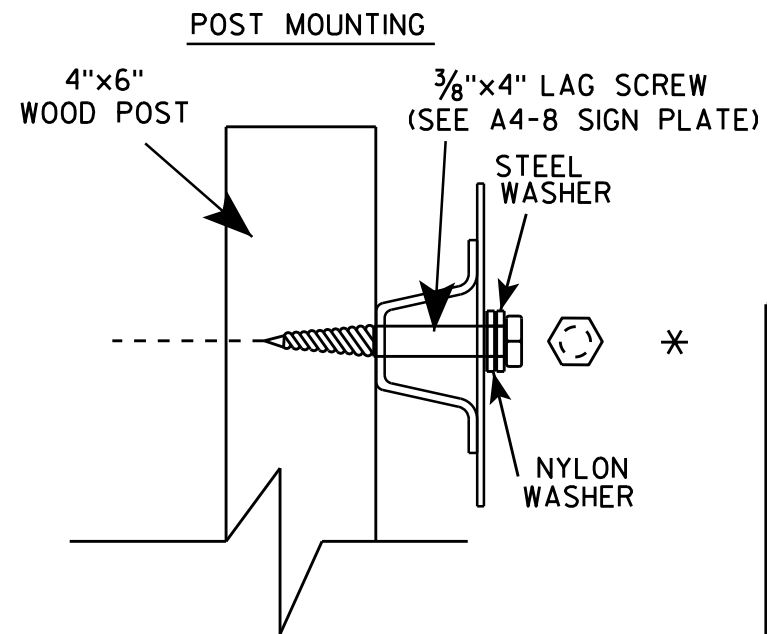
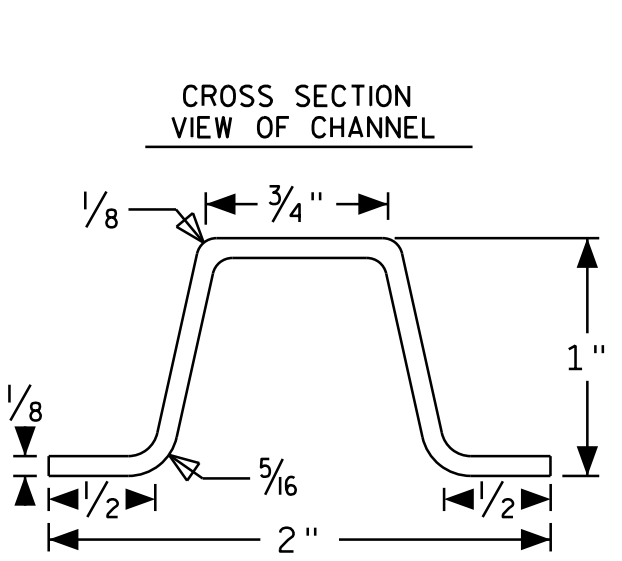
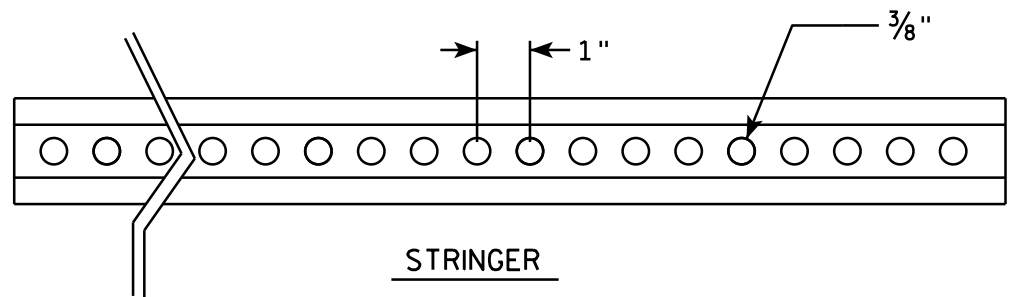




### GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

| SIGN WIDTH | STRINGER WIDTH | POSTS | HOLE SPACING | MOUNTING HOLES |         |         |                   |
|------------|----------------|-------|--------------|----------------|---------|---------|-------------------|
| 78"        | 72"            | 2     | 16"          | 15"            | 31"     | 47"     | 63"               |
| 84"        | 72"            | 2     | 17"          | 16 1/2"        | 33 1/2" | 50 1/2" | 67 1/2"           |
| 90"        | 72"            | 2     | 18"          | 18"            | 36"     | 54"     | 72"               |
| 96"        | 90"            | 2     | 19"          | 19 1/2"        | 38 1/2" | 57 1/2" | 76 1/2"           |
| 102"       | 90"            | 2     | 20"          | 21"            | 41"     | 61"     | 81"               |
| 108"       | 90"            | 2     | 21"          | 22 1/2"        | 43 1/2" | 64 1/2" | 85 1/2"           |
| 114"       | 108"           | 3     | 15"          | 12"            | 27"     | 42"     | 57" 72" 87" 102"  |
| 120"       | 108"           | 3     | 16"          | 12"            | 28"     | 44"     | 60" 76" 92" 108"  |
| 126"       | 108"           | 3     | 17"          | 12"            | 29"     | 46"     | 63" 80" 97" 114"  |
| 132"       | 126"           | 3     | 18"          | 12"            | 30"     | 48"     | 66" 84" 102" 120" |
| 138"       | 126"           | 3     | 19"          | 12"            | 31"     | 50"     | 69" 88" 107" 126" |
| 144"       | 126"           | 3     | 20"          | 12"            | 32"     | 52"     | 72" 92" 112" 132" |



### SIGN STRINGER MOUNTING REQUIREMENTS

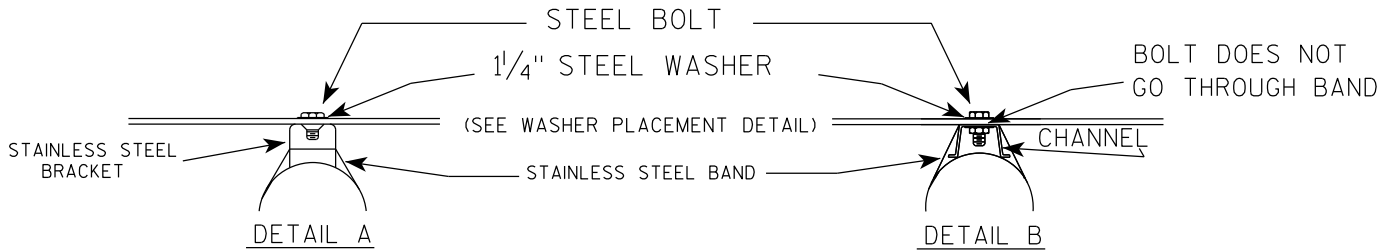
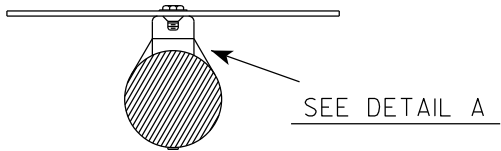
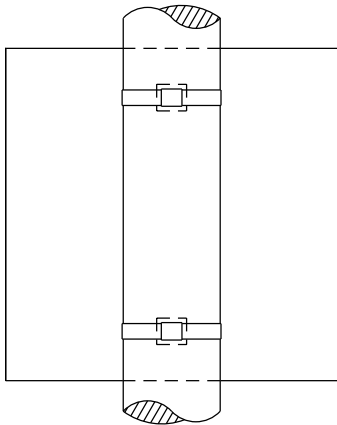
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

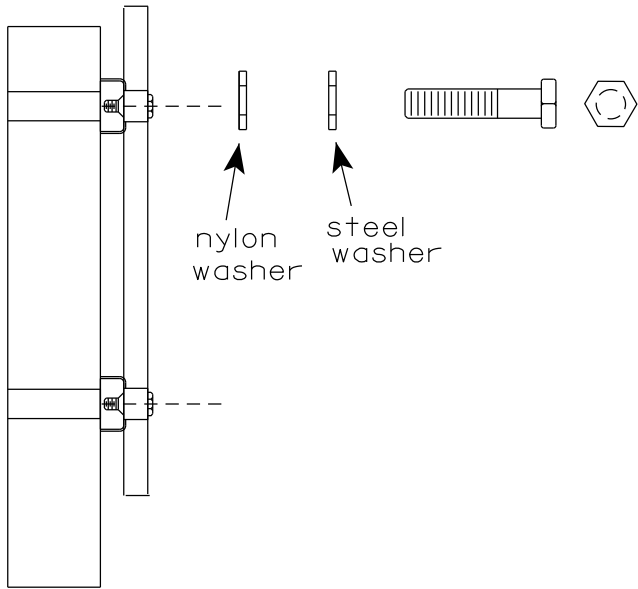
DATE 4/26/16 PLATE No A4-18.1  
313

BANDING

SINGLE SIGN



WASHER PLACEMENT

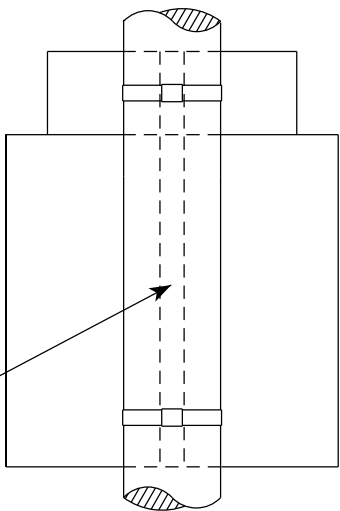


WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET

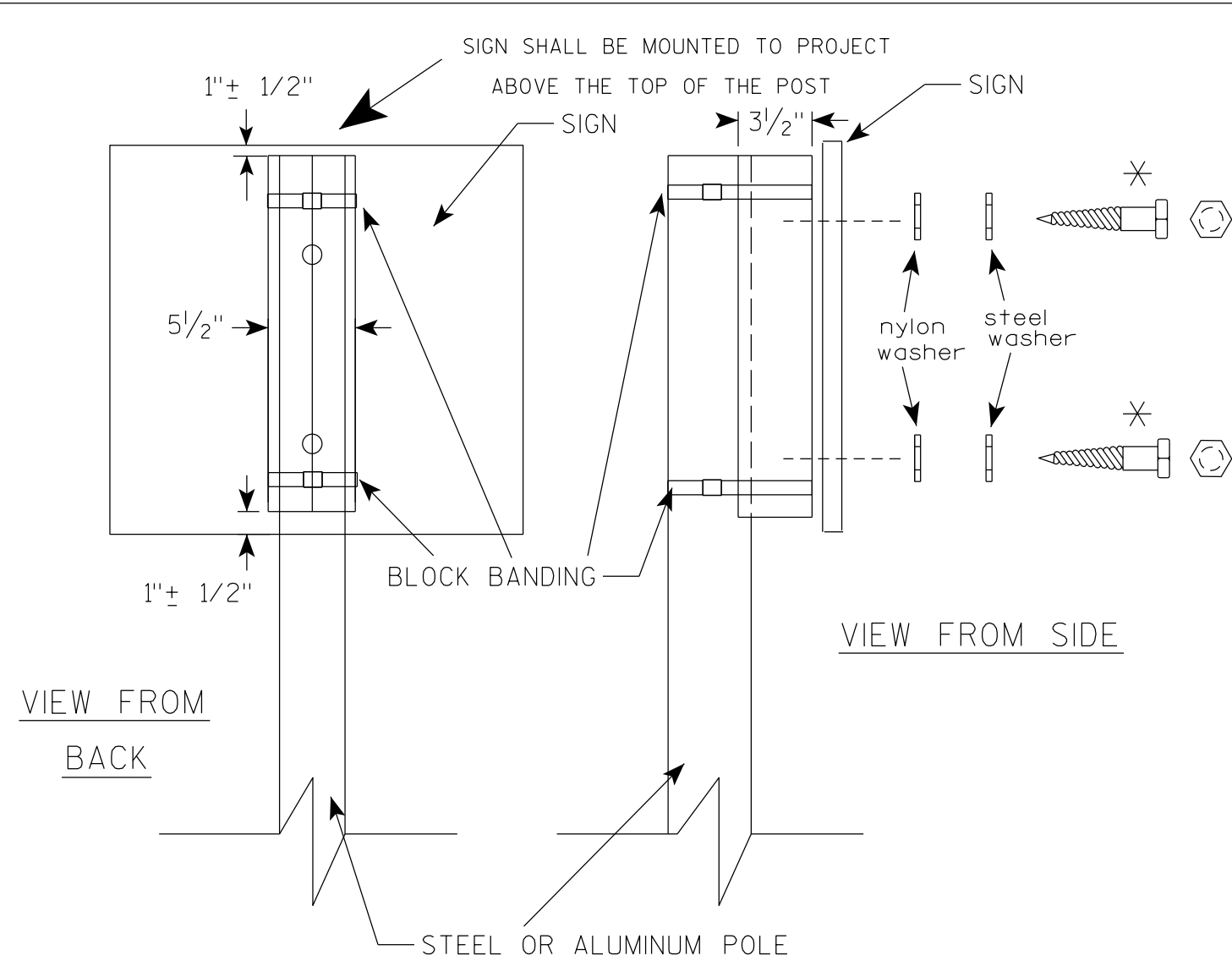
SEE DETAIL B

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

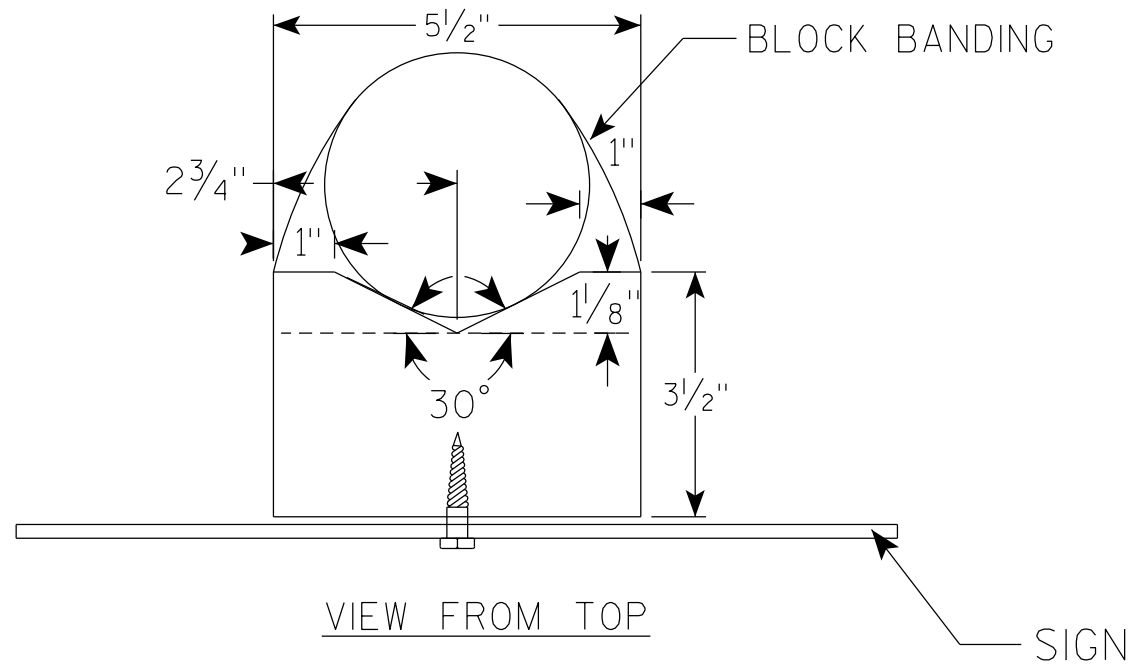
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 6/10/19 PLATE NO. A5-9.4





VIEW FROM  
BACK

VIEW FROM SIDE



## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL,  $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE  $\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE  $\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE  $\frac{3}{8}$ " X  $2\frac{1}{2}$ "

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

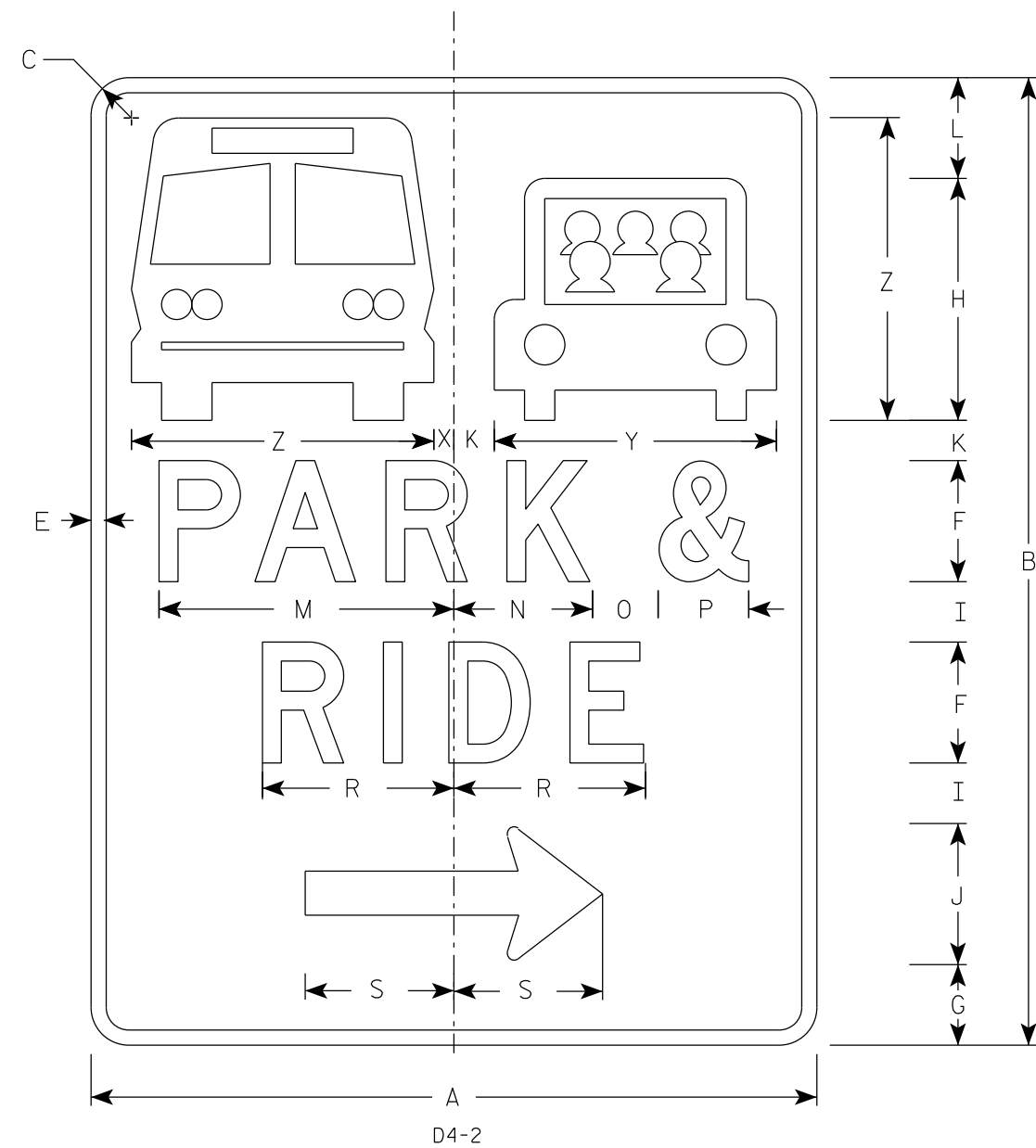
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 315

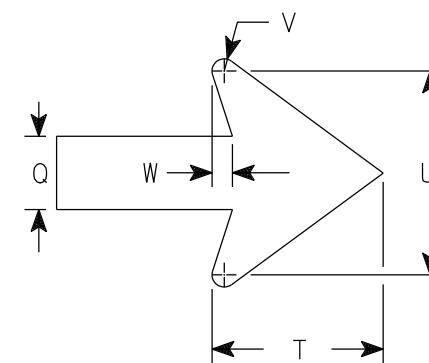
E



D4-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - D
4. The D4-2L is the same as a D4-2R except the arrow is reversed.



ARROW DETAIL

| SIZE | A  | B  | C     | D | E   | F | G     | H     | I     | J     | K     | L     | M      | N     | O     | P     | Q     | R     | S     | T     | U     | V   | W   | X   | Y      | Z      | Area<br>sq. ft. |
|------|----|----|-------|---|-----|---|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|--------|--------|-----------------|
| 1    | 24 | 30 | 1 1/2 |   | 1/2 | 4 | 1 5/8 | 7 1/2 | 1 1/2 | 4 5/8 | 1 3/8 | 3 7/8 | 9 3/4  | 4     | 2 3/4 | 3     | 1 1/2 | 6 3/8 | 4 7/8 | 3 1/2 | 4 1/8 | 1/4 | 3/8 | 5/8 | 9 3/8  | 10     | 5.0             |
| 2S   | 30 | 36 | 1 7/8 |   | 5/8 | 5 | 2     | 9     | 1 5/8 | 5 1/2 | 1 5/8 | 4 5/8 | 12 1/4 | 5 1/8 | 3 3/8 | 3 3/4 | 1 7/8 | 8     | 6 1/8 | 4 3/8 | 5 1/4 | 3/8 | 1/2 | 7/8 | 11 3/4 | 12 1/2 | 7.50            |
| 2M   | 30 | 36 | 1 7/8 |   | 5/8 | 5 | 2     | 9     | 1 5/8 | 5 1/2 | 1 5/8 | 4 5/8 | 12 1/4 | 5 1/8 | 3 3/8 | 3 3/4 | 1 7/8 | 8     | 6 1/8 | 4 3/8 | 5 1/4 | 3/8 | 1/2 | 7/8 | 11 3/4 | 12 1/2 | 7.50            |
| 3    | 36 | 48 | 1 7/8 |   | 3/4 | 6 | 4     | 12    | 3     | 7     | 2     | 5     | 14 5/8 | 6 7/8 | 3 1/4 | 4 1/2 | 1 7/8 | 9 1/2 | 7 1/2 | 5 1/4 | 6 1/4 | 3/8 | 5/8 | 1   | 14     | 15     | 12.0            |
| 4    |    |    |       |   |     |   |       |       |       |       |       |       |        |       |       |       |       |       |       |       |       |     |     |     |        |        |                 |
| 5    |    |    |       |   |     |   |       |       |       |       |       |       |        |       |       |       |       |       |       |       |       |     |     |     |        |        |                 |

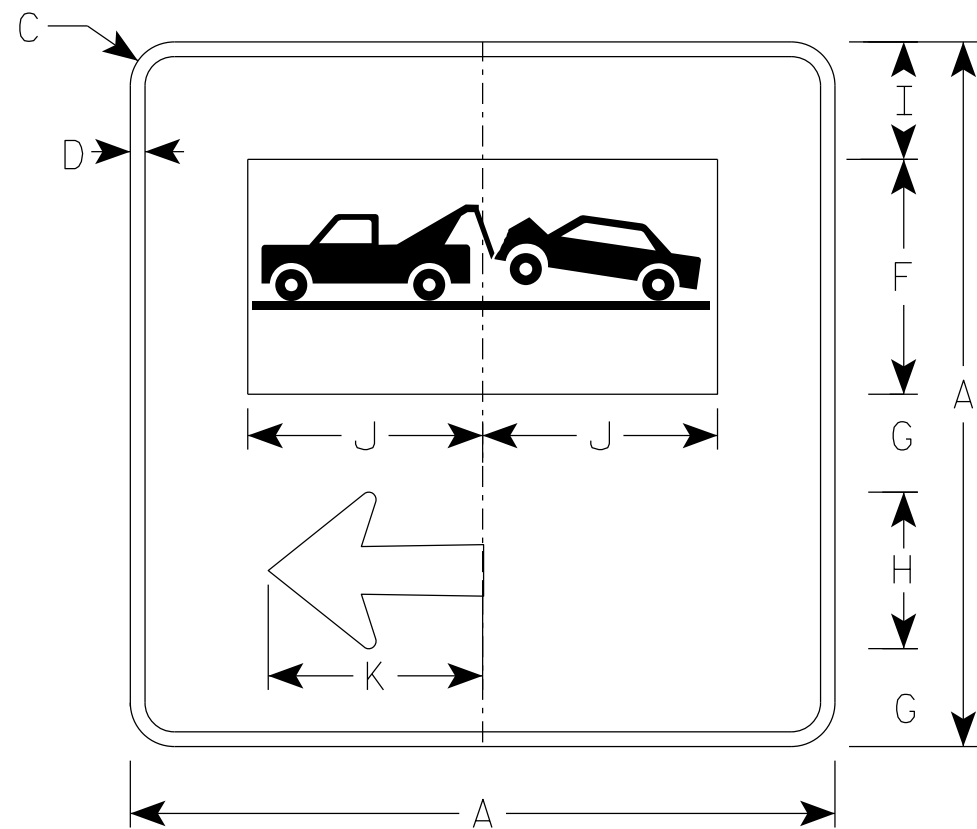
PROJECT NO:

SHEET NO: 316

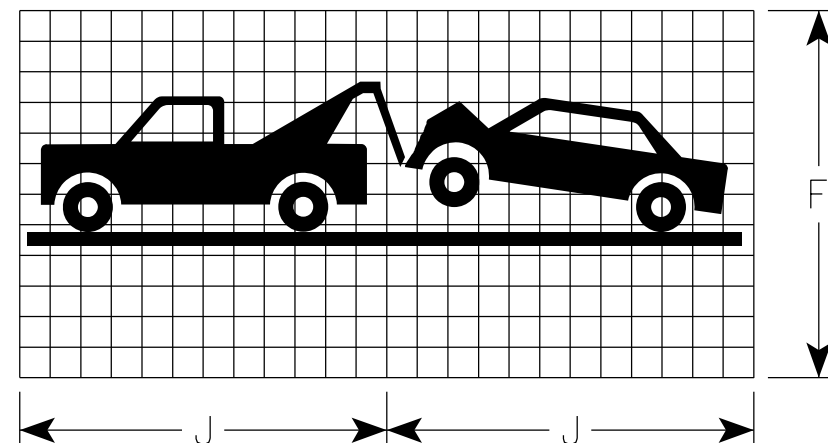
E



7



D4-55L



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - BLUE  
Message - WHITE
3. Message Series - C
4. D4-55R is same as D4-55L except arrow is reversed.
5. Arrow is from A1-2 Lower Case 4 1/2 Series D & E

| SIZE | A  | B | C     | D   | E | F  | G | H | I | J  | K  | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|---|----|---|---|---|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |     |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 36 |   | 2 1/4 | 3/4 |   | 12 | 5 | 8 | 6 | 12 | 11 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 3/4 |   | 12 | 5 | 8 | 6 | 12 | 11 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    |    |   |       |     |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |   |       |     |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |   |    |   |   |   |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

D4-55 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

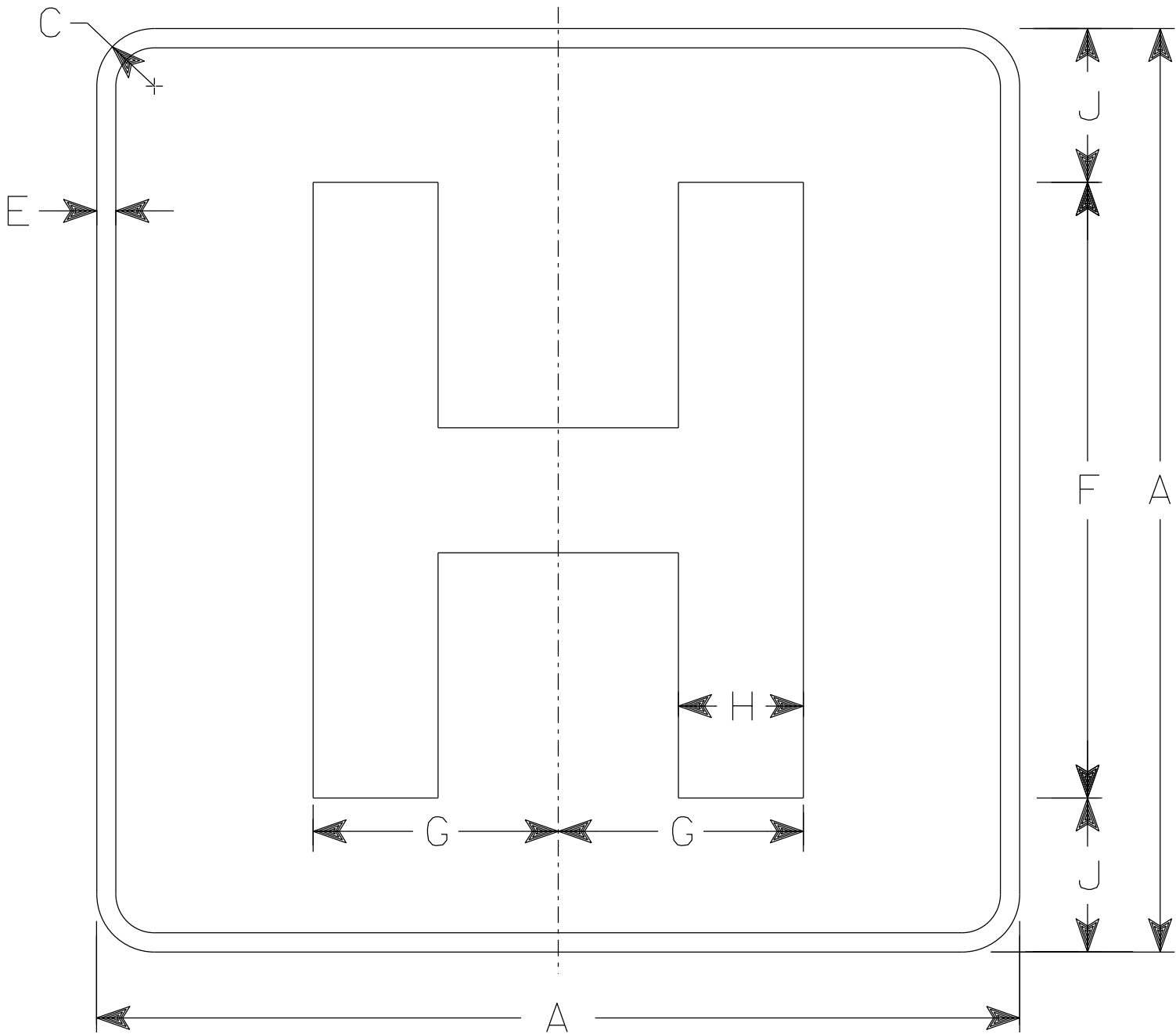
for State Traffic Engineer

DATE 1/25/2021 PLATE NO. D4-55.2

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - Blue
  - Message - White
- 3. Message Series - E Modified
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

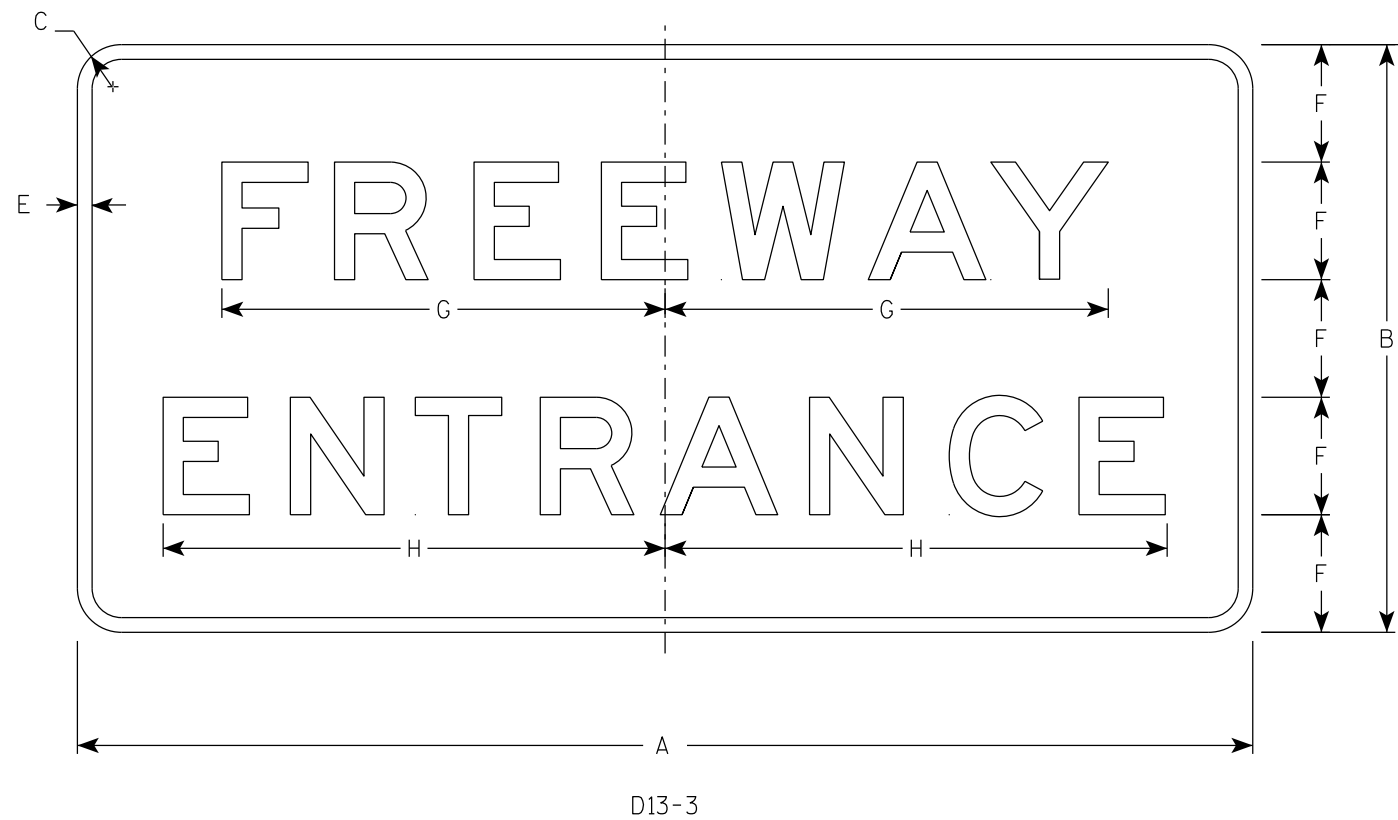


D9-2

| SIZE | A  | B | C     | D | E   | F  | G     | H     | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|-----|----|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 |   | 1 1/2 |   | 1/2 | 12 | 4 3/4 | 2 3/8 |   | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.25            |
| 2S   | 24 |   | 1 1/2 |   | 1/2 | 16 | 6 3/8 | 3 1/4 |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 |   | 1/2 | 16 | 6 3/8 | 3 1/4 |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 36 |   | 2 1/4 |   | 3/4 | 24 | 9 1/2 | 4 7/8 |   | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    |    |   |       |   |     |    |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |   |     |    |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |



7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - Green
  - Message - White
- 3. Message Series - E

7

| SIZE | A  | B  | C     | D | E   | F | G      | H      | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|---|-----|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |   |     |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 60 | 30 | 1 7⁄8 |   | 3⁄4 | 6 | 22 5⁄8 | 25 5⁄8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 2M   | 60 | 30 | 1 7⁄8 |   | 3⁄4 | 6 | 22 5⁄8 | 25 5⁄8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 3    |    |    |       |   |     |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |   |     |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |   |     |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

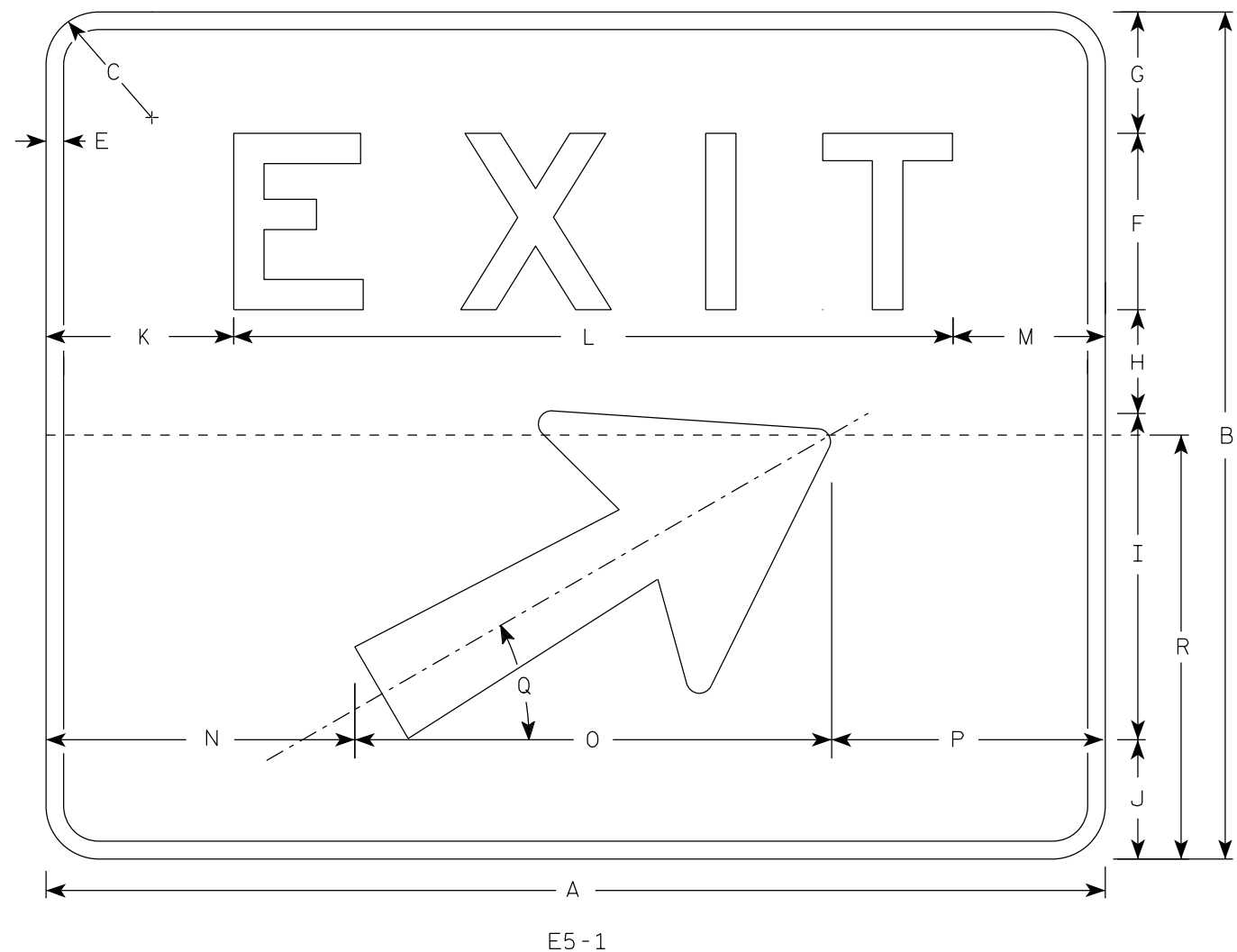
D13-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/27/2024 PLATE NO. D13-3.3

7



NOTES

- 1. Sign is Type II - Type H reflective
- 2. Color:  
Background - Green  
Message - White
- 3. Message Series - E
- 4. Sign shall be split into two seperate pieces as shown on the detail by the dashed line (-----) for sizes 4 & 5.
- 5. Arrow is Type "A" from sign plate A1-1.
- 6. As per the Standard Spec's, this sign shall not have a vertical joint.
- 7. Size 3 E5-1 shall only be used in a Work Zone application with a Temporary Sign Support

7

| SIZE | A  | B  | C | D | E | F  | G                             | H                             | I                              | J                             | K                              | L                              | M                              | N                              | O  | P                              | Q   | R  | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|---|---|---|----|-------------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----|--------------------------------|-----|----|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |   |   |   |    |                               |                               |                                |                               |                                |                                |                                |                                |    |                                |     |    |   |   |   |   |   |   |   |   |                 |
| 2S   |    |    |   |   |   |    |                               |                               |                                |                               |                                |                                |                                |                                |    |                                |     |    |   |   |   |   |   |   |   |   |                 |
| 2M   |    |    |   |   |   |    |                               |                               |                                |                               |                                |                                |                                |                                |    |                                |     |    |   |   |   |   |   |   |   |   |                 |
| 3    | 48 | 48 | 3 |   | 1 | 10 | 6 <sup>7</sup> / <sub>8</sub> | 5 <sup>7</sup> / <sub>8</sub> | 18 <sup>1</sup> / <sub>2</sub> | 6 <sup>3</sup> / <sub>4</sub> | 8 <sup>1</sup> / <sub>2</sub>  | 31 <sup>1</sup> / <sub>8</sub> | 8 <sup>3</sup> / <sub>8</sub>  | 11 <sup>1</sup> / <sub>2</sub> | 27 | 9 <sup>1</sup> / <sub>2</sub>  | 30° | 30 |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 60 | 48 | 3 |   | 1 | 10 | 6 <sup>7</sup> / <sub>8</sub> | 5 <sup>7</sup> / <sub>8</sub> | 18 <sup>1</sup> / <sub>2</sub> | 6 <sup>3</sup> / <sub>4</sub> | 10 <sup>5</sup> / <sub>8</sub> | 40 <sup>3</sup> / <sub>4</sub> | 8 <sup>5</sup> / <sub>8</sub>  | 17 <sup>1</sup> / <sub>2</sub> | 27 | 15 <sup>1</sup> / <sub>2</sub> | 30° | 30 |   |   |   |   |   |   |   |   | 20.0            |
| 5    | 72 | 60 | 3 |   | 1 | 12 | 9 <sup>3</sup> / <sub>4</sub> | 10                            | 18 <sup>1</sup> / <sub>2</sub> | 9 <sup>3</sup> / <sub>4</sub> | 13 <sup>1</sup> / <sub>4</sub> | 48 <sup>1</sup> / <sub>2</sub> | 10 <sup>1</sup> / <sub>4</sub> | 23 <sup>1</sup> / <sub>2</sub> | 27 | 21 <sup>1</sup> / <sub>2</sub> | 30° | 30 |   |   |   |   |   |   |   |   | 30.0            |

STANDARD SIGN  
E5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/26/2023 PLATE NO. E5-1.12



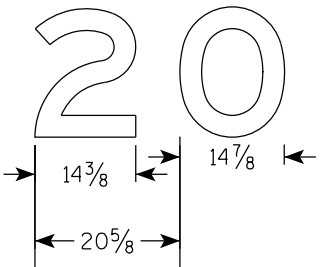
NOTES

- Signs are Type II - Type H reflective
- Color:  
Background - Green  
Message - White
- Message Series - E
- Sign shall be split into two separate pieces as shown on each detail by the dashed line (-----).
- Arrow is Type "A" from sign plate A1-1.
- Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
- When two letters are hyphenated, the distance between them should be equal to two letter heights and the hyphen is spaced optically between them.
- As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

| NUMBERS | WIDTH  | 0      | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | A      | B      | C      |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0       | 14 7⁄8 | 21 5⁄8 | 21 5⁄8 | 21 1⁄4 | 20 3⁄8 | 21 1⁄4 | 21 1⁄4 | 21 5⁄8 | 19 7⁄8 | 22 1⁄8 | 21 5⁄8 | 19 7⁄8 | 22 1⁄8 | 22 1⁄8 |
| 1       | 5 7⁄8  | 14     | 14     | 14     | 13 1⁄8 | 12 1⁄8 | 14     | 14     | 12 1⁄4 | 14     | 14     | 9 7⁄8  | 14     | 14     |
| 2       | 14 3⁄8 | 20 5⁄8 | 21 1⁄8 | 20 5⁄8 | 19 3⁄4 | 20 1⁄4 | 20 5⁄8 | 20 5⁄8 | 18 7⁄8 | 21 1⁄8 | 20 5⁄8 | 20 1⁄4 | 21 1⁄8 | 21 1⁄8 |
| 3       | 14 3⁄8 | 20 3⁄4 | 21 1⁄8 | 20 3⁄4 | 20 1⁄4 | 19 3⁄4 | 20 3⁄4 | 20 3⁄4 | 19 3⁄8 | 21 1⁄8 | 20 3⁄4 | 20 1⁄4 | 21 1⁄8 | 21 1⁄8 |
| 4       | 16 5⁄8 | 22 7⁄8 | 22     | 22 1⁄2 | 21 5⁄8 | 21 5⁄8 | 22 7⁄8 | 22 7⁄8 | 20 5⁄8 | 23 3⁄8 | 22 7⁄8 | 22 1⁄2 | 25 1⁄2 | 23 3⁄8 |
| 5       | 14 1⁄4 | 20 5⁄8 | 20 5⁄8 | 20 1⁄8 | 18 3⁄4 | 18 3⁄4 | 20 5⁄8 | 20 5⁄8 | 18 3⁄8 | 20 5⁄8 | 20 5⁄8 | 19 1⁄4 | 20 5⁄8 | 20 5⁄8 |
| 6       | 14 1⁄2 | 21 1⁄4 | 20 3⁄4 | 20 3⁄4 | 19 7⁄8 | 19 1⁄2 | 20 3⁄8 | 20 3⁄4 | 19     | 20 3⁄4 | 20 3⁄8 | 18     | 20 3⁄4 | 20 3⁄4 |
| 7       | 14 3⁄8 | 19 3⁄4 | 19 3⁄4 | 20 1⁄4 | 19 3⁄4 | 17     | 19 3⁄4 | 20 5⁄8 | 18 7⁄8 | 20 5⁄8 | 19 3⁄4 | 20 1⁄4 | 20 5⁄8 | 20 5⁄8 |
| 8       | 14 1⁄4 | 21 1⁄2 | 21 1⁄2 | 20 5⁄8 | 19 1⁄4 | 19 3⁄4 | 20 5⁄8 | 21 1⁄2 | 19 5⁄8 | 21 1⁄2 | 20 5⁄8 | 19 1⁄4 | 21 1⁄2 | 21 1⁄2 |
| 9       | 14 1⁄2 | 21 1⁄4 | 21 1⁄4 | 20 7⁄8 | 20     | 20 7⁄8 | 20 7⁄8 | 21 1⁄4 | 19 1⁄2 | 21 3⁄4 | 21 1⁄4 | 18     | 21 3⁄4 | 21 3⁄4 |
| A       | 18     | 19 3⁄4 | 19 3⁄4 | 20 1⁄4 | 19 3⁄4 | 17     | 19 3⁄4 | 20 5⁄8 | 18 7⁄8 | 20 5⁄8 | 19 3⁄4 | 21 5⁄8 | 23 7⁄8 | 23     |
| B       | 14 1⁄4 | 21 1⁄2 | 21 1⁄2 | 20 5⁄8 | 19 1⁄4 | 19 3⁄4 | 20 5⁄8 | 21 1⁄2 | 19 5⁄8 | 21 1⁄2 | 20 5⁄8 | 19 1⁄2 | 22 3⁄8 | 21 1⁄2 |
| C       | 14 1⁄4 | 21 1⁄4 | 21 1⁄4 | 20 7⁄8 | 20     | 20 7⁄8 | 20 7⁄8 | 21 1⁄4 | 19 1⁄2 | 21 3⁄4 | 21 1⁄4 | 18 3⁄8 | 21     | 19 3⁄4 |

EXAMPLE FOR USING  
SPACING CHART



| SIZE | A  | B  | C | D | E | F  | G  | H | I  | J  | K     | L  | M      | N  | O      | P      | Q | R      | S      | T      | U      | V  | W   | X  | Y     | Z  |
|------|----|----|---|---|---|----|----|---|----|----|-------|----|--------|----|--------|--------|---|--------|--------|--------|--------|----|-----|----|-------|----|
| 2    |    |    |   |   |   |    |    |   |    |    |       |    |        |    |        |        |   |        |        |        |        |    |     |    |       |    |
| 3    |    |    |   |   |   |    |    |   |    |    |       |    |        |    |        |        |   |        |        |        |        |    |     |    |       |    |
| 4    |    |    |   |   |   |    |    |   |    |    |       |    |        |    |        |        |   |        |        |        |        |    |     |    |       |    |
| 5    | 78 | 60 | 6 |   | 1 | 12 | 18 | 8 | 10 | 11 | 8 7⁄8 | 23 | 25 1⁄4 | 15 | 48 1⁄2 | 14 1⁄2 | 8 | 22 1⁄4 | 34 1⁄4 | 31 1⁄4 | 25 1⁄4 | 96 | 114 | 96 | 7 1⁄2 | 84 |

| 2<br>Digit<br>Bid<br>Area | 3<br>Digit<br>Bid<br>Area | 4<br>Digit<br>Bid<br>Area | 5<br>Digit<br>Bid<br>Area |
|---------------------------|---------------------------|---------------------------|---------------------------|
| Sq. Ft.                   |                           |                           |                           |
| 32.5                      | 40.0                      | 47.5                      | 56.0                      |

STANDARD SIGN  
E5-1B

WISCONSIN DEPT OF TRANSPORTATION

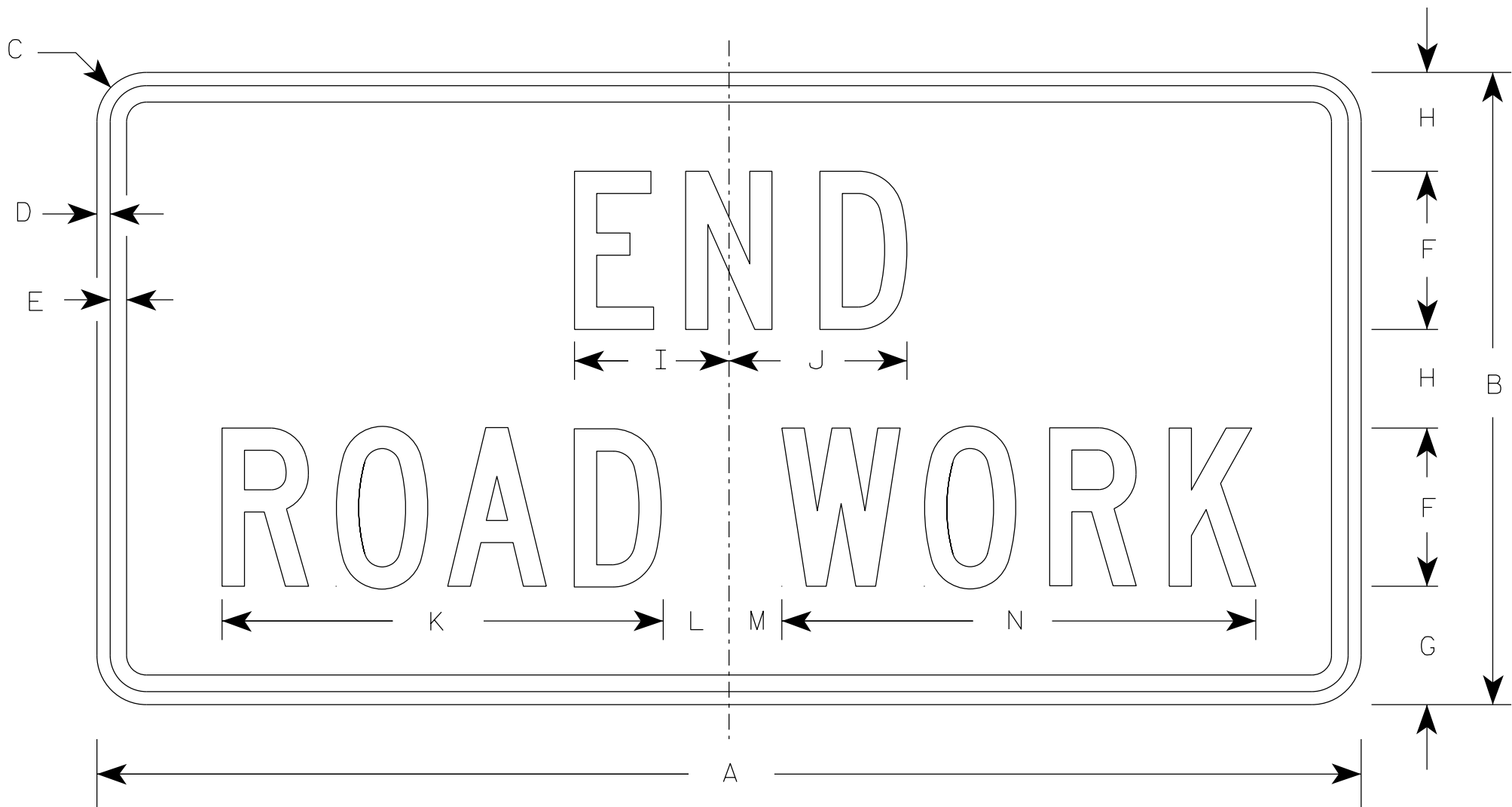
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/9/2022 PLATE NO. E5-1B.14

PROJECT NO: HWY: COUNTY: SHEET NO: 321 E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J     | K      | L     | M     | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-------|--------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2     | 1     | 12 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 2    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 4    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |

STANDARD SIGN

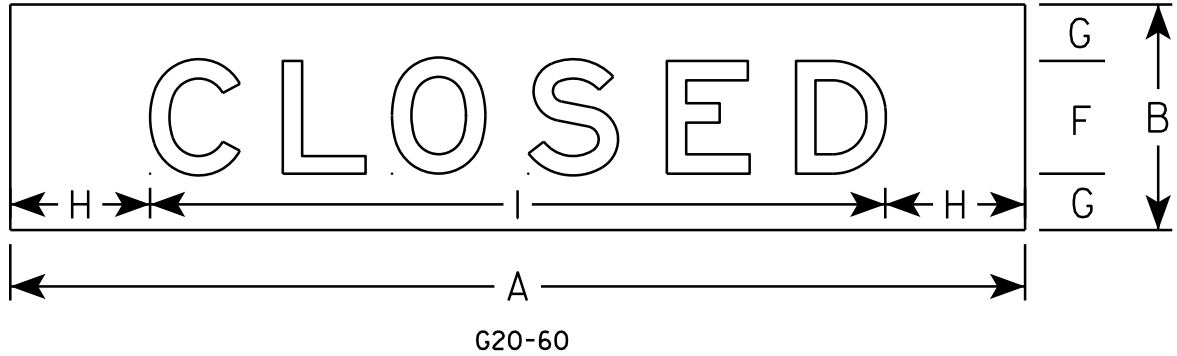
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10





NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - E
- 4. Material shall be .040 aluminum

7

7

| SIZE | A   | B  | C | D | E | F  | G | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|-----|----|---|---|---|----|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |     |    |   |   |   |    |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    |     |    |   |   |   |    |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 3    |     |    |   |   |   |    |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 108 | 24 |   |   |   | 12 | 6 | 14 7/8 | 78 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 18.0            |
| 5    |     |    |   |   |   |    |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

G20-60

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/13/15

PLATE NO. 323

G20-60.1

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - E



G20-61

| SIZE | A   | B  | C | D | E | F  | G | H  | I      | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|-----|----|---|---|---|----|---|----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 3    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 120 | 30 | 6 |   | 2 | 12 | 9 | 21 | 78 1/4 | 20 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 25.0            |
| 5    |     |    |   |   |   |    |   |    |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

G20-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 5/07/15

PLATE NO. 324

G20-61.1

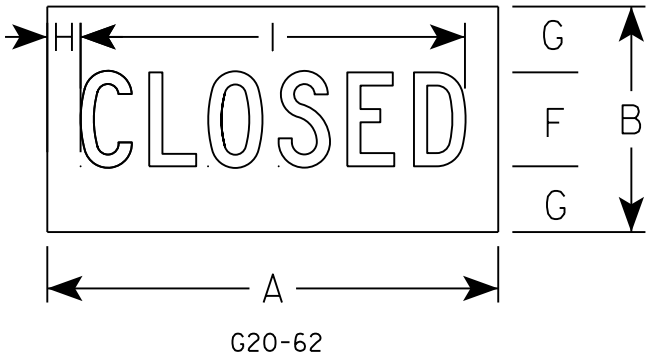
SHEET NO:

E



NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Material shall be .040 aluminum



| SIZE | A  | B  | C | D | E | F  | G | H     | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|---|---|---|----|---|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |   |   |   |    |   |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    |    |    |   |   |   |    |   |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 3    |    |    |   |   |   |    |   |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 48 | 24 |   |   |   | 10 | 7 | 3 1/2 | 40 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    |    |    |   |   |   |    |   |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

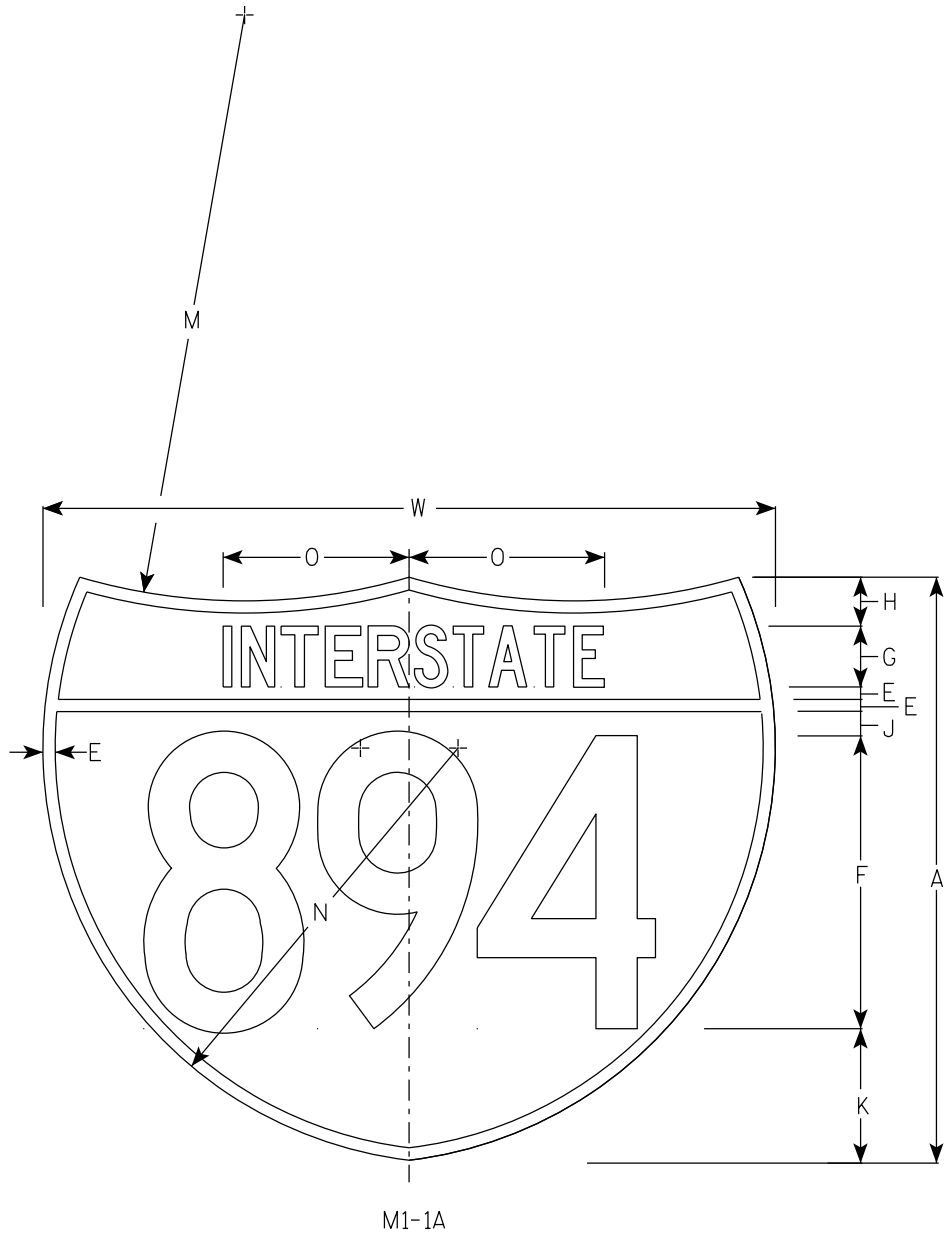
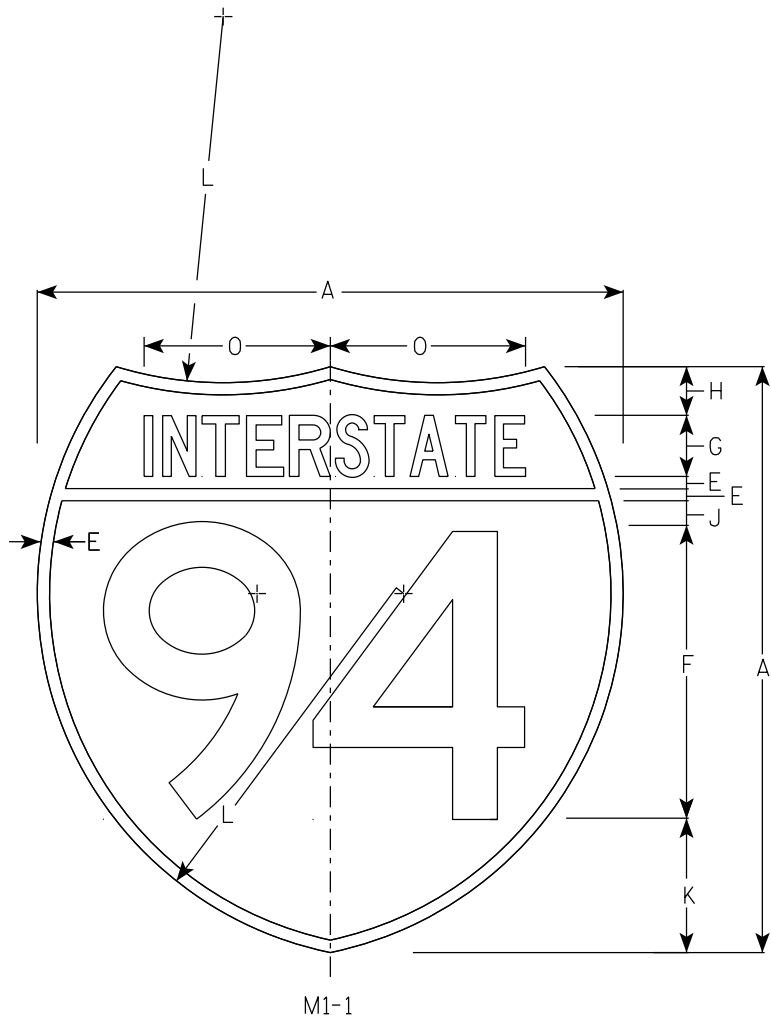
STANDARD SIGN  
G20-62

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/24/15 PLATE NO. G20-62.1  
325

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - Top Red - Bottom Blue  
Message - White
3. Message Series - See note 5
4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
5. M1-1 - Numerals - D  
Interstate - C  
M1-1A - All copy - C

7

|      |    |   |   |   |     |    |       |   |   |       |       |        |    |        |        |   |   |   |   |   |   |   |    |   |   | M1-1            | M1-1A           |
|------|----|---|---|---|-----|----|-------|---|---|-------|-------|--------|----|--------|--------|---|---|---|---|---|---|---|----|---|---|-----------------|-----------------|
| SIZE | A  | B | C | D | E   | F  | G     | H | I | J     | K     | L      | M  | N      | O      | P | Q | R | S | T | U | V | W  | X | Y | Area<br>sq. ft. | Area<br>sq. ft. |
| 1    |    |   |   |   |     |    |       |   |   |       |       |        |    |        |        |   |   |   |   |   |   |   |    |   |   |                 |                 |
| 2    | 24 |   |   |   | 1/2 | 12 | 2 1/2 | 2 |   | 1     | 5 1/2 | 15     | 24 | 17     | 7 7/8  |   |   |   |   |   |   |   | 30 |   |   | 3.13            | 3.91            |
| 2M   | 24 |   |   |   | 1/2 | 12 | 2 1/2 | 2 |   | 1     | 5 1/2 | 15     | 24 | 17     | 7 7/8  |   |   |   |   |   |   |   | 30 |   |   | 3.13            | 3.91            |
| 3    | 36 |   |   |   | 3/4 | 18 | 3 3/4 | 3 |   | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 |   |   |   |   |   |   |   | 45 |   |   | 7.03            | 8.79            |
| 4    | 36 |   |   |   | 3/4 | 18 | 3 3/4 | 3 |   | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 |   |   |   |   |   |   |   | 45 |   |   | 7.03            | 8.79            |
| 5    | 36 |   |   |   | 3/4 | 18 | 3 3/4 | 3 |   | 1 1/2 | 8 1/4 | 22 1/2 | 36 | 25 1/2 | 11 3/4 |   |   |   |   |   |   |   | 45 |   |   | 7.03            | 8.79            |

INTERSTATE ROUTE MARKER  
M1-1 FOR ASSEMBLIES

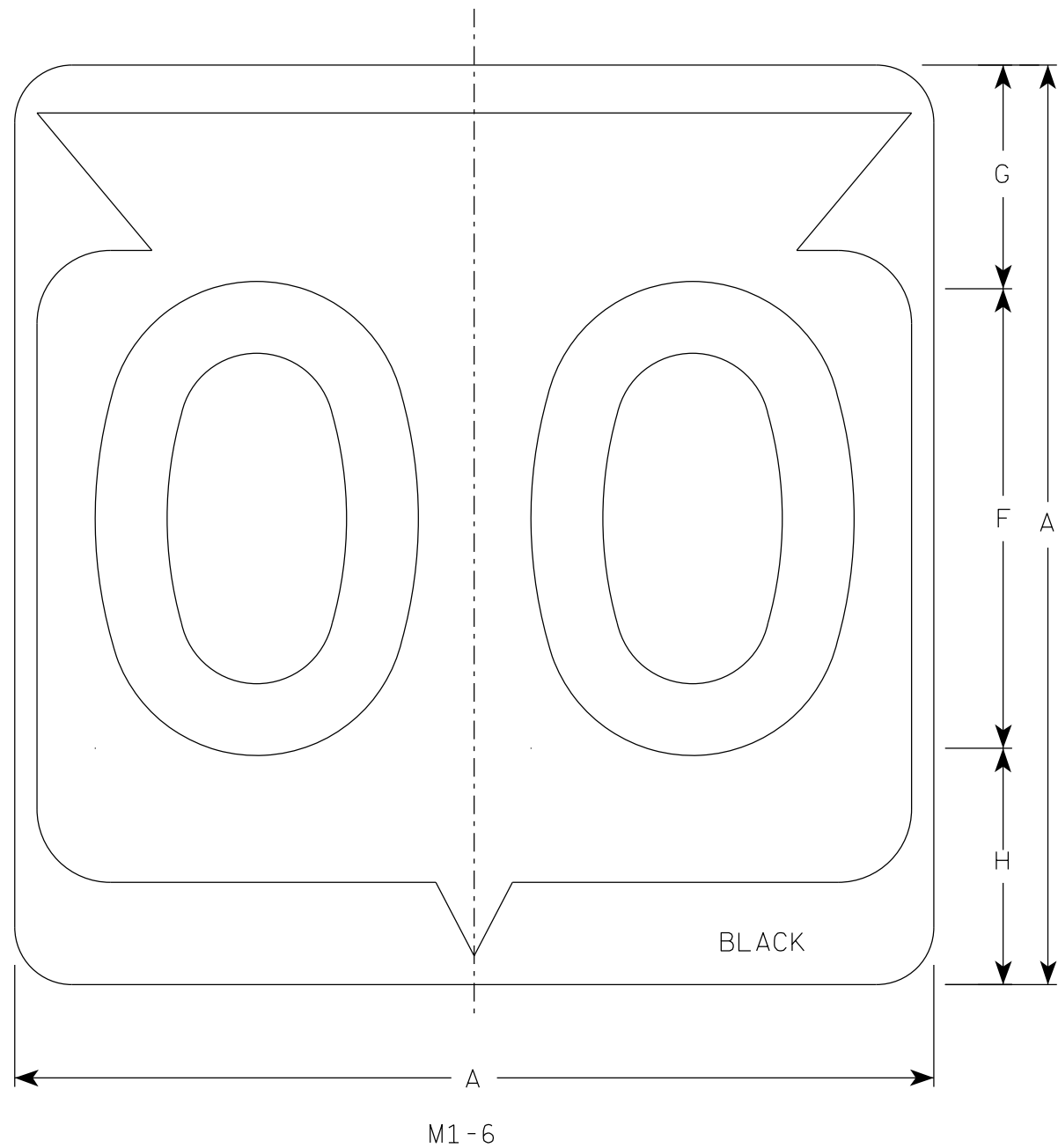
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/7/2022 PLATE NO. M1-1.9

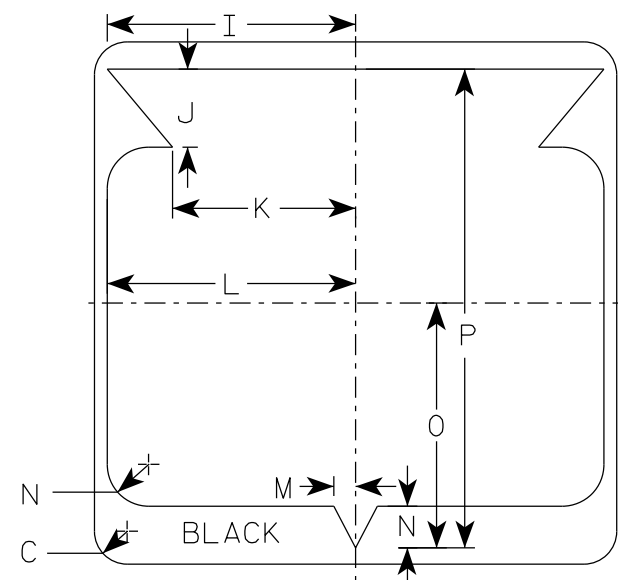


7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D except 3 number signs Series C



| SIZE | A  | B | C     | D | E | F  | G     | H     | I      | J     | K      | L      | M     | N     | O      | P      | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|----|-------|-------|--------|-------|--------|--------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |   |   |    |       |       |        |       |        |        |       |       |        |        |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |

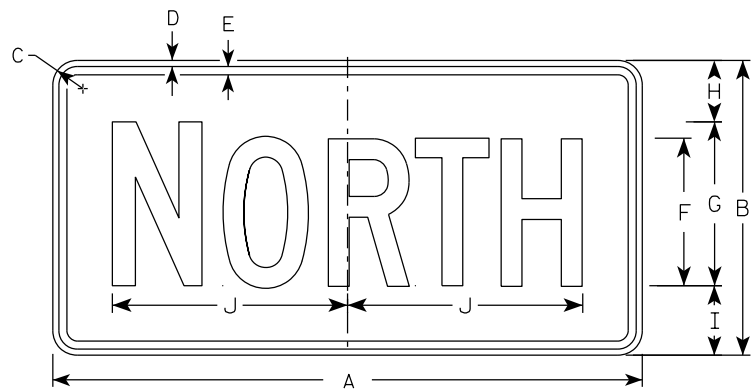
STATE ROUTE MARKER  
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

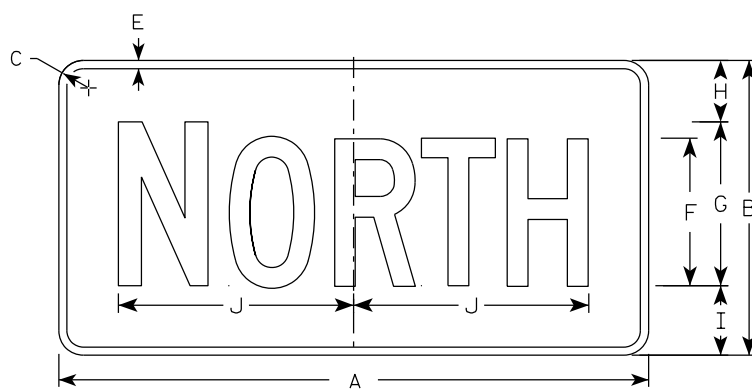
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

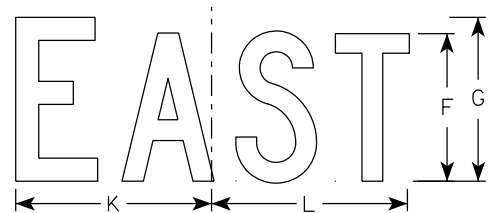
7



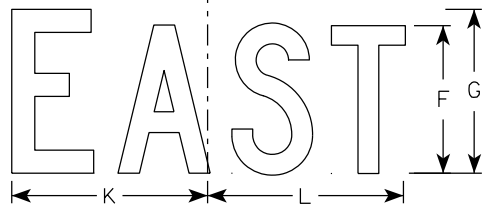
M3-1  
MM3-1  
MP3-1



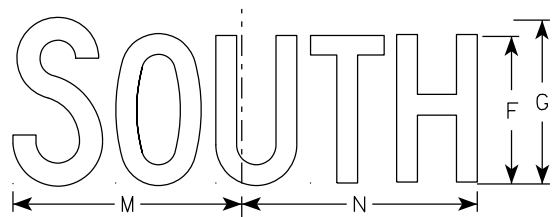
MB3-1  
MK3-1  
MN3-1



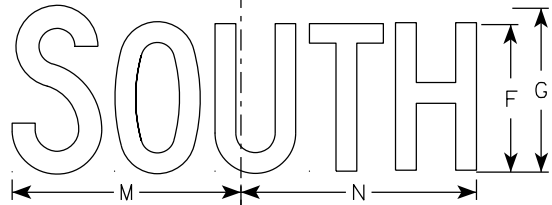
M3-2  
MM3-2  
MP3-2



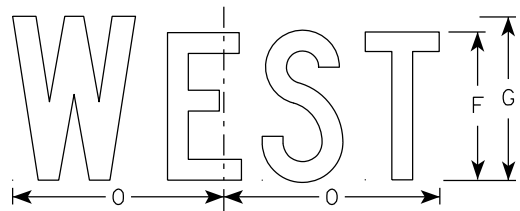
MB3-2  
MK3-2  
MN3-2



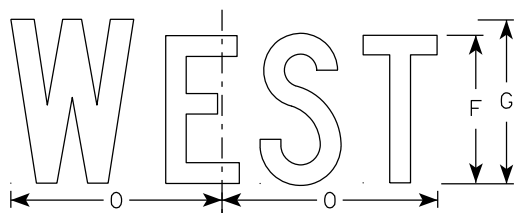
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

## NOTES

- All Signs Type II - Type H Reflective
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

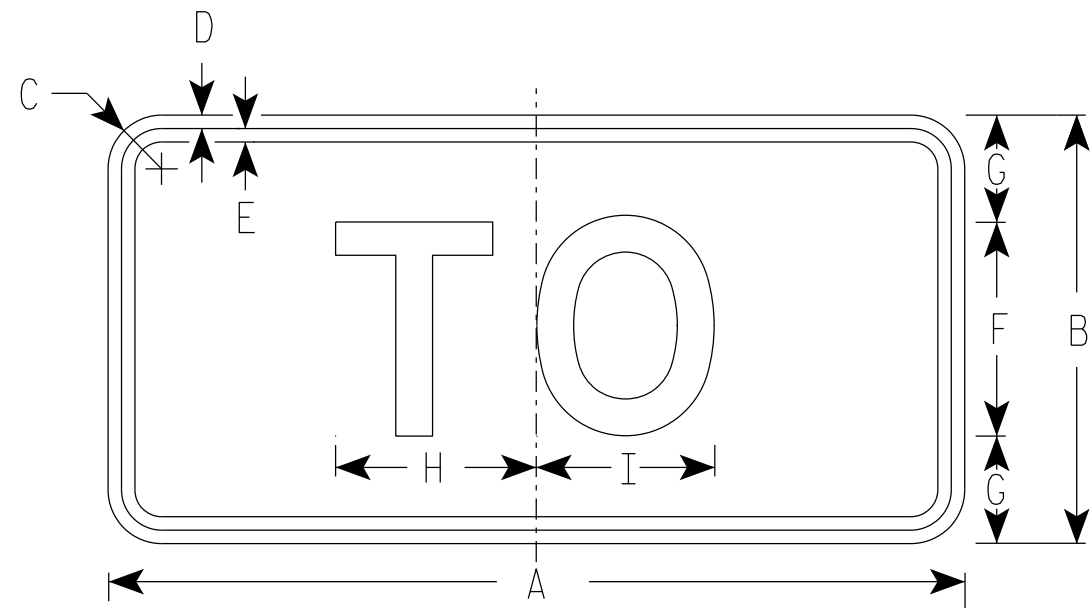
7

7

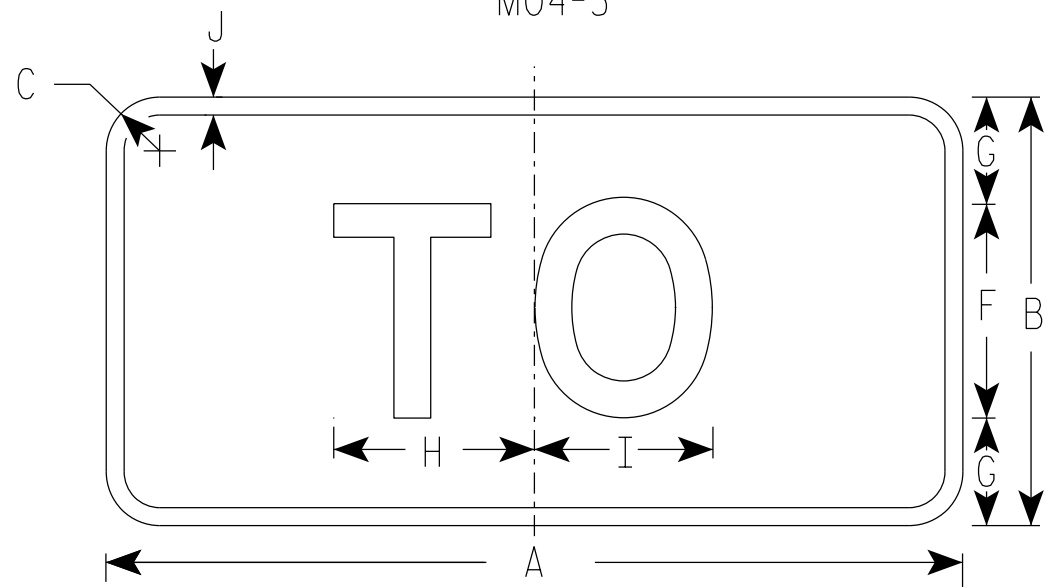
| SIZE | A  | B  | C     | D   | E   | F | G  | H     | I     | J      | K     | L      | M      | N      | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|-------|-------|--------|-------|--------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |       |       |        |       |        |        |        |       |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 328 | E |
|-------------|------|---------|---------------|---|





M4-5  
MM4-5  
MP4-5  
M04-5



MB4-5  
MK4-5  
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White  
Message - Black  
MB4-5 Background - Blue  
Message - White  
MK4-5 Background - Green  
Message - White  
MM4-5 Background - White  
Message - Green  
MN4-5 Background - Brown  
Message - White  
MP4-5 Background - White  
Message - Blue  
M04-5 Background - Orange Type F Reflective  
Message - Black

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J   | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 5 3/8 | 5 1/4 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 5 3/8 | 5 1/4 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 8 1/4 | 8 3/8 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 329

E

STANDARD SIGN  
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

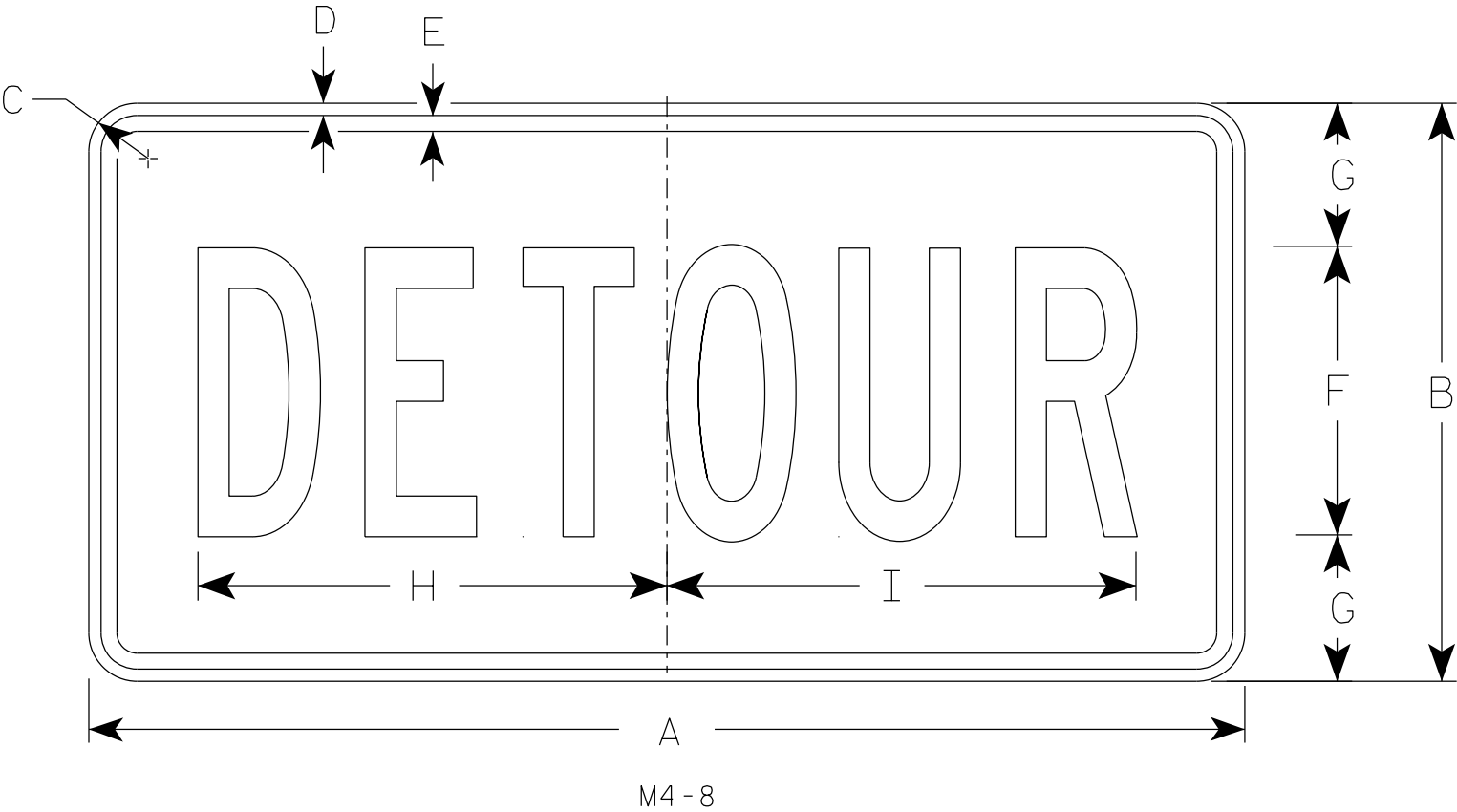
DATE 2/8/2023 PLATE NO. M4-5.11

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



| SIZE | A  | B  | C     | D   | E   | F | G     | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 10     | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 10     | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

STANDARD SIGN

M4-8

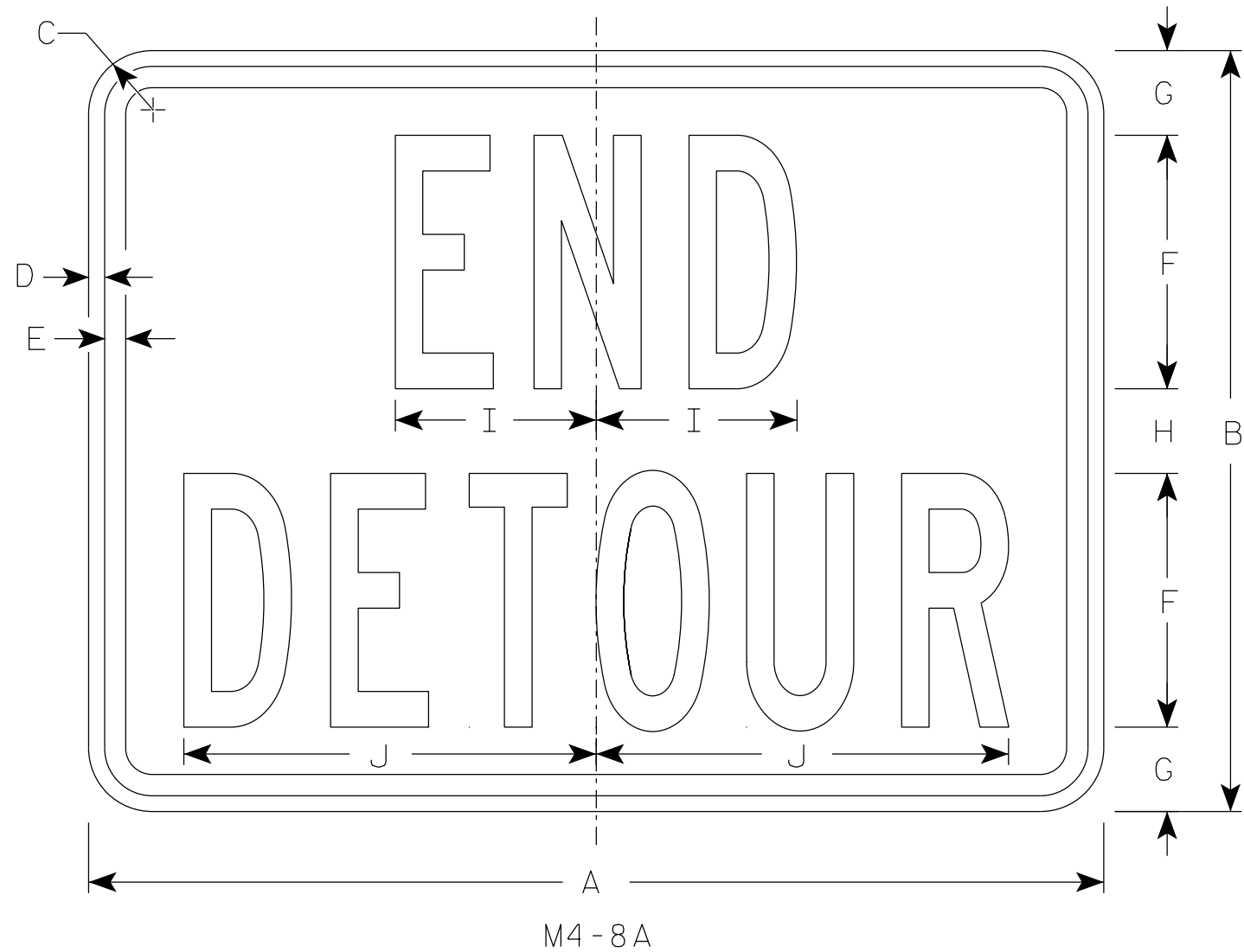
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4



7



NOTES

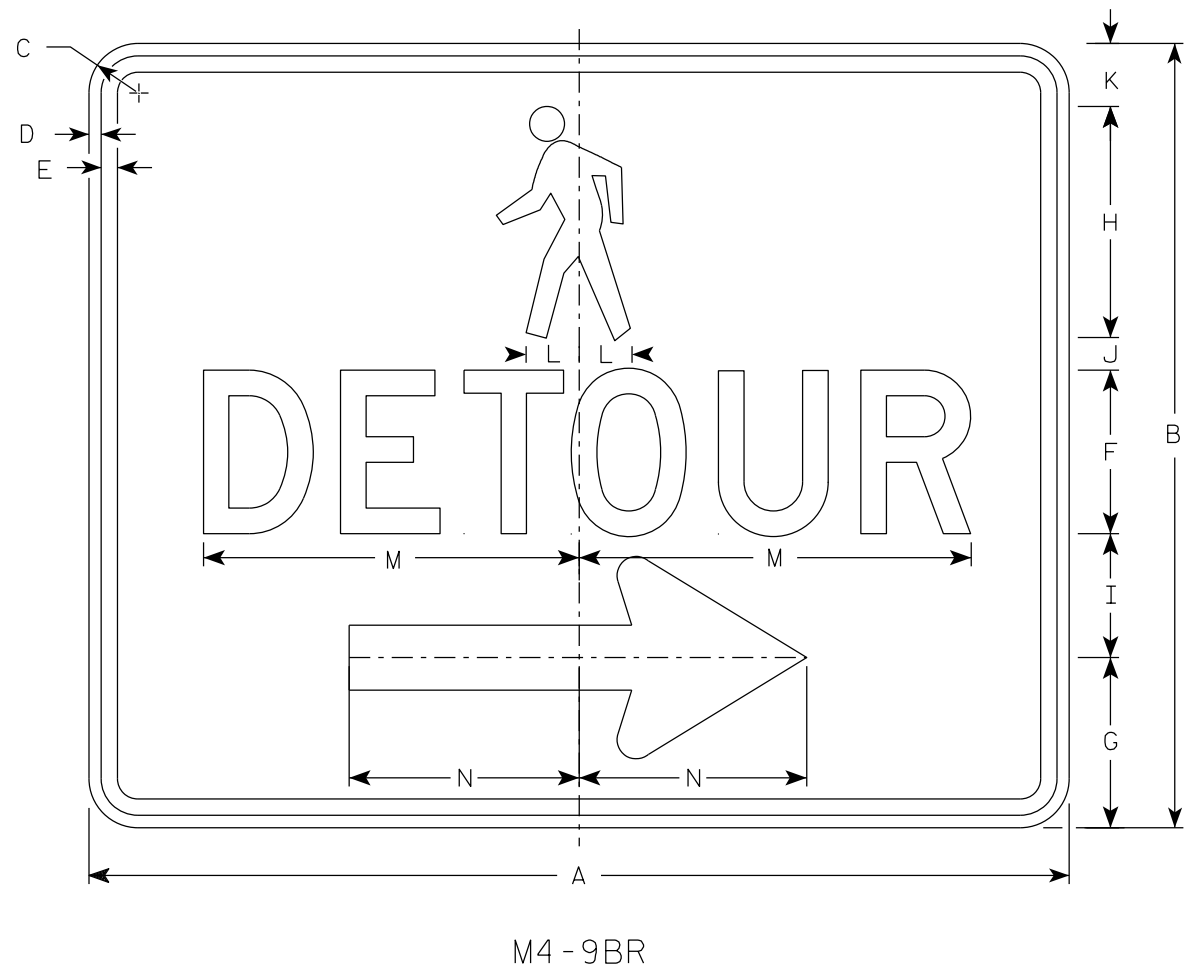
1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B  | C     | D   | E   | F | G     | H | I     | J     | K | L | M | N | O | P | Q | R | S | T | U | v | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |   |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 6 | 2     | 2 | 4 3/4 | 9 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2M   | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 6 | 2     | 2 | 4 3/4 | 9 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 3    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 4    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 5    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |

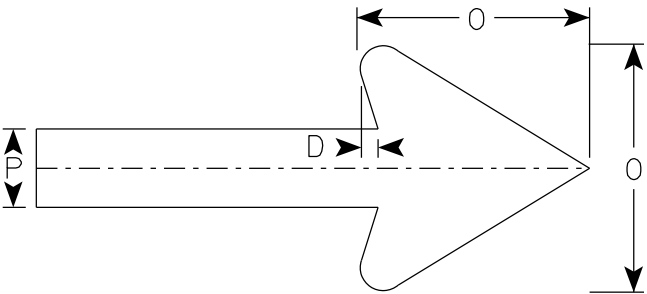
|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| STANDARD SIGN                    |                                                       |
| M4-8A                            |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 2/9/2023                    | PLATE NO. M4-8A.4                                     |

7



NOTES

1. Sign is Type II-Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

7

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J | K     | L     | M      | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|---|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |       |   |       |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 5 1/4 | 7 1/8 | 3 3/4 | 1 | 1 1/8 | 1 5/8 | 11 3/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 5 1/4 | 7 1/8 | 3 3/4 | 1 | 1 1/8 | 1 5/8 | 11 3/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 3    |    |    |       |     |     |   |       |       |       |   |       |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |       |       |       |   |       |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |       |       |       |   |       |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
M4-9B L&R

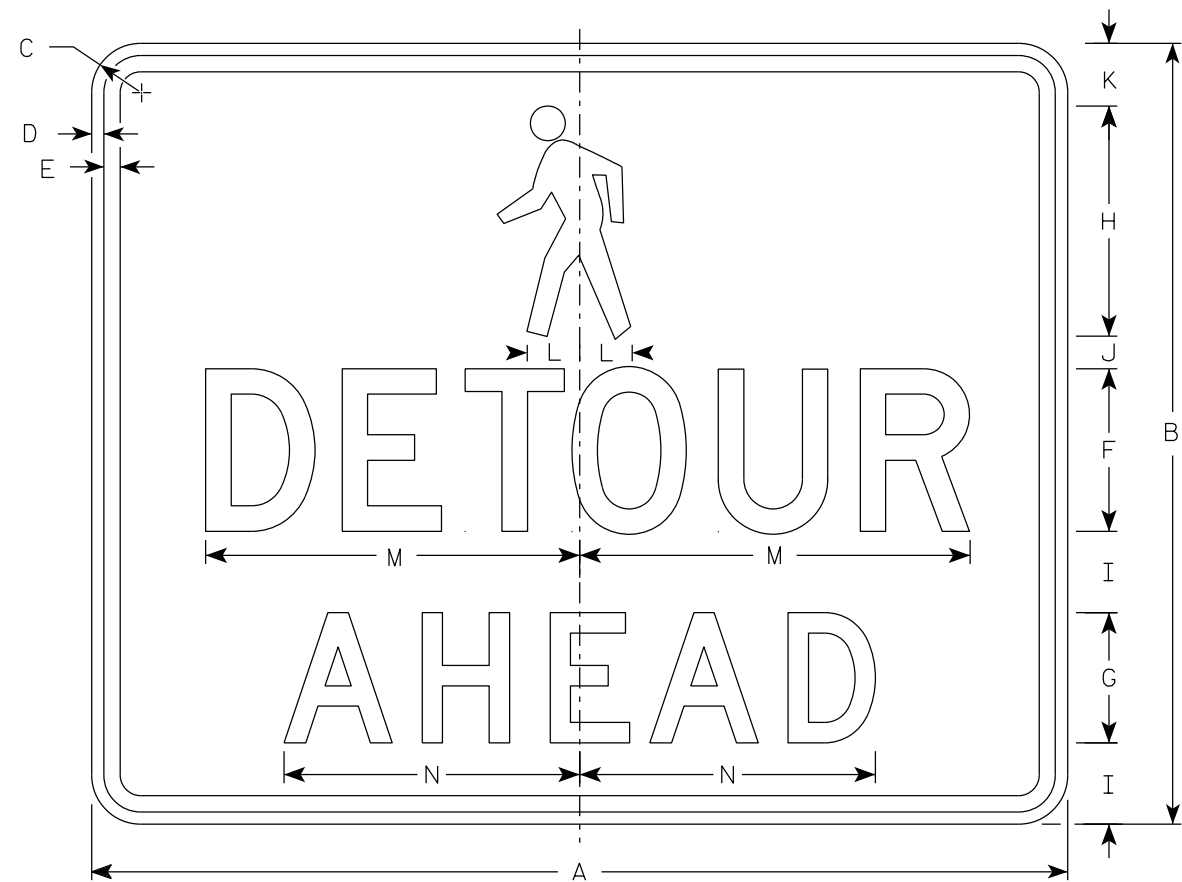
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9B.4



7



M4 - 9BA

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

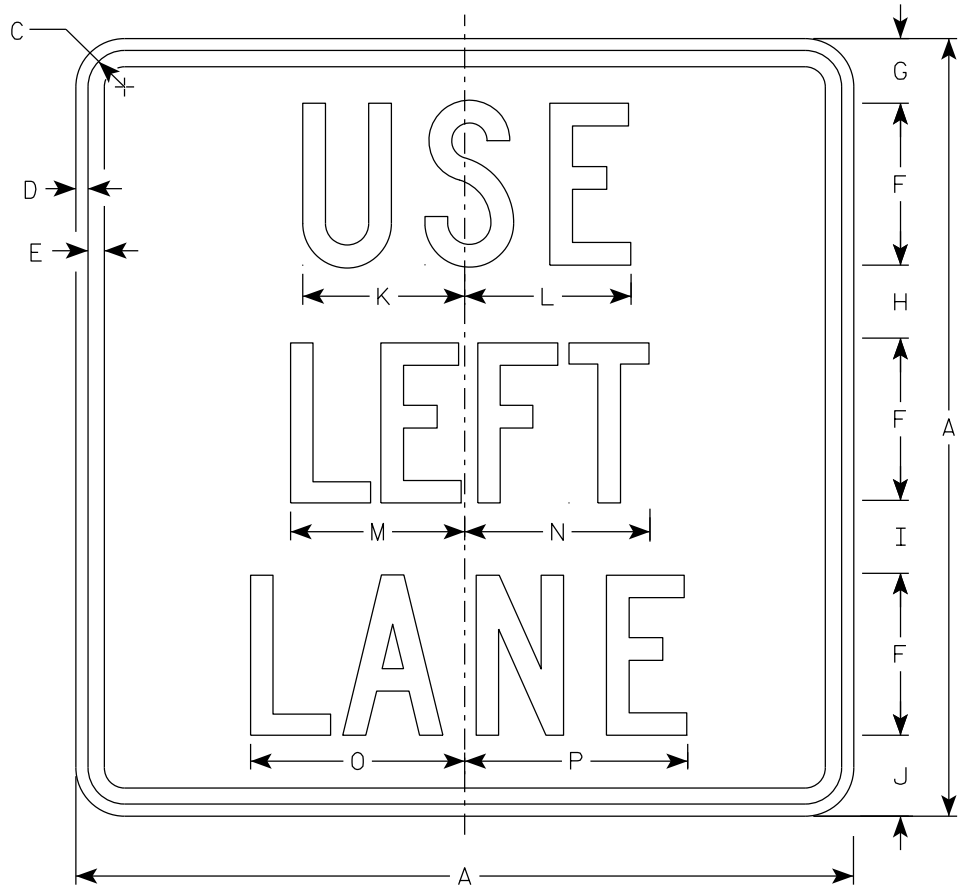
| SIZE | A  | B  | C     | D   | E   | F | G | H     | I     | J | K     | L     | M      | N     | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|-------|-------|---|-------|-------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |       |       |   |       |       |        |       |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 7 1/8 | 2 1/2 | 1 | 1 7/8 | 1 5/8 | 11 3/4 | 9 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 7 1/8 | 2 1/2 | 1 | 1 7/8 | 1 5/8 | 11 3/4 | 9 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 3    |    |    |       |     |     |   |   |       |       |   |       |       |        |       |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |   |       |       |   |       |       |        |       |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |   |       |       |   |       |       |        |       |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
M4 - 9BA

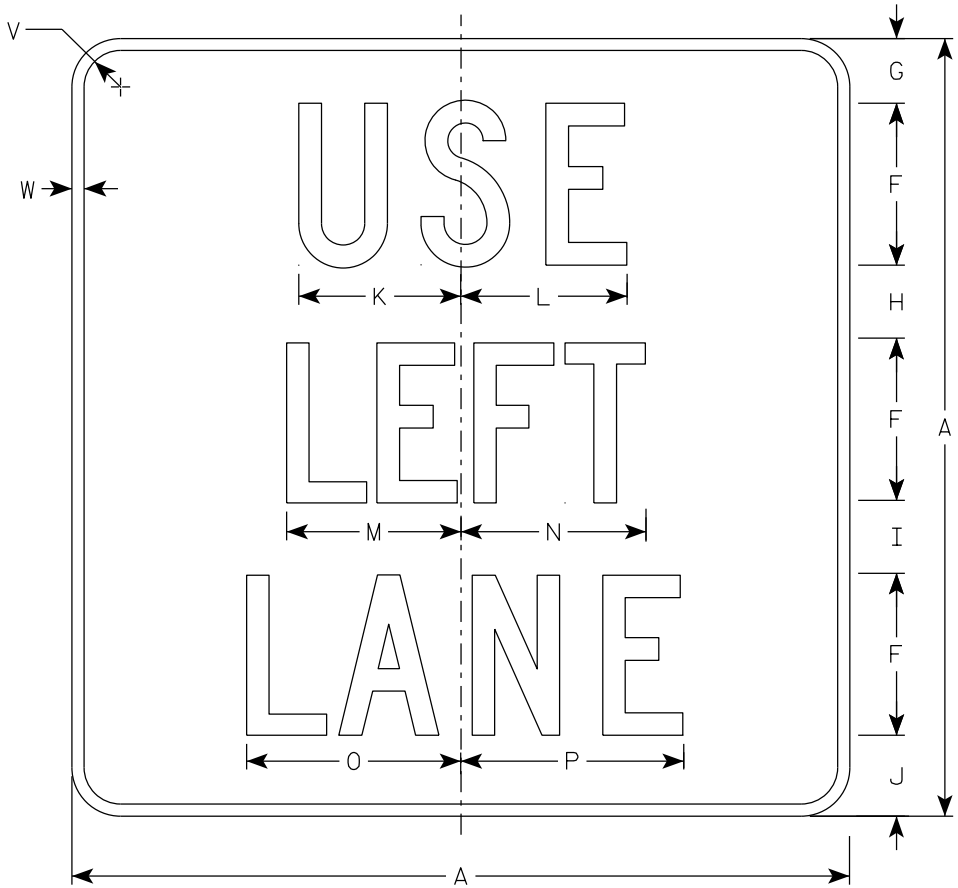
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

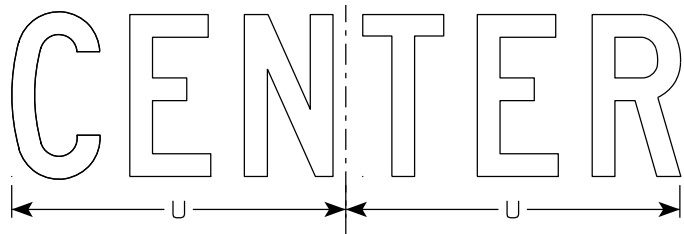
DATE 2/9/2023 PLATE NO. M4-9BA.3



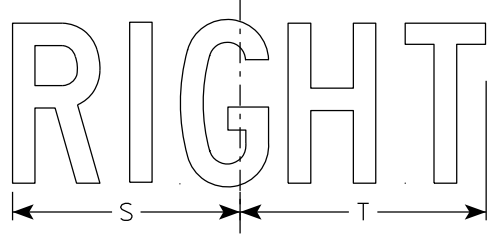
M4-20L  
MM4-20L  
M04-20L  
MP4-20L



MB4-20L  
MK4-20L  
MN4-20L  
MR4-20L



M4-20C  
MB4-20C  
MK4-20C  
MM4-20C  
MN4-20C  
M04-20C  
MP4-20C  
MR4-20C



M4-20R  
MB4-20R  
MK4-20R  
MM4-20R  
MN4-20R  
M04-20R  
MP4-20R  
MR4-20R

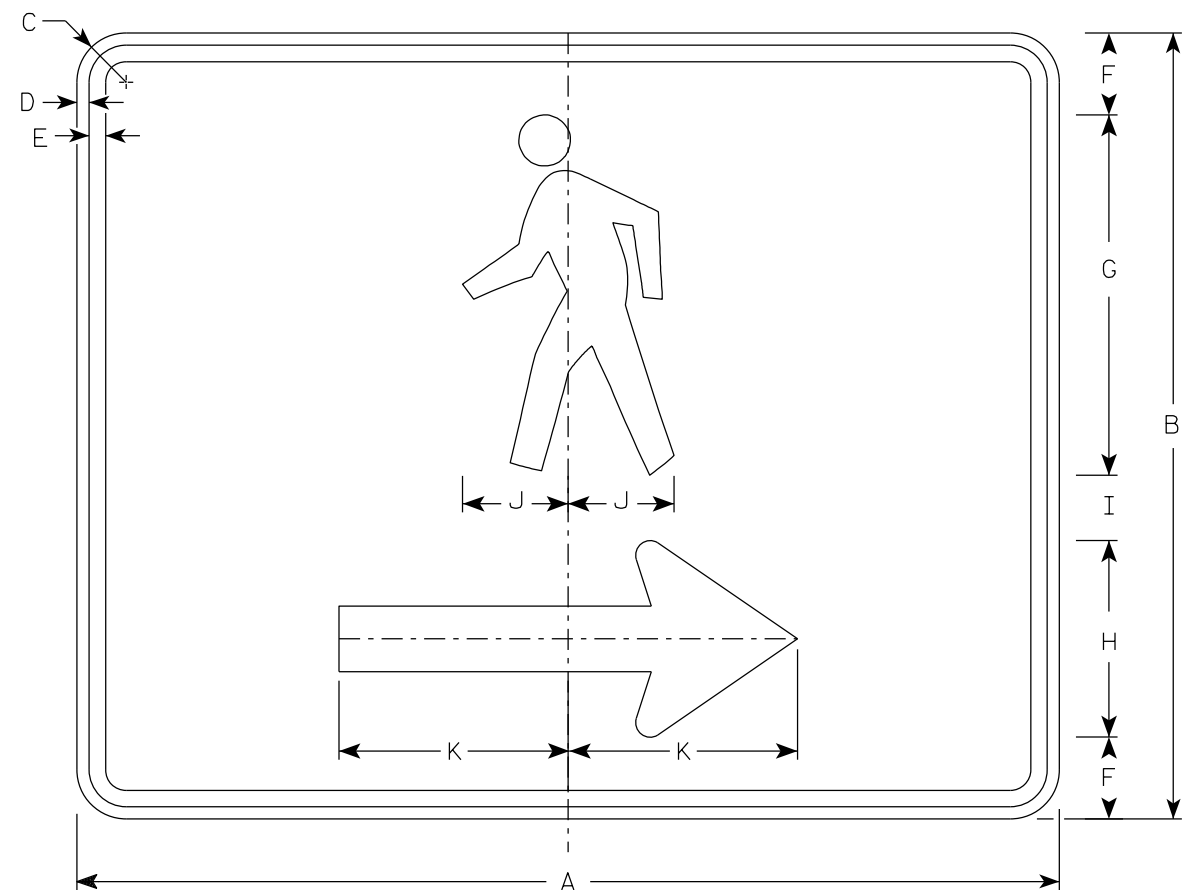
NOTES

- Sign is Type II - Type H except as Shown
- Color:  
Background - See note 5  
Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M4-20 Background - White  
Message - Black  
MB4-20 Background - Blue  
Message - White  
MK4-20 Background - Green  
Message - White  
MM4-20 Background - White  
Message - Green  
MN4-20 Background - Brown  
Message - White  
M04-20 Background - Orange - Type F Reflective  
Message - Black  
MP4-20 Background - White  
Message - Blue  
MR4-20 Background - Brown  
Message - Yellow

| SIZE | A  | B | C     | D   | E   | F | G | H     | I     | J     | K     | L     | M     | N     | O     | P      | Q | R | S      | T      | U      | V     | W   | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---|---|--------|--------|--------|-------|-----|---|---|---|-----------------|
| 1    |    |   |       |     |     |   |   |       |       |       |       |       |       |       |       |        |   |   |        |        |        |       |     |   |   |   |                 |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 5 | 2 | 2 1/4 | 2 1/4 | 2 1/2 | 5     | 5 1/8 | 5 3/8 | 5 3/4 | 6 5/8 | 6 7/8  |   |   | 7      | 7 5/8  | 10 1/4 | 1 1/2 | 1/2 |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 | 3/8 | 1/2 | 5 | 2 | 2 1/4 | 2 1/4 | 2 1/2 | 5     | 5 1/8 | 5 3/8 | 5 3/4 | 6 5/8 | 6 7/8  |   |   | 7      | 7 5/8  | 10 1/4 | 1 1/2 | 1/2 |   |   |   | 4.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 | 4 | 3     | 3 1/2 | 4 1/2 | 7 1/2 | 7 3/4 | 8     | 8 5/8 | 9 7/8 | 10 1/4 |   |   | 10 3/8 | 11 3/8 | 14 3/8 | 1 7/8 | 1/2 |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 | 4 | 3     | 3 1/2 | 4 1/2 | 7 1/2 | 7 3/4 | 8     | 8 5/8 | 9 7/8 | 10 1/4 |   |   | 10 3/8 | 11 3/8 | 14 3/8 | 1 7/8 | 1/2 |   |   |   | 9.0             |
| 5    | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 | 4 | 3     | 3 1/2 | 4 1/2 | 7 1/2 | 7 3/4 | 8     | 8 5/8 | 9 7/8 | 10 1/4 |   |   | 10 3/8 | 11 3/8 | 14 3/8 | 1 7/8 | 1/2 |   |   |   | 9.0             |



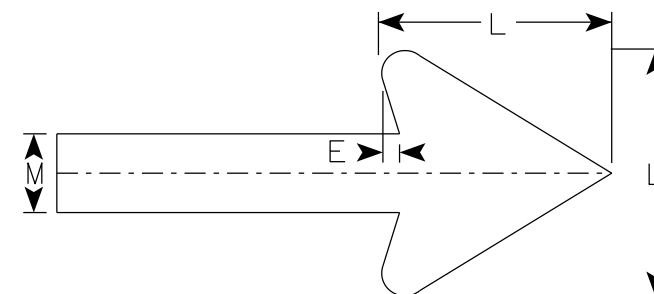
7



M4-60R

NOTES

1. Sign is Type II- Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-60L is the same as M4-60R except the arrow is reversed.



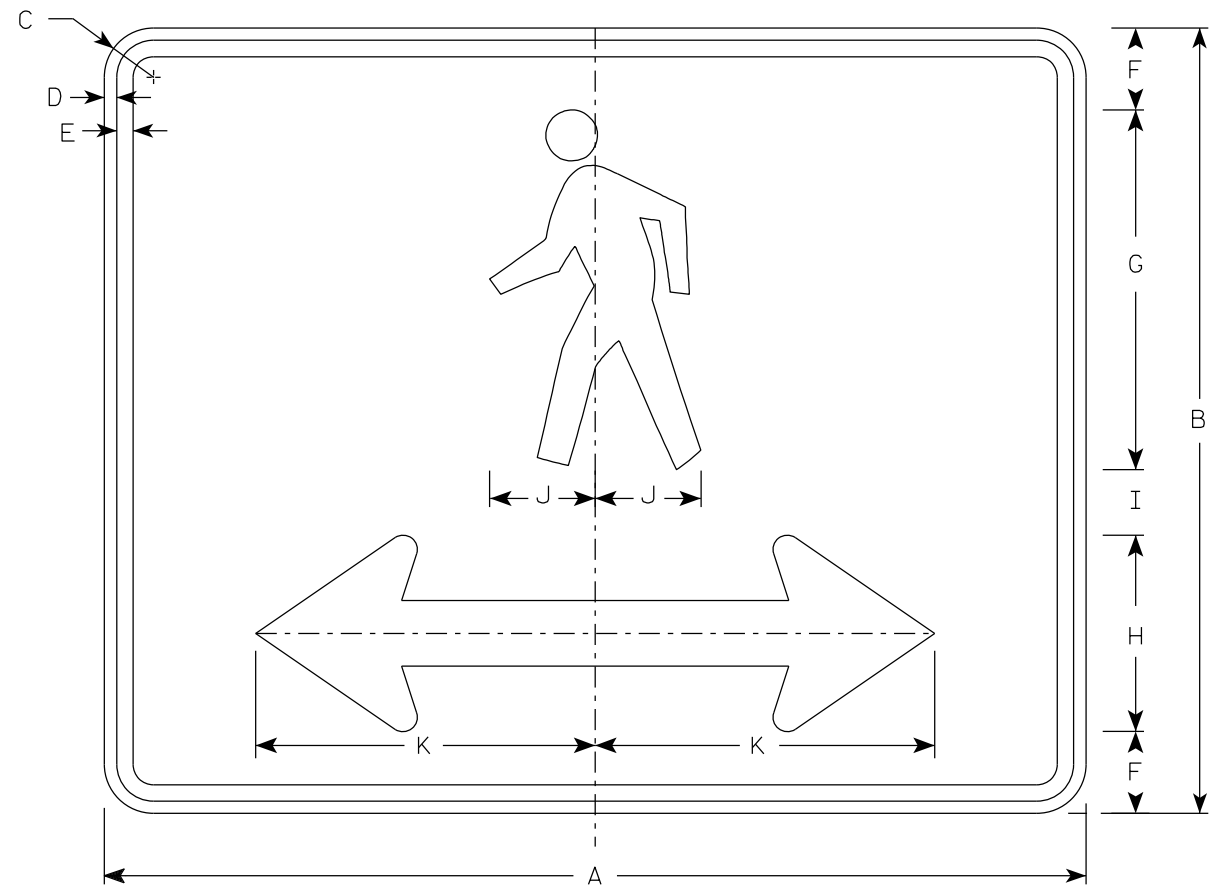
Arrow Detail

7

| SIZE | A  | B  | C     | D   | E   | F     | G  | H | I | J     | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|----|---|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 3    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 335 | E |
|-------------|------|---------|---------------|---|

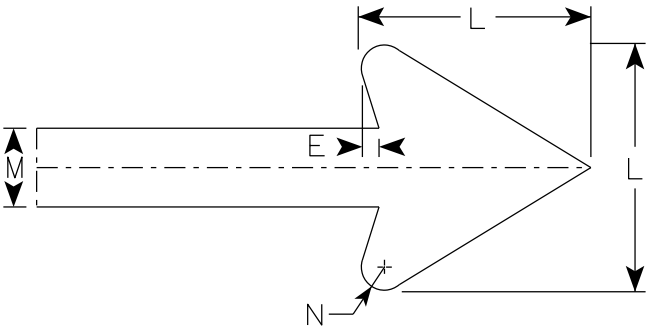
7



M4-60D

NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

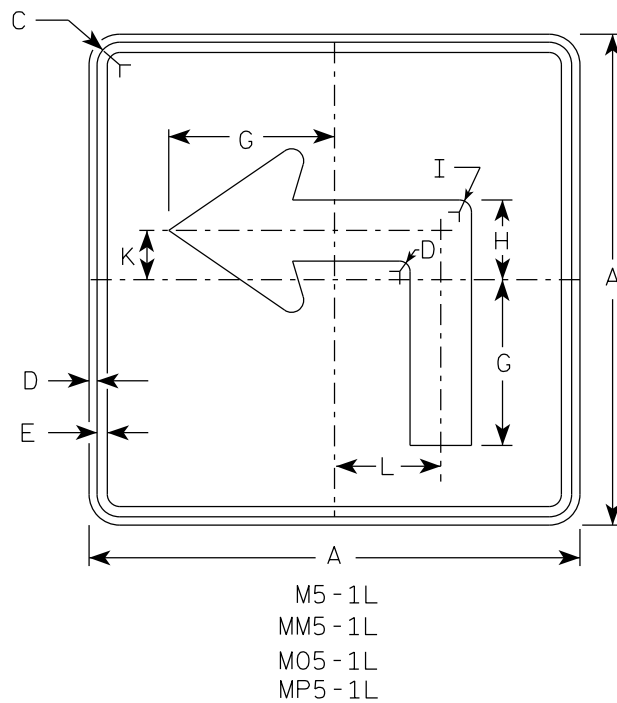


Arrow Detail

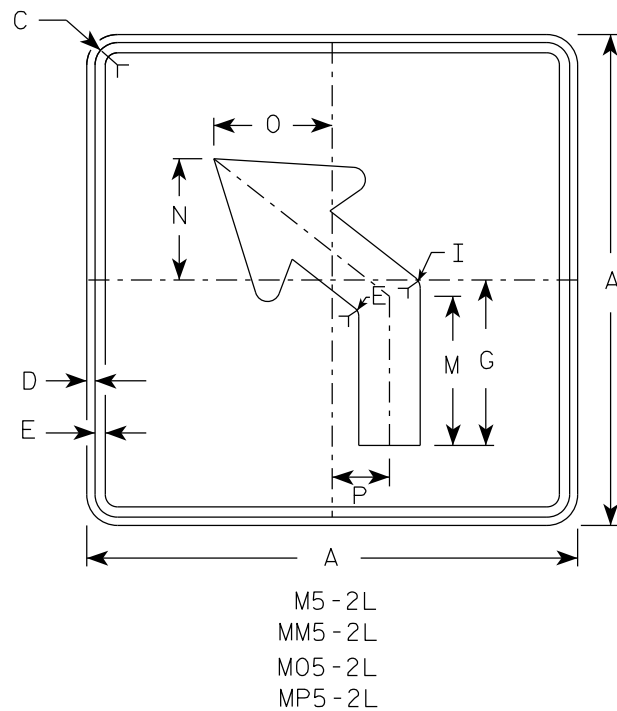
7

| SIZE | A  | B  | C     | D   | E   | F     | G  | H | I | J     | K      | L | M | N   | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|----|---|---|-------|--------|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |       |    |   |   |       |        |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 10 3/8 | 6 | 2 | 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 10 3/8 | 6 | 2 | 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 3    |    |    |       |     |     |       |    |   |   |       |        |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |       |    |   |   |       |        |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |       |    |   |   |       |        |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |                 |

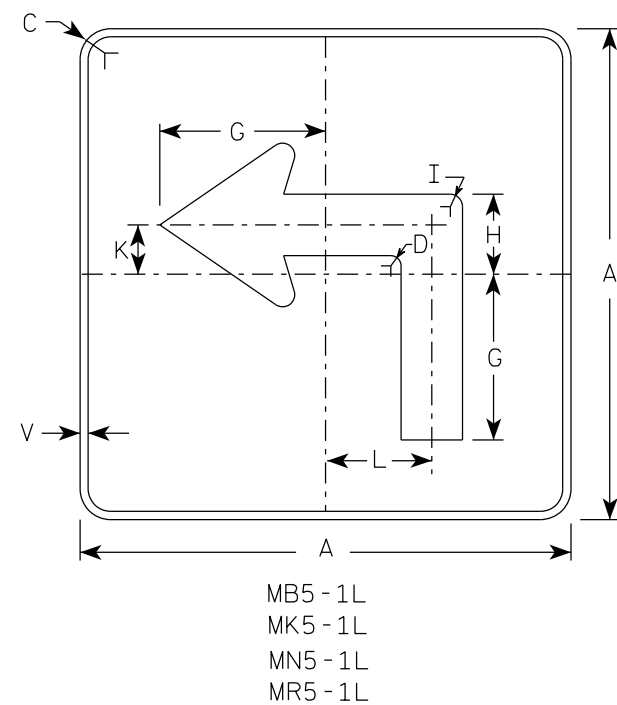




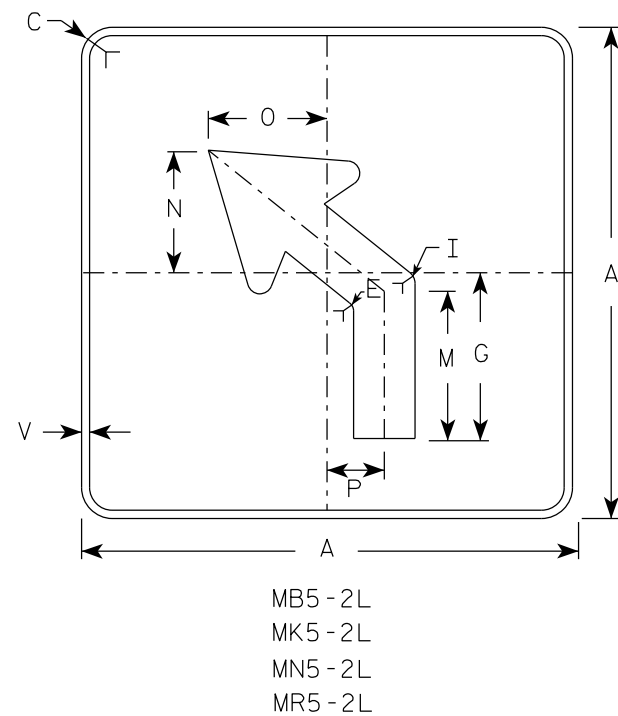
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



M5-2L  
MM5-2L  
M05-2L  
MP5-2L

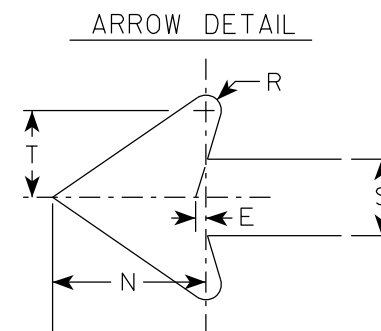


MB5-1L  
MK5-1L  
MN5-1L  
MR5-1L



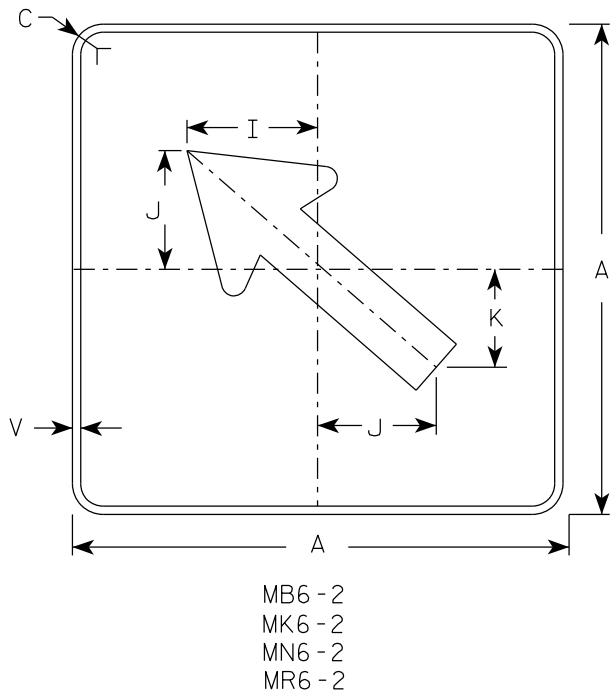
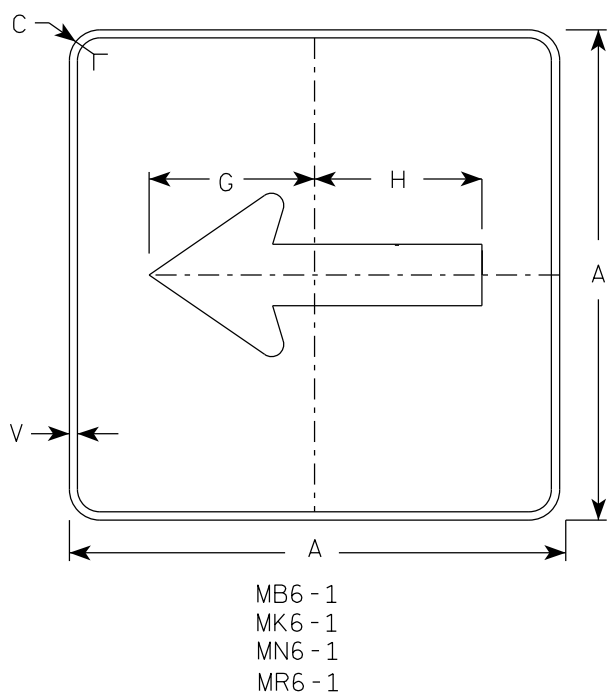
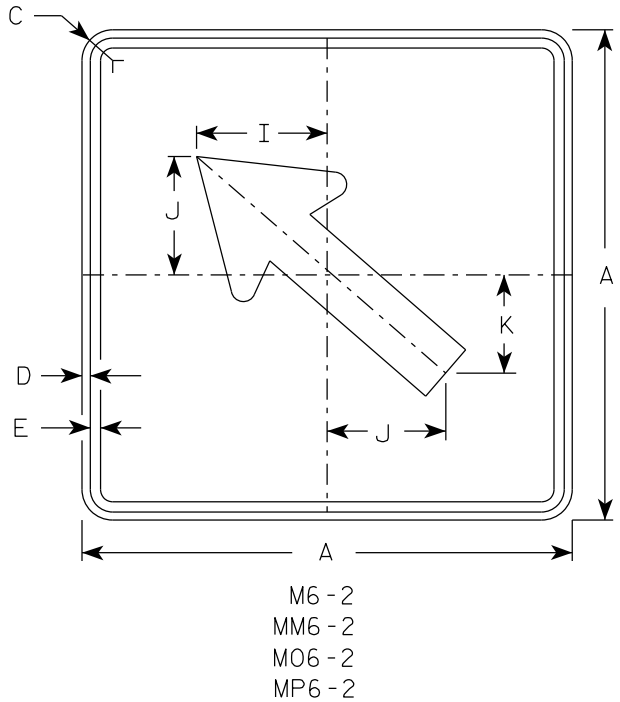
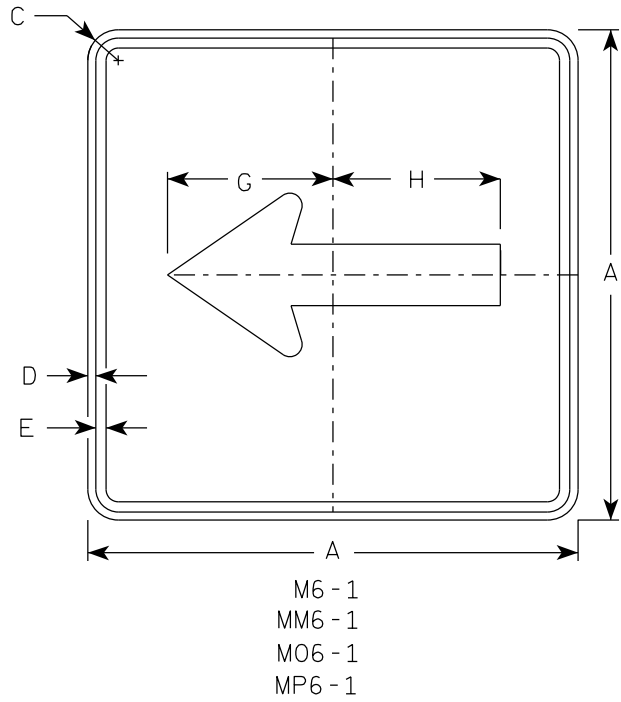
MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L

- NOTES
- Signs are Type II - Type H reflective except as shown
  - Color:  
Background - See note 4  
Message - See note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  - |           |       |                                         |
|-----------|-------|-----------------------------------------|
| M5-1 and  | M5-2  | Background - White                      |
|           |       | Message - Black                         |
| MB5-1 and | MB5-2 | Background - Blue                       |
|           |       | Message - White                         |
| MK5-1 and | MK5-2 | Background - Green                      |
|           |       | Message - White                         |
| MM5-1 and | MM5-2 | Background - White                      |
|           |       | Message - Green                         |
| MN5-1 and | MN5-2 | Background - Brown                      |
|           |       | Message - White                         |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
|           |       | Message - Black                         |
| MP5-1 and | MP5-2 | Background - White                      |
|           |       | Message - Blue                          |
| MR5-1 and | MR5-2 | Background - Brown                      |
|           |       | Message - Yellow                        |
  - M5-1R same as M5-1L except arrow points right.
  - M5-2R same as M5-2L except arrow tilts right.

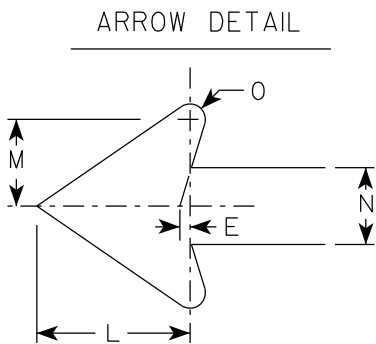


| SIZE | A  | B | C     | D   | E   | F | G      | H     | I   | J | K     | L     | M     | N     | O     | P     | Q | R   | S     | T     | U | V   | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-----|---|-------|-------|-------|-------|-------|-------|---|-----|-------|-------|---|-----|---|---|---|---|-----------------|
| 1    |    |   |       |     |     |   |        |       |     |   |       |       |       |       |       |       |   |     |       |       |   |     |   |   |   |   |                 |
| 2S   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7      | 3 3/8 | 5/8 |   | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5     | 2 1/2 |   | 1/2 | 2 5/8 | 3     |   | 1/2 |   |   |   |   | 3.06            |
| 2M   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7      | 3 3/8 | 5/8 |   | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5     | 2 1/2 |   | 1/2 | 2 5/8 | 3     |   | 1/2 |   |   |   |   | 3.06            |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |
| 4    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |
| 5    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 337 | E |
|-------------|------|---------|---------------|---|



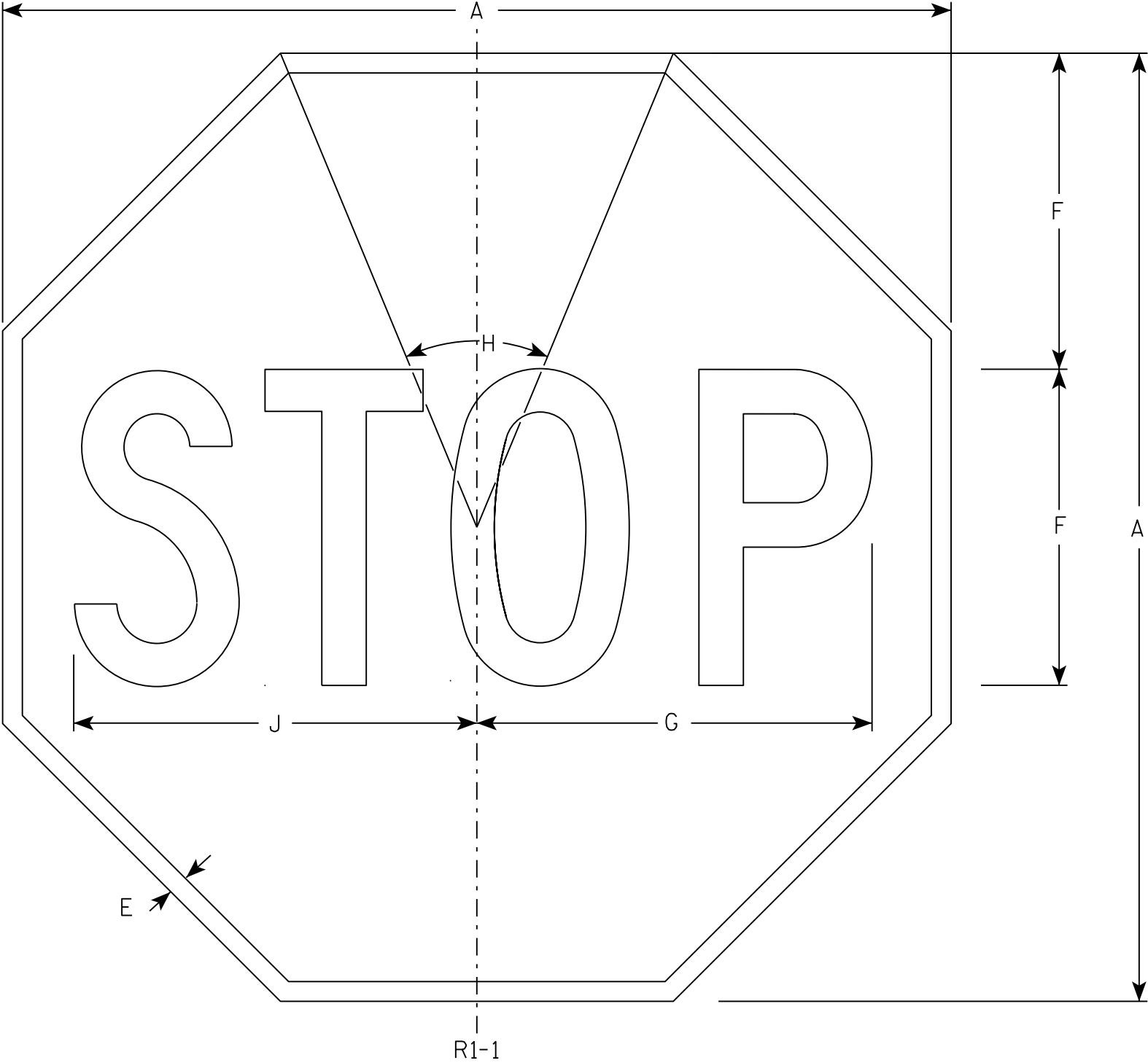
- NOTES**
- Signs are Type II - Type H Reflective except as Shown
  - Color:  
Background - See note 4  
Message - See note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  - M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow



| SIZE | A  | B | C     | D   | E   | F | G      | H      | I     | J     | K     | L     | M     | N     | O   | P | Q | R | S | T | U | V   | W | X | Y | Z | Area<br>sq. ft. |      |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|-------|-------|-------|-------|-----|---|---|---|---|---|---|-----|---|---|---|---|-----------------|------|
| 1    |    |   |       |     |     |   |        |        |       |       |       |       |       |       |     |   |   |   |   |   |   |     |   |   |   |   |                 |      |
| 2S   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7 1/2  | 7 1/8  | 5 5/8 | 5     | 4 1/4 | 5 1/4 | 3     | 2 5/8 | 1/2 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 3.06 |
| 2M   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7 1/2  | 7 1/8  | 5 5/8 | 5     | 4 1/4 | 5 1/4 | 3     | 2 5/8 | 1/2 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 3.06 |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |
| 4    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |
| 5    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |



7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Red  
Message - White
- 3. Message Series - C

7

R1-1

| SIZE | A  | B | C | D | E   | F  | G      | H   | I | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|---|-----|----|--------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2S   | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2M   | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 3    | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 4    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 5    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 6    | 18 |   |   |   | 3/8 | 6  | 7 3/4  | 45° |   | 7 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.86            |
| 7    | 12 |   |   |   | 1/4 | 4  | 5      | 45° |   | 5 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.78            |

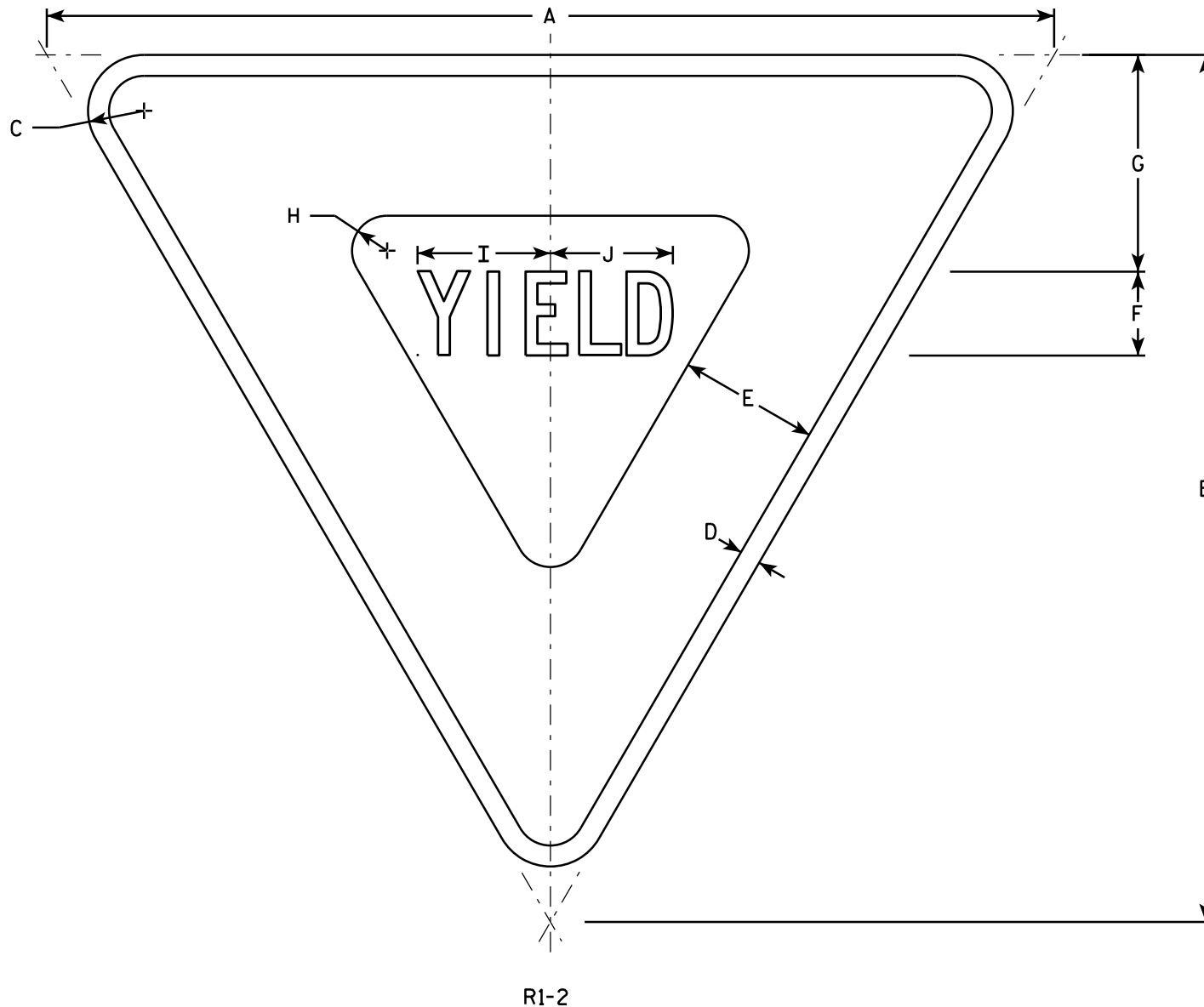
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

| SIZE | A  | B      | C     | D     | E     | F     | G     | H     | I     | J     | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|--------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 | 26     | 1 1/2 | 5/8   | 4     | 2 1/2 | 6 3/8 | 7/8   | 4     | 3 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.71            |
| 2S   | 36 | 31     | 2     | 3/4   | 5     | 3     | 7 3/4 | 1 1/4 | 4 3/4 | 4 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.88            |
| 2M   | 48 | 42     | 3     | 1     | 6     | 4     | 9 3/4 | 2     | 6 1/4 | 5 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.00            |
| 3    | 48 | 42     | 3     | 1     | 6     | 4     | 9 3/4 | 2     | 6 1/4 | 5 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.00            |
| 4    | 48 | 42     | 3     | 1     | 6     | 4     | 9 3/4 | 2     | 6 1/4 | 5 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.00            |
| 5    | 60 | 52     | 3     | 1 1/2 | 8     | 5     | 13    | 2 1/2 | 7 7/8 | 7 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 10.83           |
| 6    |    |        |       |       |       |       |       |       |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 7    | 18 | 15 1/2 | 1     | 3/8   | 2 1/2 | 1 1/2 | 3 7/8 | 5/8   | 2 3/8 | 2 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.97            |

STANDARD SIGN  
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/13/14 PLATE 340 P1-2.12

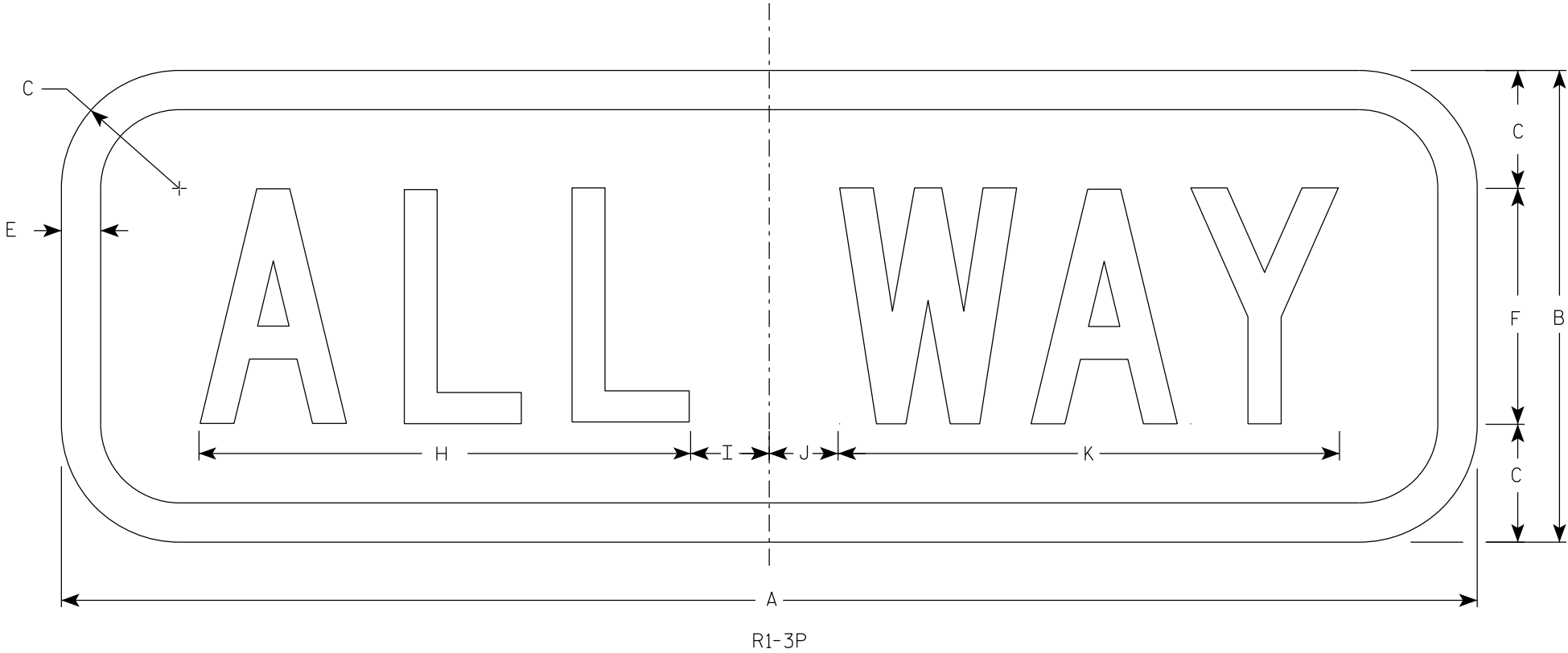


7

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - Red  
Message - White
- 3. Message Series - C
- 4. For 30"x30" R1-1 use 18"x6" R1-3P sign  
For 36"x36" R1-1 use 24"x9" R1-3P sign  
For 48"x48" R1-1 use 30"x12" R1-3P sign



| SIZE | A  | B  | C     | D | E   | F | G | H     | I     | J     | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|---|-----|---|---|-------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 | 6  | 1 1/2 |   | 1/2 | 3 |   | 6 1/4 | 1 1/4 | 7/8   | 6 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.75            |
| 2S   | 18 | 6  | 1 1/2 |   | 1/2 | 3 |   | 6 1/4 | 1 1/4 | 7/8   | 6 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.75            |
| 2M   | 24 | 9  | 1 1/2 |   | 1/2 | 5 |   | 9 1/4 | 1 1/4 | 3/4   | 9 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.5             |
| 3    | 24 | 9  | 1 1/2 |   | 1/2 | 5 |   | 9 1/4 | 1 1/4 | 3/4   | 9 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.5             |
| 4    | 30 | 12 | 1 1/2 |   | 5/8 | 6 |   | 11    | 2 1/4 | 1 1/2 | 11 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.5             |
| 5    | 30 | 12 | 1 1/2 |   | 5/8 | 6 |   | 11    | 2 1/4 | 1 1/2 | 11 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.5             |

PROJECT NO:

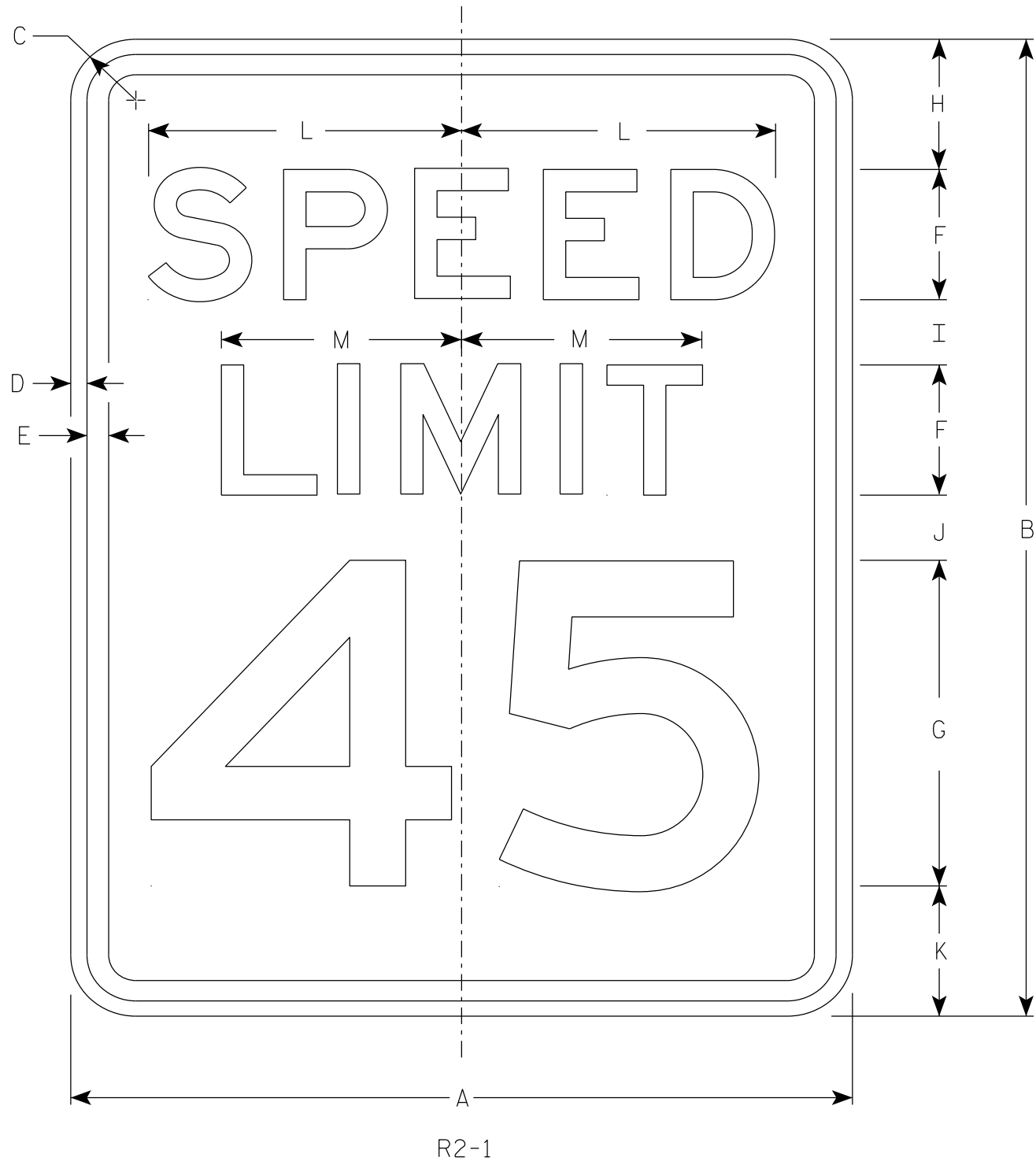
HWY:

COUNTY:

SHEET NO: 341

E

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

| SIZE | A  | B  | C     | D   | E   | F | G  | H | I     | J     | K     | L      | M      | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|---|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 | 24 | 1 1/2 | 3/8 | 1/2 | 3 | 8  | 3 | 2     | 2     | 3     | 7 1/4  | 5 1/2  |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2S   | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 4 | 10 | 3 | 2 1/4 | 3 3/8 | 3 3/8 | 9 5/8  | 7 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 30 | 36 | 1 7/8 | 1/2 | 5/8 | 5 | 12 | 5 | 2 1/2 | 2 1/2 | 4     | 12     | 9 1/4  |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.5             |
| 3    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 4    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 60 | 3     | 3/4 | 1   | 8 | 20 | 6 | 4 1/2 | 6 3/4 | 6 3/4 | 19 1/4 | 14 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   | 20.0            |

STANDARD SIGN

R2 - 1

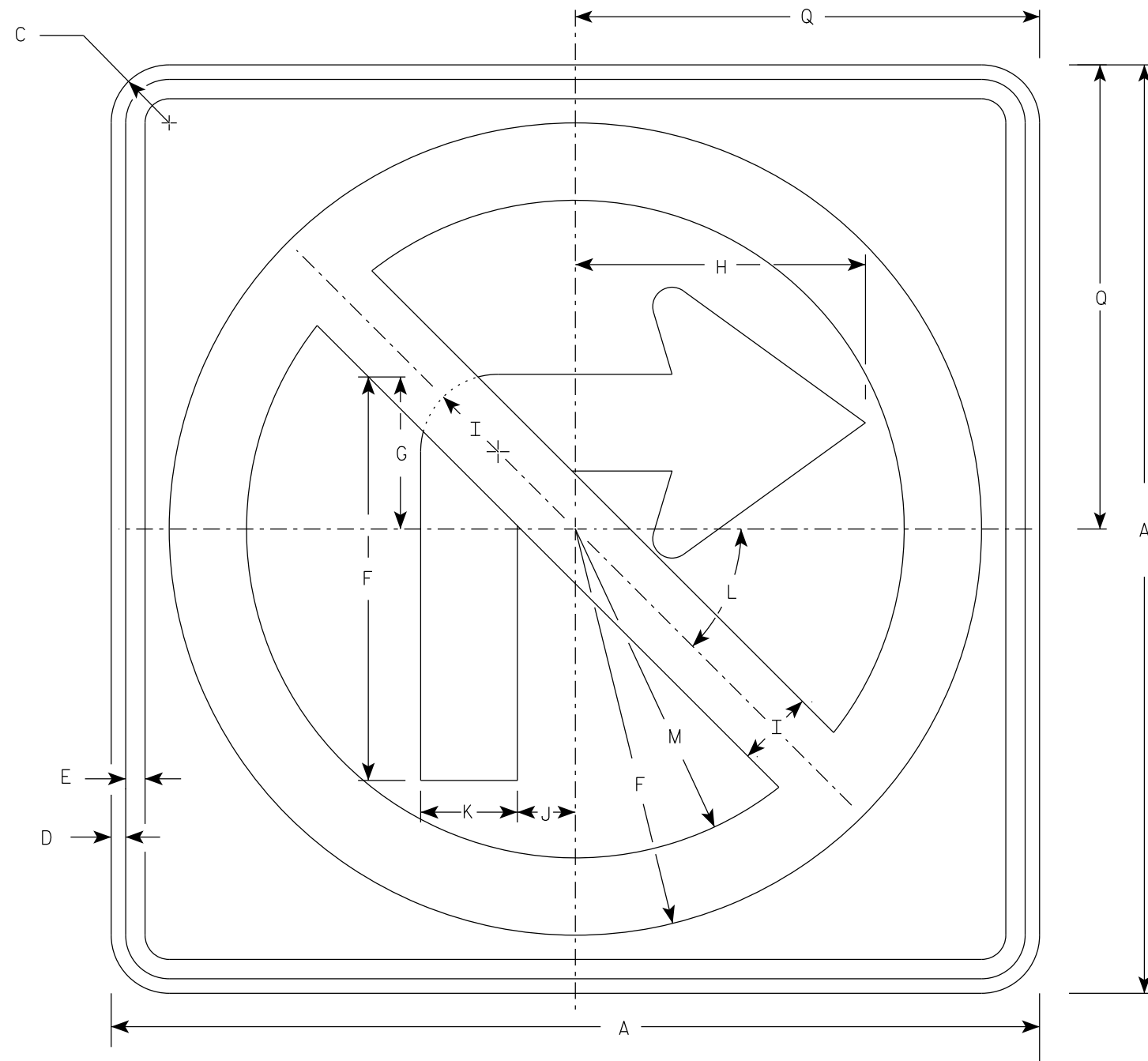
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14



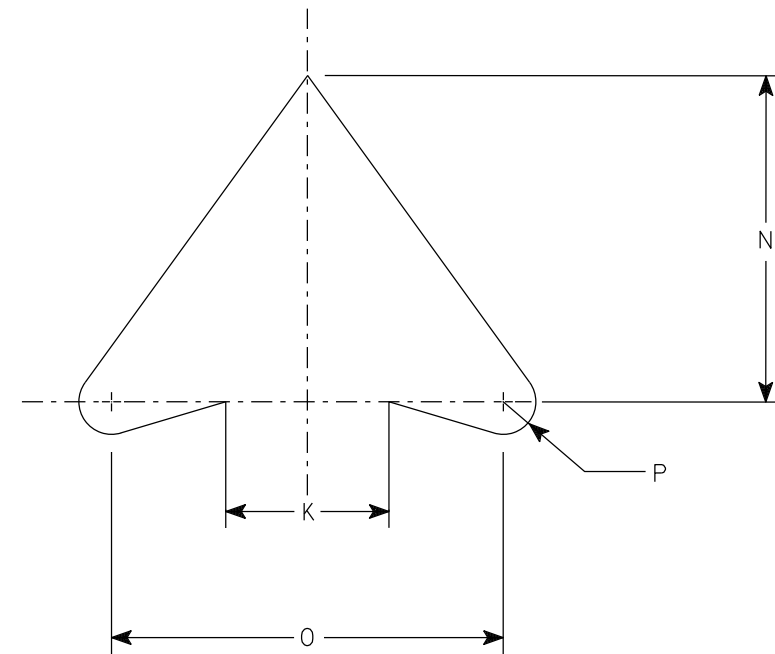
7



R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

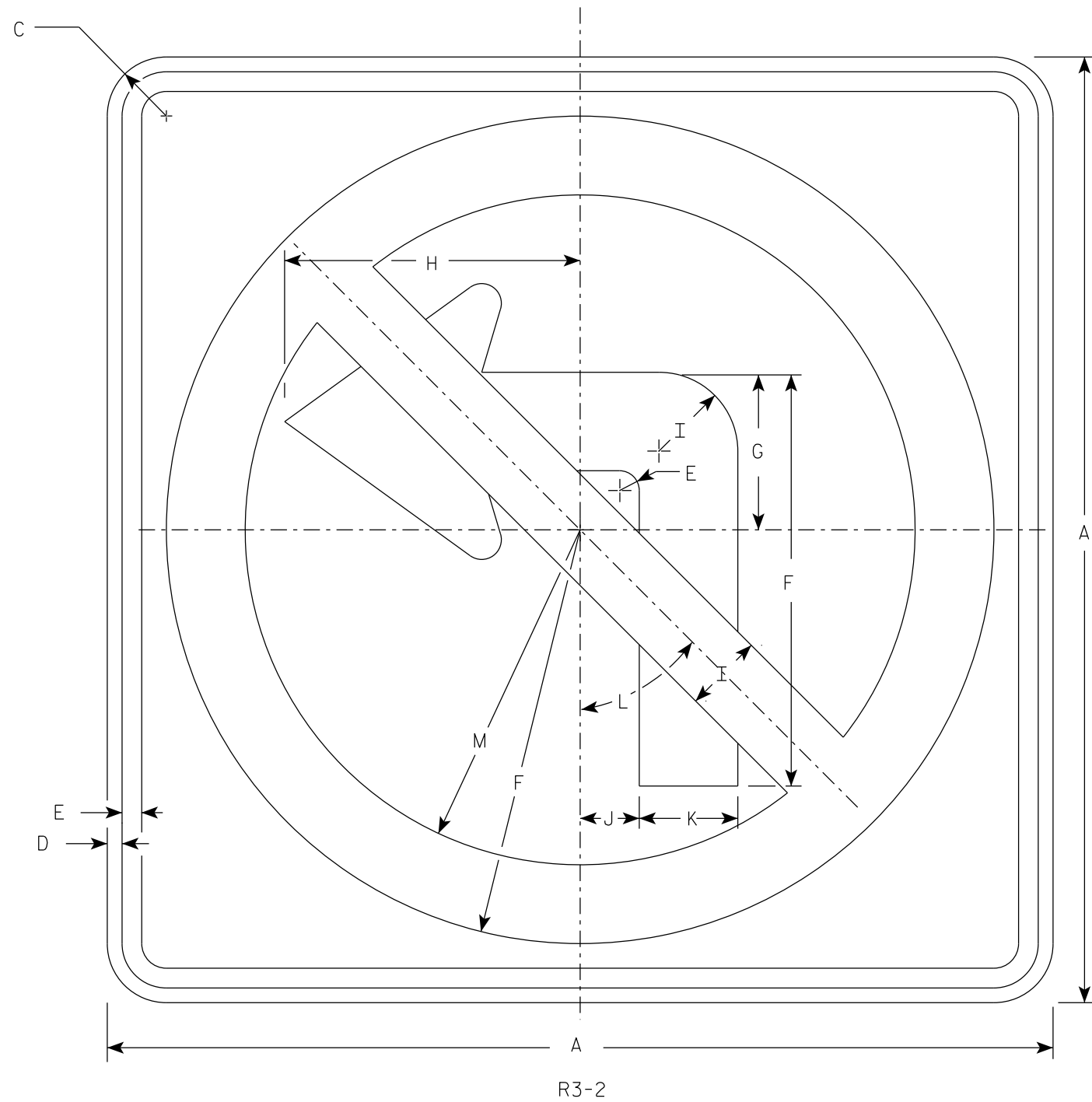


ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F      | G | H      | I | J     | K     | L   | M      | N     | O  | P   | Q  | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|---|-------|-------|-----|--------|-------|----|-----|----|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45  | 8 1/2  | 5     | 6  | 1/2 | 12 |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 | 12 |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45  | 12 3/4 | 7 1/2 | 9  | 3/4 | 18 |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45  | 12 3/4 | 7 1/2 | 9  | 3/4 | 18 |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 | 18 |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 21     | 8 | 15     | 4 | 3     | 5     | 45° | 17     | 10    | 12 | 1   | 24 |   |   |   |   |   |   |   |   |   | 16.0            |

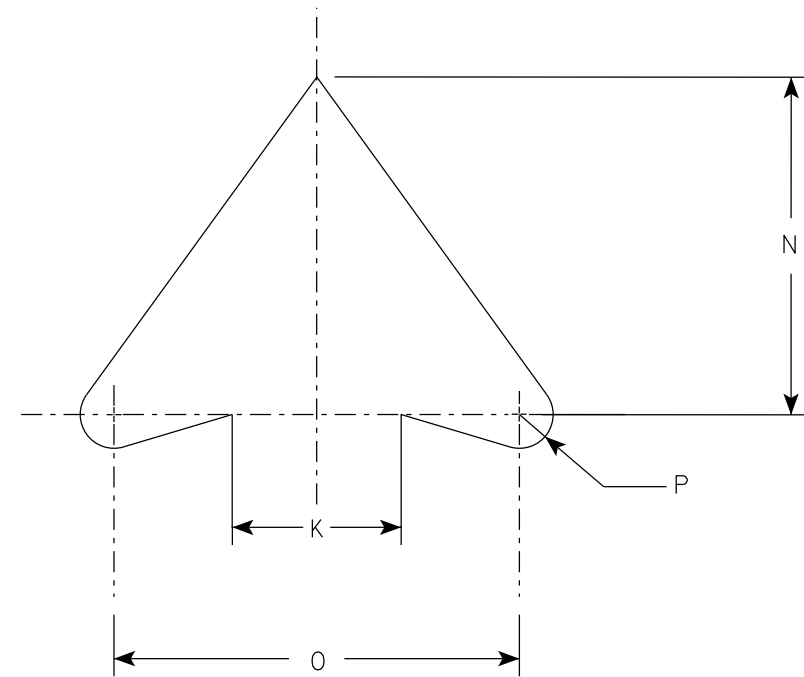
|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 343 | E |
|-------------|------|---------|---------------|---|

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F      | G | H      | I | J     | K     | L   | M      | N     | O  | P   | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|---|-------|-------|-----|--------|-------|----|-----|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 21     | 8 | 15     | 4 | 3     | 5     | 45° | 17     | 10    | 12 | 1   |   |   |   |   |   |   |   |   |   |   | 16.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 344

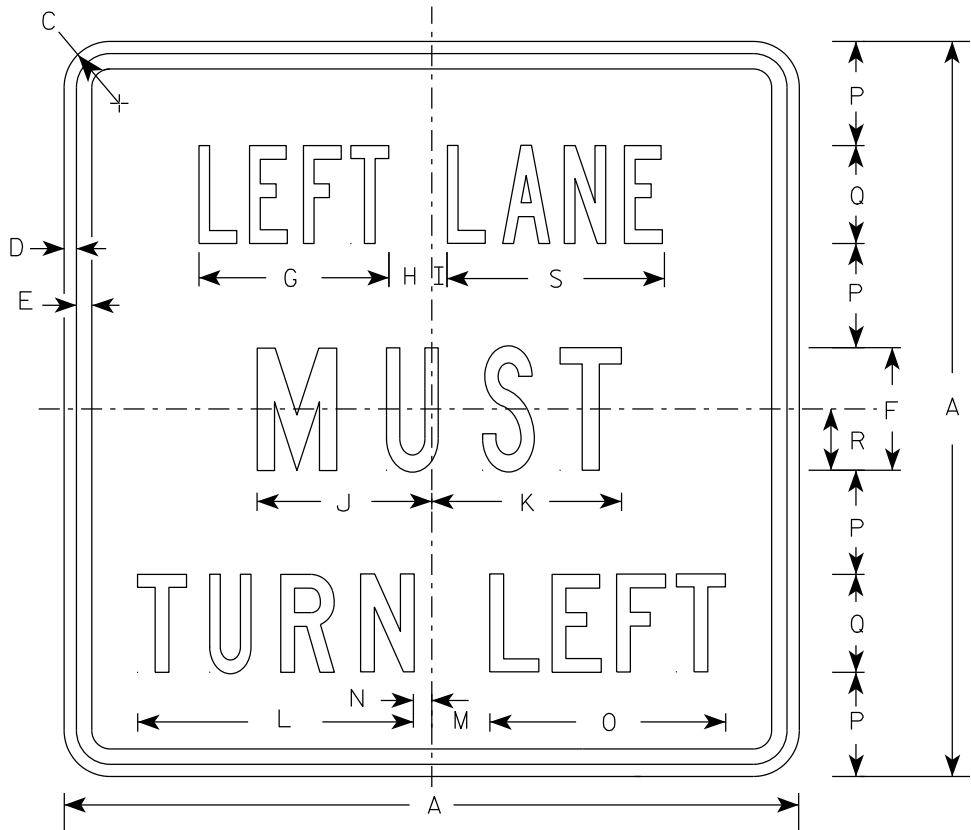
E



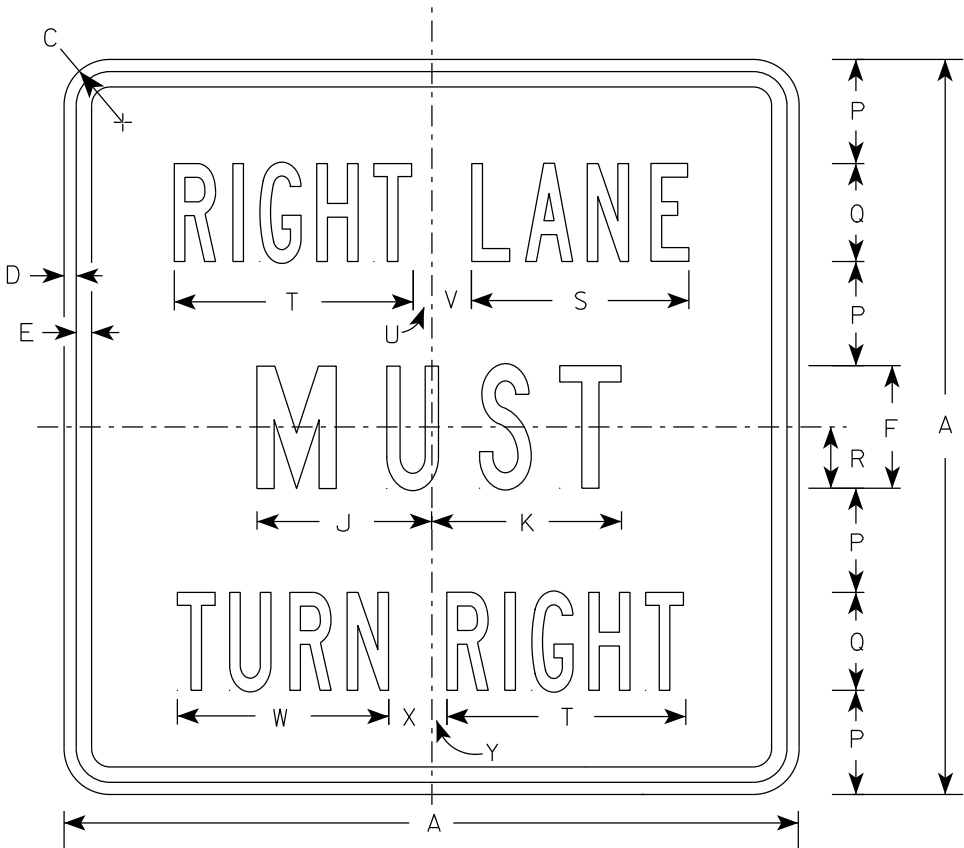
7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - Line 1 is Series B.  
Line 2 is Series C.  
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.



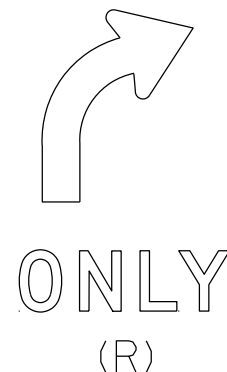
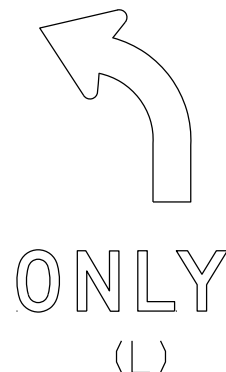
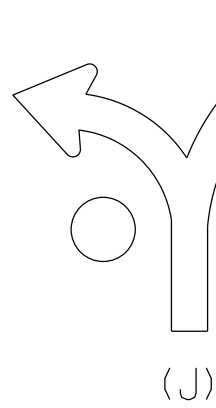
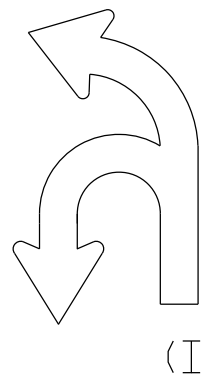
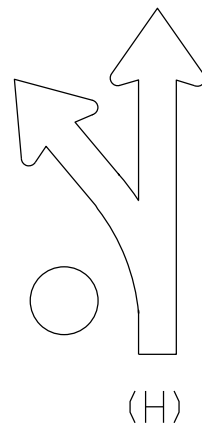
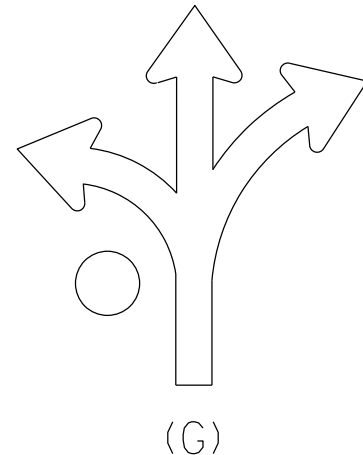
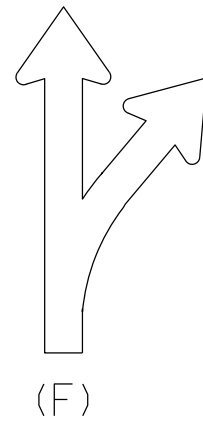
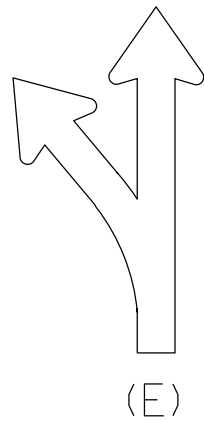
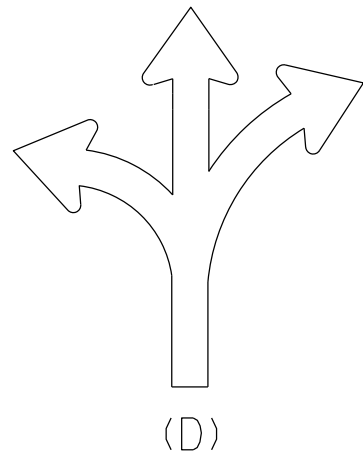
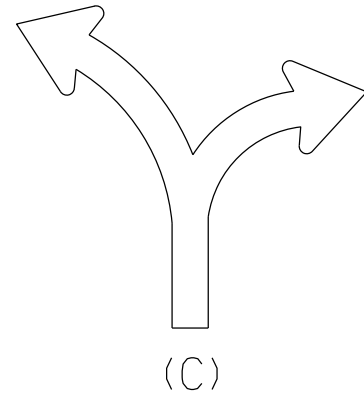
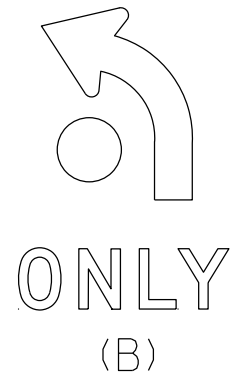
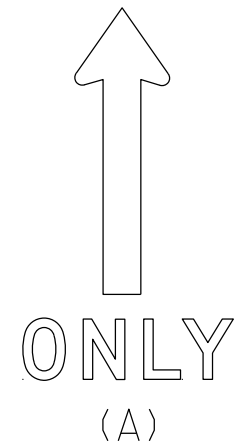
R3-7L



R3-7R

| SIZE | A  | B | C     | D   | E   | F | G      | H     | I     | J      | K      | L      | M     | N     | O      | P     | Q | R     | S      | T      | U   | V     | W      | X     | Y     | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-------|--------|--------|--------|-------|-------|--------|-------|---|-------|--------|--------|-----|-------|--------|-------|-------|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 7 3/4  | 1 3/4 | 5/8   | 7 1/8  | 7 3/4  | 11 1/4 | 2 3/8 | 3/4   | 9 5/8  | 4 1/4 | 4 | 2 1/2 | 8 7/8  | 9 3/4  | 3/4 | 1 5/8 | 8 5/8  | 1 5/8 | 5/8   |   | 6.25            |
| 2S   | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 7 3/4  | 1 3/4 | 5/8   | 7 1/8  | 7 3/4  | 11 1/4 | 2 3/8 | 3/4   | 9 5/8  | 4 1/4 | 4 | 2 1/2 | 8 7/8  | 9 3/4  | 3/4 | 1 5/8 | 8 5/8  | 1 5/8 | 5/8   |   | 6.25            |
| 2M   | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 7 3/4  | 1 3/4 | 5/8   | 7 1/8  | 7 3/4  | 11 1/4 | 2 3/8 | 3/4   | 9 5/8  | 4 1/4 | 4 | 2 1/2 | 8 7/8  | 9 3/4  | 3/4 | 1 5/8 | 8 5/8  | 1 5/8 | 5/8   |   | 6.25            |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 6 | 9 5/8  | 2     | 1 1/8 | 8 3/4  | 9      | 13 1/2 | 3 7/8 | 1 1/2 | 12 1/2 | 5     | 5 | 3     | 10 5/8 | 12     | 7/8 | 2 1/4 | 10 5/8 | 2 1/8 | 1     |   | 9.00            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 13 1/2 | 2 3/8 | 1 1/2 | 11 1/2 | 11 7/8 | 17 3/4 | 3 5/8 | 2 1/2 | 16 3/8 | 6 1/2 | 7 | 4     | 14 3/8 | 16 7/8 | 5/8 | 3 1/4 | 15 1/8 | 2 3/4 | 1 1/8 |   | 16.00           |
| 5    |    |   |       |     |     |   |        |       |       |        |        |        |       |       |        |       |   |       |        |        |     |       |        |       |       |   |                 |

7



## NOTES

1. Sigs are Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code  
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN  
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

FILE NAME : C:\CAEfiles\Projects\stdplate\_R38.dgn

PLOT DATE : 14-FEB 2023 3:01

PLOT BY : mscj9h

PLOT NAME :

SHEET NO: 346

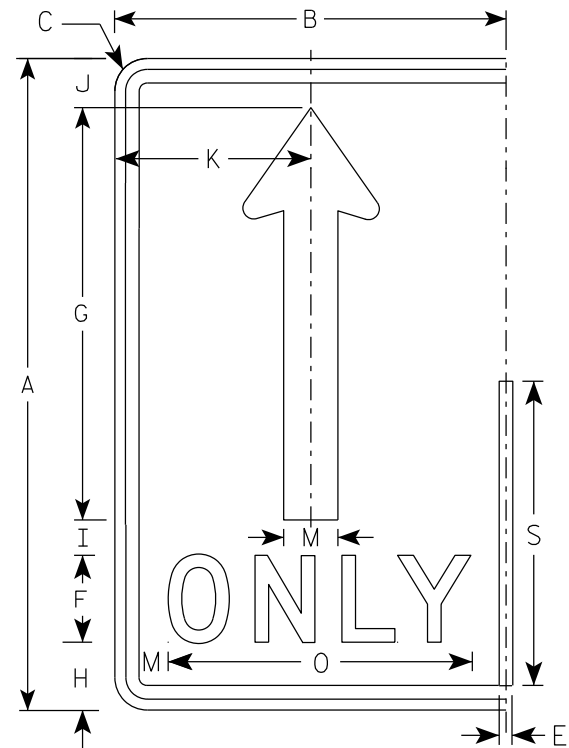
E

WISDOT/CADDs SHEET 42

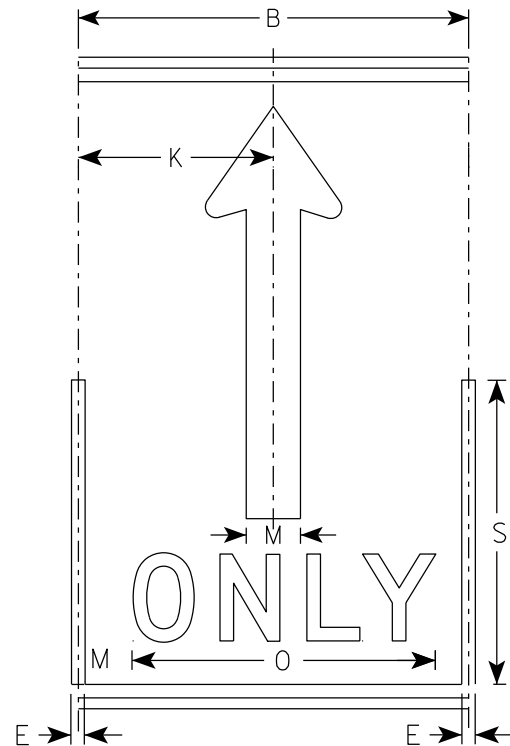


NOTES

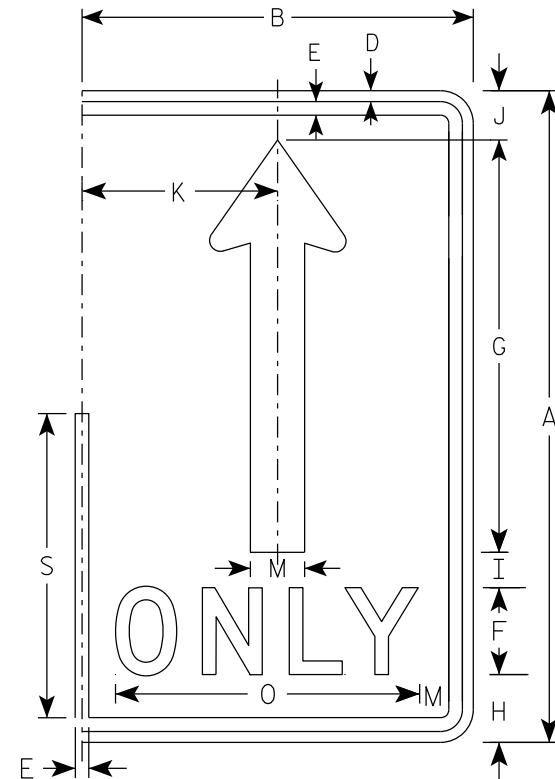
- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D



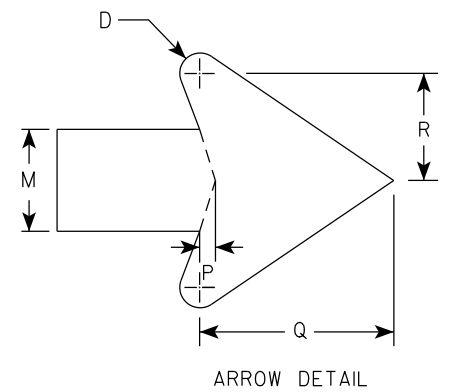
(A)



(A)



(A)



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K  | L | M     | N | O      | P   | Q     | R     | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|----|---|-------|---|--------|-----|-------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |       |    |   |       |   |        |     |       |       |        |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19     | 3 1/8 | 1 5/8 | 2 1/4 | 9  |   | 2 1/2 |   | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19     | 3 1/8 | 1 5/8 | 2 1/4 | 9  |   | 2 1/2 |   | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 22 3/4 | 3 3/4 | 1 3/4 | 2 3/4 | 12 |   | 3     |   | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 |   |   |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 |   | 4     |   | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 |   | 4     |   | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |

STANDARD SIGN  
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

7

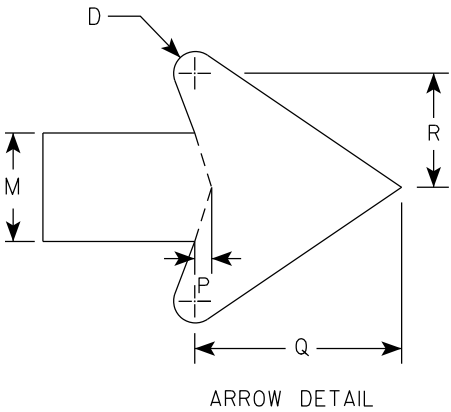
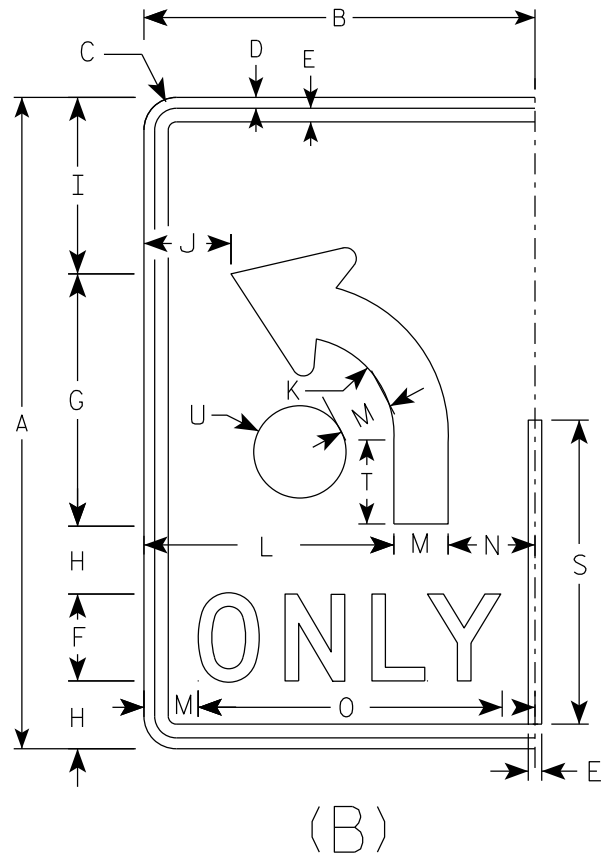
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message Series - D



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I      | J     | K     | L      | M     | N | O      | P   | Q     | R     | S      | T     | U     | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|--------|-------|-------|--------|-------|---|--------|-----|-------|-------|--------|-------|-------|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |        |       |       |        |       |   |        |     |       |       |        |       |       |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 | 2 1/8 |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 | 2 1/8 |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14     | 3 1/2 | 9 3/4  | 6     | 5 3/8 | 15     | 3     | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 | 2 1/2 |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 |   |   |   |   |   | 10.0            |

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

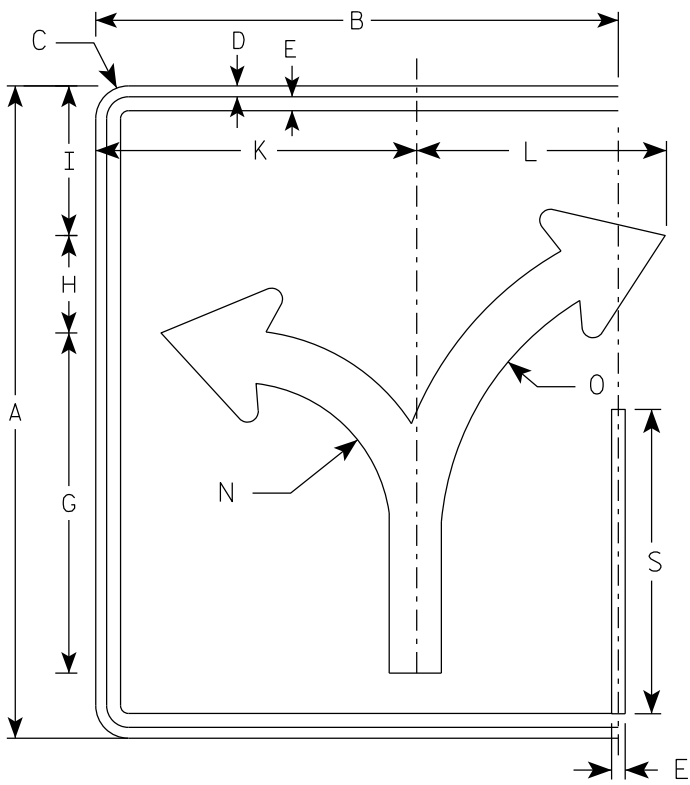
DATE 2/14/23 PLATE NO. R3-8.2



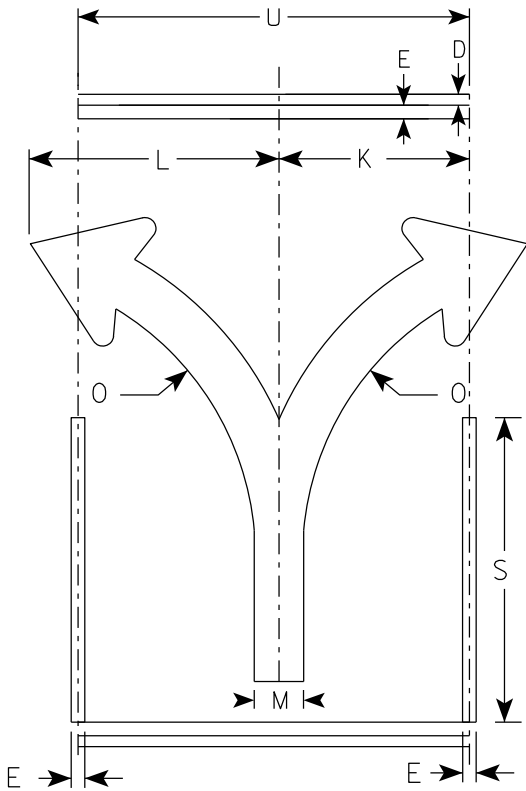
7

NOTES

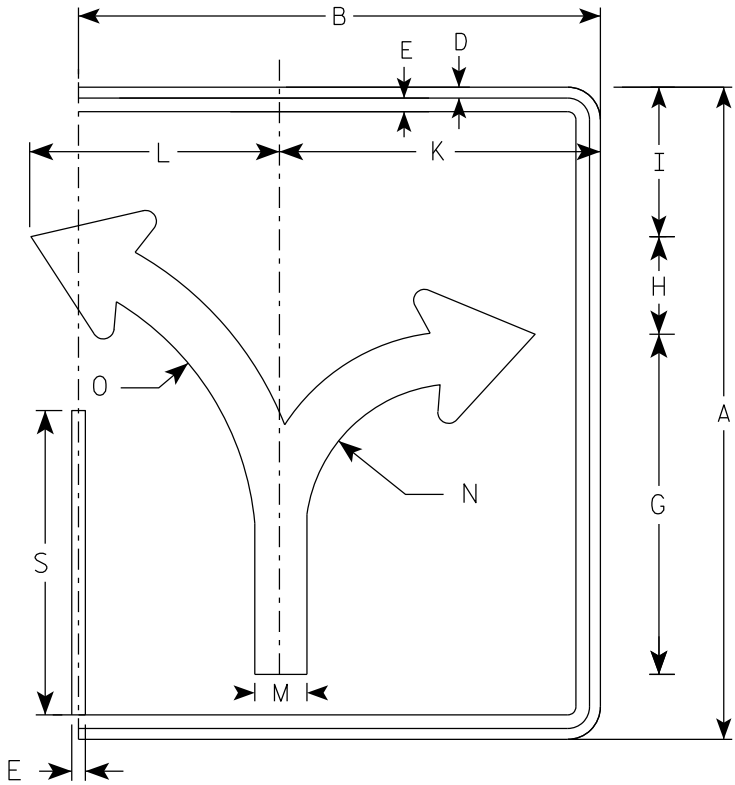
- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - None



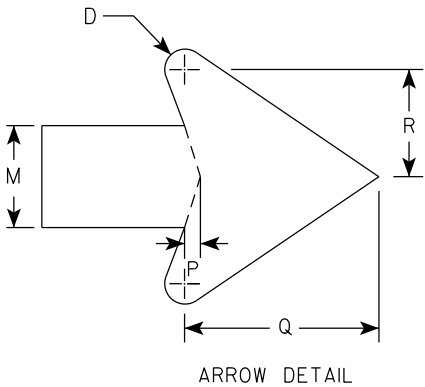
(C)



(C)



(C)



7

|      |    |    |       |     |     |   |        |       |       |   |        |        |       |        |        |     |       |       |        |   |    |   |   |   |   |   | ENDS            | MIDDLE          |
|------|----|----|-------|-----|-----|---|--------|-------|-------|---|--------|--------|-------|--------|--------|-----|-------|-------|--------|---|----|---|---|---|---|---|-----------------|-----------------|
| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J | K      | L      | M     | N      | O      | P   | Q     | R     | S      | T | U  | V | W | X | Y | Z | Area<br>sq. ft. | Area<br>sq. ft. |
| 1    |    |    |       |     |     |   |        |       |       |   |        |        |       |        |        |     |       |       |        |   |    |   |   |   |   |   |                 |                 |
| 2S   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 6 7/8 |   | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 18 |   |   |   |   |   | 5.0             | 3.75            |
| 2M   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 6 7/8 |   | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 18 |   |   |   |   |   | 5.0             | 3.75            |
| 3    | 36 | 30 | 1 1/2 | 1/2 | 5/8 |   | 18 3/4 | 5 1/2 | 8 1/4 |   | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8  | 16     | 1/2 | 5 1/2 | 3     | 16 3/4 |   | 24 |   |   |   |   |   | 7.5             | 6.0             |
| 4    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 11    |   | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 30 |   |   |   |   |   | 12.0            | 10.0            |
| 5    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 11    |   | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 30 |   |   |   |   |   | 12.0            | 10.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 349

E

STANDARD SIGN  
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

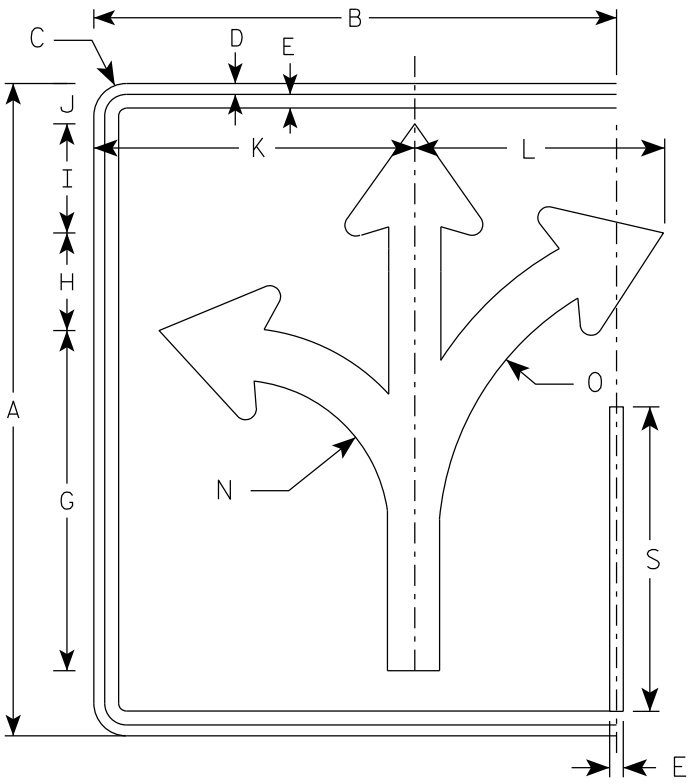
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

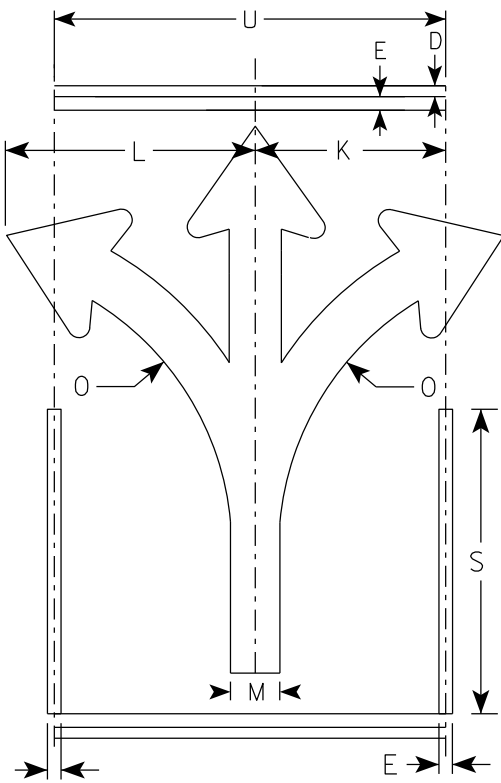
1. Sign is Type II - Type H Reflective
2. Color:

Background - White

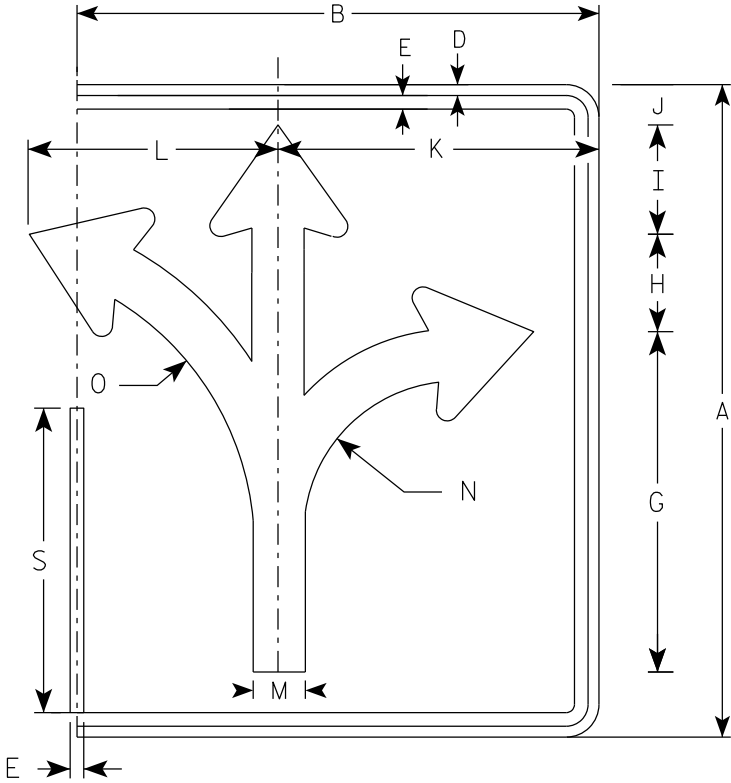
Message - Black
3. Message Series - None



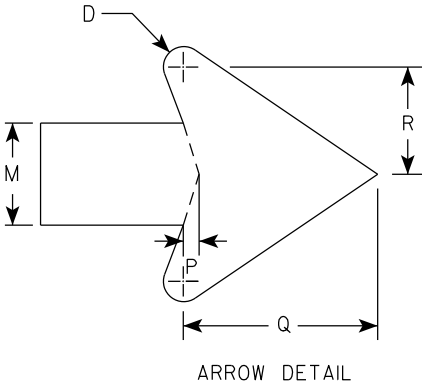
(D)



(D)



(D)



|      |    |    |       |     |     |   |        |       |       |       |        |        |       |        |        |     |       |       |        |   |    |   |   |   |   |   |                 | ENDS            | MIDDLE |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|--------|--------|-------|--------|--------|-----|-------|-------|--------|---|----|---|---|---|---|---|-----------------|-----------------|--------|
| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K      | L      | M     | N      | O      | P   | Q     | R     | S      | T | U  | V | W | X | Y | Z | Area<br>sq. ft. | Area<br>sq. ft. |        |
| 1    |    |    |       |     |     |   |        |       |       |       |        |        |       |        |        |     |       |       |        |   |    |   |   |   |   |   |                 |                 |        |
| 2S   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 5     | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 18 |   |   |   |   |   | 5.0             | 3.75            |        |
| 2M   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 5     | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 18 |   |   |   |   |   | 5.0             | 3.75            |        |
| 3    | 36 | 30 | 1 1/2 | 1/2 | 5/8 |   | 18 3/4 | 5 1/2 | 6     | 2 1/4 | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8  | 16     | 1/2 | 5 1/2 | 3     | 16 3/4 |   | 24 |   |   |   |   |   | 7.5             | 6.0             |        |
| 4    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 30 |   |   |   |   |   | 12.0            | 10.0            |        |
| 5    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 30 |   |   |   |   |   | 12.0            | 10.0            |        |

PROJECT NO:

HWY:

COUNTY:

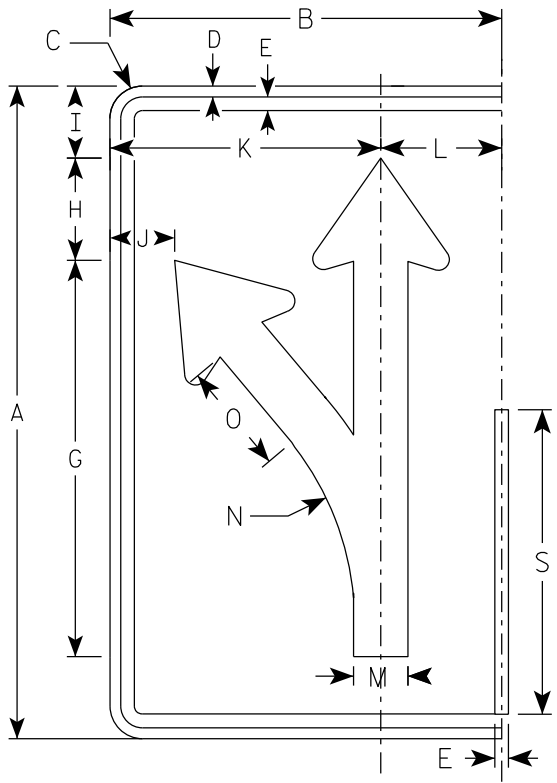
SHEET NO: 350

E

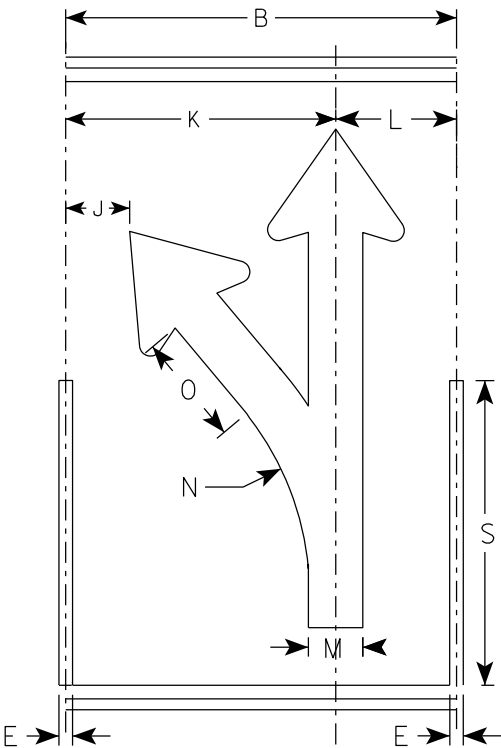


NOTES

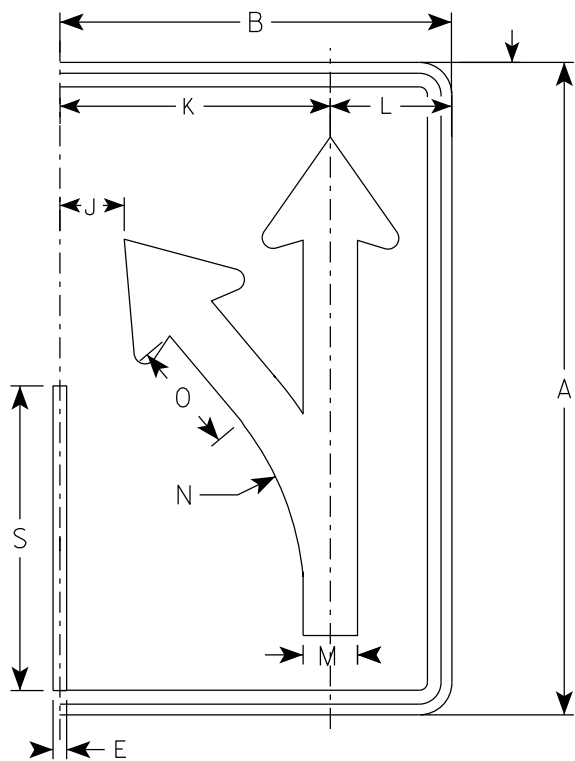
- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - None



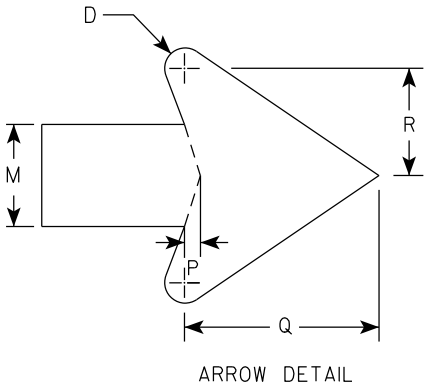
(E)



(E)



(E)



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K      | L     | M     | N      | O     | P   | Q     | R     | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|--------|-------|-------|--------|-------|-----|-------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |       |        |       |       |        |       |     |       |       |        |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 |   | 21 7/8 | 5 5/8 | 4     | 4 7/8 | 16 1/8 | 7 3/4 | 3     | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 |   |   |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 351

E

STANDARD SIGN  
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

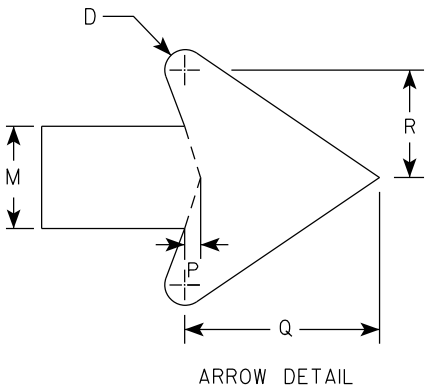
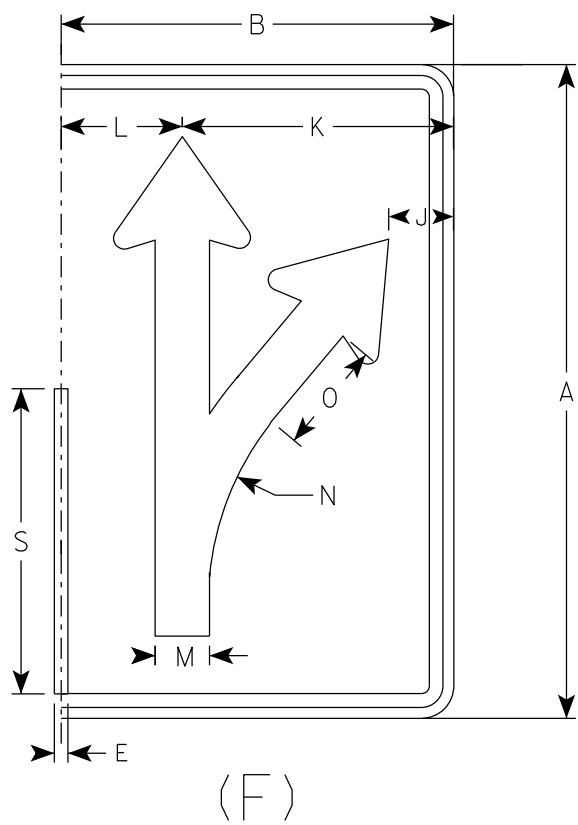
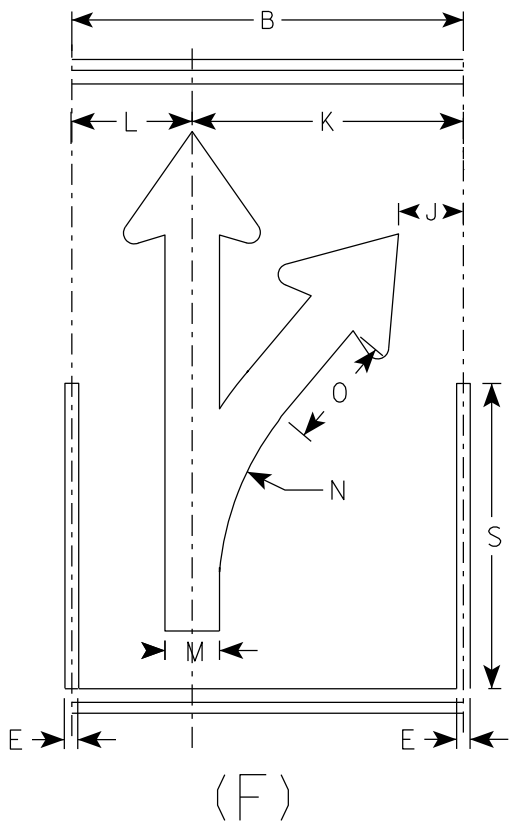
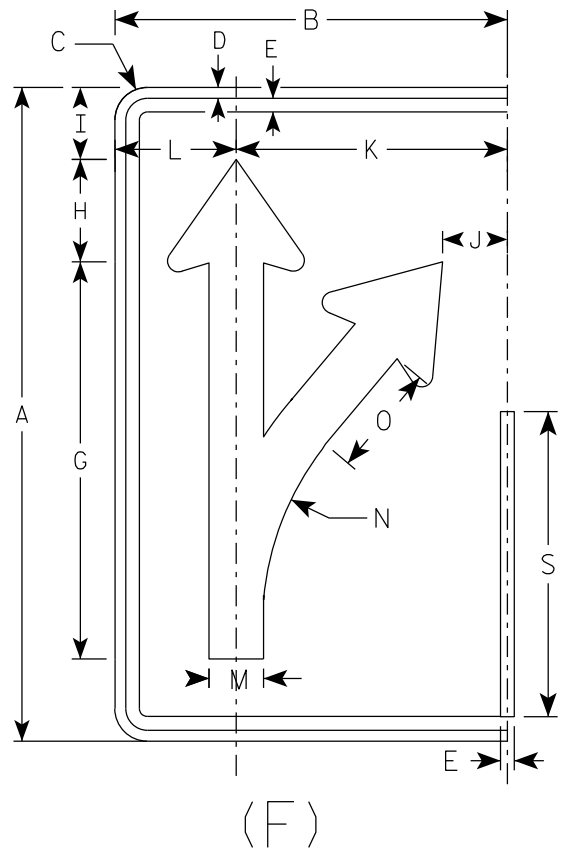
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K      | L     | M     | N      | O     | P   | Q     | R     | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|--------|-------|-------|--------|-------|-----|-------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |       |        |       |       |        |       |     |       |       |        |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   |   |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 |   | 21 7/8 | 5 5/8 | 4     | 4 7/8 | 16 1/8 | 7 3/4 | 3     | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 |   |   |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   |   |   |   |   |   |   | 10.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 352

E

STANDARD SIGN  
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

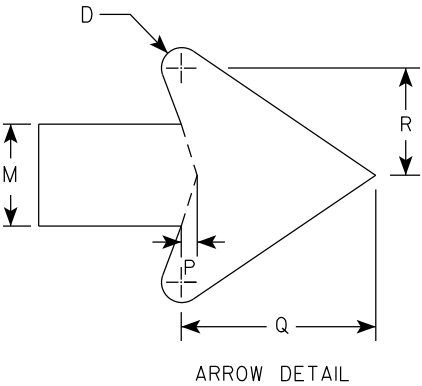
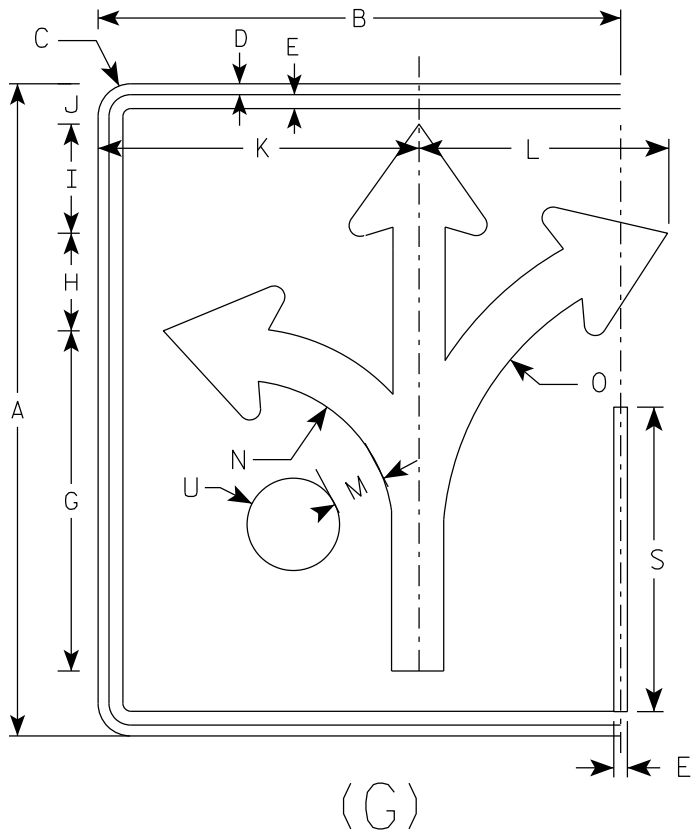


NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K      | L      | M     | N      | O      | P   | Q     | R     | S      | T | U     | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|--------|--------|-------|--------|--------|-----|-------|-------|--------|---|-------|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |       |        |        |       |        |        |     |       |       |        |   |       |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 5     | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 2 1/8 |   |   |   |   |   | 5.0             |
| 2M   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 5     | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 2 1/8 |   |   |   |   |   | 5.0             |
| 3    | 36 | 30 | 1 1/2 | 1/2 | 5/8 |   | 18 3/4 | 5 1/2 | 6     | 3 1/8 | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8  | 16     | 1/2 | 5 1/2 | 3     | 16 3/4 |   | 2 1/2 |   |   |   |   |   | 7.5             |
| 4    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 12.0            |
| 5    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 12.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 353

E

STANDARD SIGN

R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

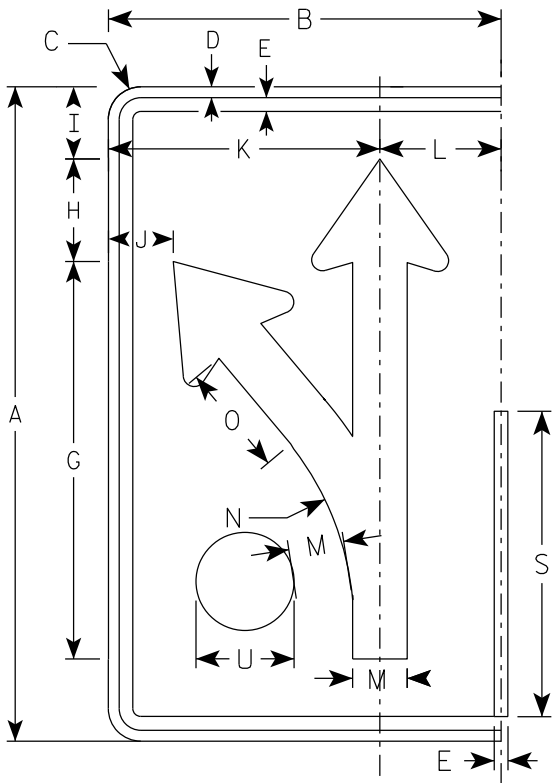
7

NOTES

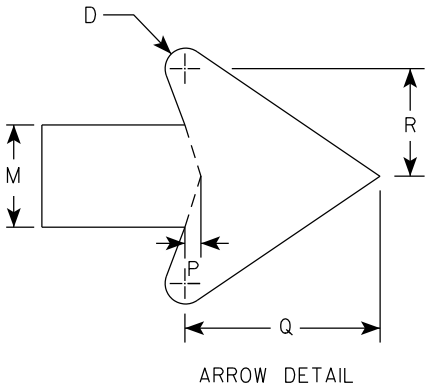
1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



(H)



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J     | K      | L     | M     | N      | O     | P   | Q     | R     | S      | T | U     | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|-------|--------|-------|-------|--------|-------|-----|-------|-------|--------|---|-------|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |       |        |       |       |        |       |     |       |       |        |   |       |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   | 2 1/8 |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 18 1/4 | 4 3/4 | 3 1/4 | 3     | 12 1/2 | 5 1/2 | 2 1/2 | 13 1/4 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     |   | 2 1/8 |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 |   | 21 7/8 | 5 5/8 | 4     | 4 7/8 | 16 1/8 | 7 3/4 | 3     | 15 7/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 |   | 2 1/2 |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 7 1/2 | 5 1/4 | 5 3/8 | 20 1/2 | 9 1/2 | 4     | 21 1/4 | 8 1/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 10.0            |

STANDARD SIGN

R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

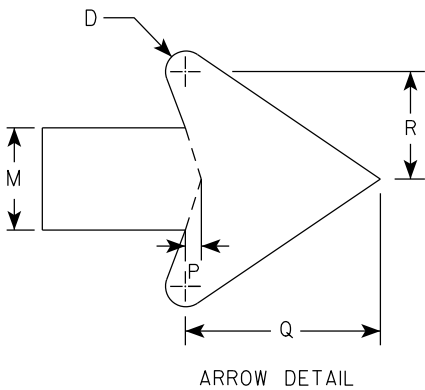
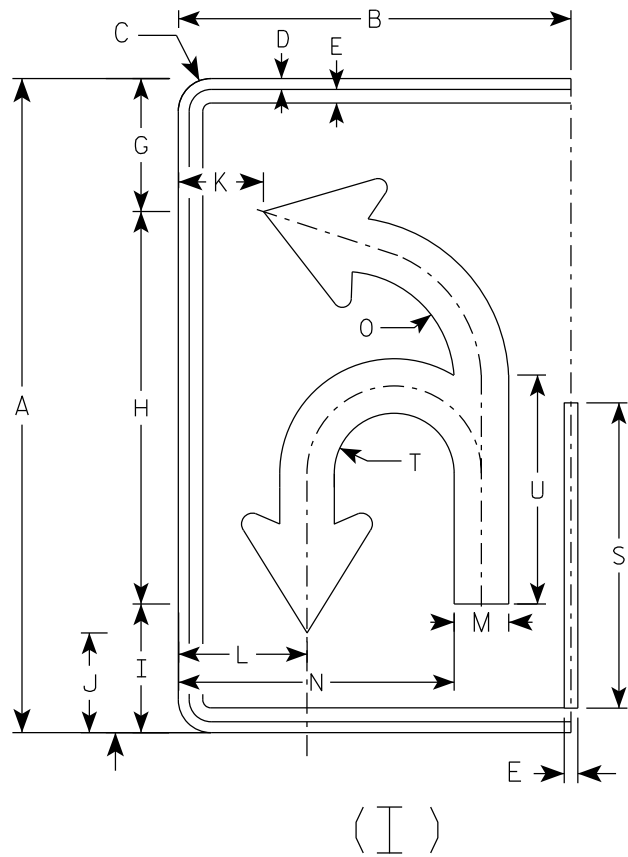


NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



| SIZE | A  | B  | C     | D   | E   | F | G      | H      | I     | J     | K     | L     | M     | N      | O     | P   | Q     | R     | S      | T     | U      | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|--------|-------|-------|-------|-------|-------|--------|-------|-----|-------|-------|--------|-------|--------|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |        |       |       |       |       |       |        |       |     |       |       |        |       |        |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 6 1/8  | 18     | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     | 2 3/4 | 10 1/2 |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 |   | 6 1/8  | 18     | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14     | 2 3/4 | 10 1/2 |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 |   | 21 7/8 | 21 5/8 | 7 1/8 | 5 1/2 | 5 7/8 | 8 1/4 | 3     | 16 3/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 3 1/4 | 12 5/8 |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10    | 4     | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   |   | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10    | 4     | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 |   |   |   |   |   | 10.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 355

E

STANDARD SIGN

R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

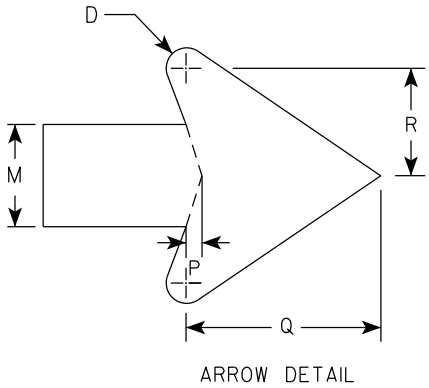
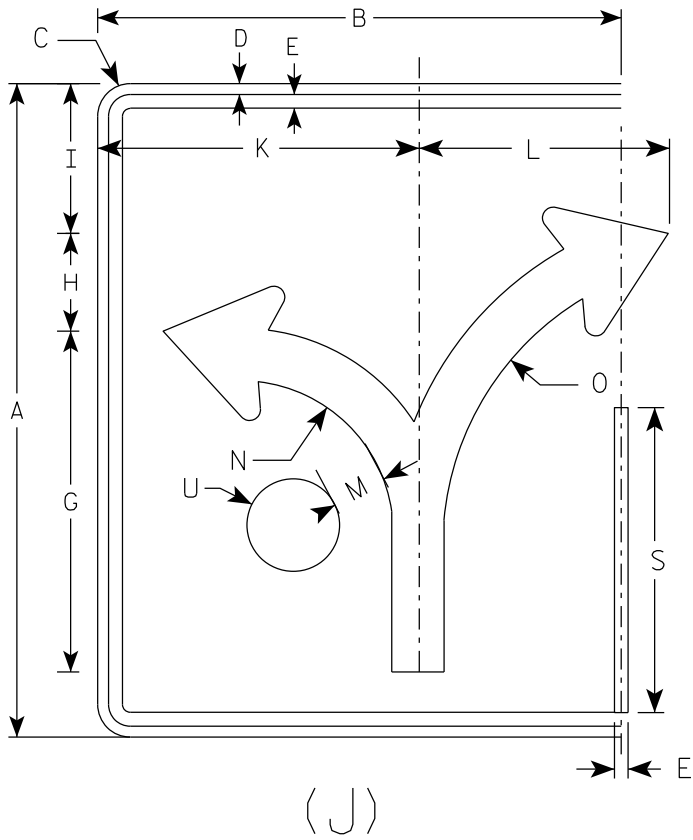
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I     | J | K      | L      | M     | N      | O      | P   | Q     | R     | S      | T | U     | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|-------|---|--------|--------|-------|--------|--------|-----|-------|-------|--------|---|-------|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |       |   |        |        |       |        |        |     |       |       |        |   |       |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 6 7/8 |   | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 2 1/8 |   |   |   |   |   | 5.0             |
| 2M   | 30 | 24 | 1 1/2 | 1/2 | 5/8 |   | 15 5/8 | 4 1/2 | 6 7/8 |   | 14 3/4 | 11 1/2 | 2 3/8 | 7      | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14     |   | 2 1/8 |   |   |   |   |   | 5.0             |
| 3    | 36 | 30 | 1 1/2 | 1/2 | 5/8 |   | 18 3/4 | 5 1/2 | 8 1/4 |   | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8  | 16     | 1/2 | 5 1/2 | 3     | 16 3/4 |   | 2 1/2 |   |   |   |   |   | 7.5             |
| 4    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 11    |   | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 12.0            |
| 5    | 48 | 36 | 2 1/4 | 3/4 | 1   |   | 24 7/8 | 7 1/4 | 11    |   | 23 1/8 | 18     | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4     | 22 3/8 |   | 3 3/8 |   |   |   |   |   | 12.0            |

STANDARD SIGN

R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

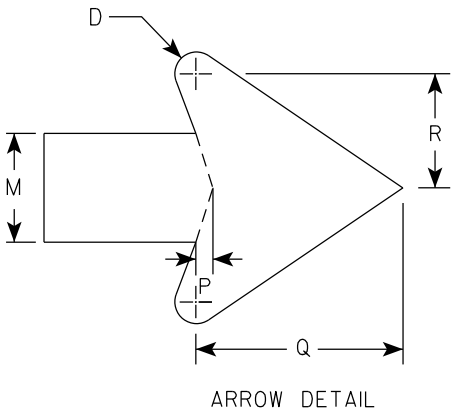
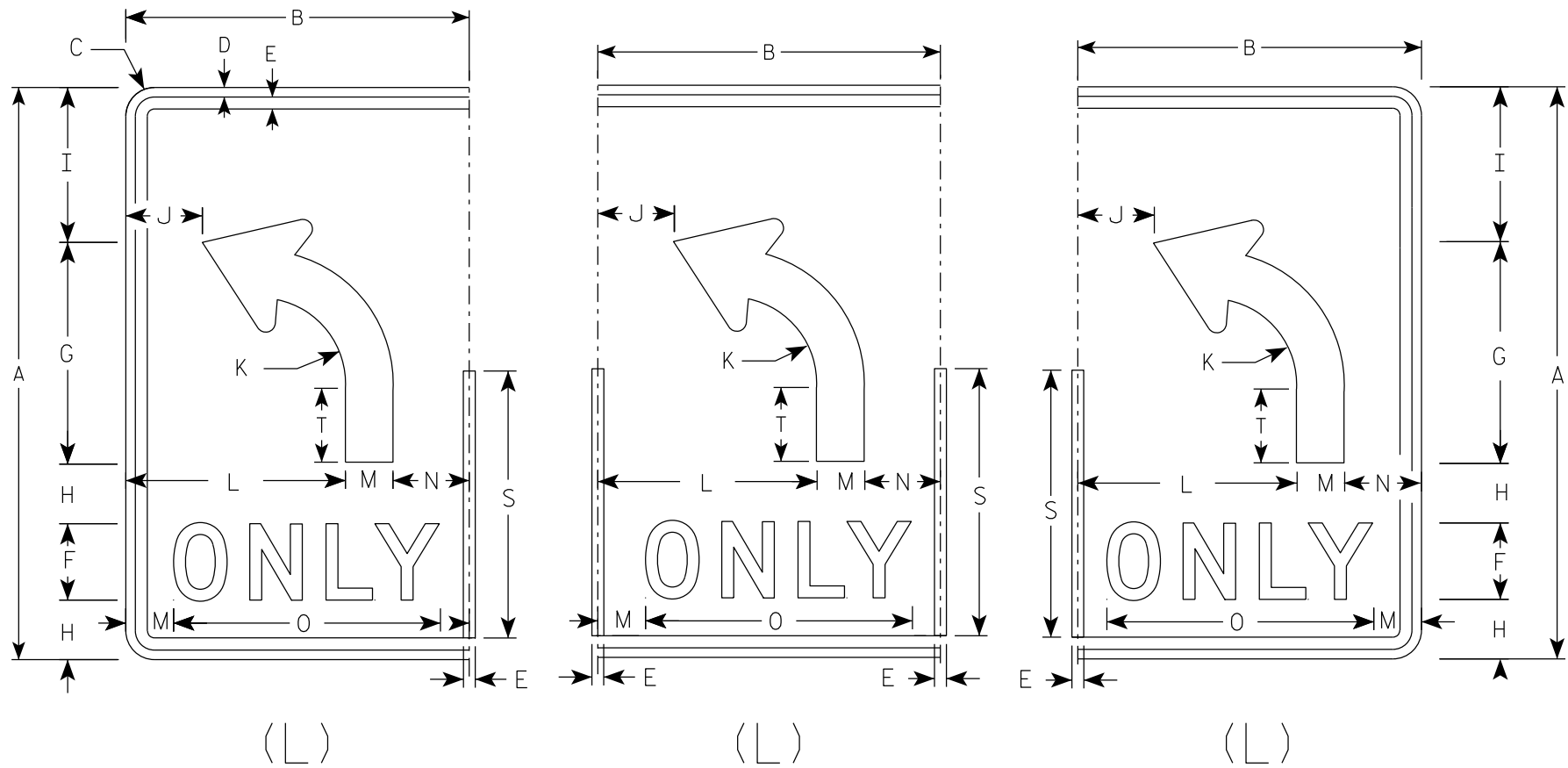
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I      | J     | K     | L      | M     | N | O      | P   | Q     | R     | S      | T     | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|--------|-------|-------|--------|-------|---|--------|-----|-------|-------|--------|-------|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |        |       |       |        |       |   |        |     |       |       |        |       |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 |   |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14     | 3 1/2 | 9 3/4  | 6     | 5 3/8 | 15     | 3     | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 |   |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 |   |   |   |   |   |   | 10.0            |

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

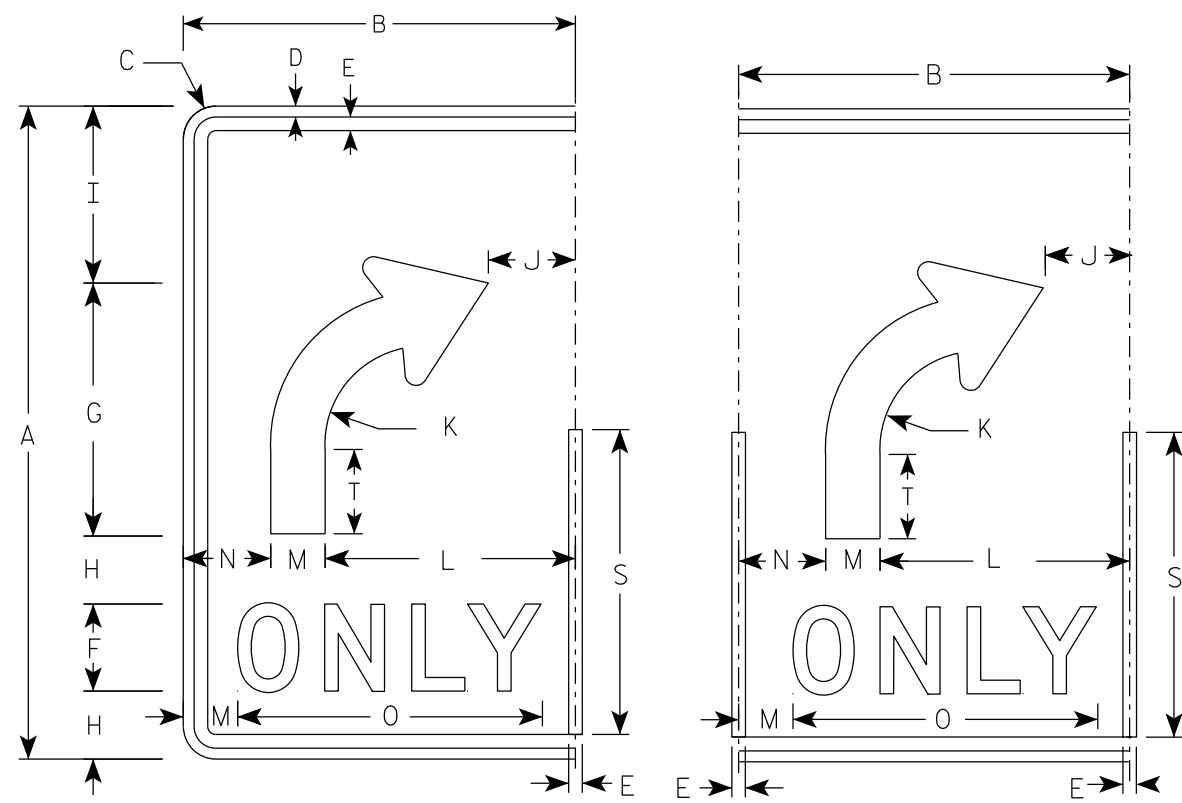
for State Traffic Engineer

DATE 2/14/23

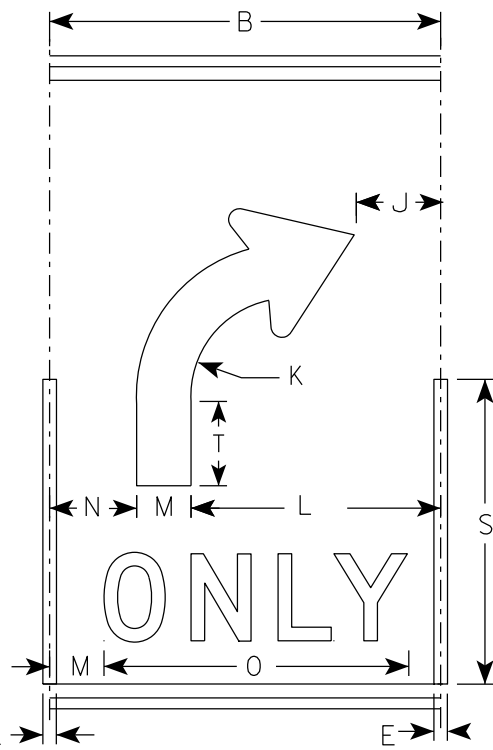
PLATE NO. R3-8.2

NOTES

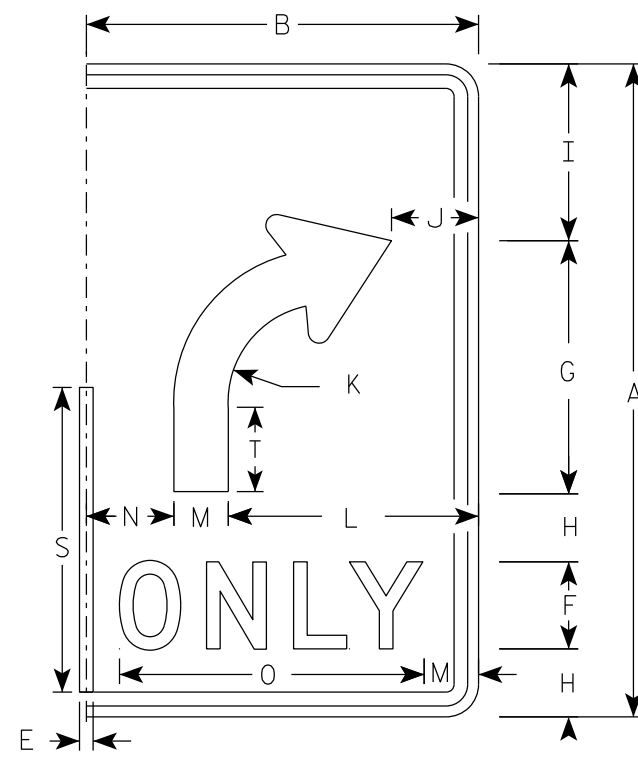
- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D



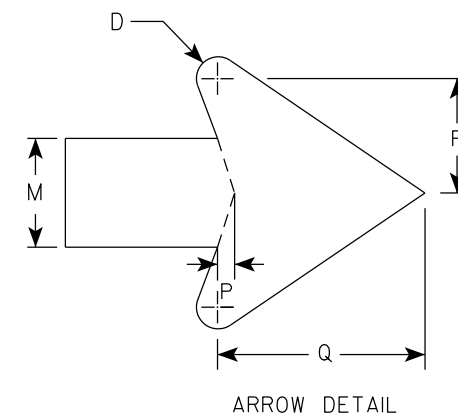
(R)



(R)



(R)



| SIZE | A  | B  | C     | D   | E   | F | G      | H     | I      | J     | K     | L      | M     | N | O      | P   | Q     | R     | S      | T     | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|--------|-------|--------|-------|-------|--------|-------|---|--------|-----|-------|-------|--------|-------|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |        |       |        |       |       |        |       |   |        |     |       |       |        |       |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8  | 4     | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14     | 3/8 | 4 3/4 | 2 5/8 | 14     | 3 7/8 |   |   |   |   |   |   | 3.75            |
| 3    | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14     | 3 1/2 | 9 3/4  | 6     | 5 3/8 | 15     | 3     | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 |   |   |   |   |   |   | 6.0             |
| 4    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 2 1/4 | 3/4 | 1   | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18     | 4     | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 |   |   |   |   |   |   | 10.0            |

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

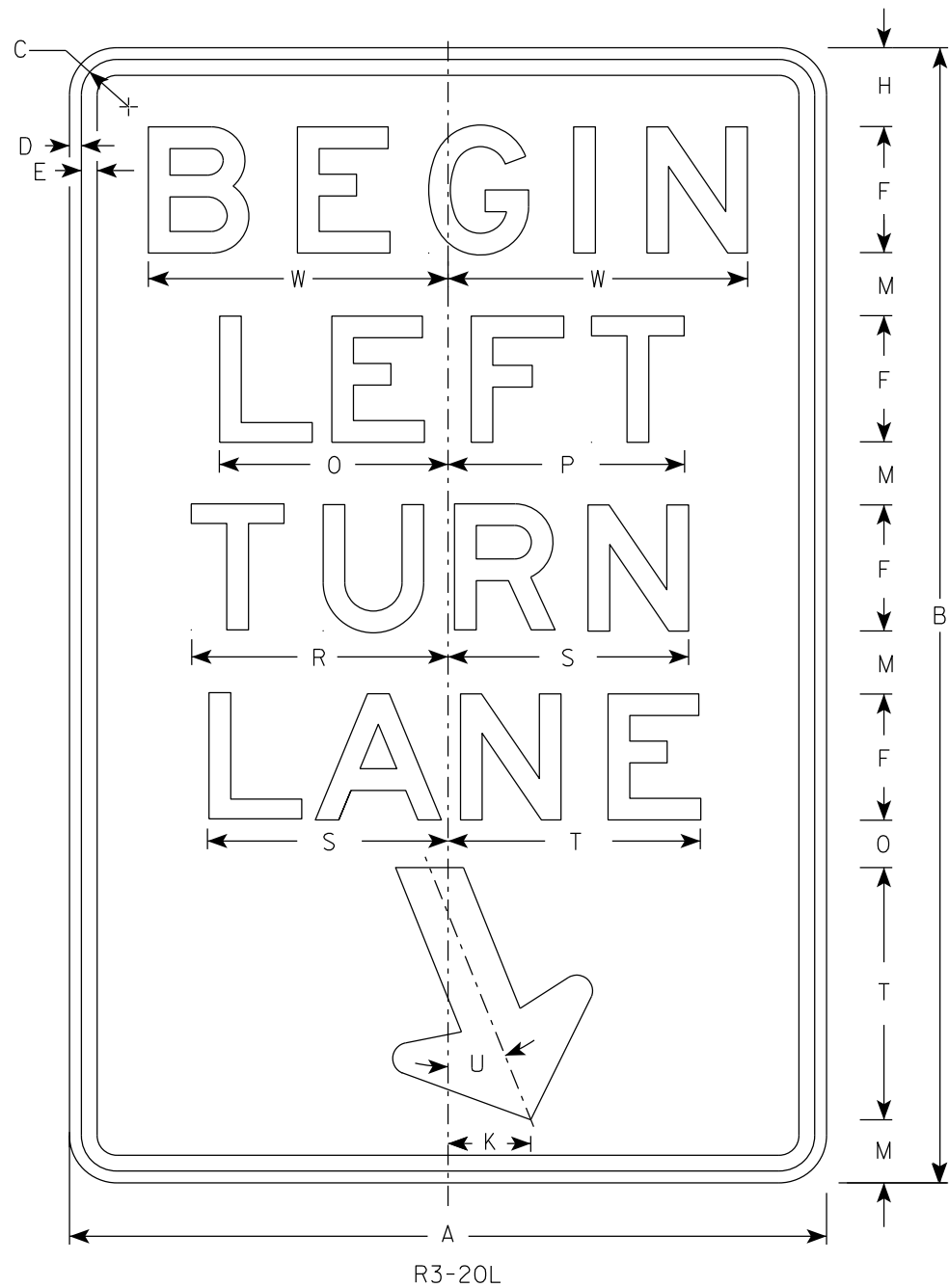
for State Traffic Engineer

DATE 2/14/23

PLATE NO. R3-8.2



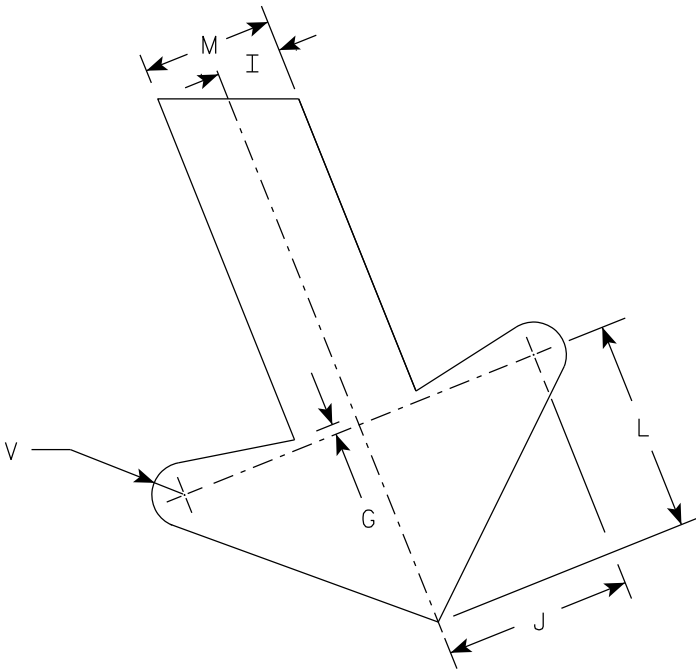
7



R3-20L

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - E



ARROW DETAIL

7

| SIZE | A  | B  | C     | D   | E   | F | G   | H     | I     | J     | K     | L     | M | N     | O      | P      | Q | R      | S      | T  | U   | v   | W      | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-----|-------|-------|-------|-------|-------|---|-------|--------|--------|---|--------|--------|----|-----|-----|--------|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 7 1/4  | 7 1/2  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 2M   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 7 1/4  | 7 1/2  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 3    | 36 | 54 | 1 7/8 | 1/2 | 5/8 | 6 | 3/8 | 3 3/4 | 1 1/2 | 4 1/4 | 4     | 4 7/8 | 3 | 2 1/4 | 10 7/8 | 11 1/4 |   | 12 1/4 | 11 1/2 | 12 | 22° | 3/4 | 13 1/4 |   |   |   | 13.5            |
| 4    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 5    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |

PROJECT NO:

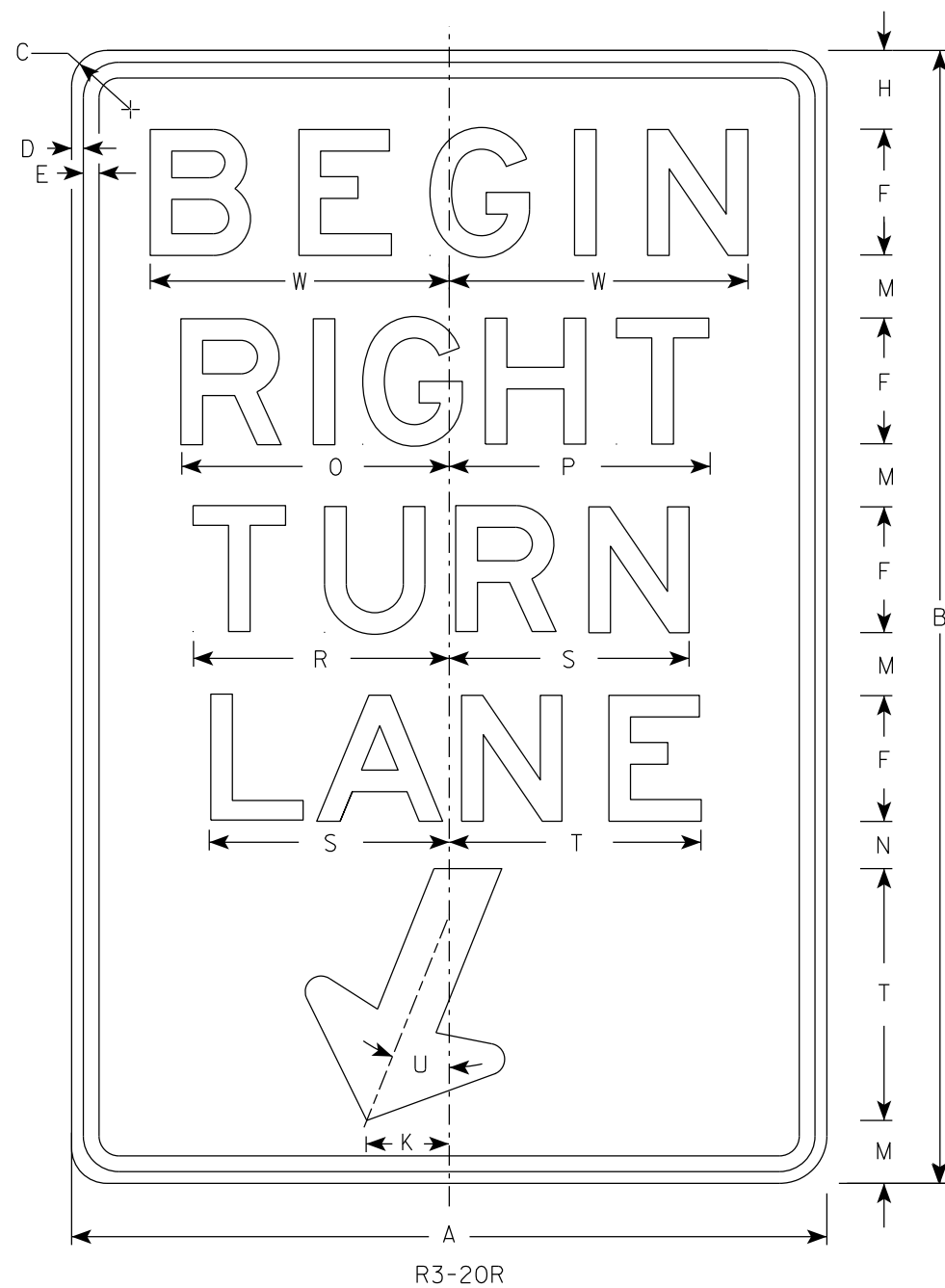
HWY:

COUNTY:

SHEET NO: 359

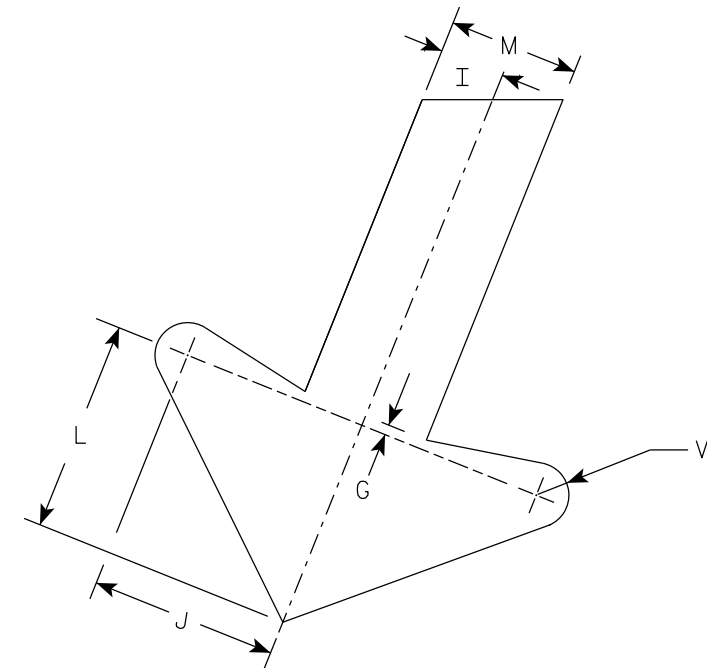
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - E



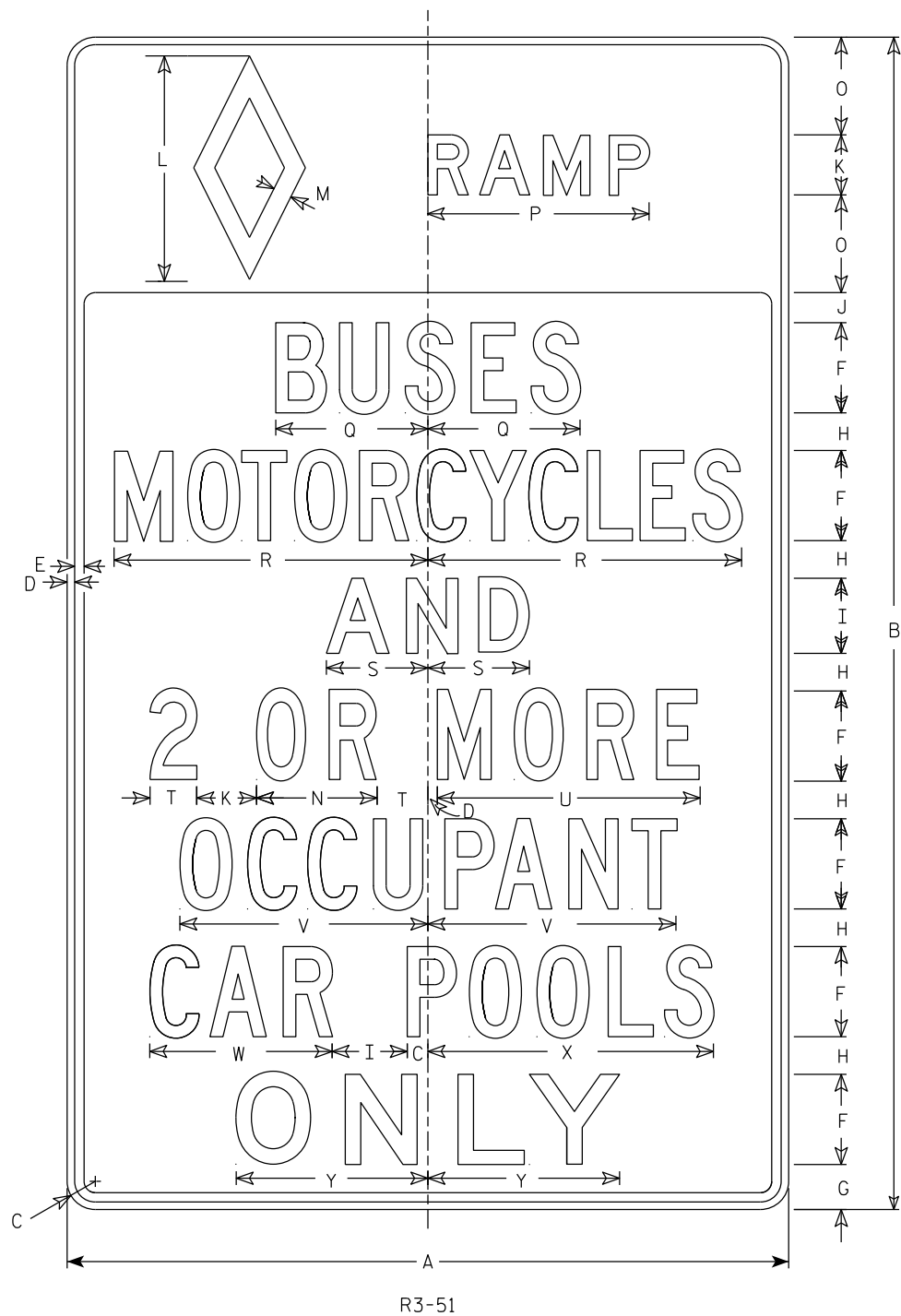
ARROW DETAIL

7

| SIZE | A  | B  | C     | D   | E   | F | G   | H     | I     | J     | K     | L     | M | N     | O      | P      | Q | R      | S      | T  | U   | V   | W      | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-----|-------|-------|-------|-------|-------|---|-------|--------|--------|---|--------|--------|----|-----|-----|--------|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 8 1/2  | 8 1/4  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 2M   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 4 | 1/4 | 2 1/2 | 1     | 2 7/8 | 2 5/8 | 3 1/4 | 2 | 1 1/2 | 8 1/2  | 8 1/4  |   | 8 1/8  | 7 5/8  | 8  | 22° | 1/2 | 9 1/2  |   |   |   | 6.0             |
| 3    | 36 | 54 | 1 7/8 | 1/2 | 5/8 | 6 | 3/8 | 3 3/4 | 1 1/2 | 4 1/4 | 4     | 4 7/8 | 3 | 2 1/4 | 12 3/4 | 12 1/2 |   | 12 1/4 | 11 1/2 | 12 | 22° | 3/4 | 13 1/4 |   |   |   | 13.5            |
| 4    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |
| 5    |    |    |       |     |     |   |     |       |       |       |       |       |   |       |        |        |   |        |        |    |     |     |        |   |   |   |                 |

|             |  |      |  |         |  |               |  |   |
|-------------|--|------|--|---------|--|---------------|--|---|
| PROJECT NO: |  | HWY: |  | COUNTY: |  | SHEET NO: 360 |  | E |
|-------------|--|------|--|---------|--|---------------|--|---|





NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - See Note 5
  - Message - See Note 5
- 3. Message Series - See Note 6
- 4. Top symbol and legend are white Type H Reflective with Black background.  
Bottom legend is Black with White Type H Reflective background.
- 5. Lines 1 and 4 are Series D.  
Lines 2, 3, 5, 6, and 7 are Series C.  
Bottom Line is Series E.

| SIZE | A  | B  | C | D   | E   | F | G | H     | I | J | K | L  | M     | N | O     | P      | Q      | R      | S     | T     | U      | V      | W      | X  | Y      | Z | Area<br>sq. ft. |
|------|----|----|---|-----|-----|---|---|-------|---|---|---|----|-------|---|-------|--------|--------|--------|-------|-------|--------|--------|--------|----|--------|---|-----------------|
| 1    |    |    |   |     |     |   |   |       |   |   |   |    |       |   |       |        |        |        |       |       |        |        |        |    |        |   |                 |
| 2S   | 48 | 78 | 3 | 1/2 | 5/8 | 6 | 3 | 2 1/2 | 5 | 2 | 4 | 15 | 1 1/4 | 8 | 6 1/2 | 14 3/4 | 10 1/8 | 20 7/8 | 6 3/4 | 3 1/8 | 17 1/2 | 16 1/2 | 12 1/8 | 19 | 12 3/4 |   | 26.0            |
| 2M   | 48 | 78 | 3 | 1/2 | 5/8 | 6 | 3 | 2 1/2 | 5 | 2 | 4 | 15 | 1 1/4 | 8 | 6 1/2 | 14 3/4 | 10 1/8 | 20 7/8 | 6 3/4 | 3 1/8 | 17 1/2 | 16 1/2 | 12 1/8 | 19 | 12 3/4 |   | 26.0            |
| 3    |    |    |   |     |     |   |   |       |   |   |   |    |       |   |       |        |        |        |       |       |        |        |        |    |        |   |                 |
| 4    |    |    |   |     |     |   |   |       |   |   |   |    |       |   |       |        |        |        |       |       |        |        |        |    |        |   |                 |
| 5    |    |    |   |     |     |   |   |       |   |   |   |    |       |   |       |        |        |        |       |       |        |        |        |    |        |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 361

E

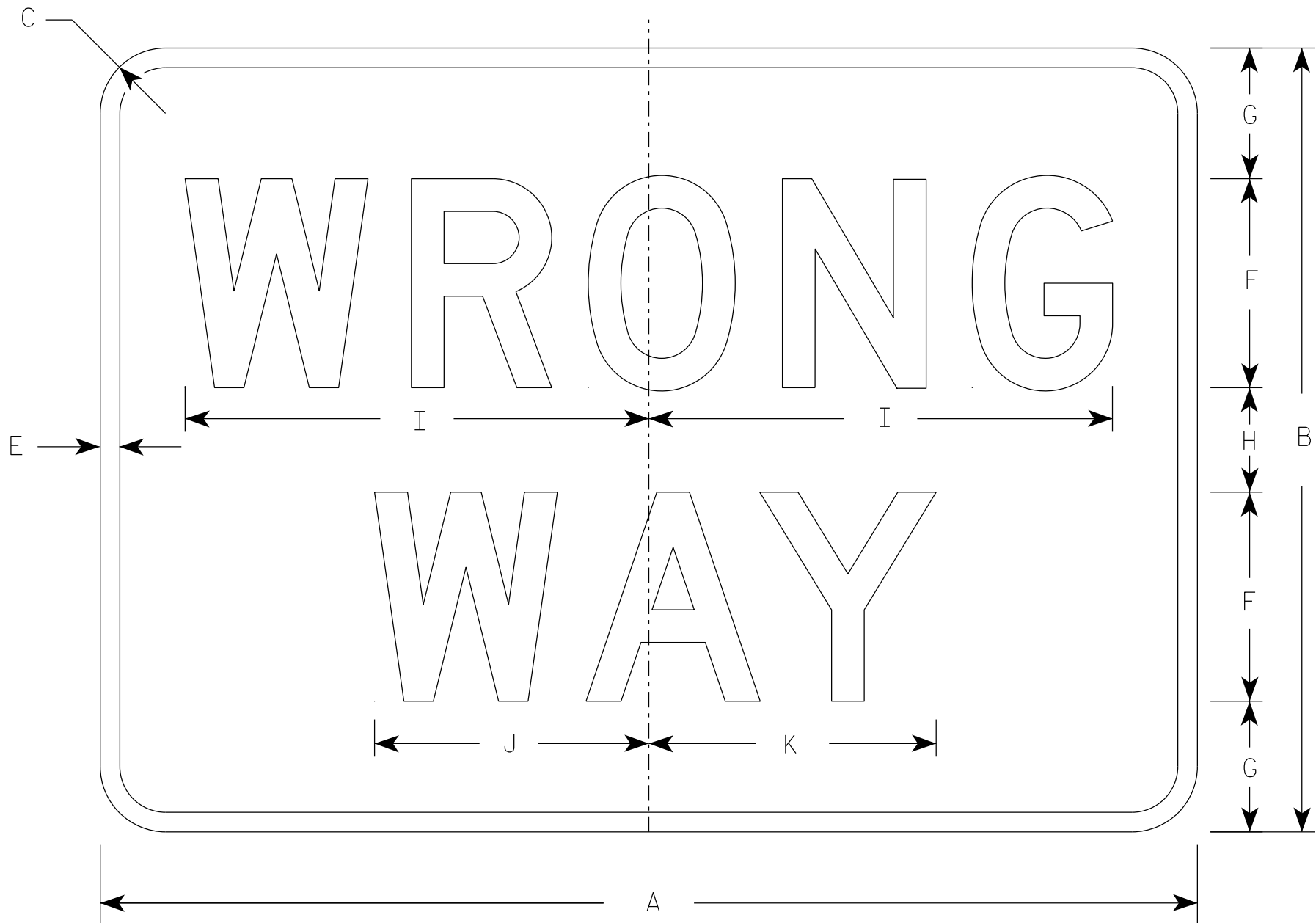
STANDARD SIGN  
R3-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/27/24 PLATE NO. R3-51.7

7



R5-1A

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - Red
  - Message - White
- 3. Message Series - D

7

| SIZE | A  | B  | C     | D | E   | F | G     | H | I      | J      | K     | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|---|-----|---|-------|---|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 | 18 | 1 1/2 |   | 1/2 | 5 | 3     | 2 | 11     | 6 1/2  | 6 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 2S   | 36 | 24 | 1 1/2 |   | 5/8 | 6 | 4 1/2 | 3 | 13 1/4 | 7 7/8  | 8 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.00            |
| 2M   | 42 | 30 | 1 7/8 |   | 3/4 | 8 | 5     | 4 | 17 3/4 | 10 1/2 | 11    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.75            |
| 3    | 42 | 30 | 1 7/8 |   | 3/4 | 8 | 5     | 4 | 17 3/4 | 10 1/2 | 11    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.75            |
| 4    | 42 | 30 | 1 7/8 |   | 3/4 | 8 | 5     | 4 | 17 3/4 | 10 1/2 | 11    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.75            |
| 5    | 42 | 30 | 1 7/8 |   | 3/4 | 8 | 5     | 4 | 17 3/4 | 10 1/2 | 11    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.75            |

STANDARD SIGN  
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-1A.3



7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - Lines 1, 2, and 5 are Series C.
  - Lines 3 and 4 are Series B.

7

| SIZE | A  | B | C     | D   | E   | F | G | H | I     | J      | K      | L  | M      | N     | O     | P | Q | R     | S  | T  | U     | V     | W      | X  | Y      | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|---|---|-------|--------|--------|----|--------|-------|-------|---|---|-------|----|----|-------|-------|--------|----|--------|---|-----------------|
| 1    |    |   |       |     |     |   |   |   |       |        |        |    |        |       |       |   |   |       |    |    |       |       |        |    |        |   |                 |
| 2S   |    |   |       |     |     |   |   |   |       |        |        |    |        |       |       |   |   |       |    |    |       |       |        |    |        |   |                 |
| 2M   |    |   |       |     |     |   |   |   |       |        |        |    |        |       |       |   |   |       |    |    |       |       |        |    |        |   |                 |
| 3    |    |   |       |     |     |   |   |   |       |        |        |    |        |       |       |   |   |       |    |    |       |       |        |    |        |   |                 |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 4 | 3 | 2 | 3 1/2 | 14 1/4 | 14 7/8 | 11 | 11 1/2 | 4 3/4 | 1 3/4 | 9 |   | 1 3/8 | 10 | 11 | 2 1/2 | 1 3/4 | 15 1/2 | 13 | 13 5/8 |   | 9.0             |
| 5    | 36 |   | 2 1/4 | 5/8 | 3/4 | 4 | 3 | 2 | 3 1/2 | 14 1/4 | 14 7/8 | 11 | 11 1/2 | 4 3/4 | 1 3/4 | 9 |   | 1 3/8 | 10 | 11 | 2 1/2 | 1 3/4 | 15 1/2 | 13 | 13 5/8 |   | 9.0             |

STANDARD SIGN

R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

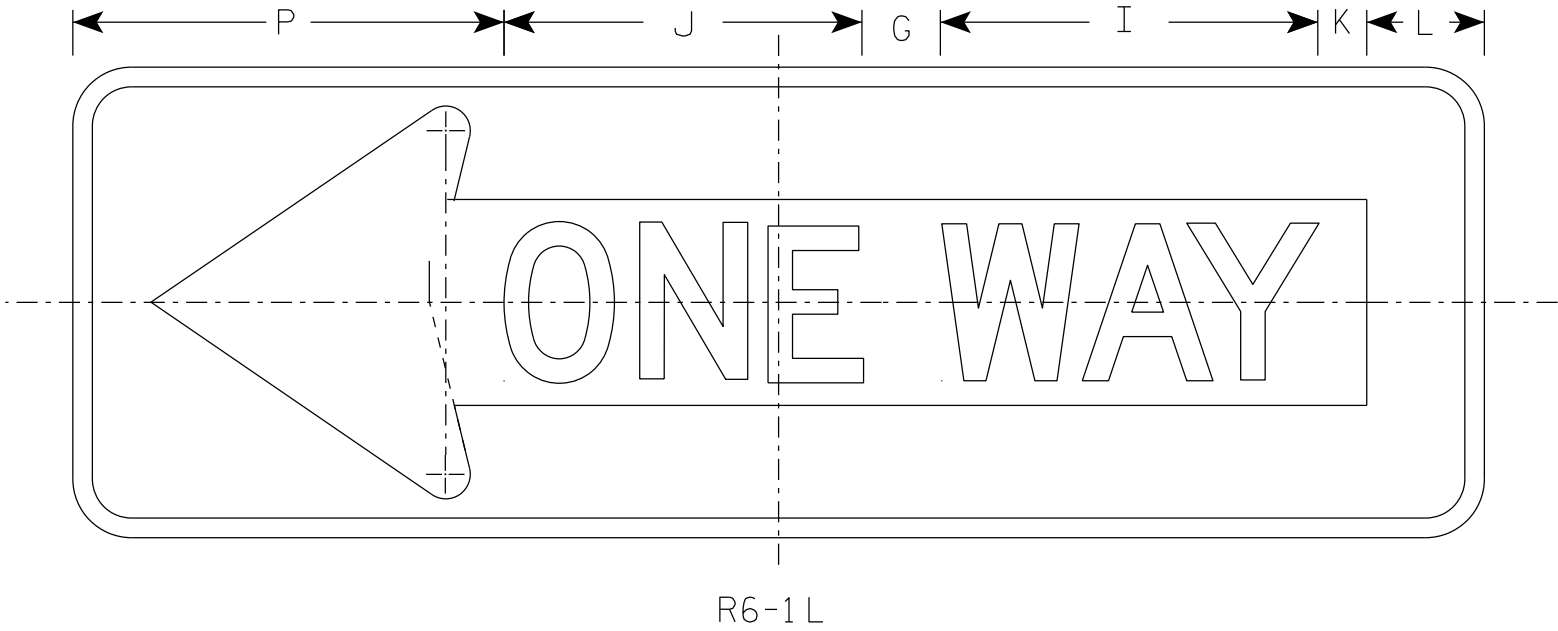
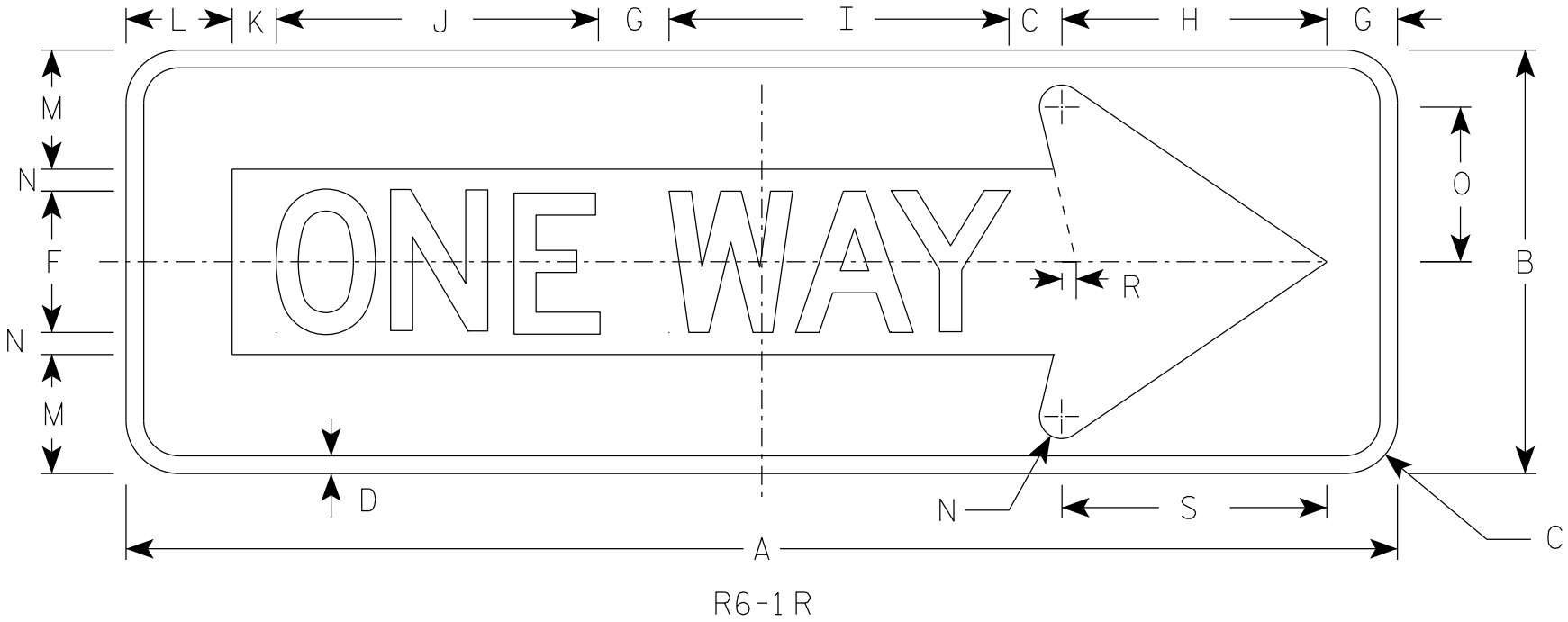
DATE 8/30/23 PLATE NO. R5-57.11

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - Black

Message - Black Legend & White Arrow & Border
3. Message Series - D



| SIZE | A  | B  | C     | D   | E | F | G | H      | I      | J      | K     | L     | M     | N   | O     | P      | Q | R   | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|---|---|---|--------|--------|--------|-------|-------|-------|-----|-------|--------|---|-----|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |   |   |   |        |        |        |       |       |       |     |       |        |   |     |        |   |   |   |   |   |   |   |                 |
| 2S   | 36 | 12 | 1 1/2 | 1/2 |   | 4 | 2 | 7 1/2  | 9 5/8  | 9 1/8  | 1 1/4 | 3     | 3 3/8 | 5/8 | 4 3/8 | 11     |   | 3/8 | 7 1/2  |   |   |   |   |   |   |   | 3.0             |
| 2M   | 54 | 18 | 1 1/2 | 3/4 |   | 6 | 3 | 11 1/4 | 13 5/8 | 14 1/2 | 1 7/8 | 4 1/2 | 5     | 1   | 6 1/2 | 16 1/2 |   | 5/8 | 11 1/4 |   |   |   |   |   |   |   | 6.75            |
| 3    | 54 | 18 | 1 1/2 | 3/4 |   | 6 | 3 | 11 1/4 | 13 5/8 | 14 1/2 | 1 7/8 | 4 1/2 | 5     | 1   | 6 1/2 | 16 1/2 |   | 5/8 | 11 1/4 |   |   |   |   |   |   |   | 6.75            |
| 4    | 54 | 18 | 1 1/2 | 3/4 |   | 6 | 3 | 11 1/4 | 13 5/8 | 14 1/2 | 1 7/8 | 4 1/2 | 5     | 1   | 6 1/2 | 16 1/2 |   | 5/8 | 11 1/4 |   |   |   |   |   |   |   | 6.75            |
| 5    |    |    |       |     |   |   |   |        |        |        |       |       |       |     |       |        |   |     |        |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
R6-1 L&R

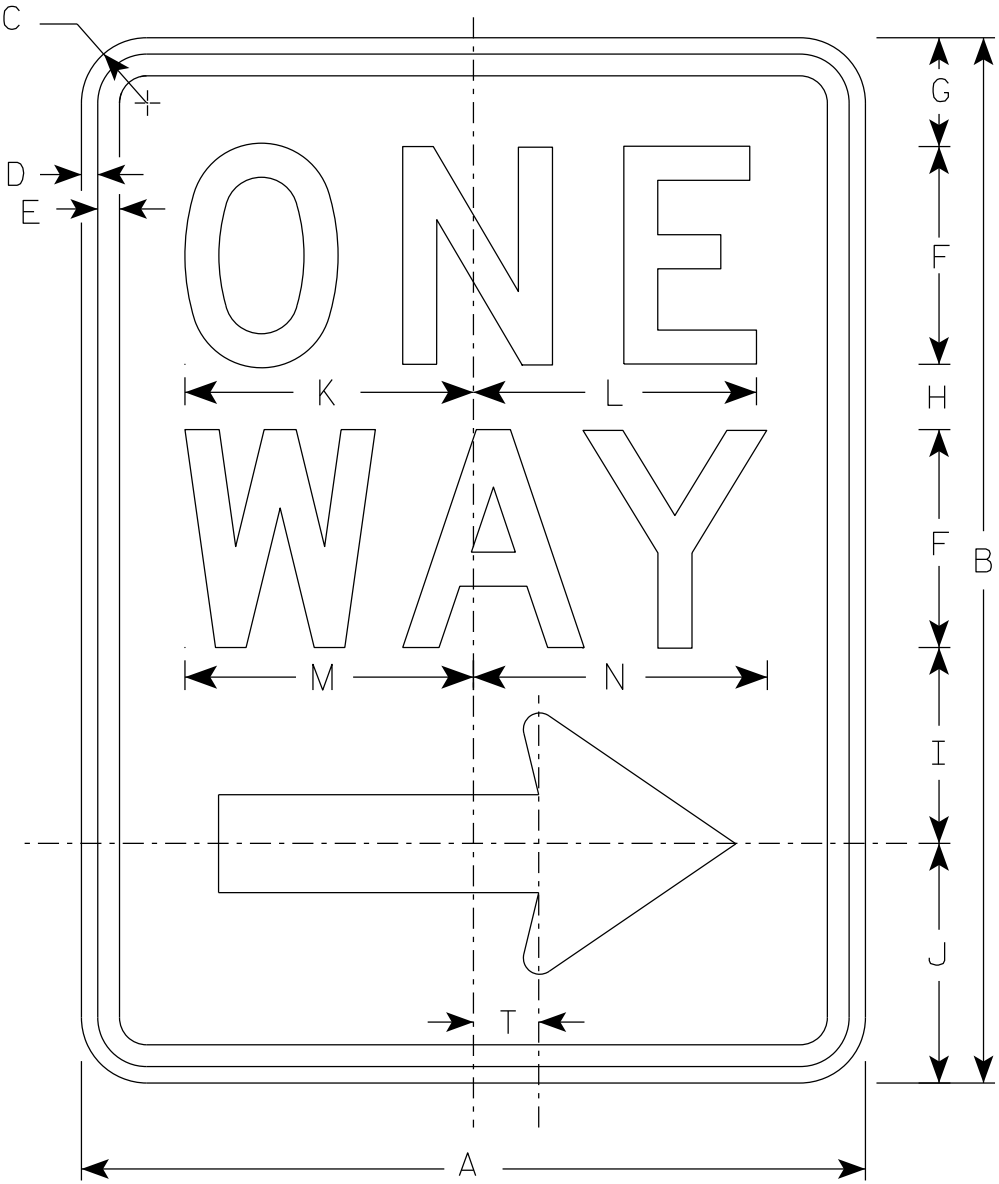
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/30/23 PLATE NO. R6-1.4



7

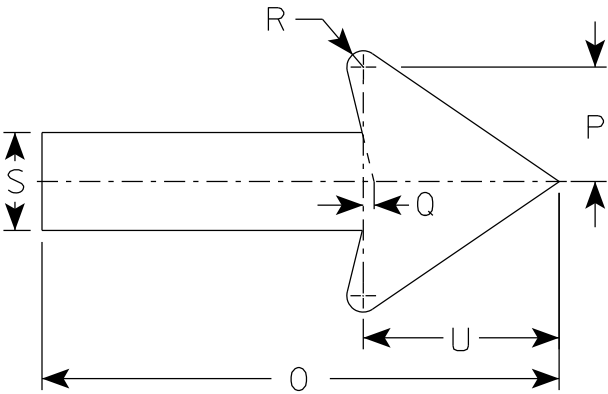


R6 - 2R

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - D
- 4. R6-2L same as R6-2R except arrow points to the left.

Arrow Detail



7

| SIZE | A  | B  | C     | D   | E   | F  | G     | H     | I     | J      | K      | L      | M      | N      | O      | P     | Q   | R   | S     | T     | U     | V | W | X | Y | Z |
|------|----|----|-------|-----|-----|----|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-----|-----|-------|-------|-------|---|---|---|---|---|
| 1    | 18 | 24 | 1 1/2 | 3/8 | 1/2 | 5  | 2 1/2 | 1 1/2 | 4 1/2 | 5 1/2  | 6 5/8  | 6 1/2  | 6 5/8  | 6 3/4  | 11 7/8 | 2 5/8 | 1/4 | 3/8 | 2 1/4 | 1 1/2 | 4 1/2 |   |   |   |   |   |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 6  | 3     | 2 1/2 | 5 1/2 | 7      | 8 1/8  | 8 1/8  | 8 1/2  | 8 5/8  | 16     | 3 1/2 | 3/8 | 1/2 | 3     | 2     | 6     |   |   |   |   |   |
| 2M   | 30 | 36 | 1 7/8 | 1/2 | 5/8 | 8  | 2 1/2 | 2 5/8 | 6 7/8 | 8      | 10 1/2 | 10 1/2 | 11 1/4 | 11 1/4 | 20     | 4 3/8 | 1/2 | 5/8 | 3 3/4 | 2 1/2 | 7 1/2 |   |   |   |   |   |
| 3    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 10 | 5 1/4 | 3 1/4 | 9     | 10 1/2 | 12 3/4 | 12 3/4 | 13 1/4 | 13 1/2 | 24     | 5 5/8 | 1/2 | 3/4 | 4 3/4 | 3     | 9     |   |   |   |   |   |
| 4    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 10 | 5 1/4 | 3 1/4 | 9     | 10 1/2 | 12 3/4 | 12 3/4 | 13 1/4 | 13 1/2 | 24     | 5 5/8 | 1/2 | 3/4 | 4 3/4 | 3     | 9     |   |   |   |   |   |
| 5    |    |    |       |     |     |    |       |       |       |        |        |        |        |        |        |       |     |     |       |       |       |   |   |   |   |   |

PROJECT NO:

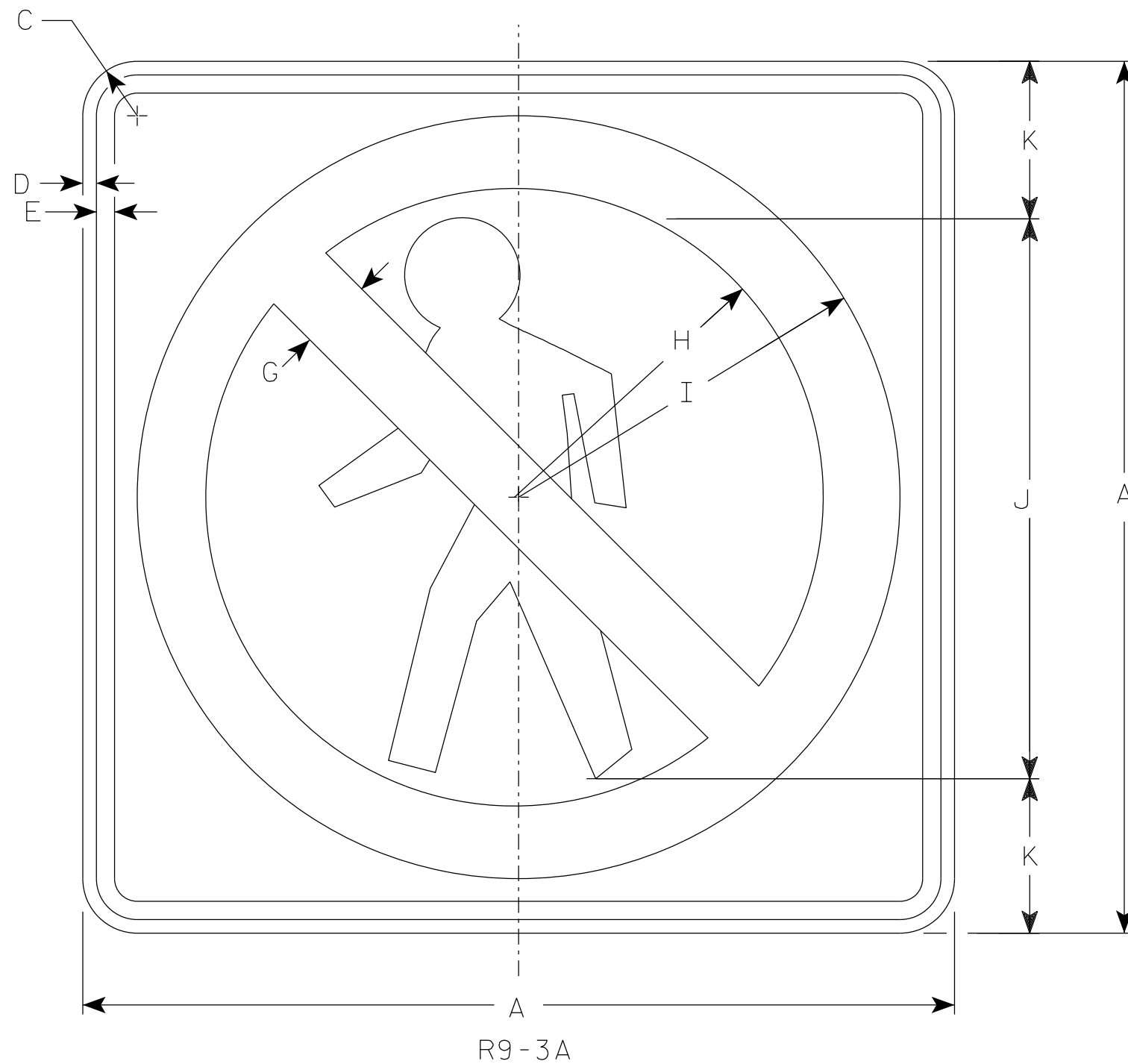
HWY:

COUNTY:

SHEET NO: 365

E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - See note 3
3. Border & Pedestrian are non-reflective black.  
Circle with diagonal bar is reflective red.

7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J  | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 |   | 1 1/2 | 3/8 | 3/8 |   | 1 1/2 | 6 1/4 | 7 7/8  | 12 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.25            |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 |   | 2     | 8 1/2 | 10 1/2 | 15 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.00            |
| 2M   | 24 |   | 1 1/2 | 3/8 | 1/2 |   | 2     | 8 1/2 | 10 1/2 | 15 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.00            |
| 3    |    |   |       |     |     |   |       |       |        |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |   |       |     |     |   |       |       |        |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |     |   |       |       |        |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
R9-3A

WISCONSIN DEPT OF TRANSPORTATION

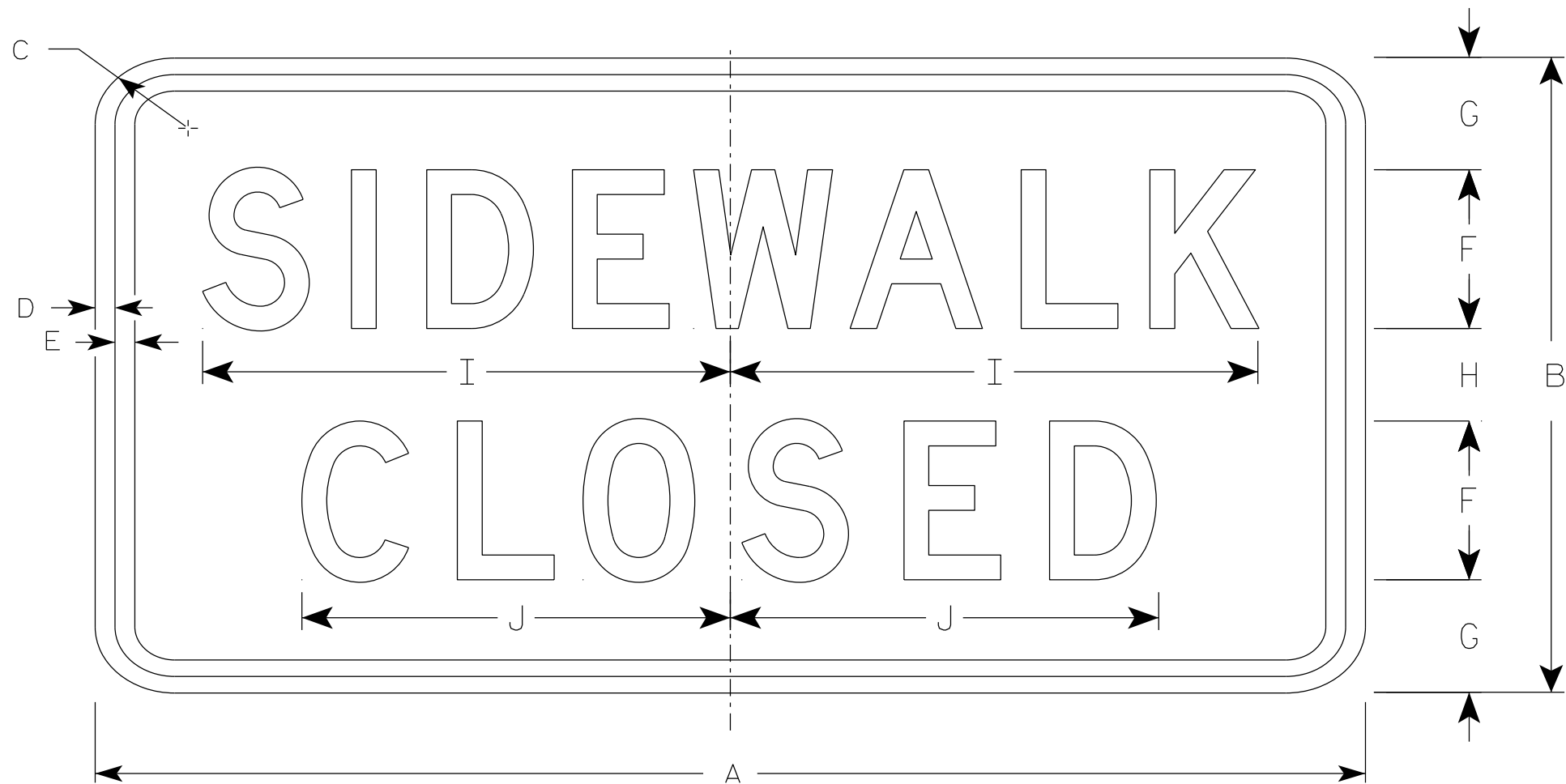
APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/23/24 PLATE NO. R9-3A.4

|             |      |         |               |  |   |
|-------------|------|---------|---------------|--|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 366 |  | E |
|-------------|------|---------|---------------|--|---|



7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

7

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I      | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 1/2 | 1/2 | 3 | 2 1/8 | 1 3/4 | 10     | 8 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 2M   | 24 | 12 | 1 1/2 | 1/2 | 1/2 | 3 | 2 1/8 | 1 3/4 | 10     | 8 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 3    | 30 | 18 | 1 1/2 | 1/2 | 1/2 | 4 | 3 1/2 | 3     | 12 1/2 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 4    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 367

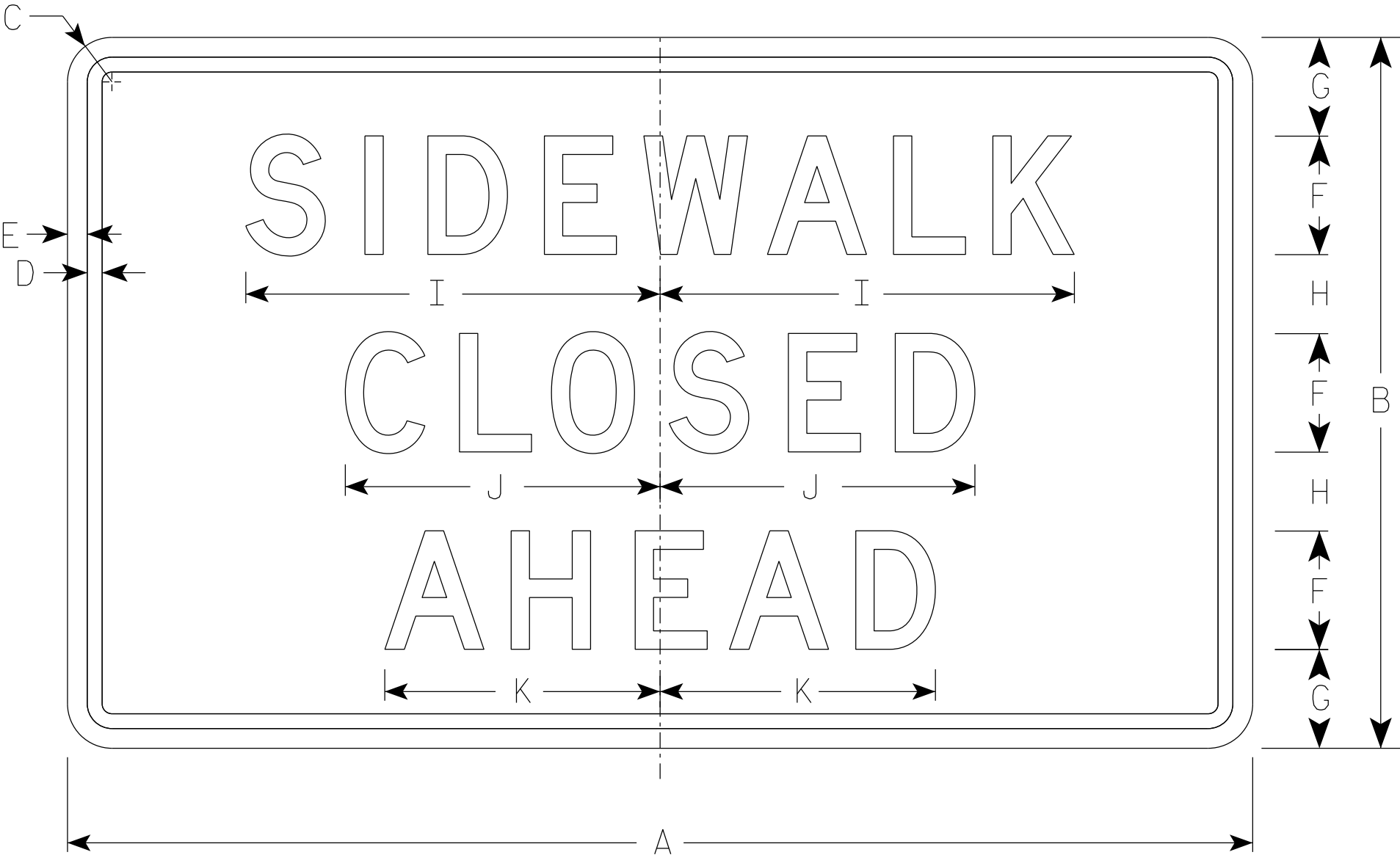
E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - D



R9-9A

| SIZE | A  | B  | C     | D   | E   | F | G     | H | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 3 | 2 1/2 | 2 | 10 1/2 | 8 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 2M   | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 3 | 2 1/2 | 2 | 10 1/2 | 8 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 3    |    |    |       |     |     |   |       |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |       |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |       |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

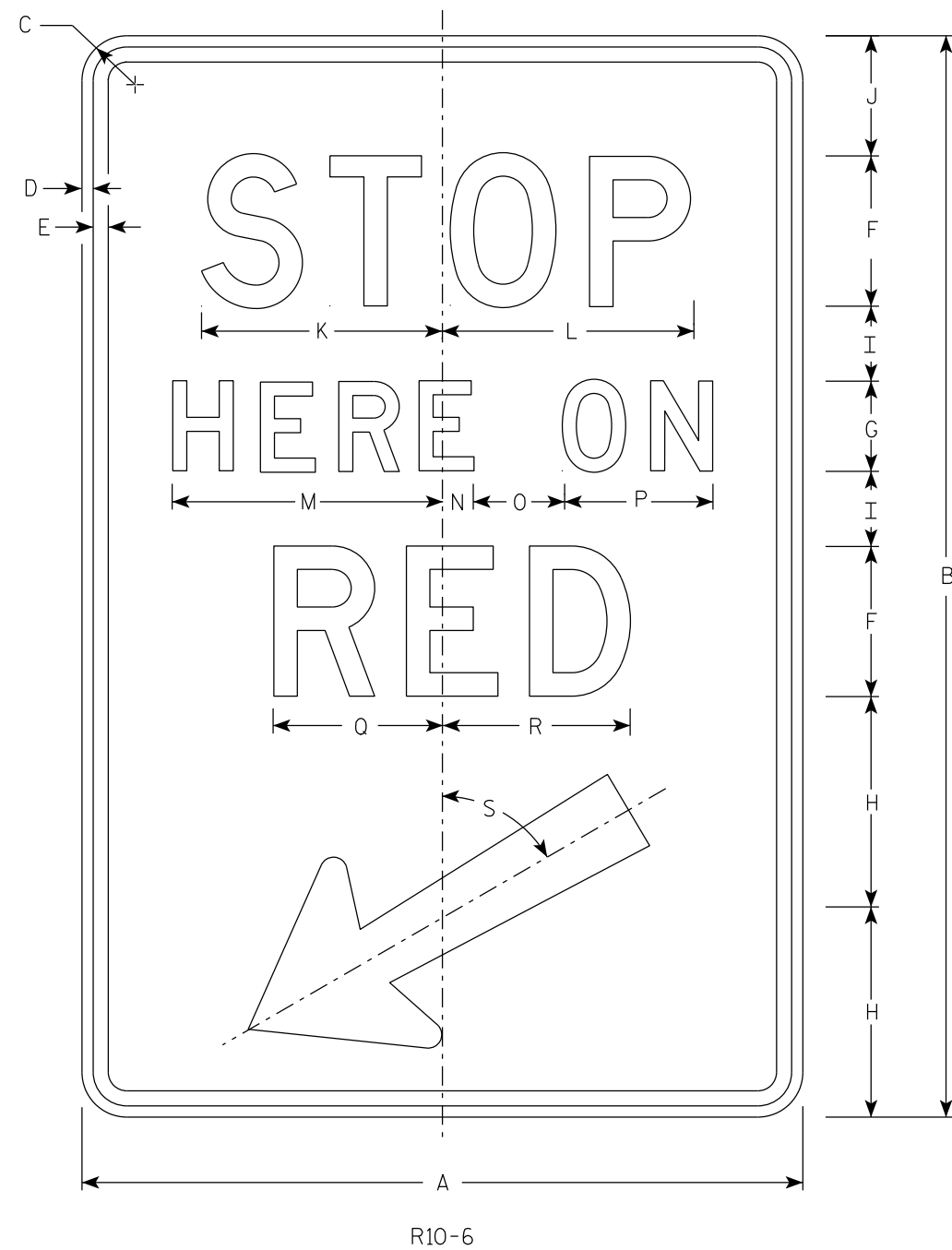
COUNTY:

SHEET NO: 368

E

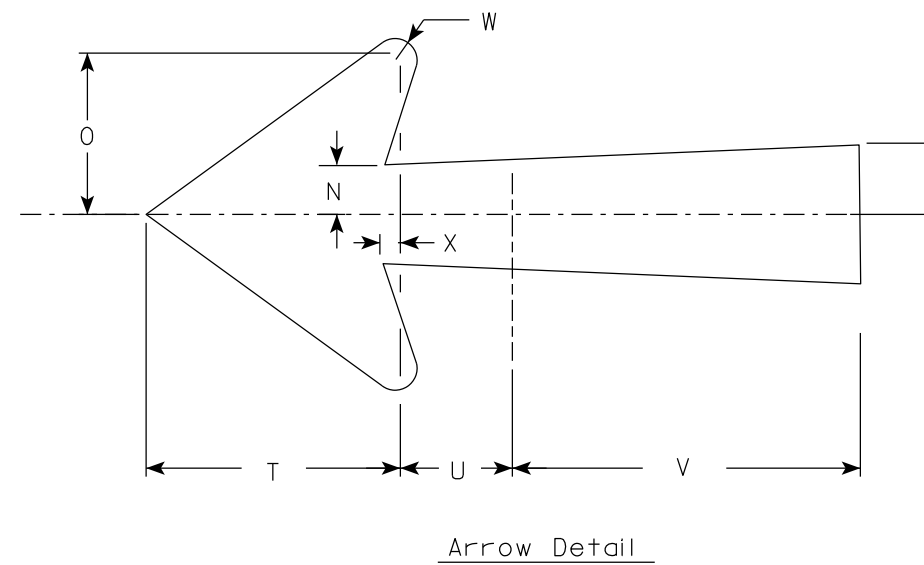


7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D



7

| SIZE | A  | B  | C     | D   | E   | F | G | H | I     | J | K | L     | M | N | O | P | Q     | R     | S   | T     | U     | V     | W   | X   | Y     | Z | Areq<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|-------|---|---|-------|---|---|---|---|-------|-------|-----|-------|-------|-------|-----|-----|-------|---|-----------------|
| 1    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 2S   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 7 | 2 1/2 | 4 | 8 | 8 3/8 | 9 | 1 | 3 | 5 | 5 5/8 | 6 1/4 | 60° | 5 1/4 | 2 1/4 | 7 1/8 | 1/2 | 3/8 | 1 3/8 |   | 6.0             |
| 2M   | 24 | 36 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 7 | 2 1/2 | 4 | 8 | 8 3/8 | 9 | 1 | 3 | 5 | 5 5/8 | 6 1/4 | 60° | 5 1/4 | 2 1/4 | 7 1/8 | 1/2 | 3/8 | 1 3/8 |   | 6.0             |
| 3    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 4    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |
| 5    |    |    |       |     |     |   |   |   |       |   |   |       |   |   |   |   |       |       |     |       |       |       |     |     |       |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 369

E

FILE NAME : C:\CAEfiles\Projects\tr\_stdplate\R106.dgn

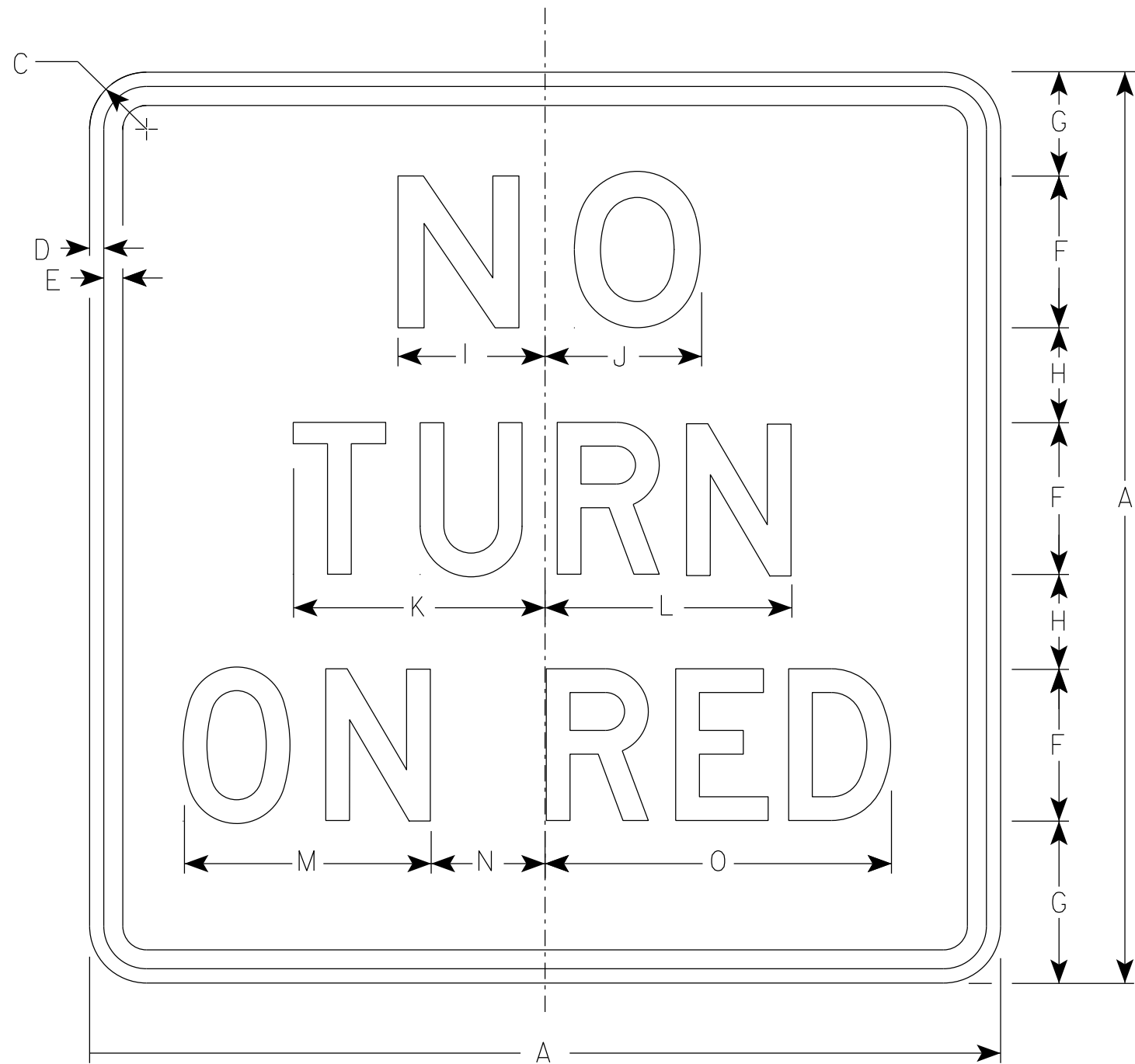
PLOT DATE : 25-JAN 2024 11:01

PLOT BY : mscj9h

PLOT NAME :

PLOT SCALE : \$\$.....plotscale.....\$\$WISDOT/CADDs SHEET 42

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - Line 1 is Series E.  
Lines 2 and 3 are Series D.

7

R10-11B

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K     | L     | M     | N     | O      | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 |   | 1 1/2 | 3/8 | 3/8 | 3 | 2 3/4 | 1 3/4 | 3     | 3 1/8 | 5     | 4 7/8 | 5 1/4 | 1 7/8 | 7 1/8  |   |   |   |   |   |   |   |   |   |   |   | 2.25            |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 4 | 3 1/2 | 2 1/2 | 3 7/8 | 4 1/8 | 6 5/8 | 6 1/2 | 6 1/2 | 3     | 9 1/8  |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 | 3/8 | 1/2 | 4 | 3 1/2 | 2 1/2 | 3 7/8 | 4 1/8 | 6 5/8 | 6 1/2 | 6 1/2 | 3     | 9 1/8  |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 4 1/2 | 3     | 4 7/8 | 5 1/4 | 8 1/4 | 8 1/8 | 7 3/4 | 4 1/8 | 11 7/8 |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 4    |    |   |       |     |     |   |       |       |       |       |       |       |       |       |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |     |   |       |       |       |       |       |       |       |       |        |   |   |   |   |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

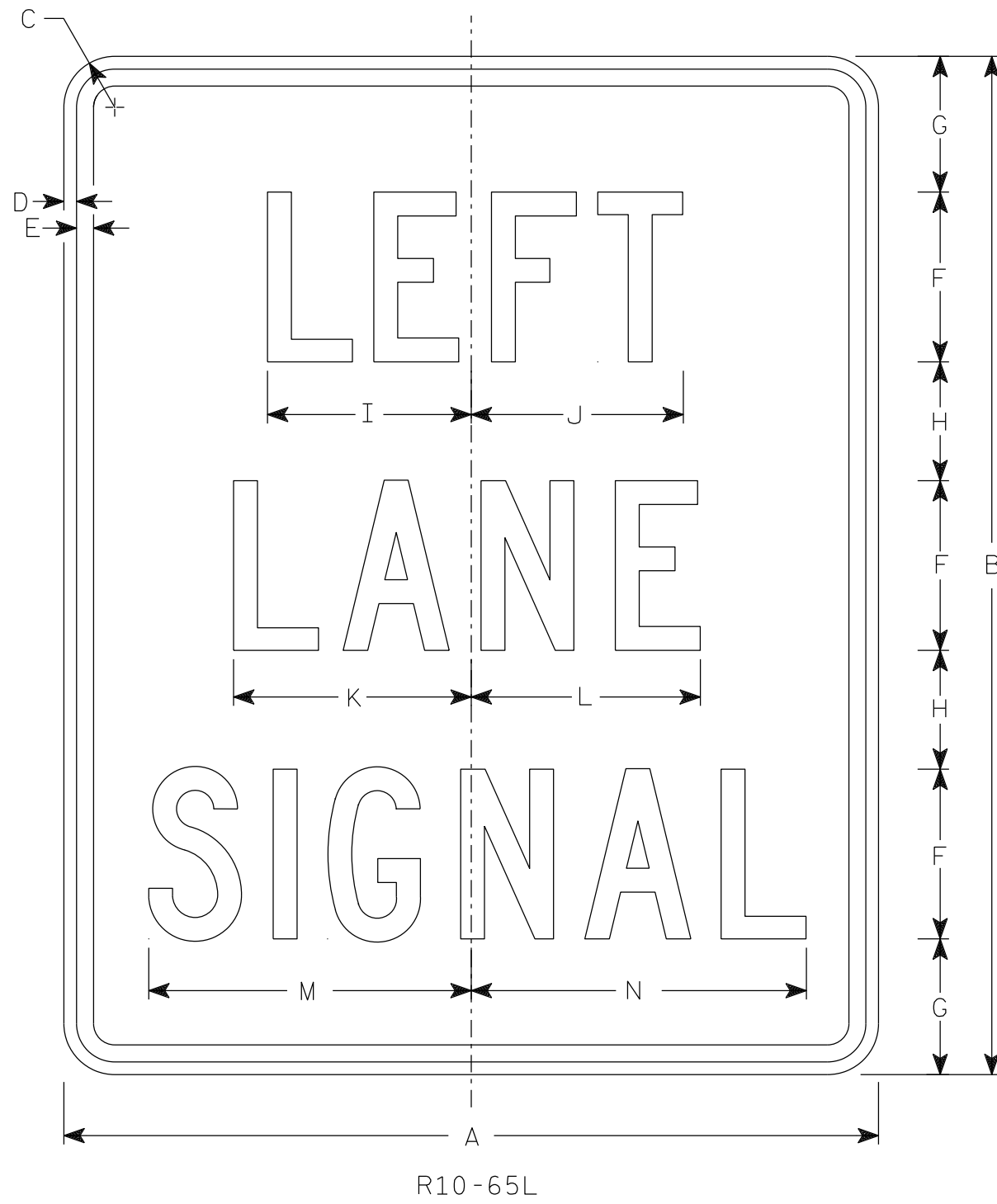
COUNTY:

SHEET NO: 370

E

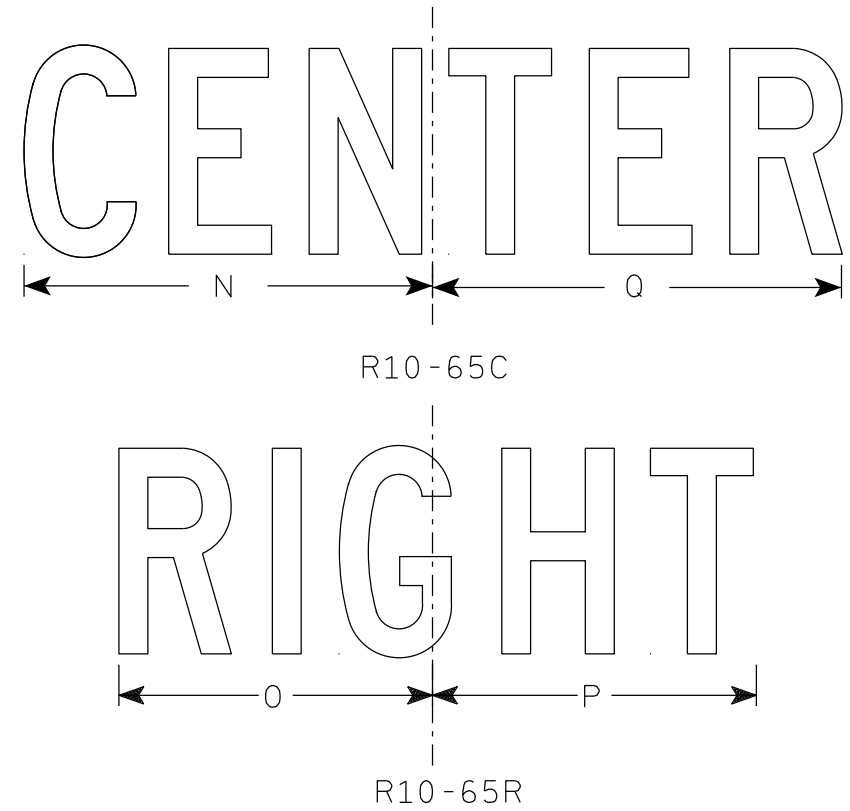


7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - C



7

| SIZE | A  | B  | C     | D   | E   | F | G | H     | I | J     | K | L     | M     | N     | O     | P     | Q  | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|-------|---|-------|---|-------|-------|-------|-------|-------|----|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |       |   |       |   |       |       |       |       |       |    |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 3 1/2 | 6 | 6 1/4 | 7 | 6 3/4 | 9 1/2 | 9 7/8 | 7 5/8 | 7 7/8 | 10 |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 3 1/2 | 6 | 6 1/4 | 7 | 6 3/4 | 9 1/2 | 9 7/8 | 7 5/8 | 7 7/8 | 10 |   |   |   |   |   |   |   |   |   | 5.0             |
| 3    |    |    |       |     |     |   |   |       |   |       |   |       |       |       |       |       |    |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |   |       |   |       |   |       |       |       |       |       |    |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |   |       |   |       |   |       |       |       |       |       |    |   |   |   |   |   |   |   |   |   |                 |

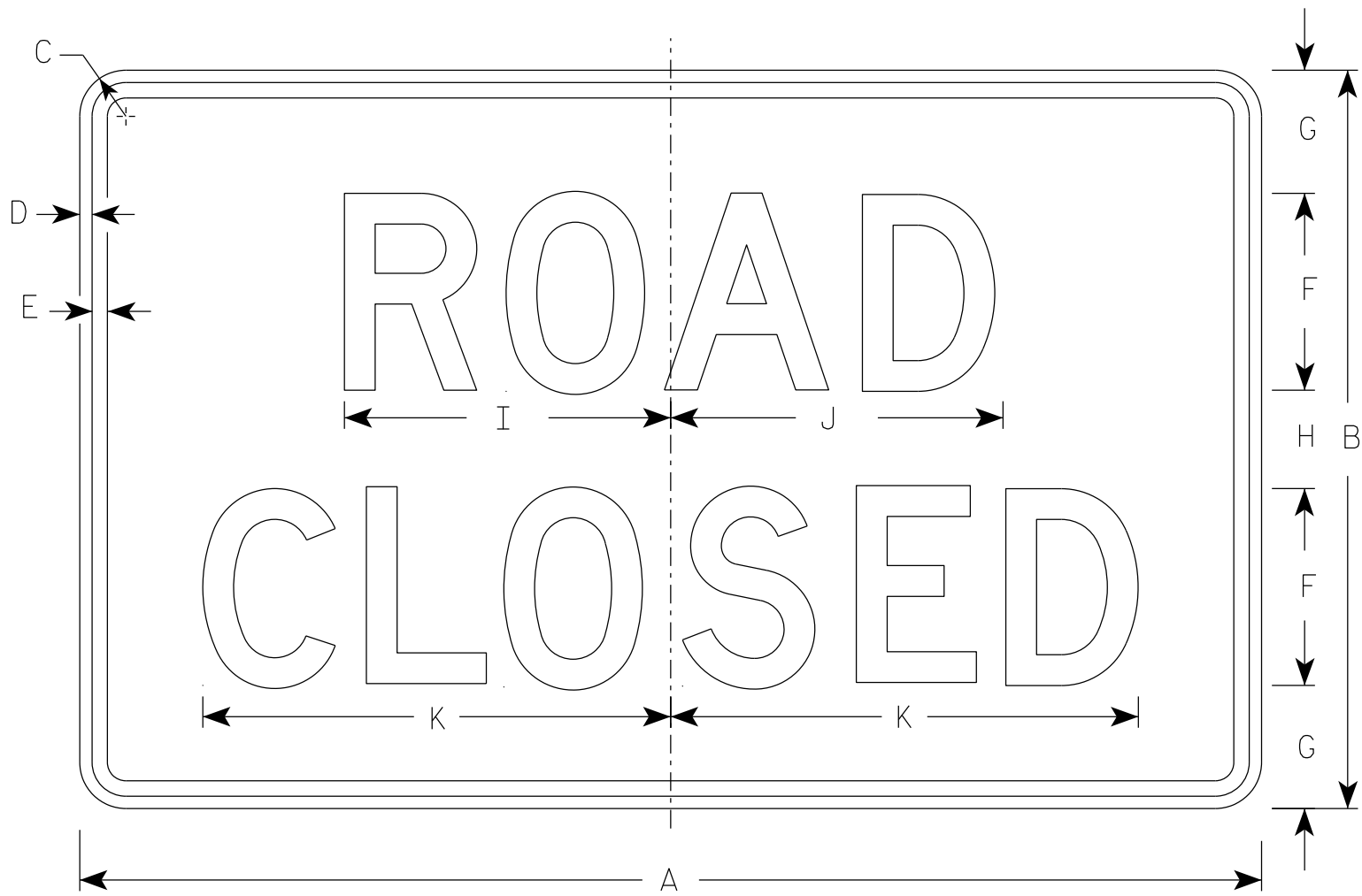
PROJECT NO:

HWY:

COUNTY:

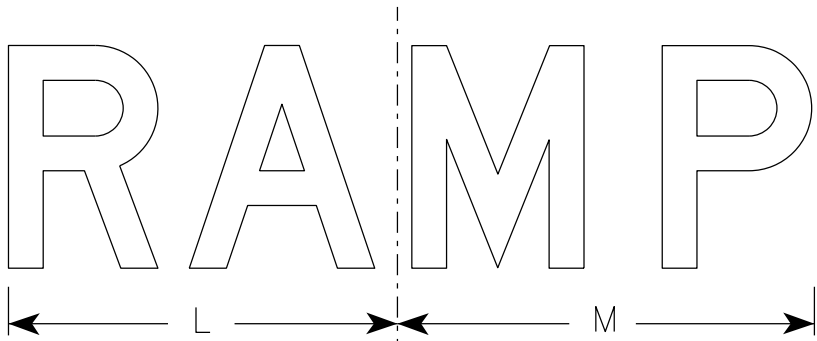
SHEET NO: 371

E

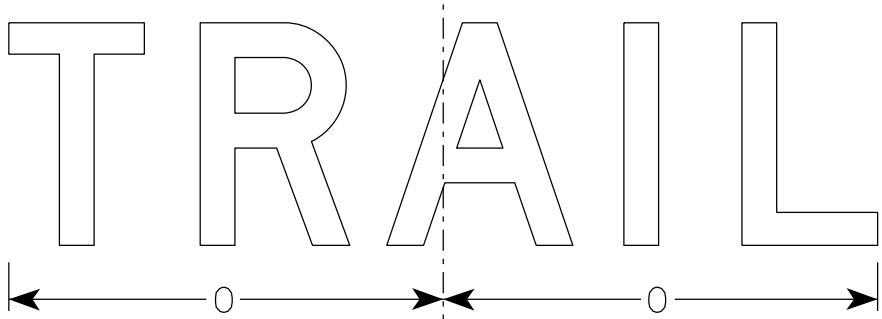


R11-2

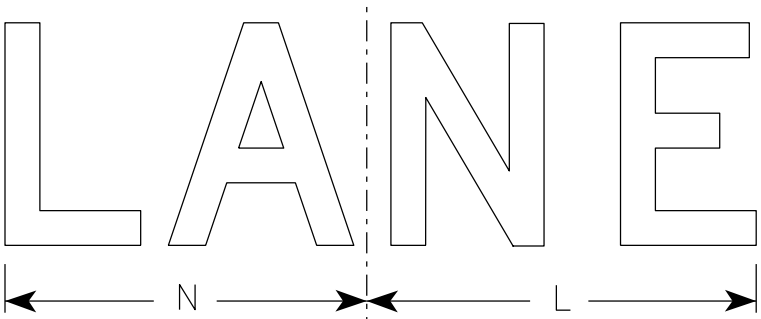
- NOTES
1. Sign is Type II - Type H Reflective
  2. Color:  
Background - White  
Message - Black
  3. Message Series - D
  4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  5. Modify the message as required.



R11-2R



R11-2T



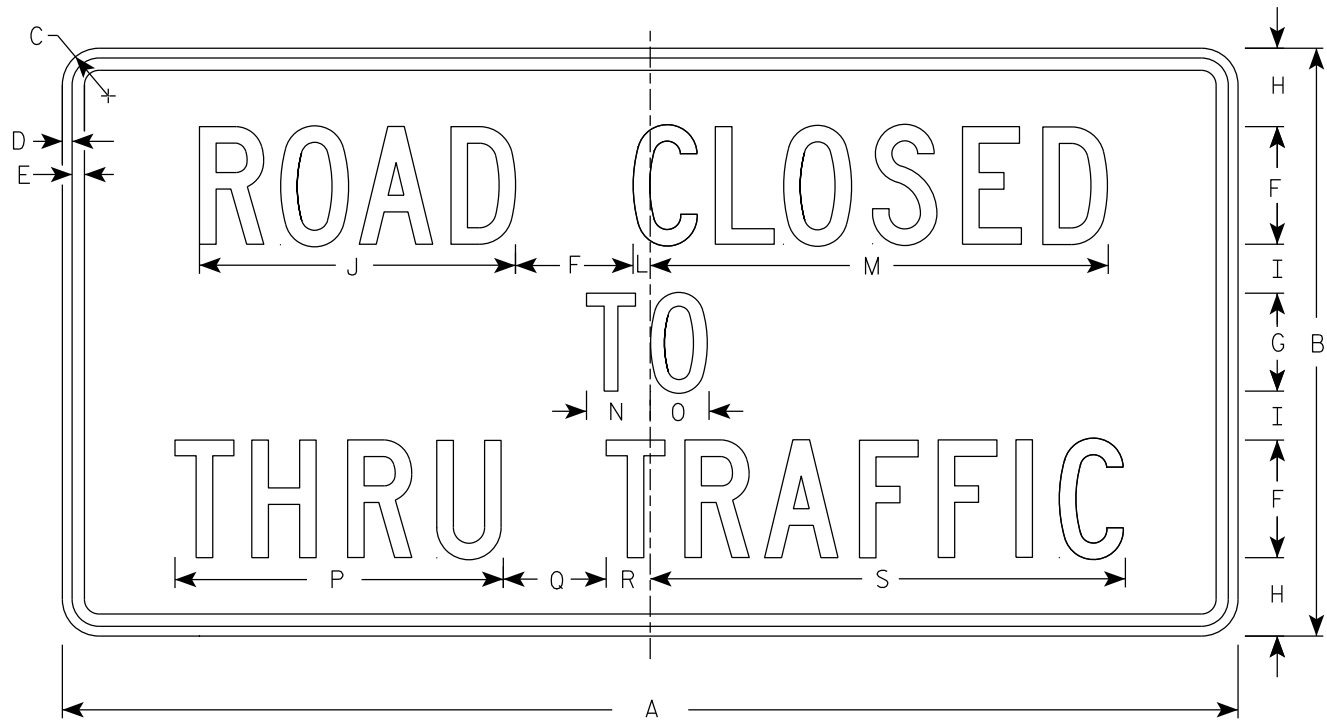
R11-2L

| SIZE | A  | B  | C     | D   | E   | F | G | H | I      | J      | K  | L  | M  | N  | O      | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|--------|--------|----|----|----|----|--------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |   |        |        |    |    |    |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 |   |   |   |   |   |   |   |   |   |   |   | 10.0            |
| 2M   | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 |   |   |   |   |   |   |   |   |   |   |   | 10.0            |
| 3    | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 |   |   |   |   |   |   |   |   |   |   |   | 10.0            |
| 4    | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 |   |   |   |   |   |   |   |   |   |   |   | 10.0            |
| 5    | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 |   |   |   |   |   |   |   |   |   |   |   | 10.0            |

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| STANDARD SIGN<br>R11-2           |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 2/5/24                      | PLATE NO. R11-2.12                                    |



7



R11-4

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B  | C     | D   | E   | F | G | H | I     | J      | K | L   | M      | N     | O | P      | Q     | R     | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|-------|--------|---|-----|--------|-------|---|--------|-------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 2S   | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 |   | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 |   |   |   |   |   |   |   | 12.5            |
| 2M   | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 |   | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 |   |   |   |   |   |   |   | 12.5            |
| 3    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |

PROJECT NO:

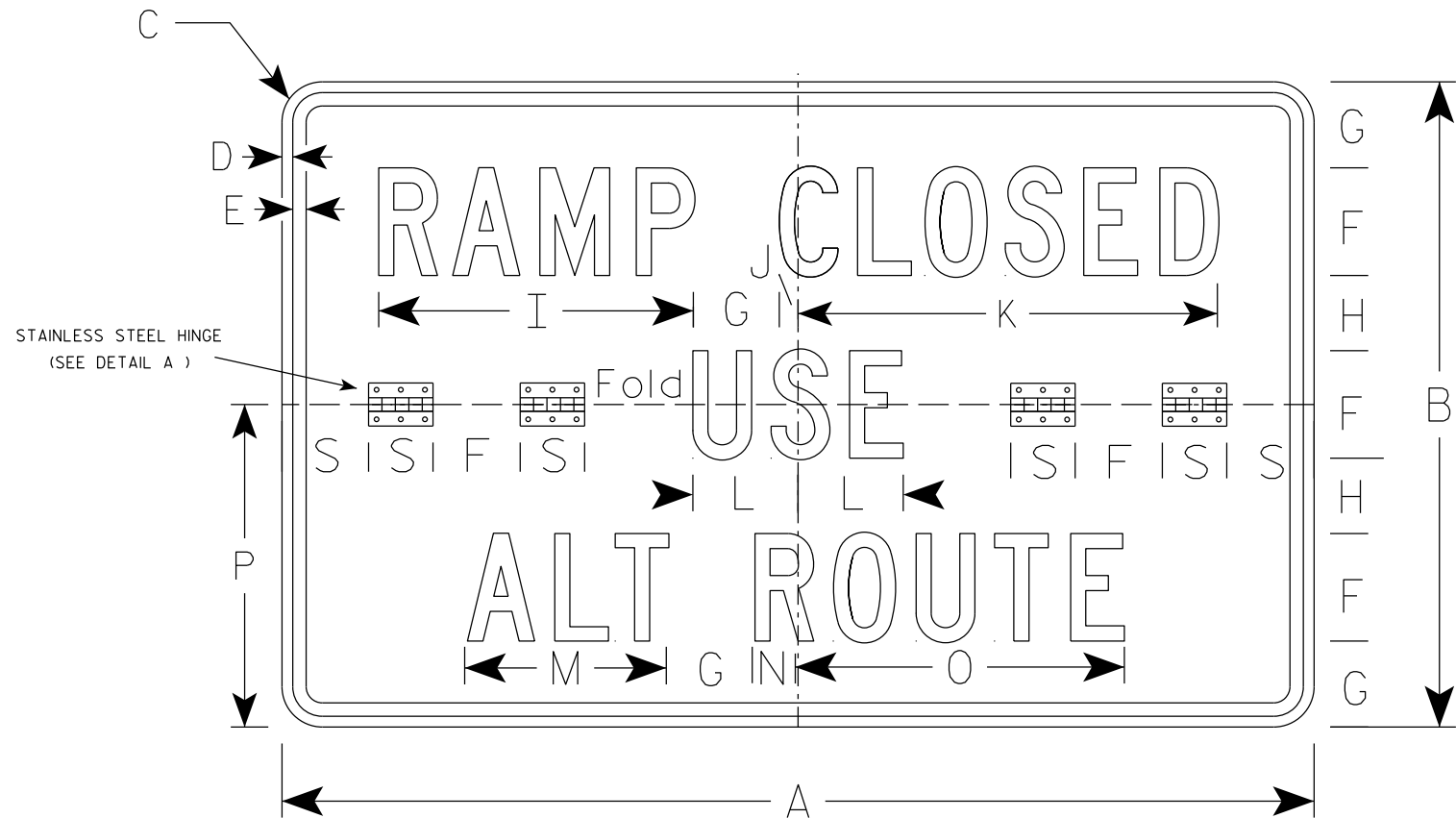
HWY:

COUNTY:

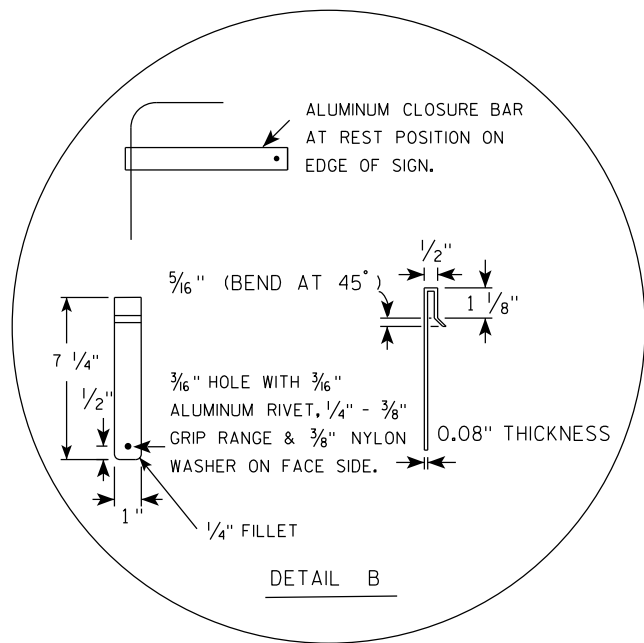
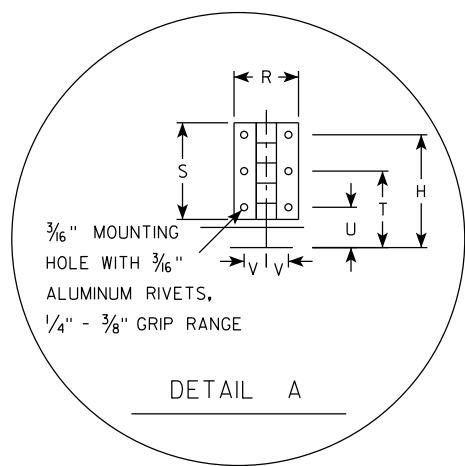
SHEET NO: 373

E

7

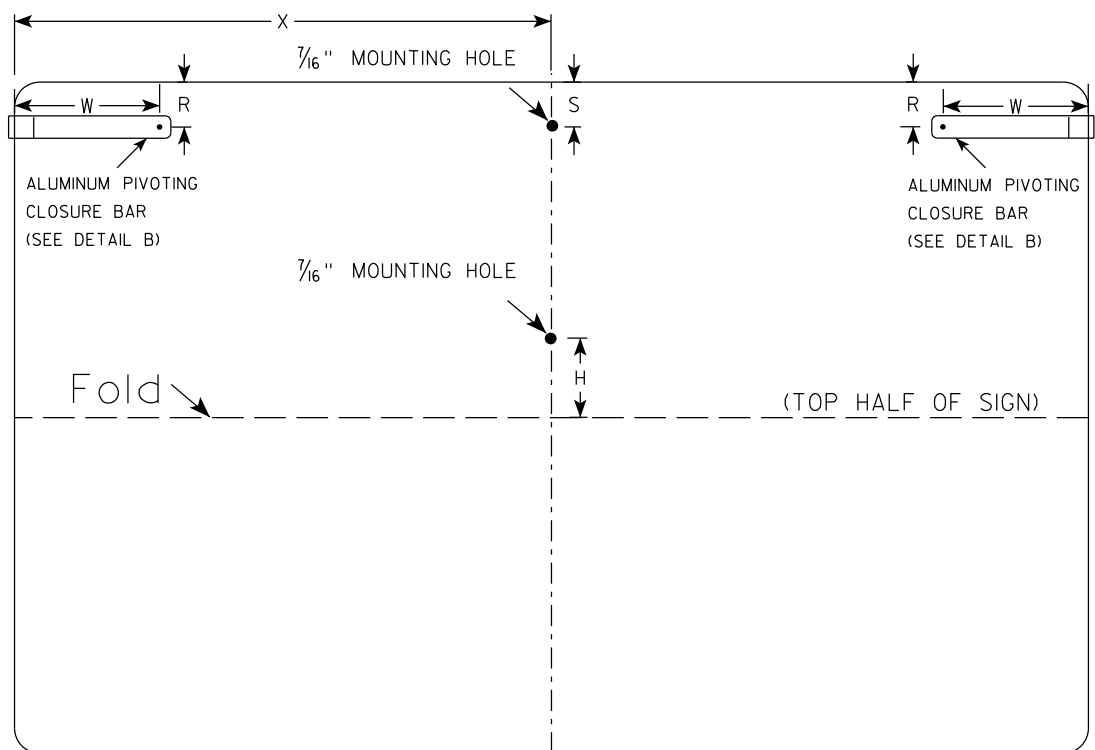


R11-54F



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - C
- 4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
- 5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
- 6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

| SIZE | A  | B  | C     | D   | E   | F | G | H     | I      | J   | K      | L     | M     | N | O      | P  | Q | R | S | T     | U     | V     | W     | X  | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|-------|--------|-----|--------|-------|-------|---|--------|----|---|---|---|-------|-------|-------|-------|----|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |       |        |     |        |       |       |   |        |    |   |   |   |       |       |       |       |    |   |   |                 |
| 2S   | 48 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 | 5 | 4 | 3 1⁄2 | 14 5⁄8 | 7⁄8 | 19 1⁄2 | 4 7⁄8 | 9 3⁄8 | 2 | 15 1⁄4 | 15 |   | 2 | 3 | 2 5⁄8 | 1 1⁄4 | 11⁄16 | 6 1⁄2 | 24 |   |   | 10.0            |
| 2M   | 48 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 | 5 | 4 | 3 1⁄2 | 14 5⁄8 | 7⁄8 | 19 1⁄2 | 4 7⁄8 | 9 3⁄8 | 2 | 15 1⁄4 | 15 |   | 2 | 3 | 2 5⁄8 | 1 1⁄4 | 11⁄16 | 6 1⁄2 | 24 |   |   | 10.0            |
| 3    |    |    |       |     |     |   |   |       |        |     |        |       |       |   |        |    |   |   |   |       |       |       |       |    |   |   |                 |
| 4    |    |    |       |     |     |   |   |       |        |     |        |       |       |   |        |    |   |   |   |       |       |       |       |    |   |   |                 |
| 5    |    |    |       |     |     |   |   |       |        |     |        |       |       |   |        |    |   |   |   |       |       |       |       |    |   |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 374

E

7



7

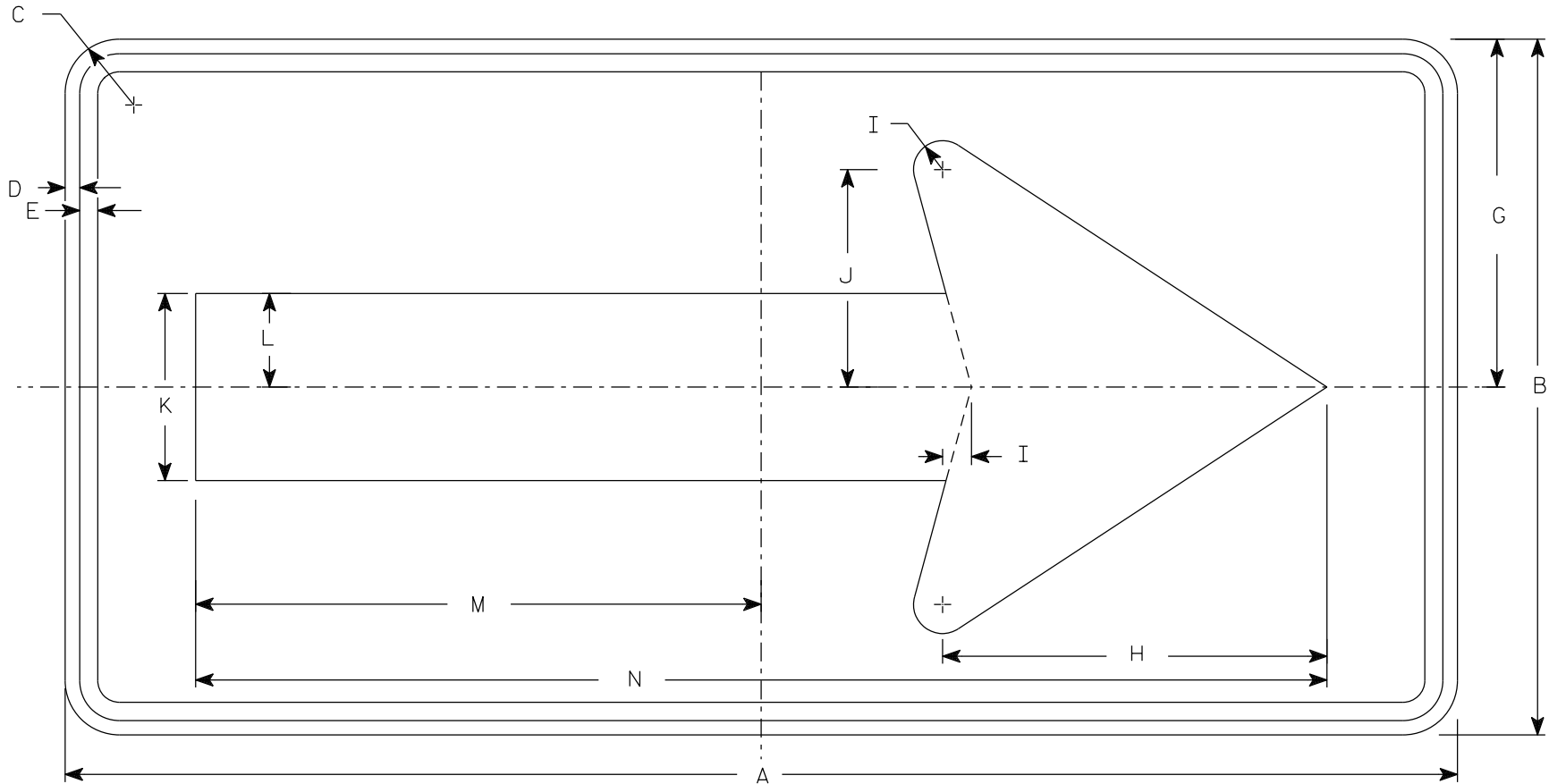
7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:

Background - Yellow

Message - Black



W1-6

| SIZE | A  | B  | C     | D   | E   | F | G  | H      | I     | J     | K     | L     | M      | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|--------|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 18 | 1 1/2 | 3/8 | 3/8 |   | 9  | 10     | 3/4   | 5 5/8 | 4 3/4 | 2 3/8 | 14 5/8 | 29 1/4 |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 |   | 12 | 13 1/4 | 1     | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 |   | 12 | 13 1/4 | 1     | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 60 | 30 | 1 7/8 | 1/2 | 5/8 |   | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8     | 4     | 24 3/8 | 48 3/4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 4    | 60 | 30 | 1 7/8 | 1/2 | 5/8 |   | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8     | 4     | 24 3/8 | 48 3/4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    | 96 | 48 | 3     | 3/4 | 1   |   | 24 | 26 1/2 | 2     | 15    | 13    | 6 1/2 | 39     | 78     |   |   |   |   |   |   |   |   |   |   |   |   | 32.0            |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 375

E

STANDARD SIGN

W1-6

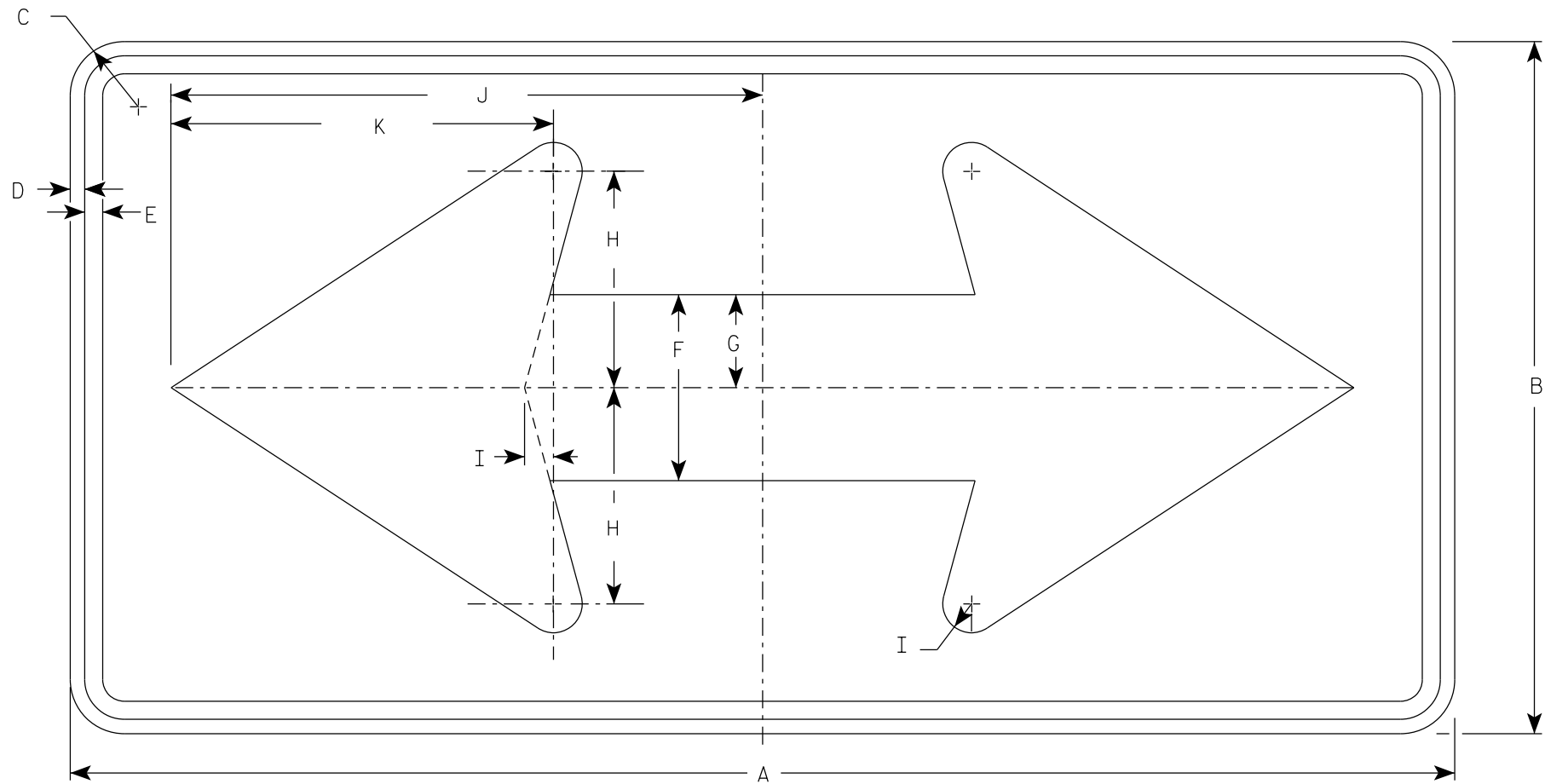
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/13/2023

PLATE NO. W1-6.9

7



W1-7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black

7

| SIZE | A  | B  | C     | D   | E   | F     | G     | H     | I     | J      | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 5     | 2 1/2 | 5 3/4 | 3/4   | 15 5/8 | 10 1/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1     | 20 1/2 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1     | 20 1/2 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 8     | 4     | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 4    | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 8     | 4     | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    | 96 | 48 | 3     | 3/4 | 1   | 13    | 6 1/2 | 15    | 2     | 41     | 26 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 32.0            |

STANDARD SIGN  
W1-7

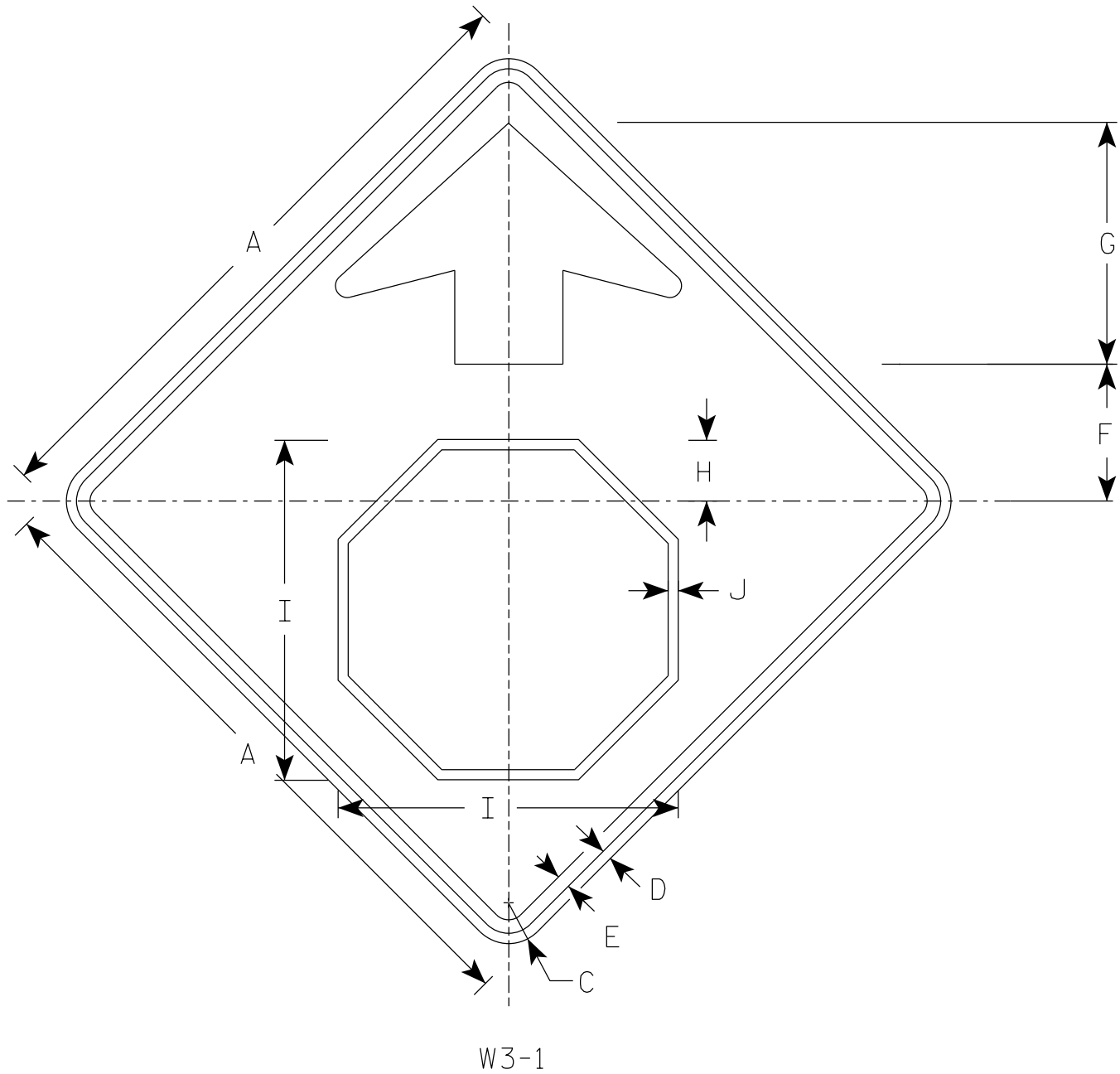
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/10/2023 PLATE NO. W1-7.8



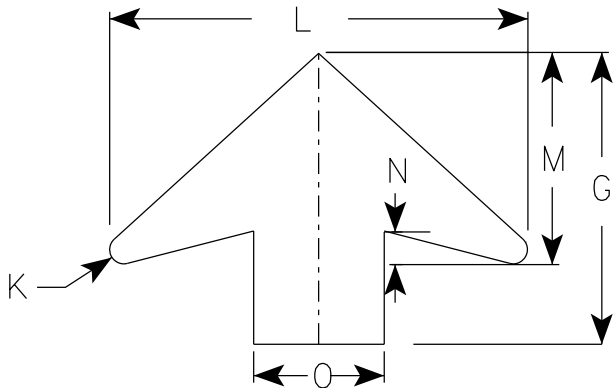
7



W3-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Arrow & Border - Black
  - Stop Symbol - White Border on Red Background



ARROW DETAIL

7

| SIZE | A  | B | C     | D   | E   | F     | G      | H     | I      | J   | K   | L      | M     | N     | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|-------|--------|-------|--------|-----|-----|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7⁄8 | 1⁄2 | 5⁄8 | 6 1⁄4 | 11 1⁄4 | 2 3⁄8 | 15 3⁄4 | 1⁄2 | 1⁄2 | 16     | 8     | 1 1⁄4 | 5 |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1⁄4 | 5⁄8 | 3⁄4 | 7 1⁄2 | 13 1⁄2 | 3 1⁄2 | 19     | 5⁄8 | 5⁄8 | 19 1⁄4 | 9 3⁄4 | 1 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1⁄4 | 5⁄8 | 3⁄4 | 7 1⁄2 | 13 1⁄2 | 3 1⁄2 | 19     | 5⁄8 | 5⁄8 | 19 1⁄4 | 9 3⁄4 | 1 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1⁄4 | 5⁄8 | 3⁄4 | 7 1⁄2 | 13 1⁄2 | 3 1⁄2 | 19     | 5⁄8 | 5⁄8 | 19 1⁄4 | 9 3⁄4 | 1 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3⁄4 | 1   | 10    | 17 7⁄8 | 4 1⁄2 | 25 1⁄8 | 3⁄4 | 7⁄8 | 25 5⁄8 | 13    | 2     | 8 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3⁄4 | 1   | 10    | 17 7⁄8 | 4 1⁄2 | 25 1⁄8 | 3⁄4 | 7⁄8 | 25 5⁄8 | 13    | 2     | 8 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

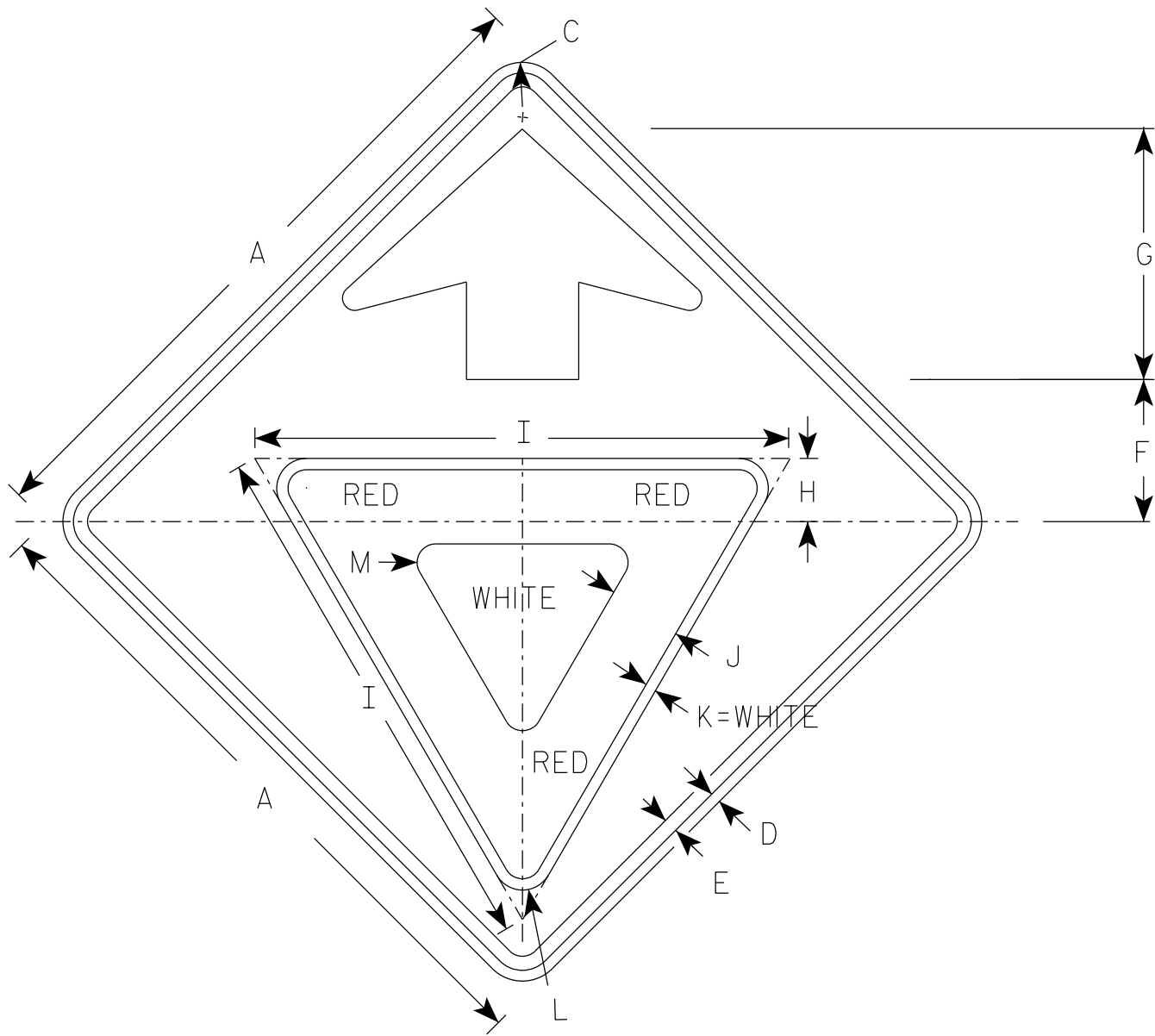
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/17/2023

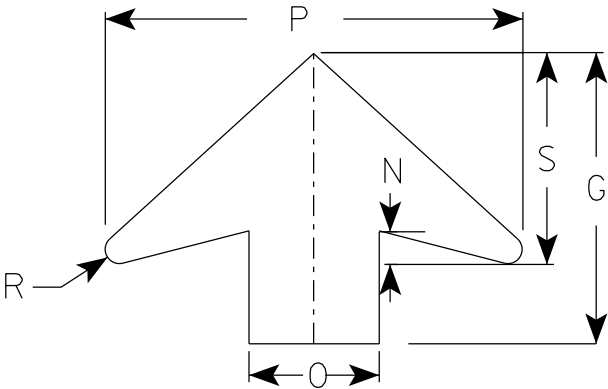
PLATE NO. W3-1.13



W3-2

NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:
  - Background - Yellow
  - Arrow & Border - Black
  - Yield Symbol - White Border on Red Background



ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F     | G      | H     | I  | J     | K   | L     | M     | N     | O | P      | Q | R   | S     | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|-------|--------|-------|----|-------|-----|-------|-------|-------|---|--------|---|-----|-------|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 | 6 1/4 | 11 1/4 | 3     | 25 | 3 3/8 | 1/2 | 1 3/8 | 7/8   | 1 1/4 | 5 | 16     |   | 1/2 | 8     |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 3/8 | 28 | 3 3/4 | 5/8 | 1 1/2 | 1     | 1 5/8 | 6 | 19 1/4 |   | 5/8 | 9 3/4 |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 3/8 | 28 | 3 3/4 | 5/8 | 1 1/2 | 1     | 1 5/8 | 6 | 19 1/4 |   | 5/8 | 9 3/4 |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 3 3/8 | 28 | 3 3/4 | 5/8 | 1 1/2 | 1     | 1 5/8 | 6 | 19 1/4 |   | 5/8 | 9 3/4 |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 10    | 17 7/8 | 4 1/2 | 38 | 5     | 3/4 | 2 1/8 | 1 3/8 | 2     | 8 | 25 5/8 |   | 7/8 | 13    |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 10    | 17 7/8 | 4 1/2 | 38 | 5     | 3/4 | 2 1/8 | 1 3/8 | 2     | 8 | 25 5/8 |   | 7/8 | 13    |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

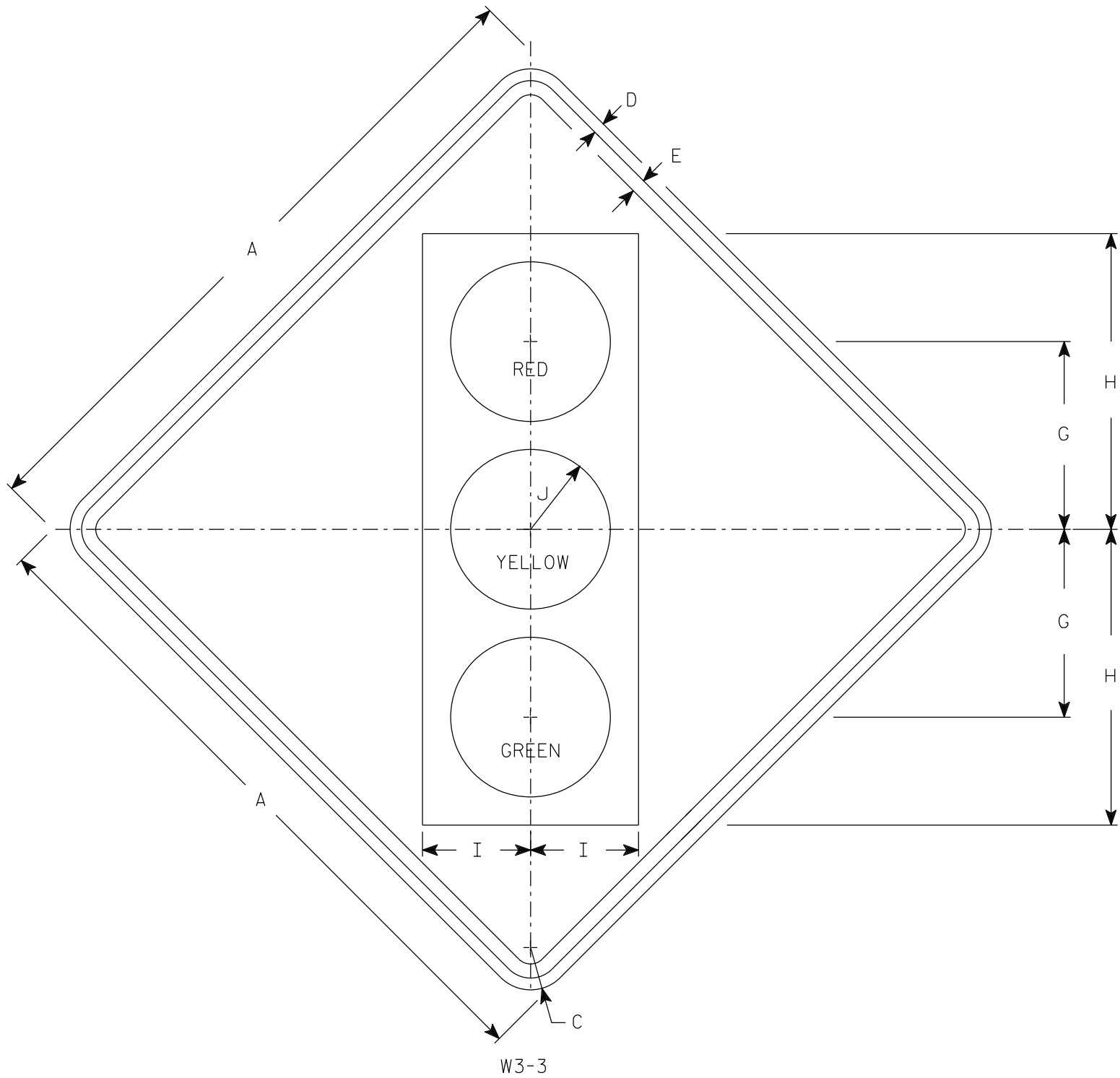
DATE 8/17/2023 PLATE NO. W3-2.10

PROJECT NO:

SHEET NO: 378

E





NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - See Note 3
- 3. Symbol and border are non-reflective black.
  - Top circle - Type H Reflectorized Red
  - Center circle - Same as background
  - Bottom circle - Type H Reflectorized Green

| SIZE | A  | B | C     | D   | E   | F | G      | H      | I     | J     | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 8 3/4  | 13 3/4 | 5     | 3 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 10     | 15 3/4 | 5 3/4 | 4 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 10     | 15 3/4 | 5 3/4 | 4 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 10     | 15 3/4 | 5 3/4 | 4 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   |   | 12 1/2 | 20     | 7 1/2 | 5     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   |   | 12 1/2 | 20     | 7 1/2 | 5     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

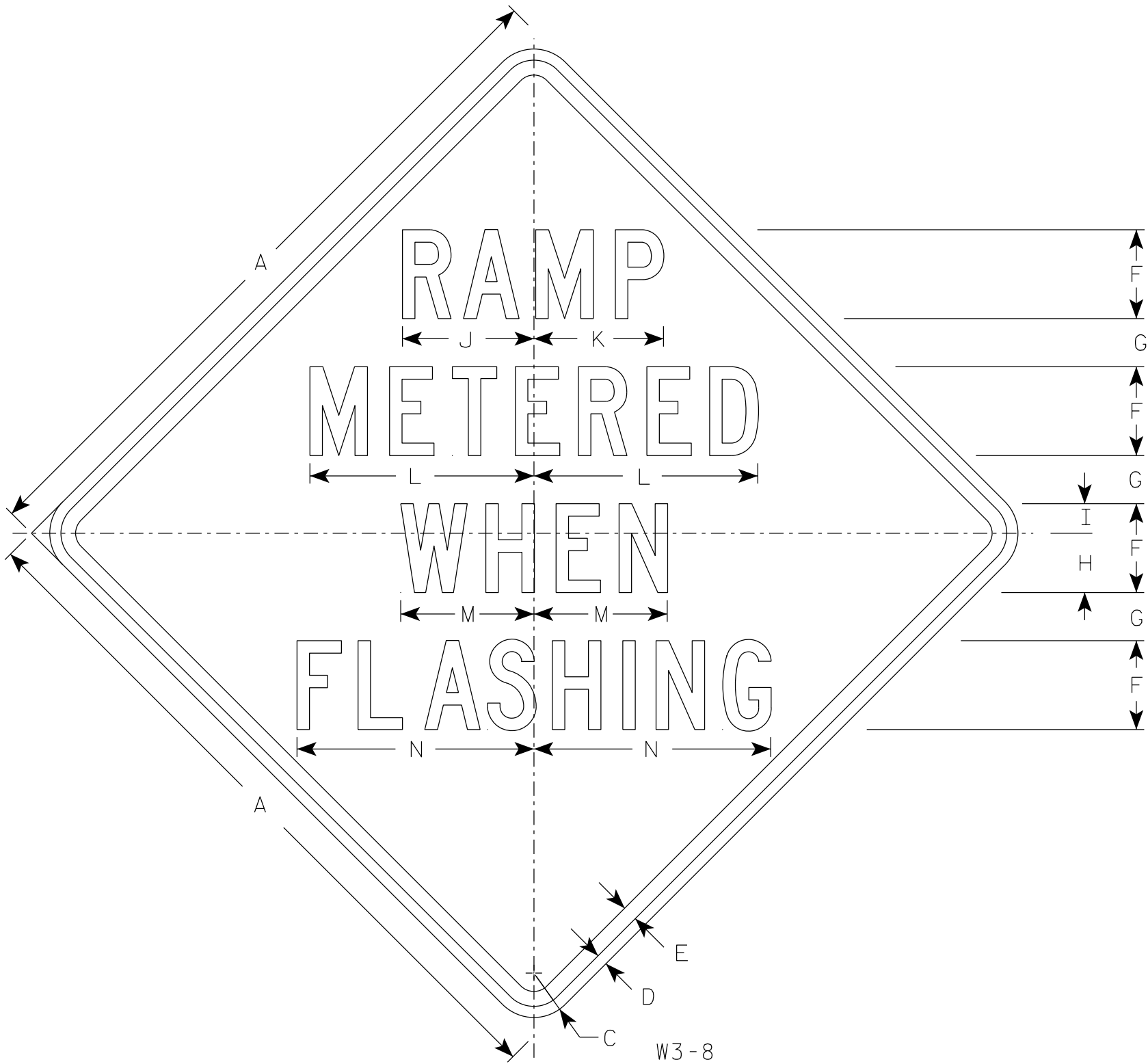
STANDARD SIGN

W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/2023 PLATE NO. W3-3.12



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - Black
- 3. Message Series - C

7

7

| SIZE | A  | B | C | D   | E | F | G     | H | I | J     | K     | L      | M | N  | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|-----|---|---|-------|---|---|-------|-------|--------|---|----|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |   |     |   |   |       |   |   |       |       |        |   |    |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 |   | 3 | 3/4 | 1 | 6 | 3 3/4 | 4 | 2 | 8 7/8 | 8 3/4 | 15 1/8 | 9 | 16 |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3 | 3/4 | 1 | 6 | 3 3/4 | 4 | 2 | 8 7/8 | 8 3/4 | 15 1/8 | 9 | 16 |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3 | 3/4 | 1 | 6 | 3 3/4 | 4 | 2 | 8 7/8 | 8 3/4 | 15 1/8 | 9 | 16 |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3 | 3/4 | 1 | 6 | 3 3/4 | 4 | 2 | 8 7/8 | 8 3/4 | 15 1/8 | 9 | 16 |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3 | 3/4 | 1 | 6 | 3 3/4 | 4 | 2 | 8 7/8 | 8 3/4 | 15 1/8 | 9 | 16 |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

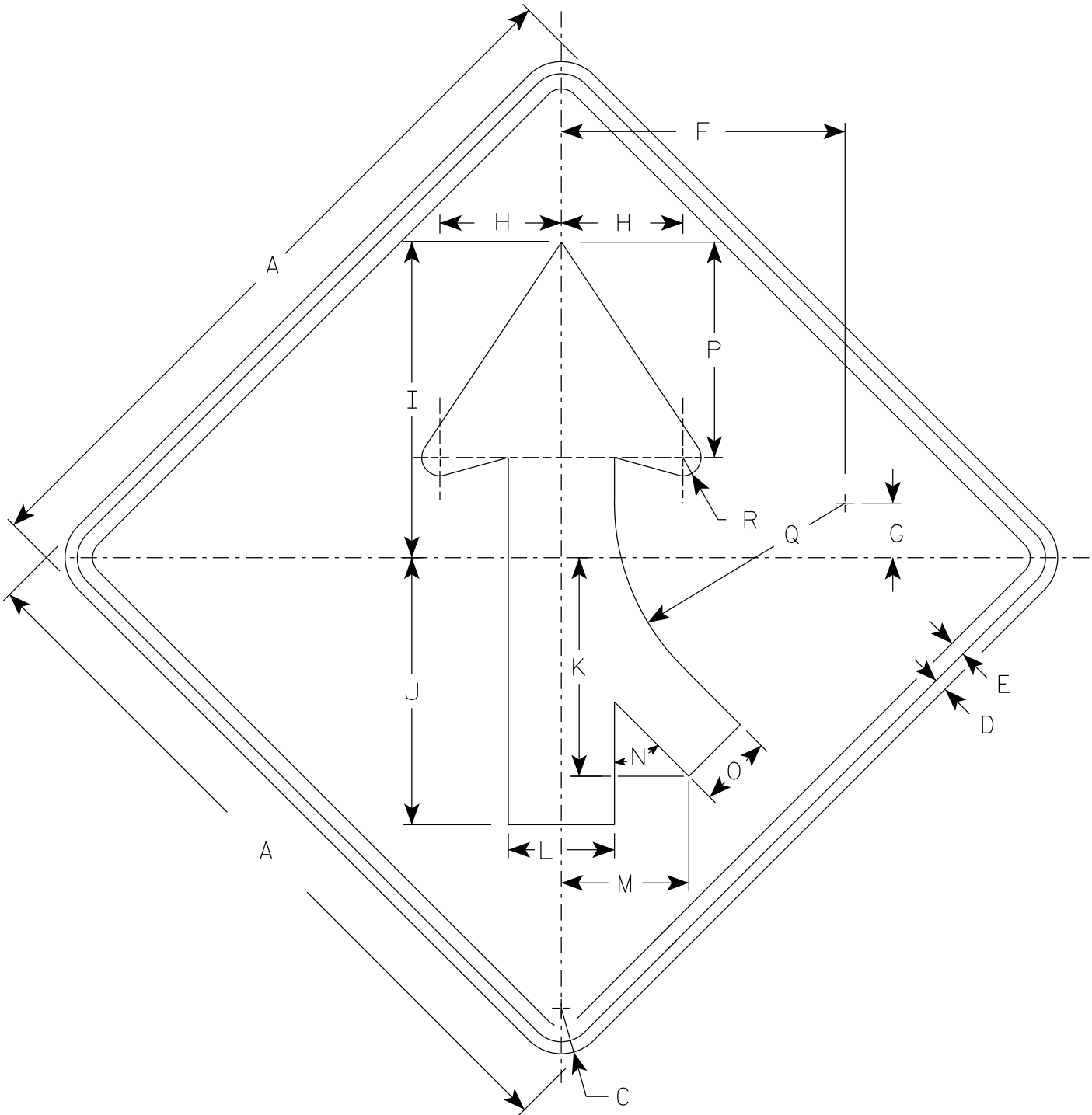
STANDARD SIGN  
W3-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/30/2023 PLATE NO. W3-8.3





NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

W4-1 R

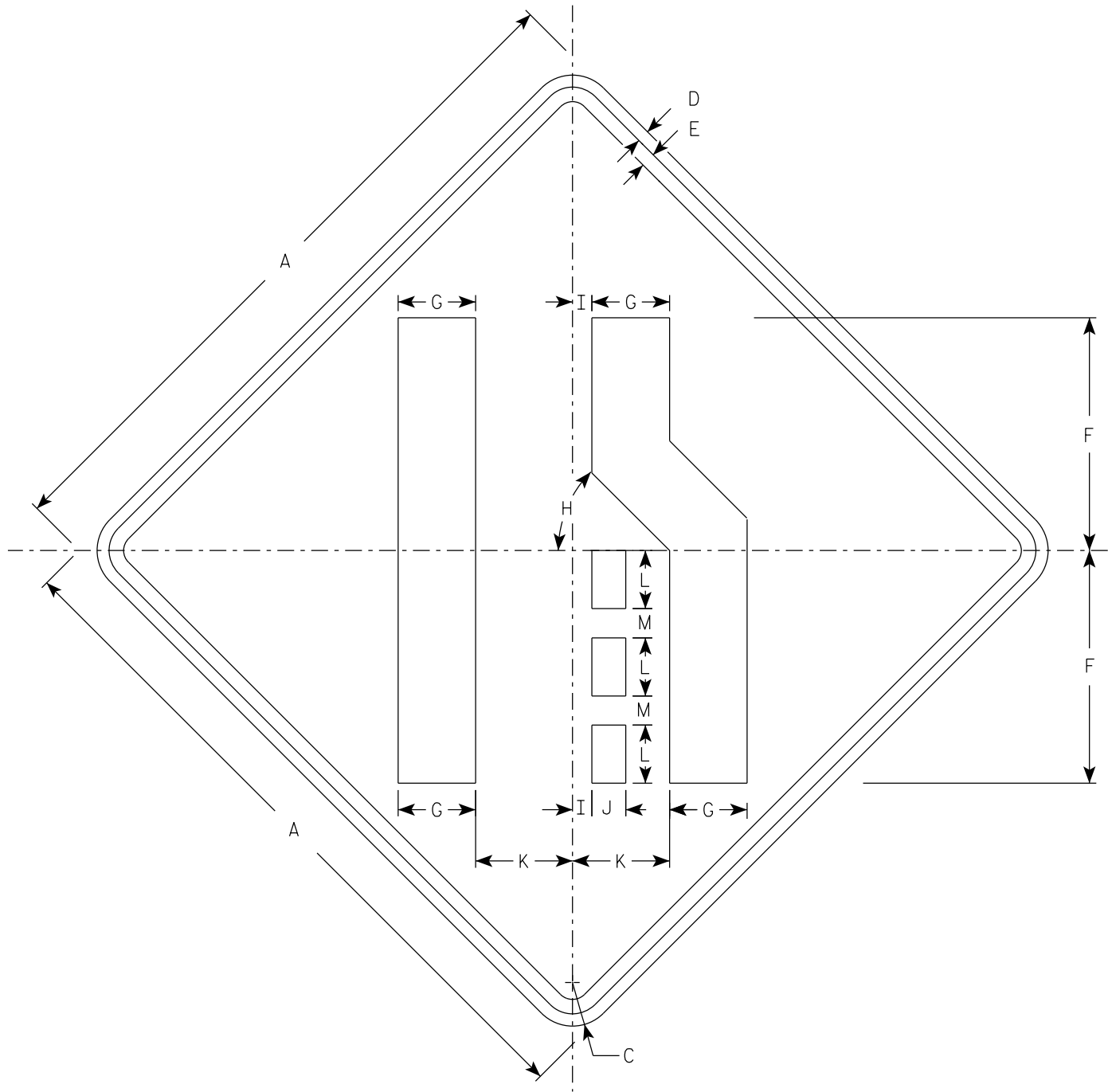
| SIZE | A  | B | C     | D   | E   | F      | G     | H | I      | J      | K      | L     | M     | N   | O     | P      | Q      | R     | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|-------|---|--------|--------|--------|-------|-------|-----|-------|--------|--------|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 | 11 5/8 | 2 1/2 | 5 | 13     | 11     | 9      | 4 3/8 | 5 1/4 | 45° | 3     | 8 7/8  | 9 1/2  | 3/4   |   |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 | 14     | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 14     | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 14     | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 10 1/4 | 5 1/4 | 6 3/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 14 3/8 | 7     | 8 3/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 14 3/8 | 7     | 8 3/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/31/2023 PLATE NO. W4-1.15



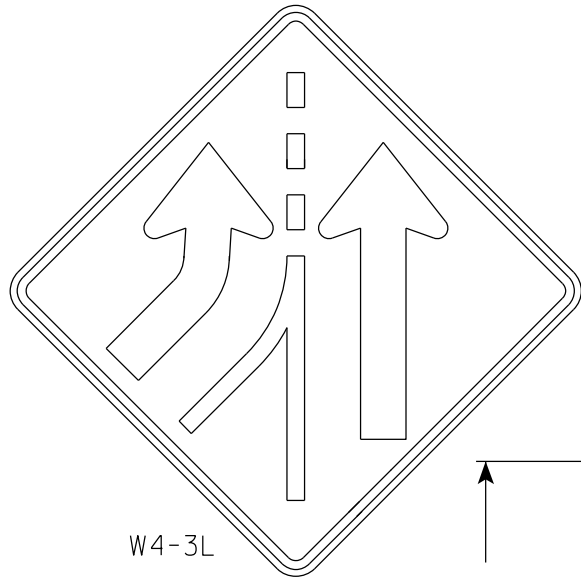
W4-2R

NOTES

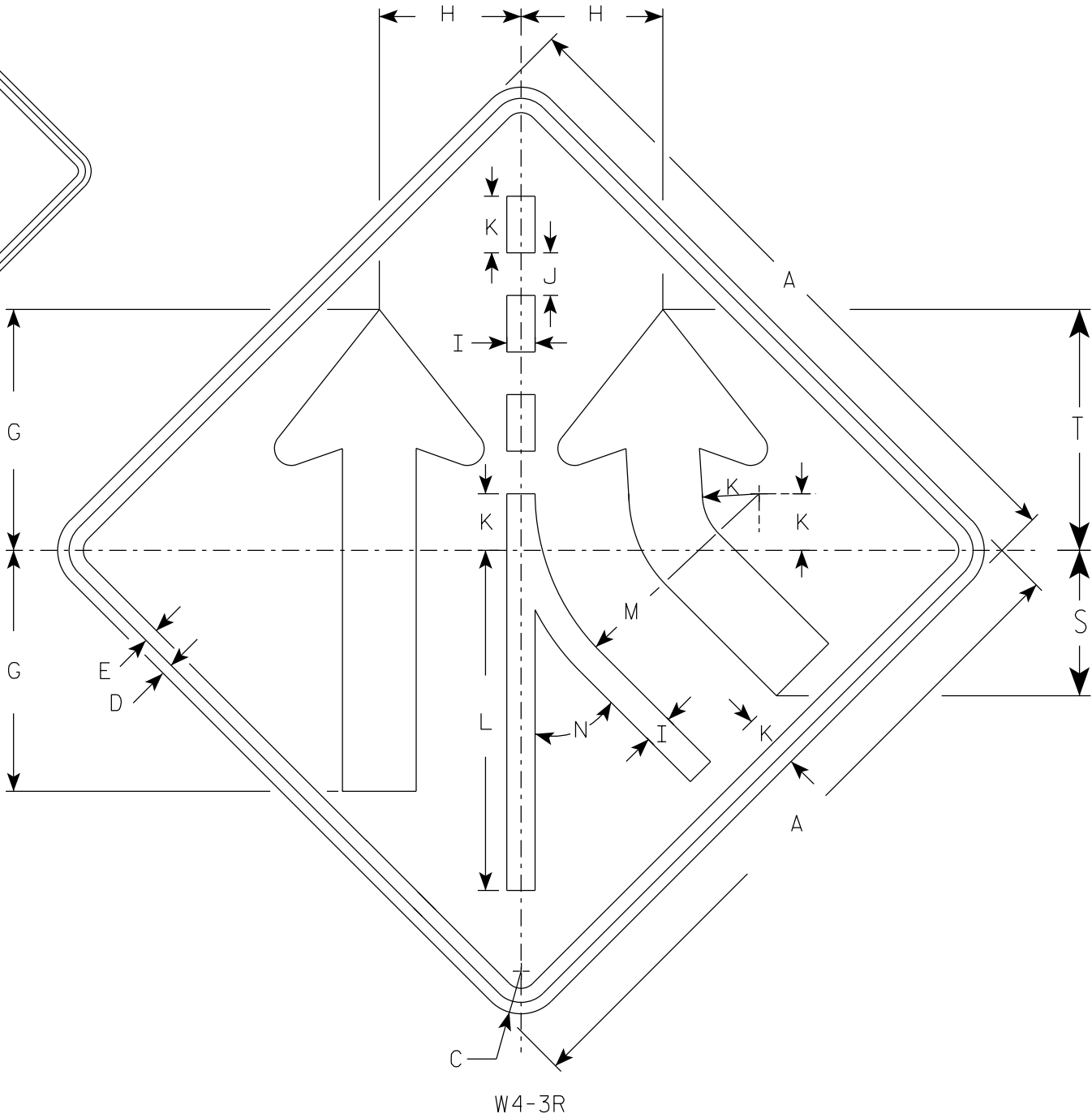
- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

| SIZE | A  | B | C     | D   | E   | F  | G     | H   | I     | J     | K     | L     | M     | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|-------|-----|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 | 10 | 3 3/8 | 45° | 7/8   | 1 1/2 | 4 1/4 | 2 1/2 | 1 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 4     | 45° | 1     | 1 3/4 | 5     | 3     | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 4     | 45° | 1     | 1 3/4 | 5     | 3     | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 4     | 45° | 1     | 1 3/4 | 5     | 3     | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4     | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4     | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |





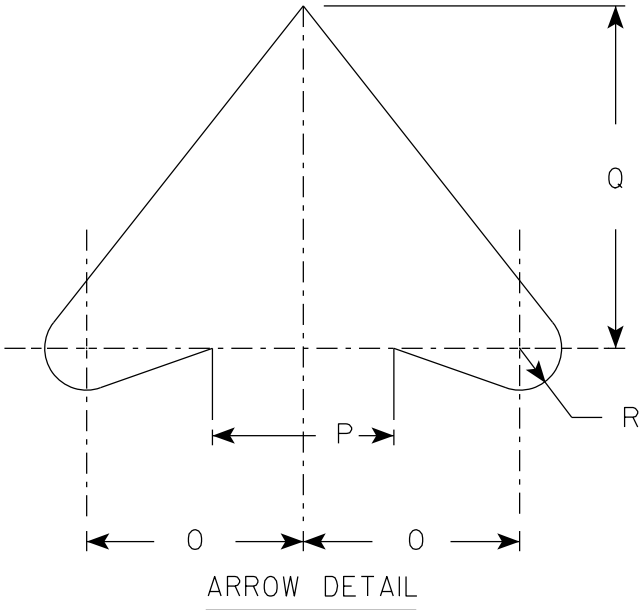
W4-3L



W4-3R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-3 L is the same as W4-3 R except the arrow is reversed along the vertical centerline.



| SIZE | A  | B | C     | D   | E   | F | G      | H     | I     | J     | K     | L  | M      | N   | O     | P     | Q     | R     | S      | T      | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-------|-------|-------|----|--------|-----|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 5/8 | 6 1/4 | 1 1/4 | 1 7/8 | 2 1/2 | 15 | 9 7/8  | 45° | 3 7/8 | 3 1/4 | 6 1/8 | 3/4   | 6 3/8  | 10 5/8 |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/4 | 7 1/2 | 1 1/2 | 2 1/4 | 3     | 18 | 11 7/8 | 45° | 4 5/8 | 4     | 7 3/8 | 7/8   | 7 3/4  | 12 3/4 |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/4 | 7 1/2 | 1 1/2 | 2 1/4 | 3     | 18 | 11 7/8 | 45° | 4 5/8 | 4     | 7 3/8 | 7/8   | 7 3/4  | 12 3/4 |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/4 | 7 1/2 | 1 1/2 | 2 1/4 | 3     | 18 | 11 7/8 | 45° | 4 5/8 | 4     | 7 3/8 | 7/8   | 7 3/4  | 12 3/4 |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   |   | 17     | 10    | 2     | 3     | 4     | 24 | 15 3/4 | 45° | 6 1/4 | 5 1/2 | 9 7/8 | 1 1/4 | 10 1/4 | 17     |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   |   | 17     | 10    | 2     | 3     | 4     | 24 | 15 3/4 | 45° | 6 1/4 | 5 1/2 | 9 7/8 | 1 1/4 | 10 1/4 | 17     |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W4-3

WISCONSIN DEPT OF TRANSPORTATION

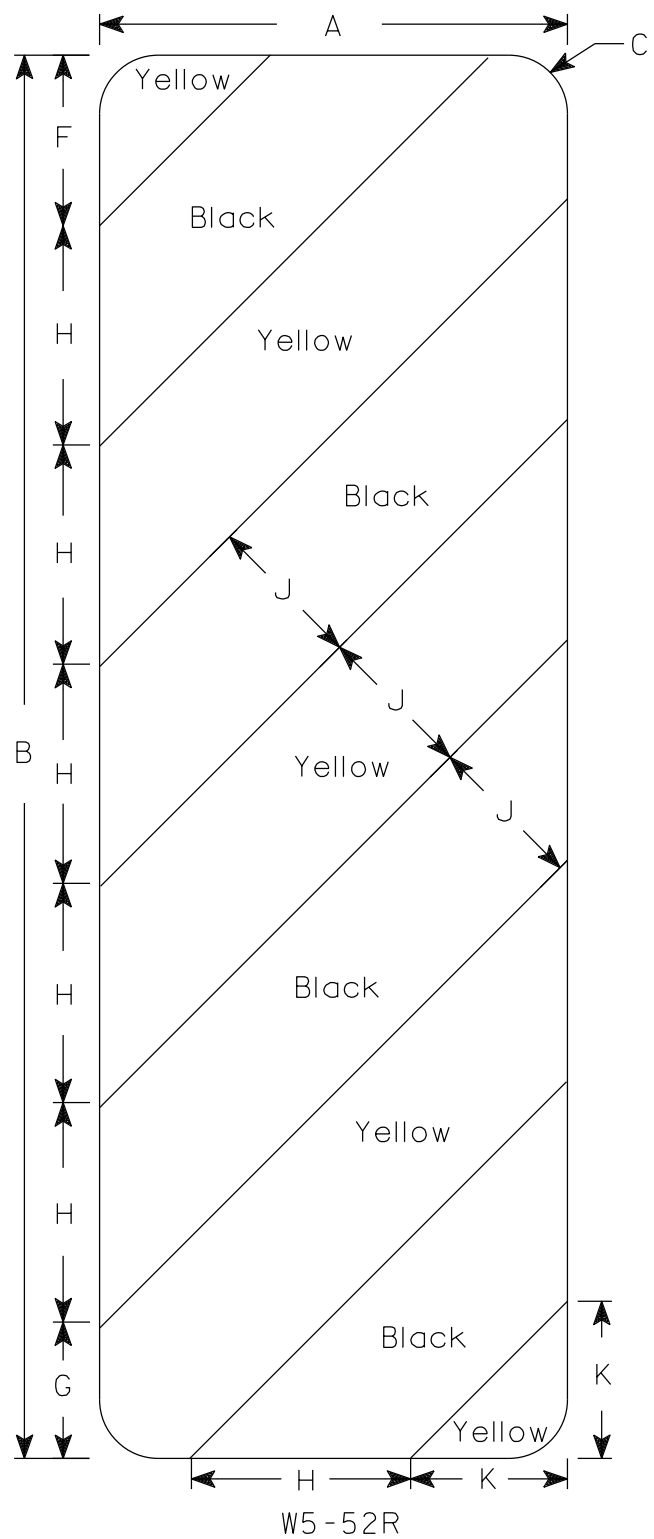
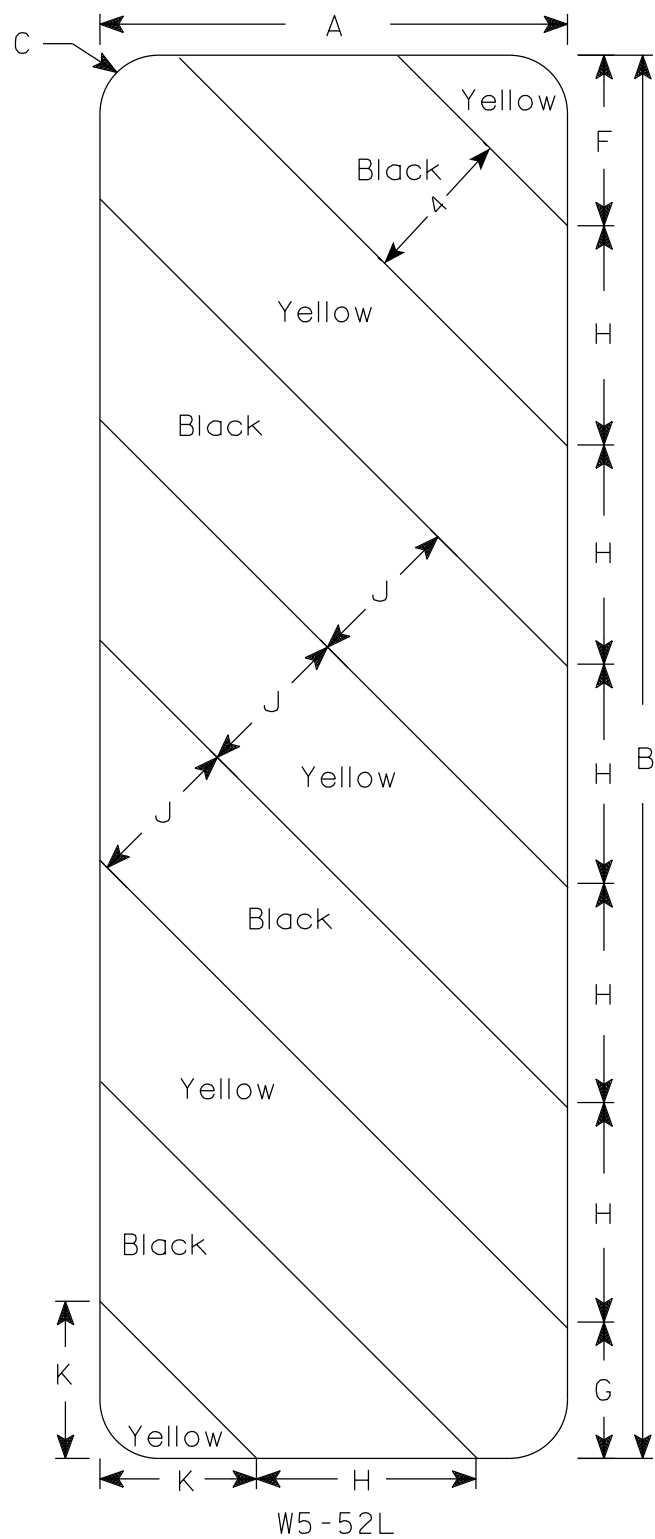
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/31/2023 PLATE NO. W4-3.10

PROJECT NO:

SHEET NO: 383

E



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - Black
- 3. Alternate colors of stripes as shown.

| SIZE | A  | B  | C     | D | E | F     | G     | H     | I   | J | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|---|---|-------|-------|-------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 12 | 36 | 1 1/2 |   |   | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2M   | 12 | 36 | 1 1/2 |   |   | 4 3/8 | 3 1/2 | 5 5/8 | 45° | 4 | 4      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 3    | 18 | 54 | 1 1/2 |   |   | 6     | 5 1/2 | 8 1/2 | 45° | 6 | 6 9/16 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.75            |
| 4    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |   |   |       |       |       |     |   |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
W5-52L & W5-52R

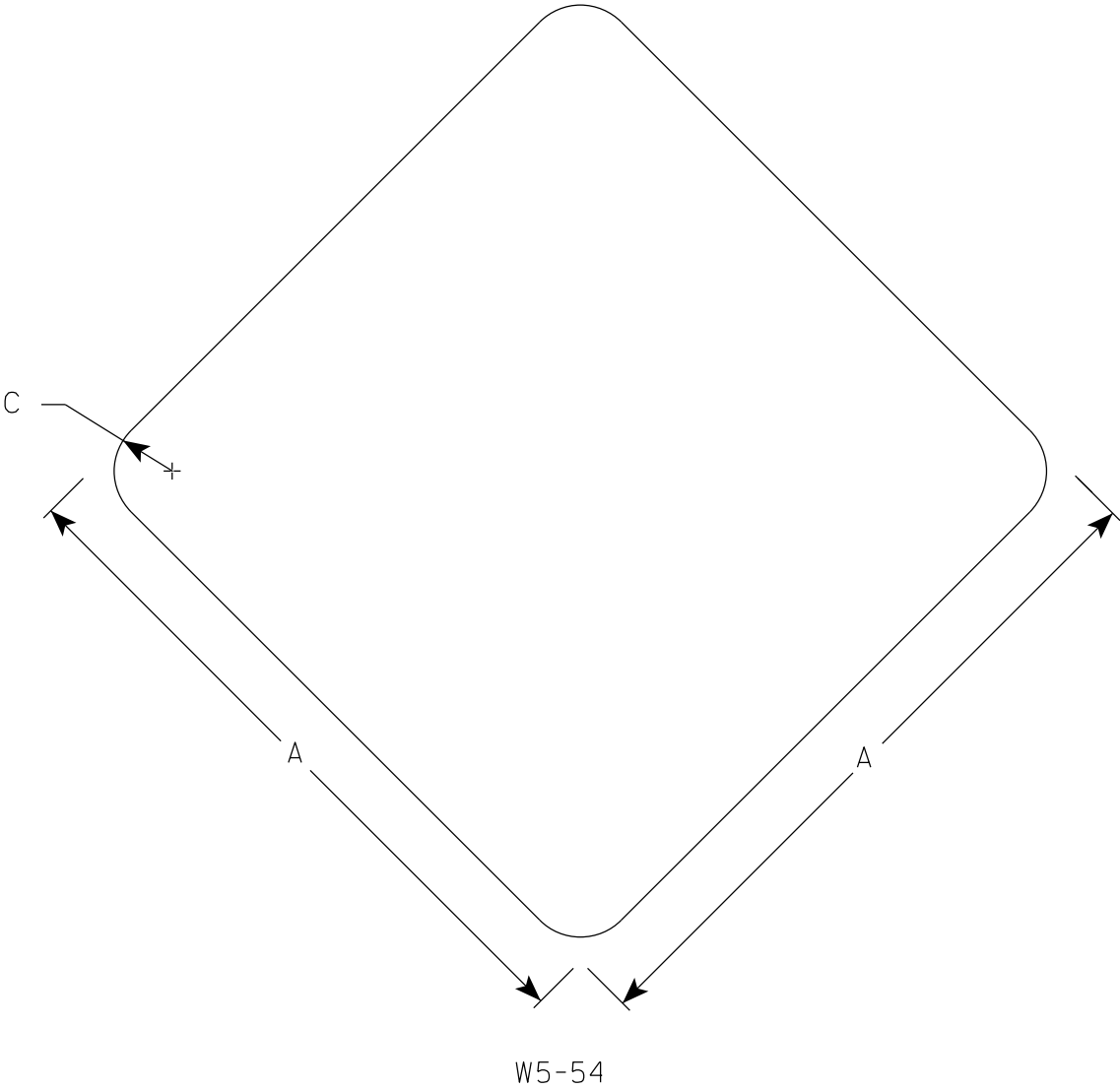
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10



7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow

7

| SIZE | A  | B | C     | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 12 |   | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.0             |
| 2S   | 18 |   | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.25            |
| 2M   | 18 |   | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.25            |
| 3    |    |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

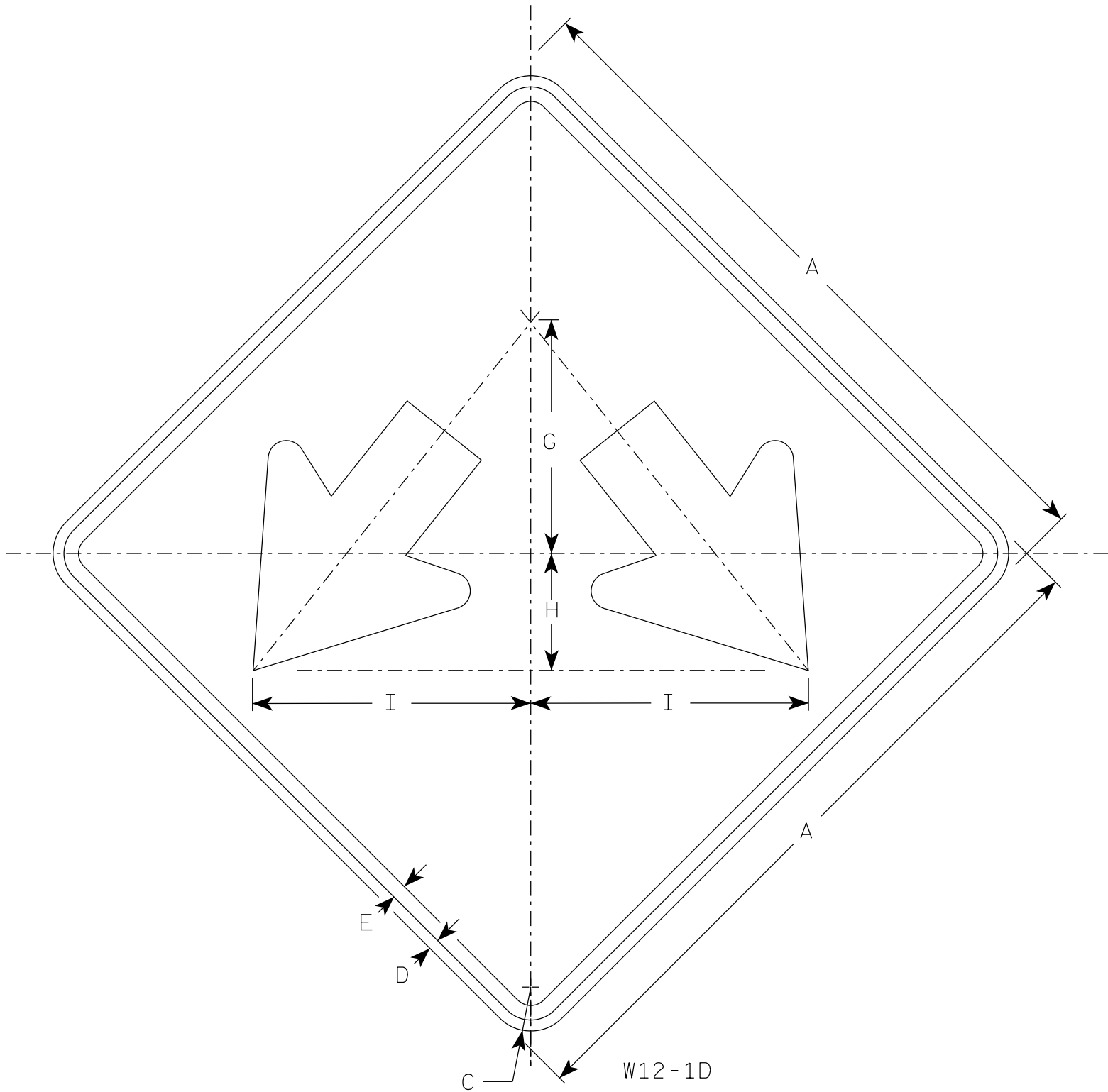
STANDARD SIGN

W5-54

WISCONSIN DEPT OF TRANSPORTATION

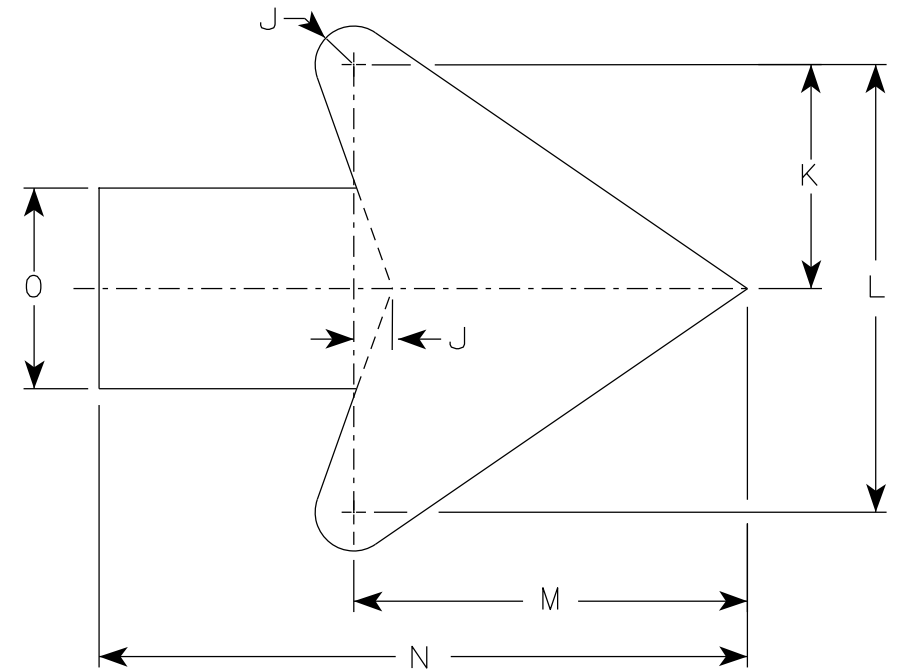
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/5/2024 PLATE NO. W5-54.9



### NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black



Arrow Detail

| SIZE | A  | B | C     | D   | E   | F | G  | H | I      | J     | K     | L      | M      | N      | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|----|---|--------|-------|-------|--------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |     |     |   |    |   |        |       |       |        |        |        |       |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 |   | 1 1/2 | 1/2 | 3/8 |   | 8  | 4 | 9 1/2  | 3/8   | 3 3/8 | 7 1/4  | 6 3/8  | 10 3/8 | 3 1/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 | 1/2 | 3/8 |   | 8  | 4 | 9 1/2  | 3/8   | 3 3/8 | 7 1/4  | 6 3/8  | 10 3/8 | 3 1/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 | 5 | 11 7/8 | 3/4   | 4 1/2 | 9      | 7 7/8  | 13     | 4     |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 4    | 36 |   | 2 1/4 | 1/2 | 5/8 |   | 12 | 6 | 14 1/4 | 1     | 5 1/2 | 10 7/8 | 9 5/8  | 15 3/4 | 4 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 3     | 3/4 | 1   |   | 16 | 8 | 19     | 1 1/4 | 7 1/4 | 14 1/2 | 12 3/4 | 21     | 6 1/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

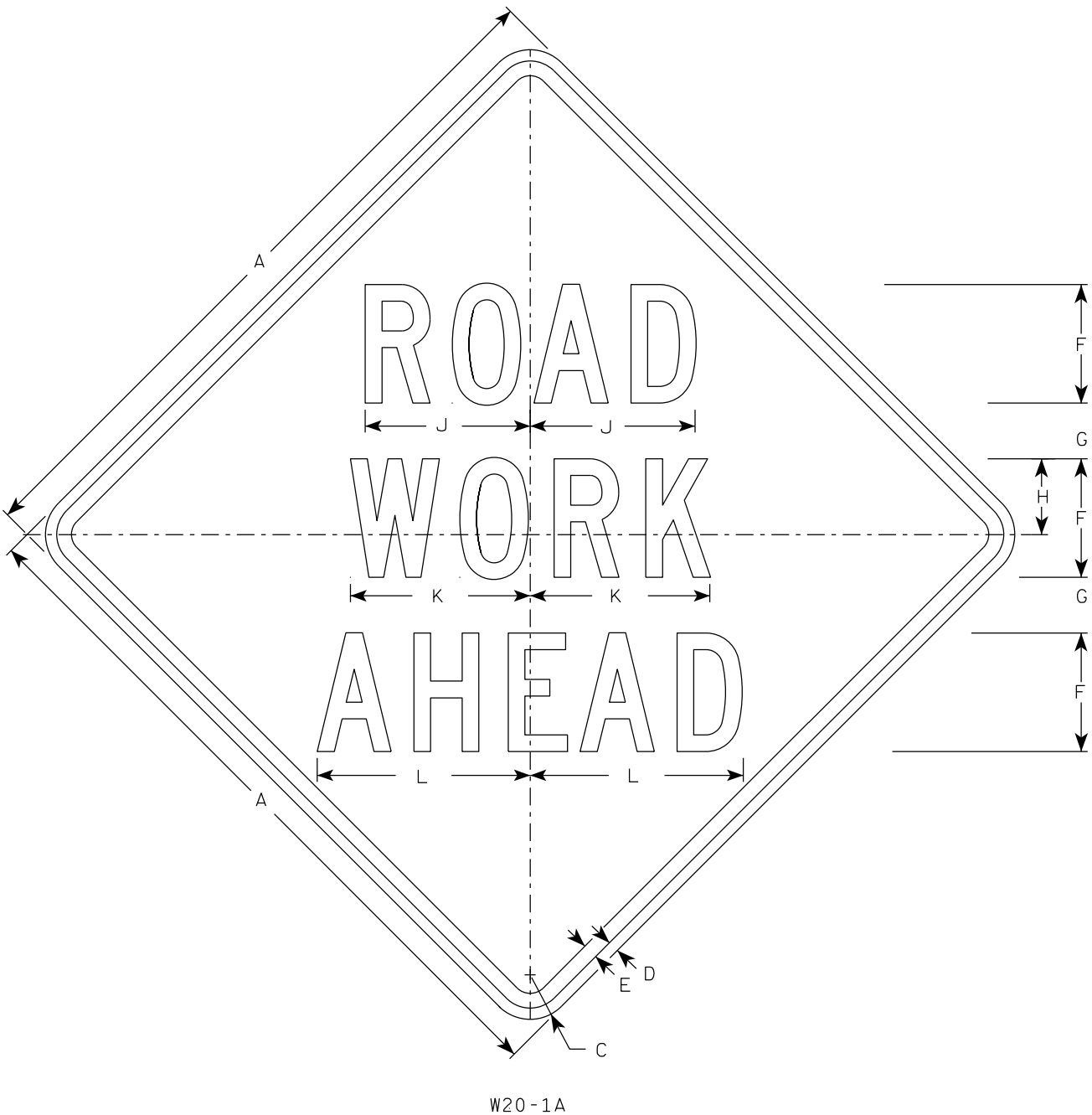
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/30/2023 PLATE NO. W12-1D.16

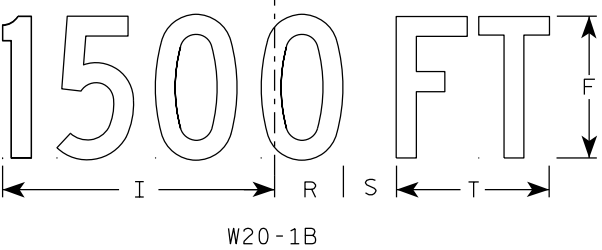
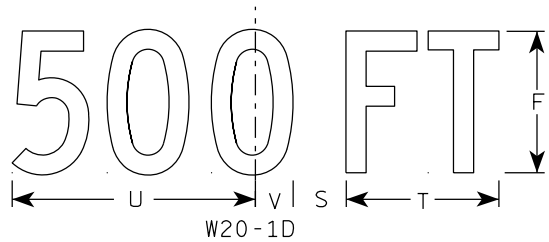
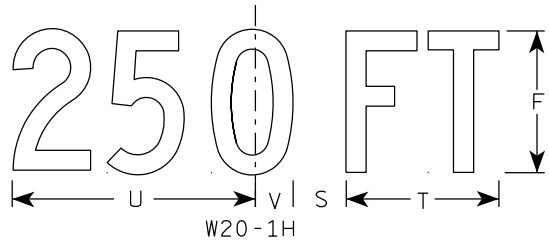
PROJECT NO: HWY: COUNTY: SHEET NO: 386 **E**

FILE NAME : C:\CAEfiles\Projects\tr\_stdplate\W121D.dgn PLOT DATE : 30-NOV 2023 2:34 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$. . . . . \$\$. . . . . \$\$. . . . . WISDOT/CADDS SHEET 42



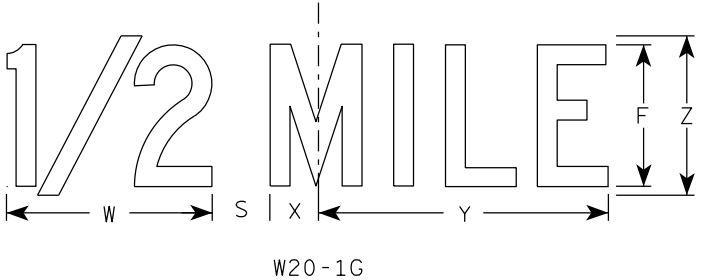


W20-1A

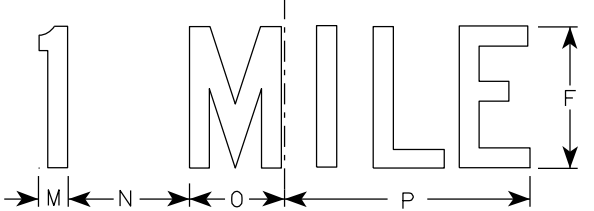


W20-1B

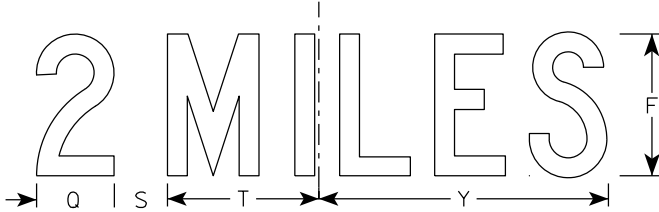
- NOTES
- 1. Sign is Type II - Type F Reflective
  - 2. Color:  
Background - Orange  
Message - Black
  - 3. Message Series - C
  - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



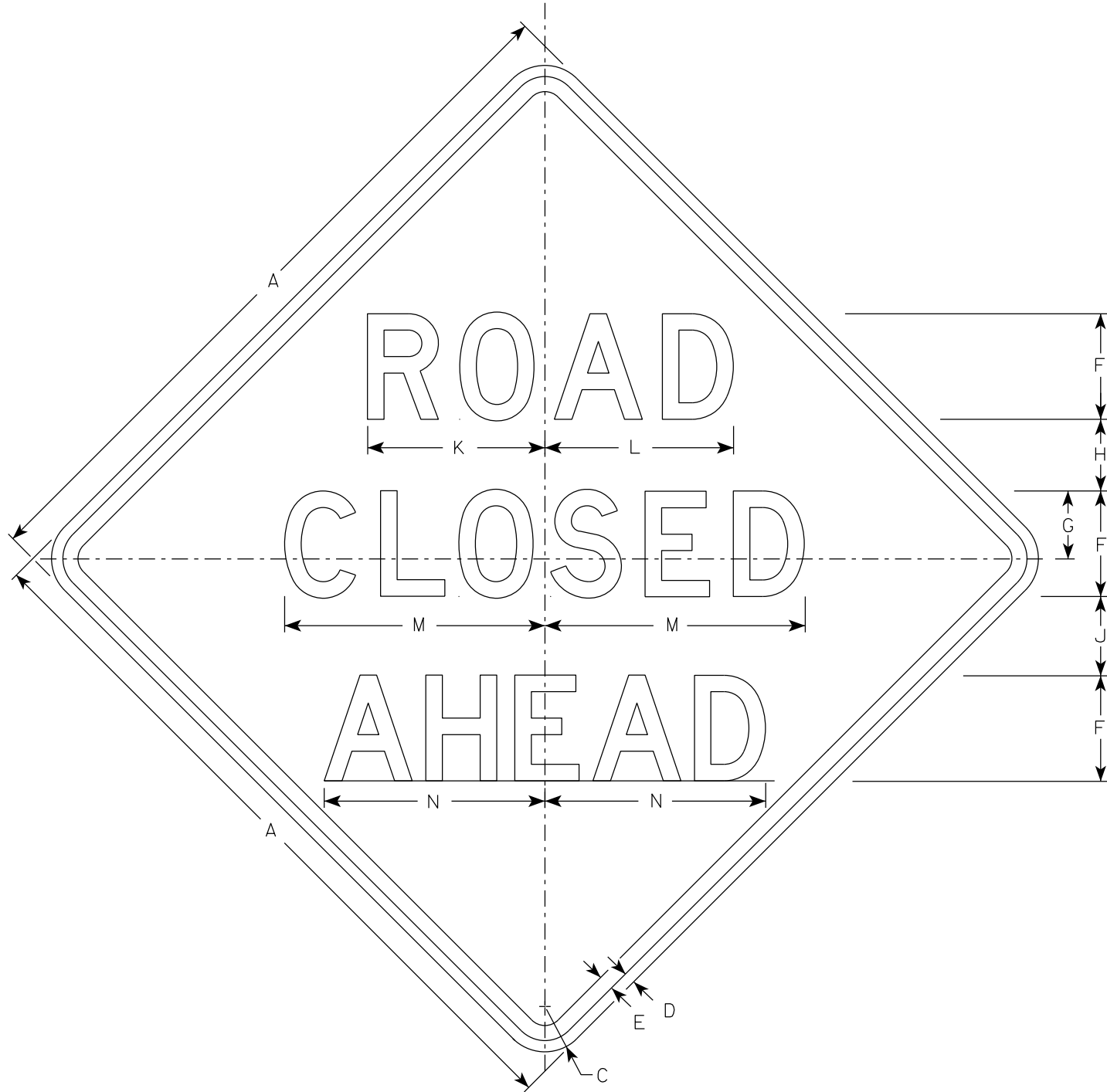
W20-1F



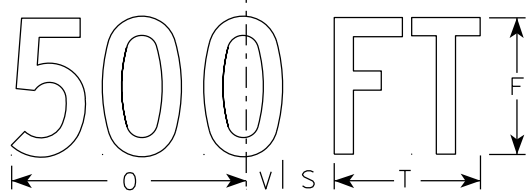
W20-1E

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M     | N     | O     | P      | Q     | R     | S     | T     | U      | v     | W      | X     | Y      | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|-------|--------|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7      | 7 5/8  | 8 7/8  | 1 1/8 | 4 1/2 | 3 1/2 | 9      | 3 1/4 | 2 1/2 | 2 1/4 | 5 5/8 | 9      | 1 3/8 | 8      | 1 3/4 | 10 3/4 | 6 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |

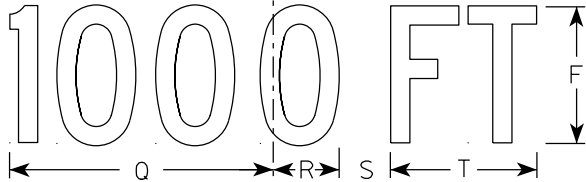
7



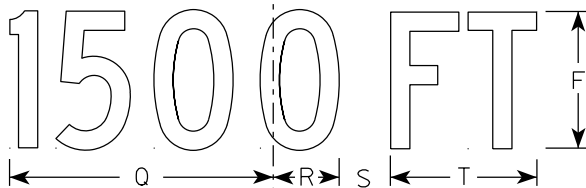
W20-3A



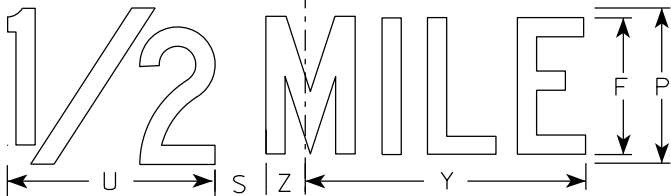
W20-3D



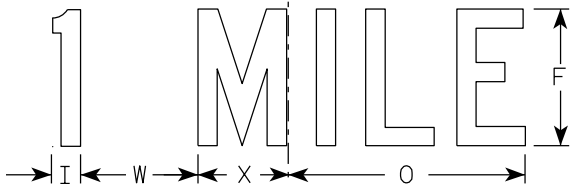
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K      | L      | M      | N      | O  | P | Q      | R     | S     | T     | U      | v     | W     | X     | Y      | Z     | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|--------|--------|--------|----|---|--------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 1 1/8 | 4     | 8 3/8  | 8 7/8  | 12 1/2 | 11     | 9  | 6 | 10 1/8 | 2 1/2 | 1 7/8 | 5 5/8 | 8      | 1 3/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 11 3/4 | 12 1/2 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |

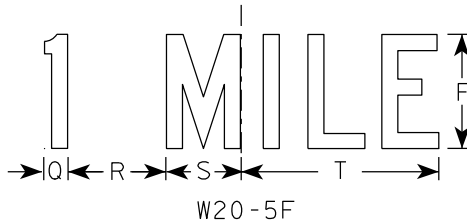
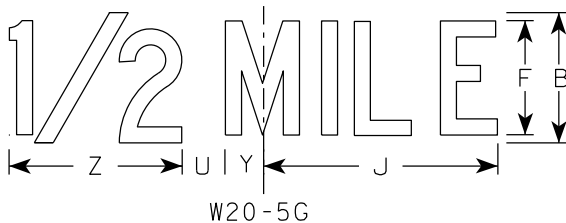
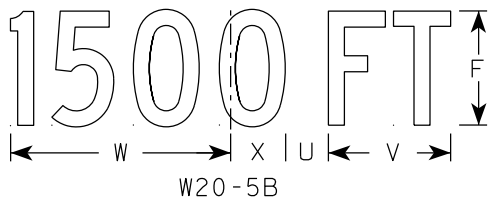
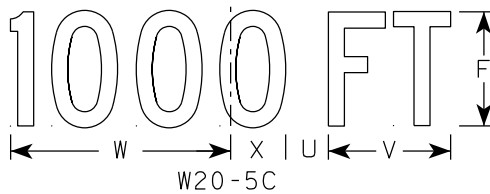
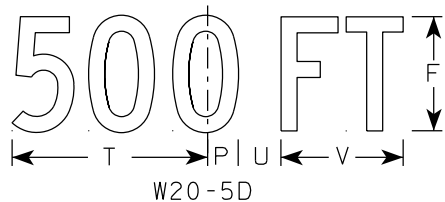
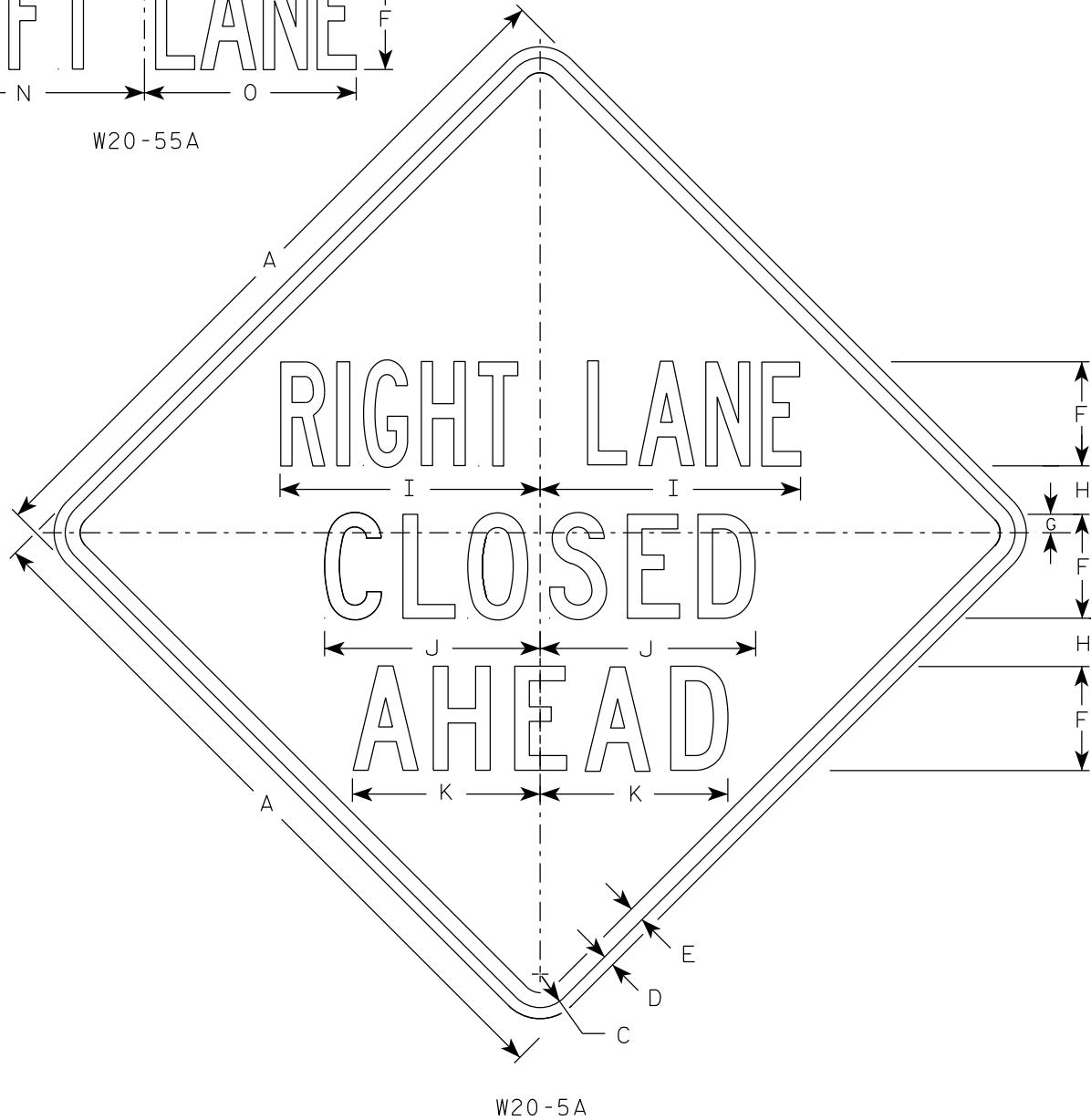
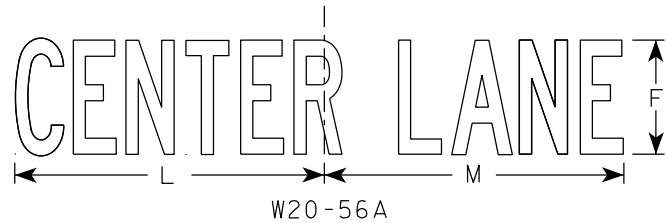
STANDARD SIGN  
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8





NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. " \_\_\_\_\_ LANE" is Series B.  
All other copy is Series C.

7

7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M      | N  | O      | P     | Q     | R     | S     | T  | U     | V     | W      | X     | Y     | Z      | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|--------|----|--------|-------|-------|-------|-------|----|-------|-------|--------|-------|-------|--------|-----------------|
| 1    | 36 | 6 | 2 1/4 | 5/8 | 3/4 | 5 | 7/8   | 2 1/2 | 13 1/8 | 10 3/4 | 9 1/2  | 14 1/4 | 13 5/8 | 12 | 12     | 1 3/8 | 1 1/8 | 4 1/2 | 3 1/2 | 9  | 1 7/8 | 5 5/8 | 10 1/8 | 2 1/2 | 1 3/4 | 8      | 9.0             |
| 2S   | 48 | 8 | 3     | 3/4 | 1   | 7 | 1 1/4 | 3 1/4 | 17 1/2 | 14 3/8 | 12 5/8 | 19     | 18 3/8 | 16 | 14 1/4 | 1 7/8 | 1 1/2 | 6     | 4 5/8 | 12 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 2 3/8 | 10 5/8 | 16.0            |
| 2M   | 48 | 8 | 3     | 3/4 | 1   | 7 | 1 1/4 | 3 1/4 | 17 1/2 | 14 3/8 | 12 5/8 | 19     | 18 3/8 | 16 | 14 1/4 | 1 7/8 | 1 1/2 | 6     | 4 5/8 | 12 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 2 3/8 | 10 5/8 | 16.0            |
| 3    | 48 | 8 | 3     | 3/4 | 1   | 7 | 1 1/4 | 3 1/4 | 17 1/2 | 14 3/8 | 12 5/8 | 19     | 18 3/8 | 16 | 14 1/4 | 1 7/8 | 1 1/2 | 6     | 4 5/8 | 12 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 2 3/8 | 10 5/8 | 16.0            |
| 4    | 48 | 8 | 3     | 3/4 | 1   | 7 | 1 1/4 | 3 1/4 | 17 1/2 | 14 3/8 | 12 5/8 | 19     | 18 3/8 | 16 | 14 1/4 | 1 7/8 | 1 1/2 | 6     | 4 5/8 | 12 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 2 3/8 | 10 5/8 | 16.0            |
| 5    | 48 | 8 | 3     | 3/4 | 1   | 7 | 1 1/4 | 3 1/4 | 17 1/2 | 14 3/8 | 12 5/8 | 19     | 18 3/8 | 16 | 14 1/4 | 1 7/8 | 1 1/2 | 6     | 4 5/8 | 12 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 2 3/8 | 10 5/8 | 16.0            |

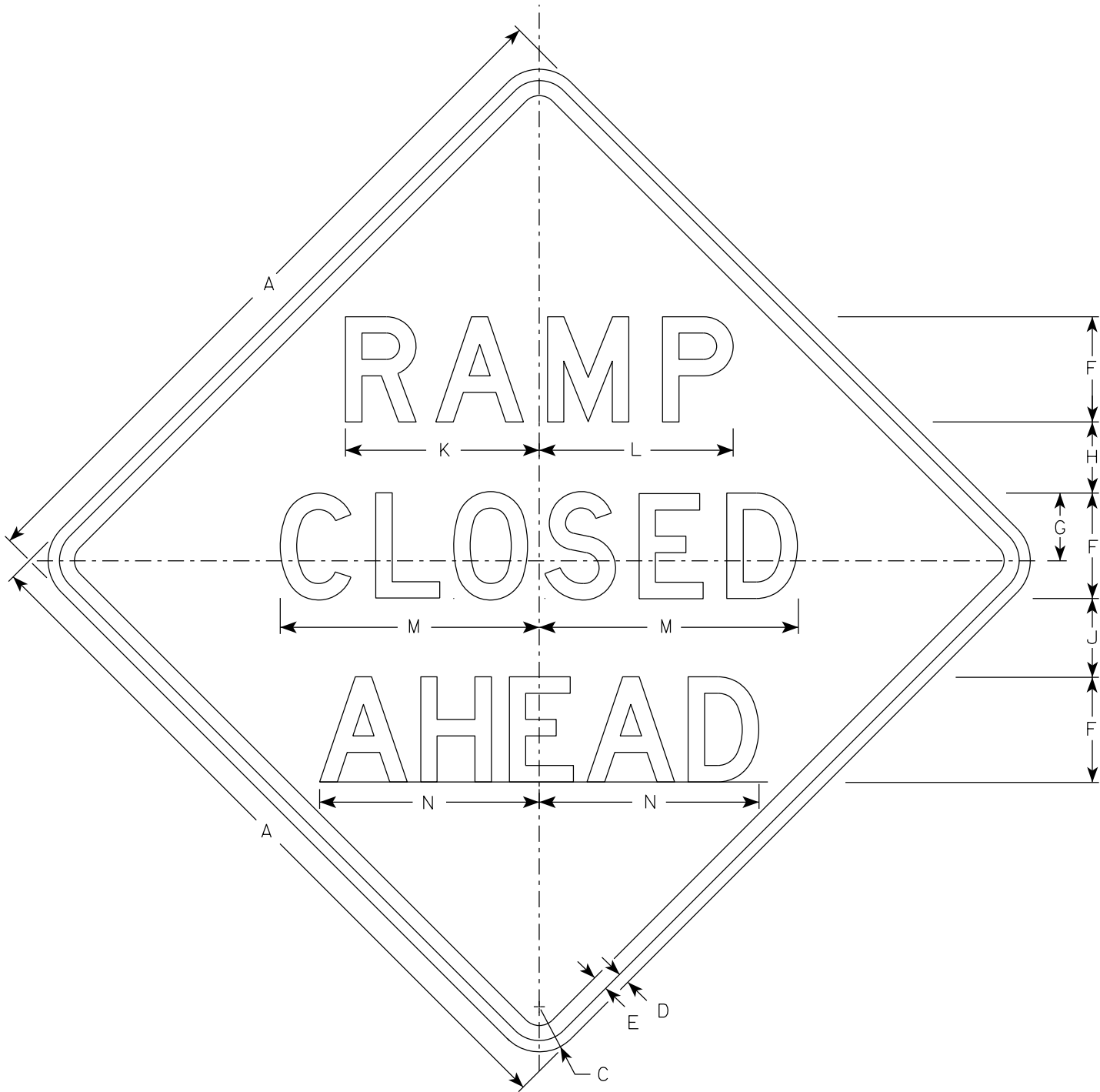
PROJECT NO:

HWY:

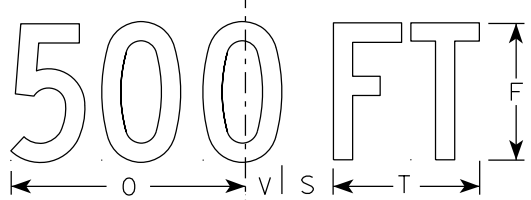
COUNTY:

SHEET NO: 389

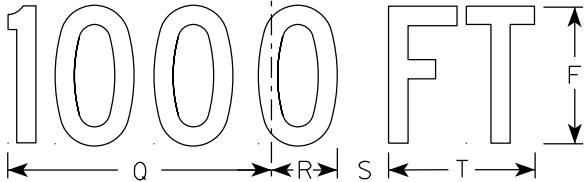
E



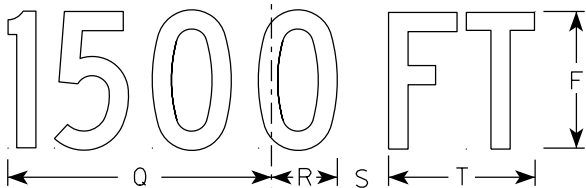
W20-53A



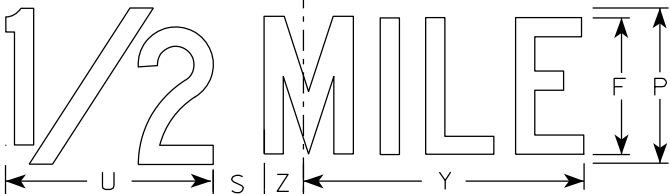
W20-53D



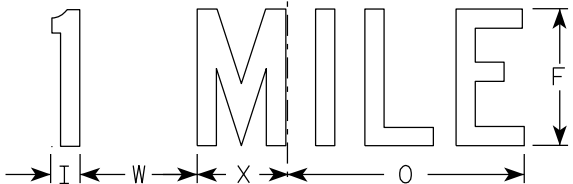
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K      | L      | M      | N      | O  | P | Q      | R     | S     | T     | U      | V     | W     | X     | Y      | Z     | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|--------|--------|--------|----|---|--------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 1 1/8 | 4     | 9 1/4  | 9 1/4  | 12 1/2 | 11     | 9  | 6 | 10 1/8 | 2 1/2 | 1 7/8 | 5 5/8 | 8      | 1 3/8 | 4 1/2 | 3 1/2 | 10 3/4 | 1 3/4 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 1 1/2 | 5 1/4 | 12 7/8 | 12 7/8 | 17 1/4 | 14 5/8 | 12 | 8 | 13 1/2 | 3 3/8 | 2 5/8 | 7 1/2 | 10 5/8 | 1 7/8 | 6     | 4 5/8 | 14 3/8 | 2 3/8 | 16.0            |

STANDARD SIGN  
W20-53A,B,C,D,F,G

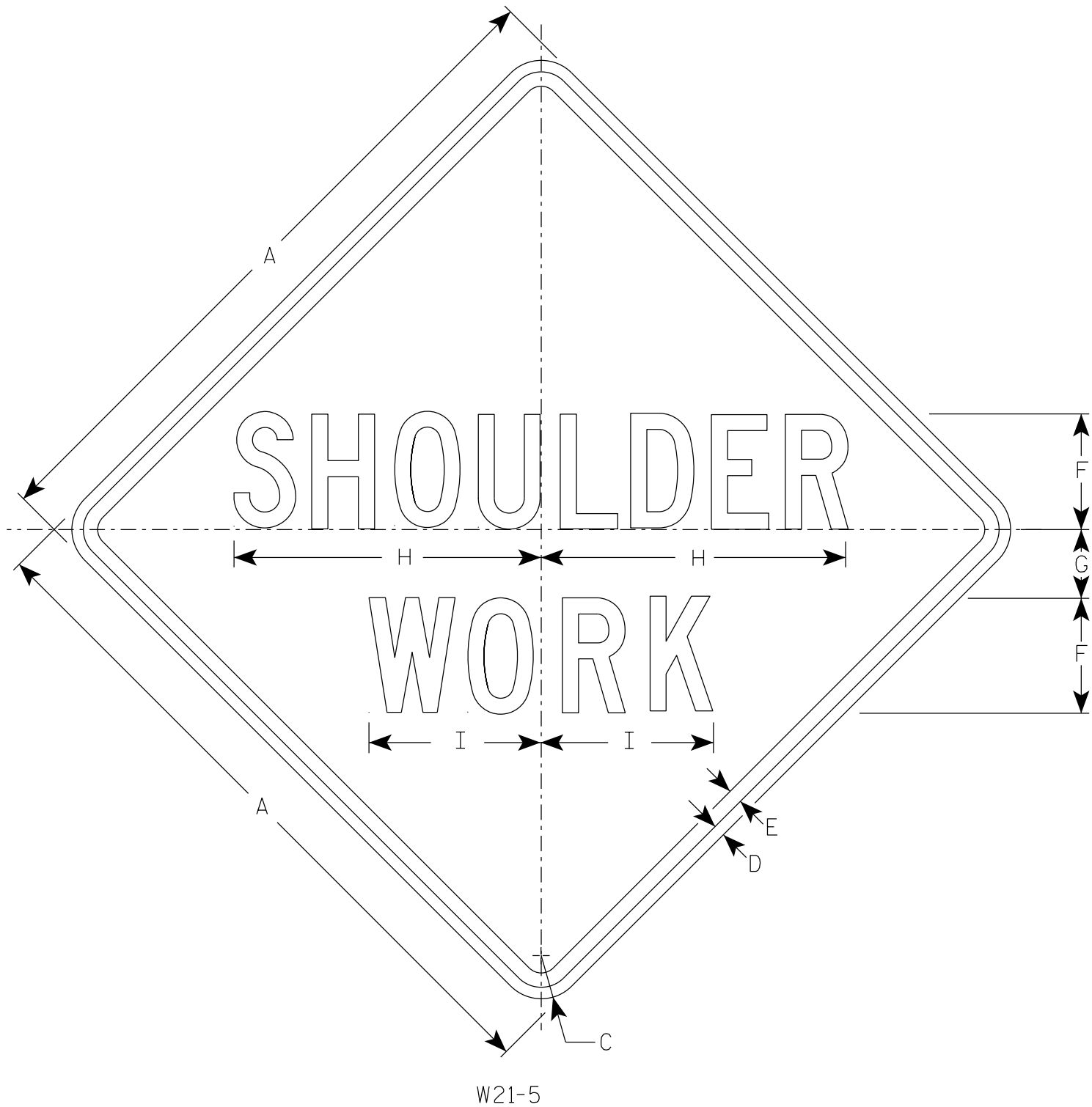
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2



7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C

7

| SIZE | A  | B | C     | D   | E   | F | G     | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 6 | 3 1/2 | 16     | 9      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/11/2024 PLATE NO. W21-5.7

PROJECT NO:

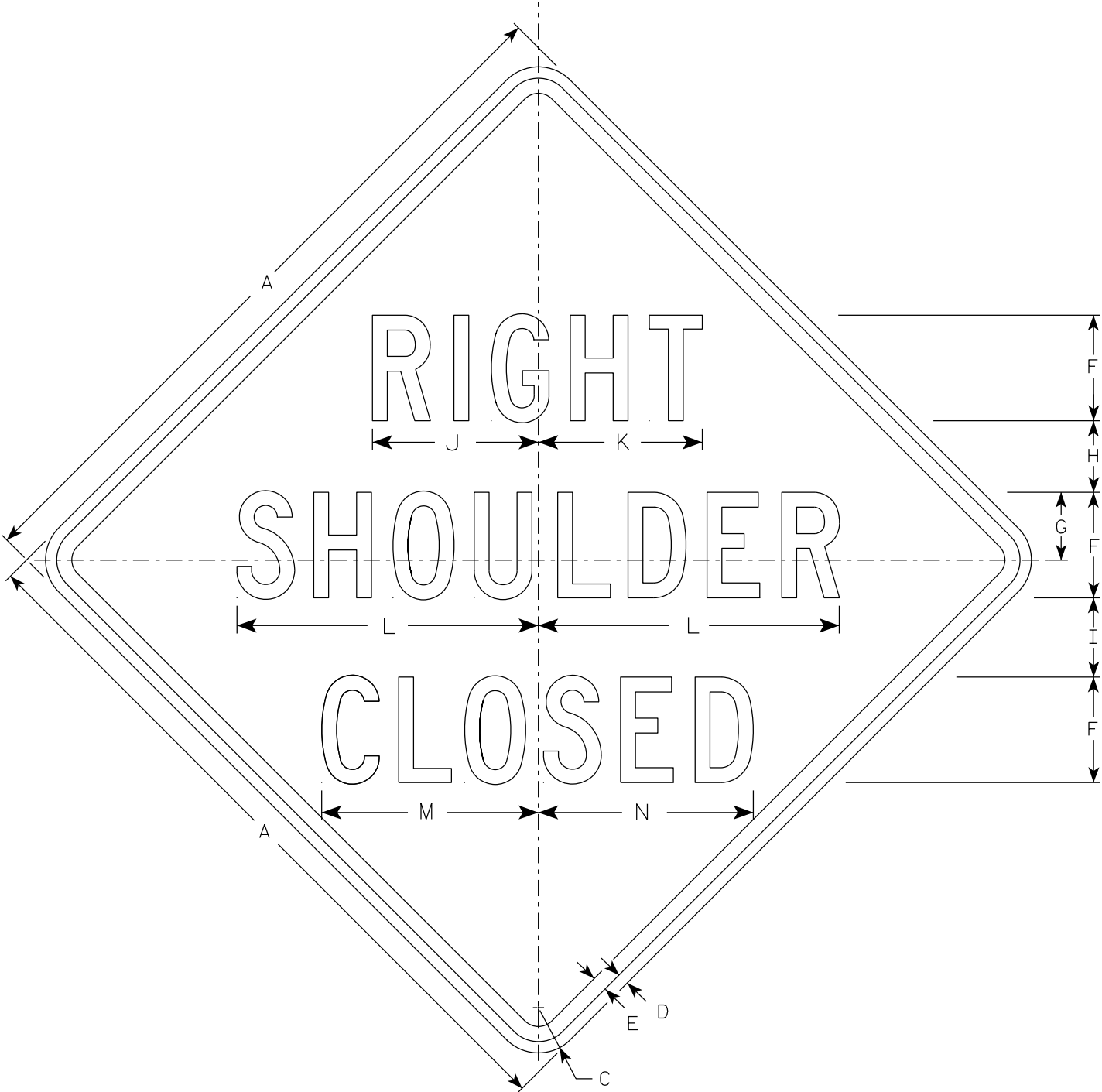
HWY:

COUNTY:

SHEET NO: 391

E

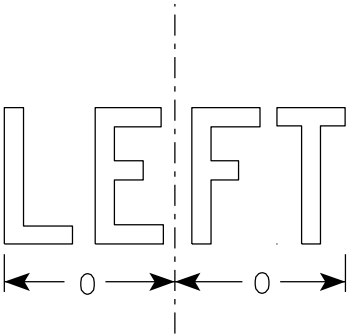
7



W21-5A

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - D



W21-5AL

7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K      | L      | M      | N      | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|--------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 3 3/8 | 3 1/2 | 4     | 7 7/8 | 7 3/4  | 14 1/4 | 10 1/4 | 10 1/8 | 6 1/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 5 1/4 | 11    | 10 7/8 | 20     | 14 3/8 | 14 1/4 | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 5 1/4 | 11    | 10 7/8 | 20     | 14 3/8 | 14 1/4 | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 5 1/4 | 11    | 10 7/8 | 20     | 14 3/8 | 14 1/4 | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 5 1/4 | 11    | 10 7/8 | 20     | 14 3/8 | 14 1/4 | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 4 1/2 | 4 3/4 | 5 1/4 | 11    | 10 7/8 | 20     | 14 3/8 | 14 1/4 | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

PROJECT NO:

HWY:

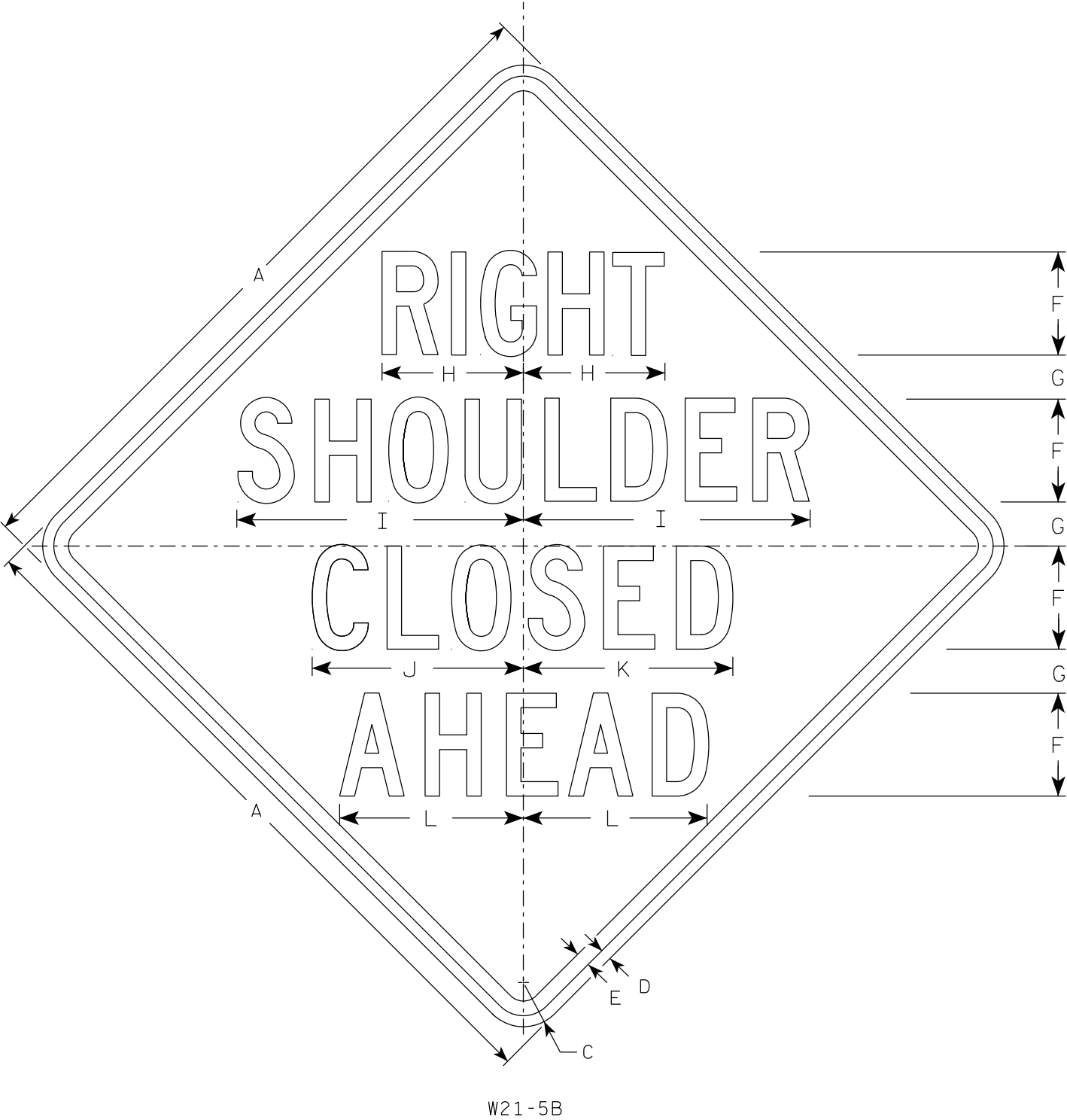
COUNTY:

SHEET NO: 392

E

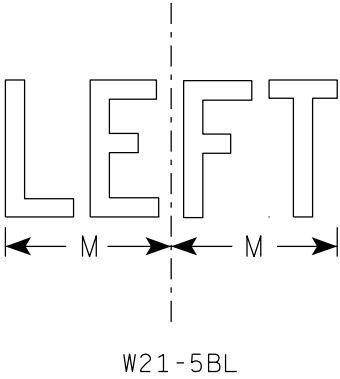


7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - C



7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M     | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 2 1/4 | 7 3/8 | 14 1/4 | 10 1/4 | 10 1/8 | 8 7/8  | 6 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7 | 3     | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7 | 3     | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7 | 3     | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7 | 3     | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7 | 3     | 9 5/8 | 19 1/2 | 14 3/8 | 14 1/4 | 12 1/2 | 8 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

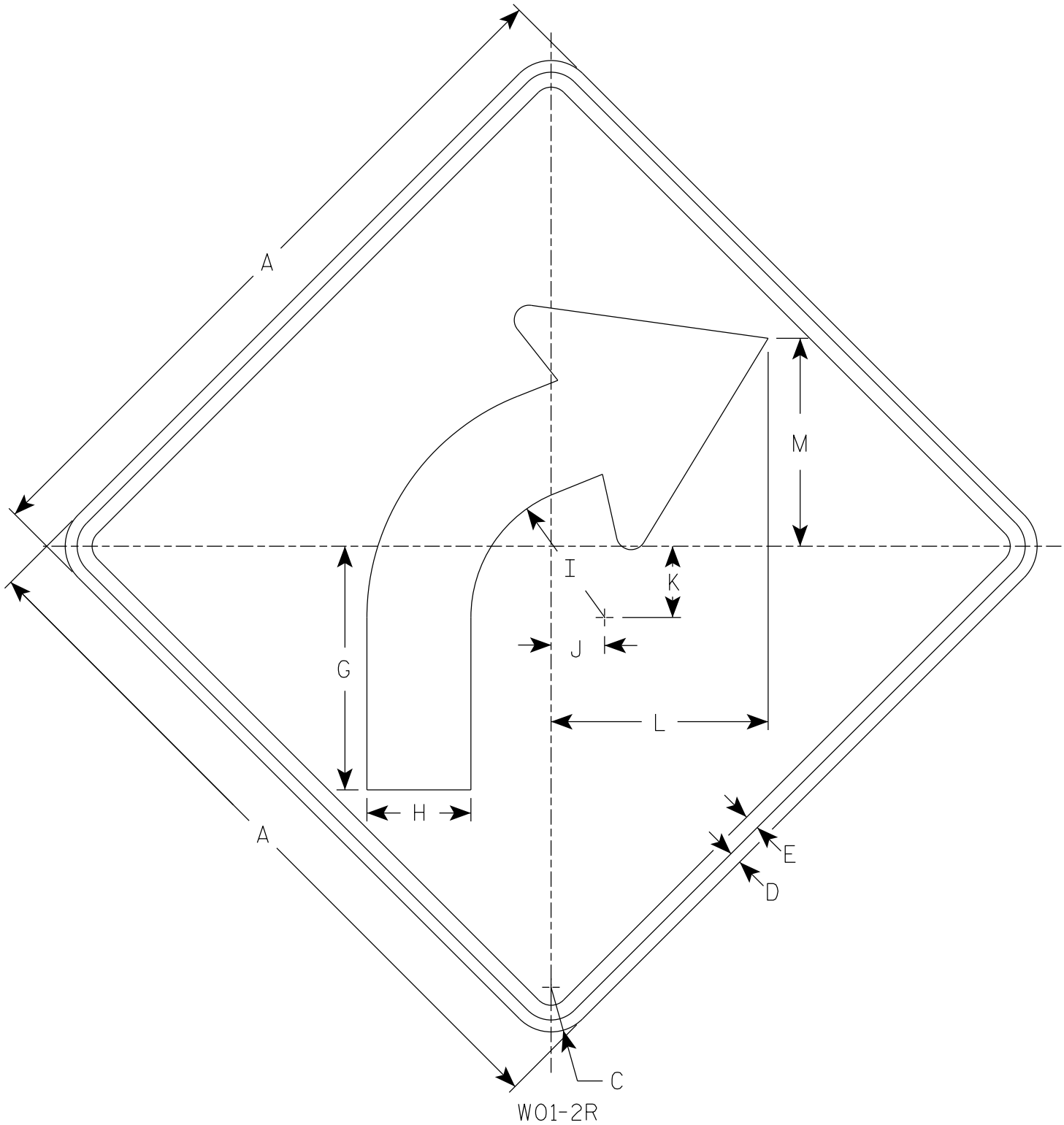
PROJECT NO:

HWY:

COUNTY:

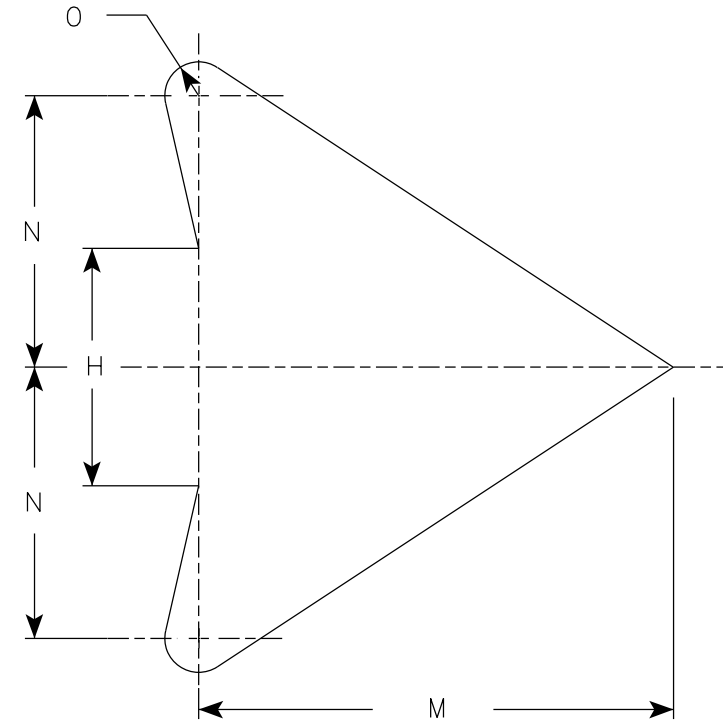
SHEET NO: 393

E



### NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-2L is the same as W01-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F | G      | H     | I     | J     | K     | L      | M      | N | O   | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-------|-------|-------|--------|--------|---|-----|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/8 | 5 1/4 | 6 3/4 | 2 5/8 | 3 1/2 | 10 7/8 | 10 1/2 | 6 | 3/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

### STANDARD SIGN W01-2

WISCONSIN DEPT OF TRANSPORTATION

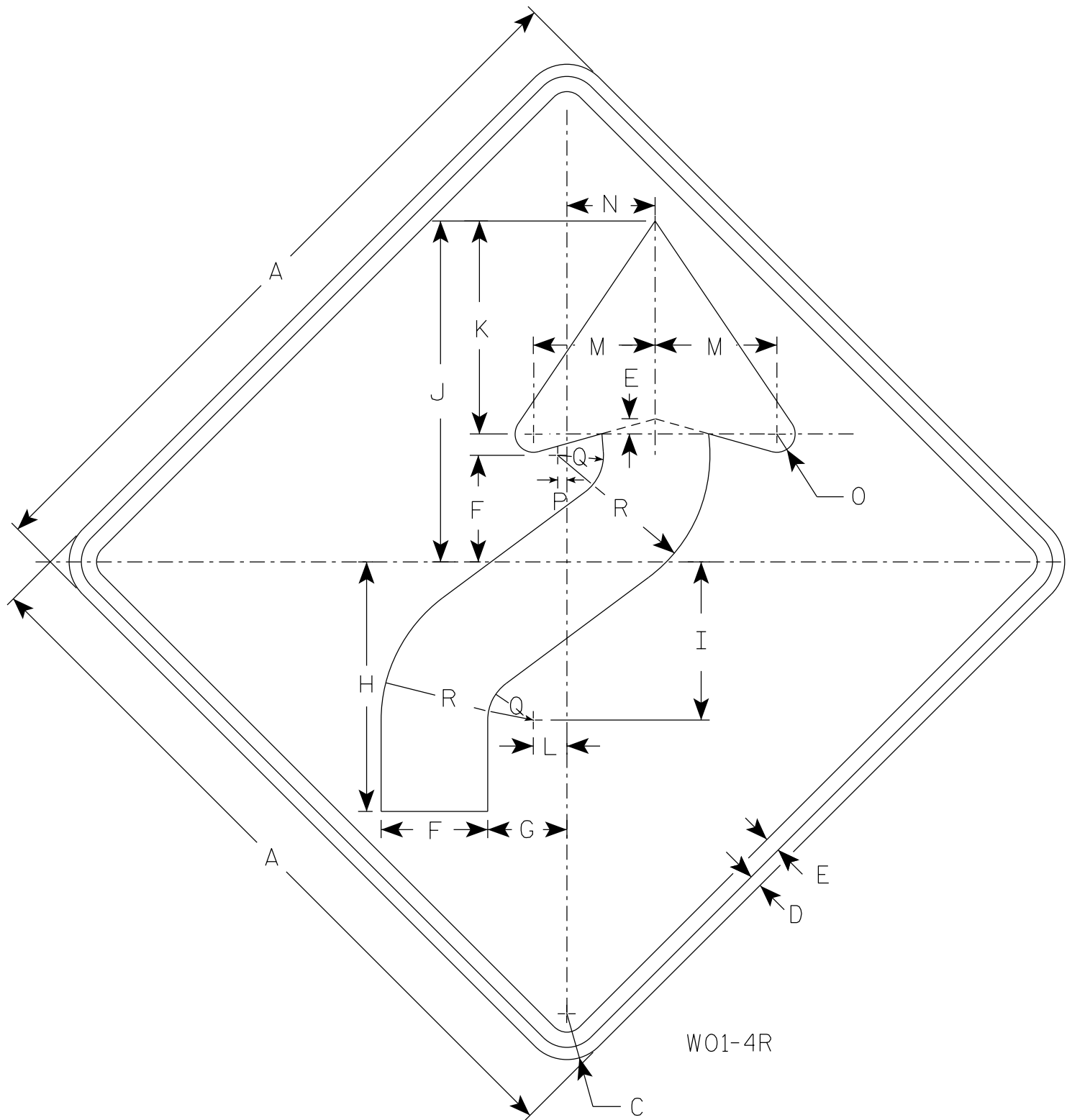
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-2.2

PROJECT NO: HWY: COUNTY: SHEET NO: 394 E

FILE NAME : C:\CAEfiles\Projects\tr\_stdplate\W012.dgn PLOT DATE : 24-JAN 2024 10:17 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDs SHEET 42





NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

| SIZE | A  | B | C     | D   | E   | F     | G     | H      | I      | J      | K      | L     | M | N     | O     | P   | Q     | R     | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|-------|-------|--------|--------|--------|--------|-------|---|-------|-------|-----|-------|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 1/4 | 4     | 12 3/8 | 7 7/8  | 16 7/8 | 10 1/2 | 1 5/8 | 6 | 4 1/2 | 1     | 1/2 | 2 1/4 | 7 1/2 |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 7     | 5 1/4 | 16 1/2 | 10 1/2 | 22 1/2 | 14     | 2 1/4 | 8 | 6     | 1 1/4 | 5/8 | 3     | 10    |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W01-4

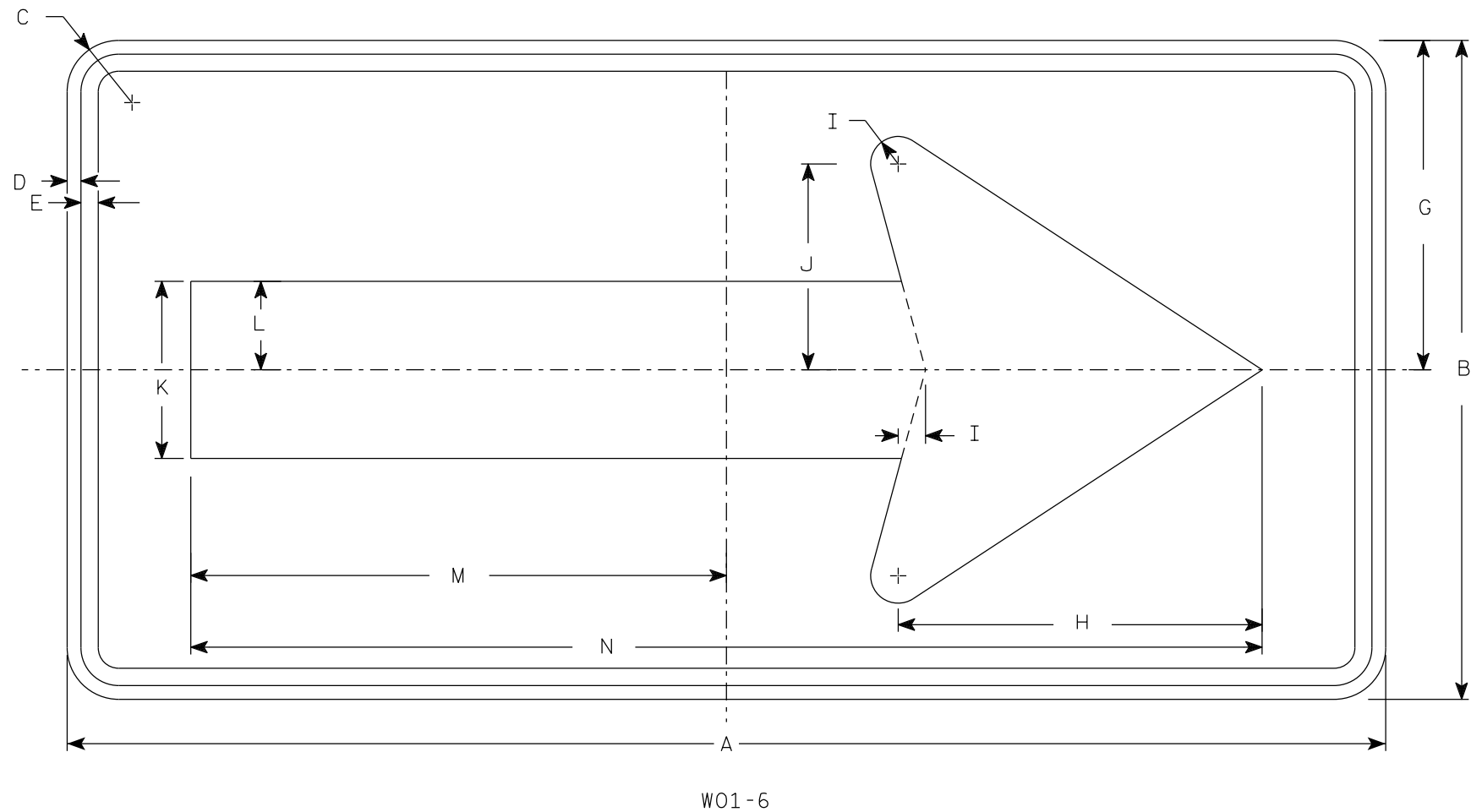
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 395 | E |
|-------------|------|---------|---------------|---|

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B  | C     | D   | E   | F | G  | H      | I     | J     | K     | L     | M      | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|--------|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |        |       |       |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 |   | 12 | 13 1/4 | 1     | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 |   | 12 | 13 1/4 | 1     | 7 1/2 | 6 1/2 | 3 1/4 | 19 1/2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 60 | 30 | 1 7/8 | 1/2 | 5/8 |   | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8     | 4     | 24 3/8 | 48 3/4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 4    | 60 | 30 | 1 7/8 | 1/2 | 5/8 |   | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8     | 4     | 24 3/8 | 48 3/4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    | 60 | 30 | 1 7/8 | 1/2 | 5/8 |   | 15 | 16 1/4 | 1 1/4 | 9 1/4 | 8     | 4     | 24 3/8 | 48 3/4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |

STANDARD SIGN

W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

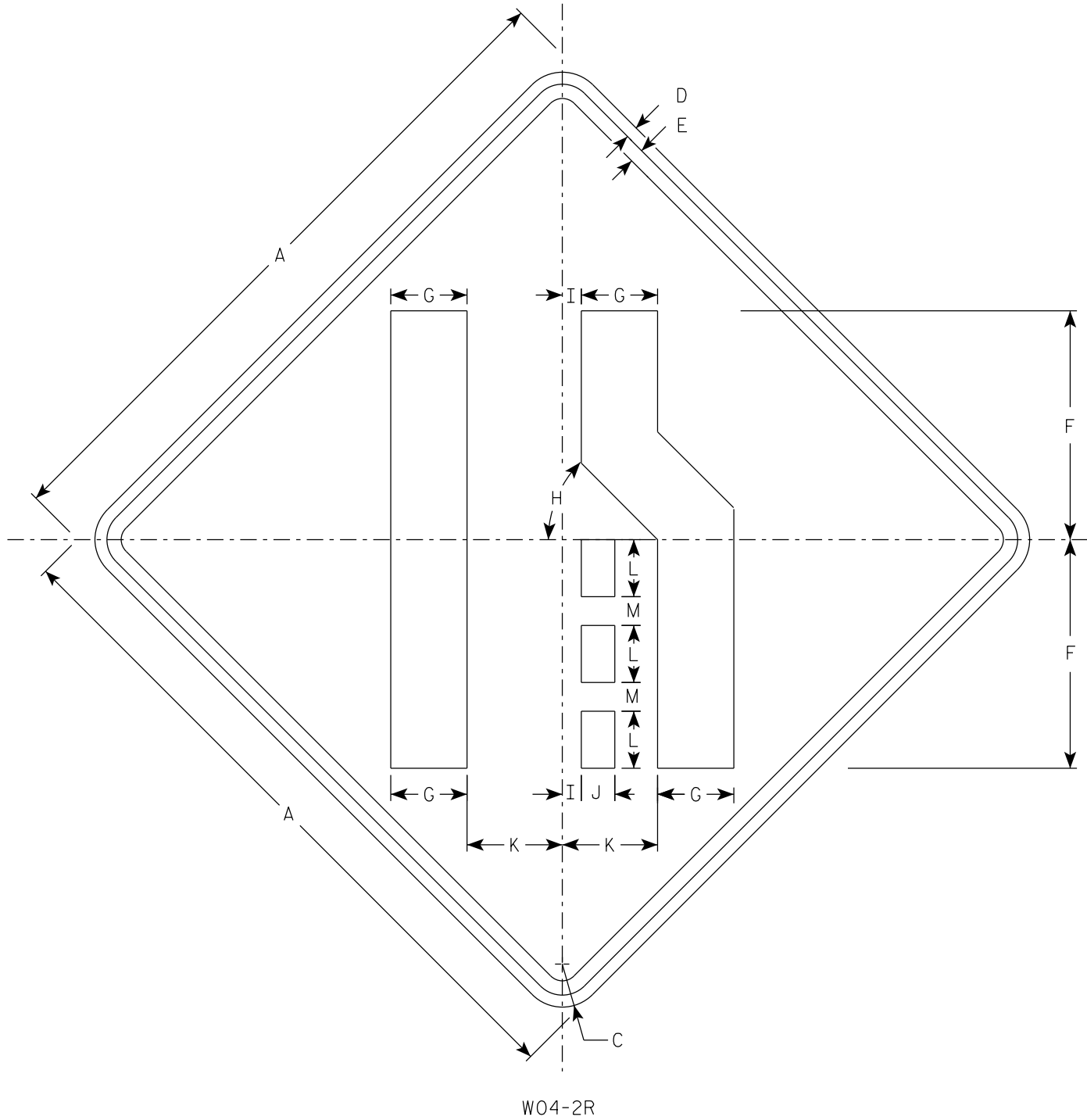
for State Traffic Engineer

DATE 1/24/2024

PLATE NO. W01-6.2



7

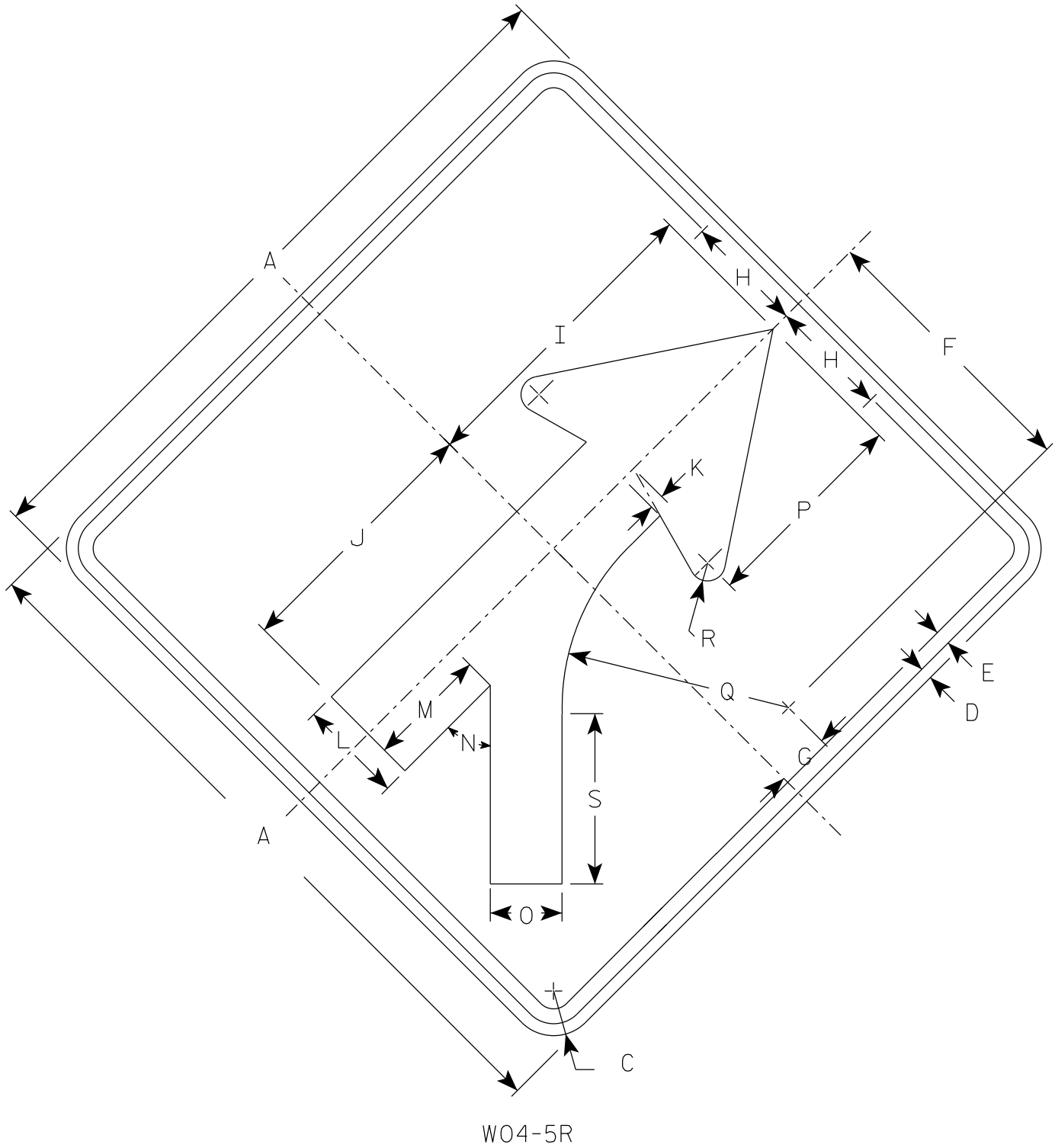


NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

7

| SIZE | A  | B | C     | D   | E   | F  | G     | H   | I     | J     | K     | L | M     | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|-------|-----|-------|-------|-------|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 4     | 45° | 1     | 1 3/4 | 5     | 3 | 1 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 16 | 5 3/8 | 45° | 1 1/4 | 2 3/8 | 6 3/4 | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

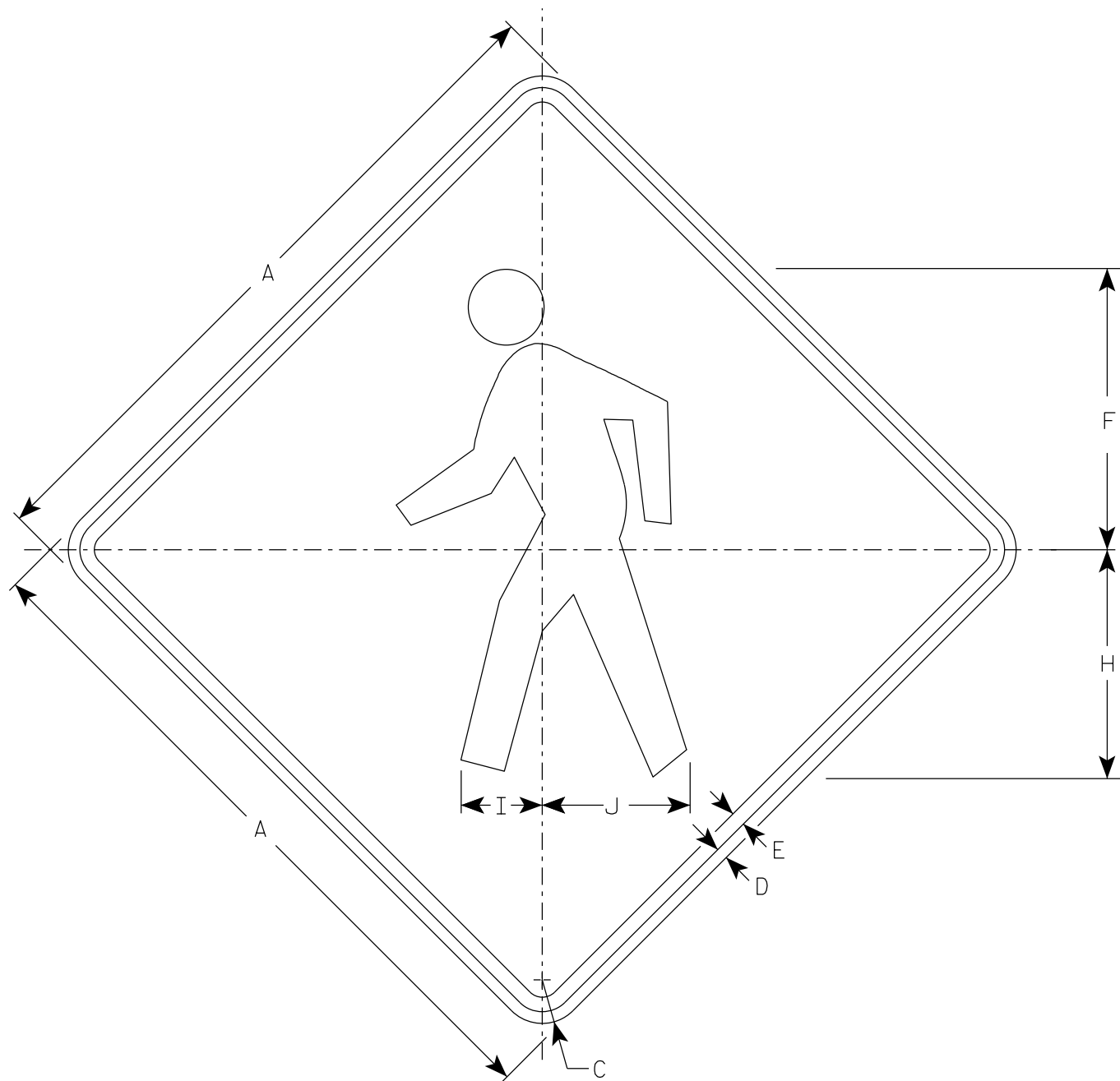


NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-5L is the same as W04-5R except the arrow is reversed along the vertical centerline.

| SIZE | A  | B | C     | D   | E   | F      | G     | H | I      | J      | K   | L     | M     | N   | O     | P      | Q      | R     | S      | T | U | v | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|-------|---|--------|--------|-----|-------|-------|-----|-------|--------|--------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 14     | 2 3/4 | 6 | 15 3/4 | 13 1/4 | 3/4 | 5 1/4 | 6 1/8 | 45° | 3 5/8 | 10 5/8 | 11 3/8 | 7/8   | 8 1/2  |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 1   | 7     | 8 1/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | 11 3/8 |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 1   | 7     | 8 1/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | 11 3/8 |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 1   | 7     | 8 1/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | 11 3/8 |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 1   | 7     | 8 1/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | 11 3/8 |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 18 3/4 | 3 5/8 | 8 | 20 1/2 | 17 1/2 | 1   | 7     | 8 1/8 | 45° | 4 3/4 | 14 1/4 | 15 1/4 | 1 1/4 | 11 3/8 |   |   |   |   |   |   |   | 16.0            |





NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F      | G | H      | I     | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 14 1/2 |   | 11 7/8 | 4 1/4 | 7 5/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 19 3/8 |   | 15 3/4 | 5 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 19 3/8 |   | 15 3/4 | 5 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 19 3/8 |   | 15 3/4 | 5 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 19 3/8 |   | 15 3/4 | 5 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |        |   |        |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

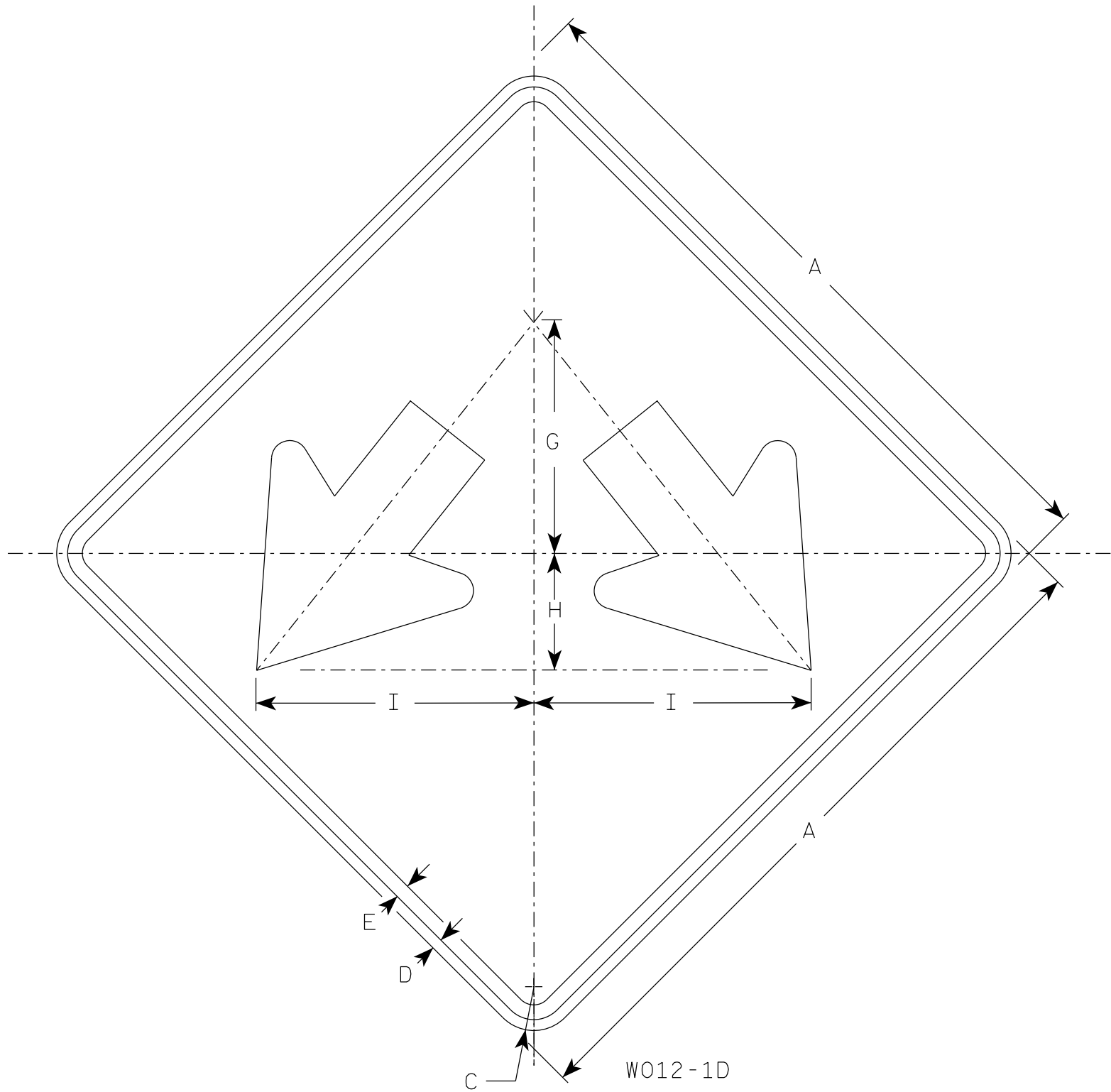
STANDARD SIGN  
W011-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

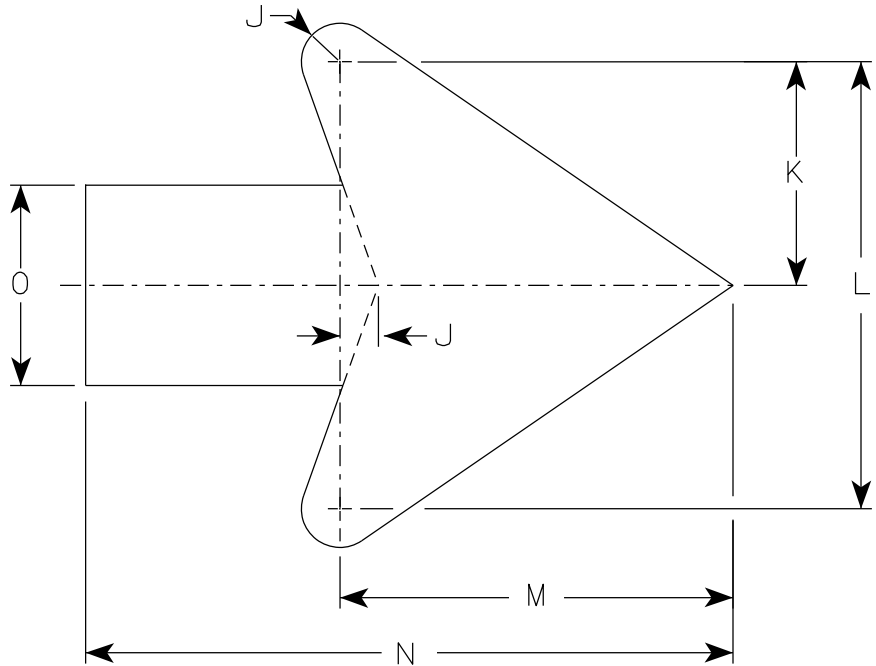
DATE 2/1/2024 PLATE NO. W011-2.2

|             |      |         |               |  |   |
|-------------|------|---------|---------------|--|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 399 |  | E |
|-------------|------|---------|---------------|--|---|



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

| SIZE | A  | B | C     | D   | E   | F | G  | H | I      | J   | K     | L      | M     | N      | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|----|---|--------|-----|-------|--------|-------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 1/2 | 3/8 |   | 8  | 4 | 9 1/2  | 3/8 | 3 3/8 | 7 1/4  | 6 3/8 | 10 3/8 | 3 1/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 24 |   | 1 1/2 | 1/2 | 3/8 |   | 8  | 4 | 9 1/2  | 3/8 | 3 3/8 | 7 1/4  | 6 3/8 | 10 3/8 | 3 1/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   | 1 1/2 | 1/2 | 3/8 |   | 8  | 4 | 9 1/2  | 3/8 | 3 3/8 | 7 1/4  | 6 3/8 | 10 3/8 | 3 1/4 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 | 5 | 11 7/8 | 3/4 | 4 1/2 | 9      | 7 7/8 | 13     | 4     |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 4    | 36 |   | 2 1/4 | 1/2 | 5/8 |   | 12 | 6 | 14 1/4 | 1   | 5 1/2 | 10 7/8 | 9 5/8 | 15 3/4 | 4 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 36 |   | 2 1/4 | 1/2 | 5/8 |   | 12 | 6 | 14 1/4 | 1   | 5 1/2 | 10 7/8 | 9 5/8 | 15 3/4 | 4 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |

STANDARD SIGN  
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/1/2024

PLATE NO. W012-1D.3

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

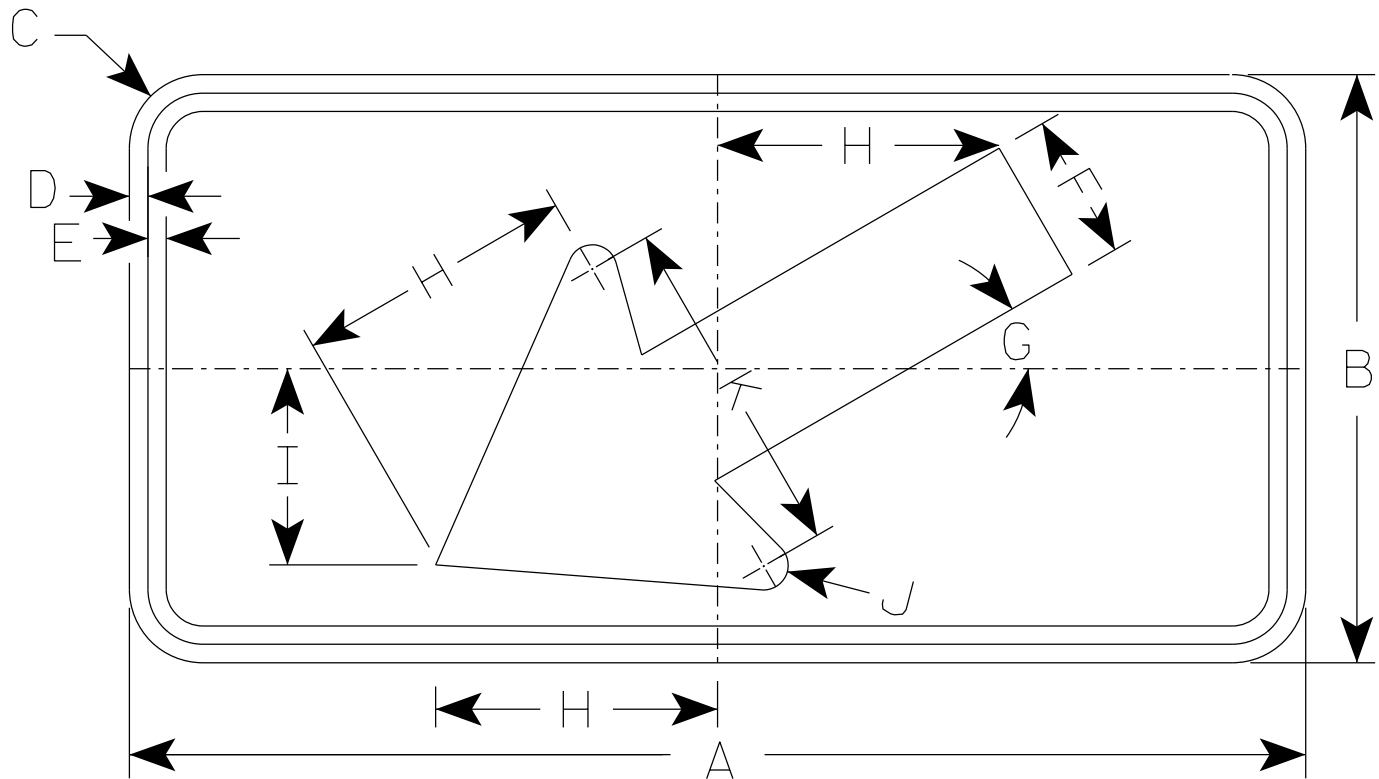
400

E



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Corners may be square or rounded but corners shall be rounded when base material is metal.
- 4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.



W016 - 7L

| SIZE | A  | B  | C     | D   | E   | F     | G   | H      | I | J   | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|-----|--------|---|-----|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 4 1/2 | 30° | 8 1/2  | 6 | 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 4    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 401

E

STANDARD SIGN  
W016 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W016-7.3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W016-9P

| SIZE | A  | B  | C     | D   | E   | F  | G     | H     | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|----|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 7  | 5 1/2 | 2 3/4 | 24 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7     | 6 1/8 | 35 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7     | 6 1/8 | 35 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7     | 6 1/8 | 35 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 4    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7     | 6 1/8 | 35 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 10 | 7     | 6 1/8 | 35 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |

STANDARD SIGN

W016-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/1/2024

PLATE NO. W016-9P.8

PROJECT NO: HWY: COUNTY: SHEET NO: 402 E

FILE NAME : C:\CAEfiles\Projects\tr\_stdplate\W0169P.dgn PLOT DATE : 1-FEB 2024 10:20 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDs SHEET 42



GENERAL NOTES:

THE PROPOSED WORK INCLUDES CLEANING AND APPLYING A POLYMER OVERLAY TO THE TOP SURFACE OF THE BRIDGE DECK, CONCRETE SURFACE REPAIR, A PROTECTIVE SURFACE RESEAL TO SIDEWALKS, MEDIANS, AND CONCRETE SURFACE REPAIR, AND PIGMENTED SURFACE SEALER RESEAL TO THE INSIDE FACE AND TOP OF PARAPET.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON PREVIOUS STRUCTURE PLANS. VERTICAL CLEARANCES ARE BASED ON INSPECTION REPORTS.

BRIDGE PLAN ALIGNMENT AND STATIONING MAT NOT CORRESPOND TO ROADWAY ALIGNMENT AND STATIONING.

REFER TO THE PROJECT SPECIFICATIONS FOR DETAILS OF THE REQUIREMENTS FOR DECK PREPARATION. SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

CLEAN, STRAIGHTEN AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION WHERE APPLICABLE.

ENGINEER TO VERIFY CONCRETE SURFACE REPAIR AREAS. CONCRETE SURFACE REPAIRS SHALL BE MADE ONLY AS DIRECTED BY THE ENGINEER. QUANTITIES SHOWN ARE APPROXIMATE.

EPOXY CRACK INJECTION REPAIR IS LOCATED IN BOTTOM FLANGE OF GIRDERS AT PIERS 1 AND 3.

TAPER POLYMER OVERLAY AT EXPANSION DEVICE OR AS DIRECTED BY ENGINEER.

UPON COMPLETION OF WORK, REMOVE ANY DEBRIS FROM BRIDGE EXPANSION DEVICES.

DESIGN DATA

LIVE LOAD:  
INVENTORY RATING = HS07  
OPERATING RATING = HS15  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 170 KIPS

TRAFFIC DATA

W. LAPHAM ST.  
A.D.T. (2035) = 8,516

IH-43/94  
A.D.T. (2030) = 108,000

MATERIAL PROPERTIES

CONCRETE MASONRY - SURFACE REPAIR  $f'_c = 4,000$  P.S.I.

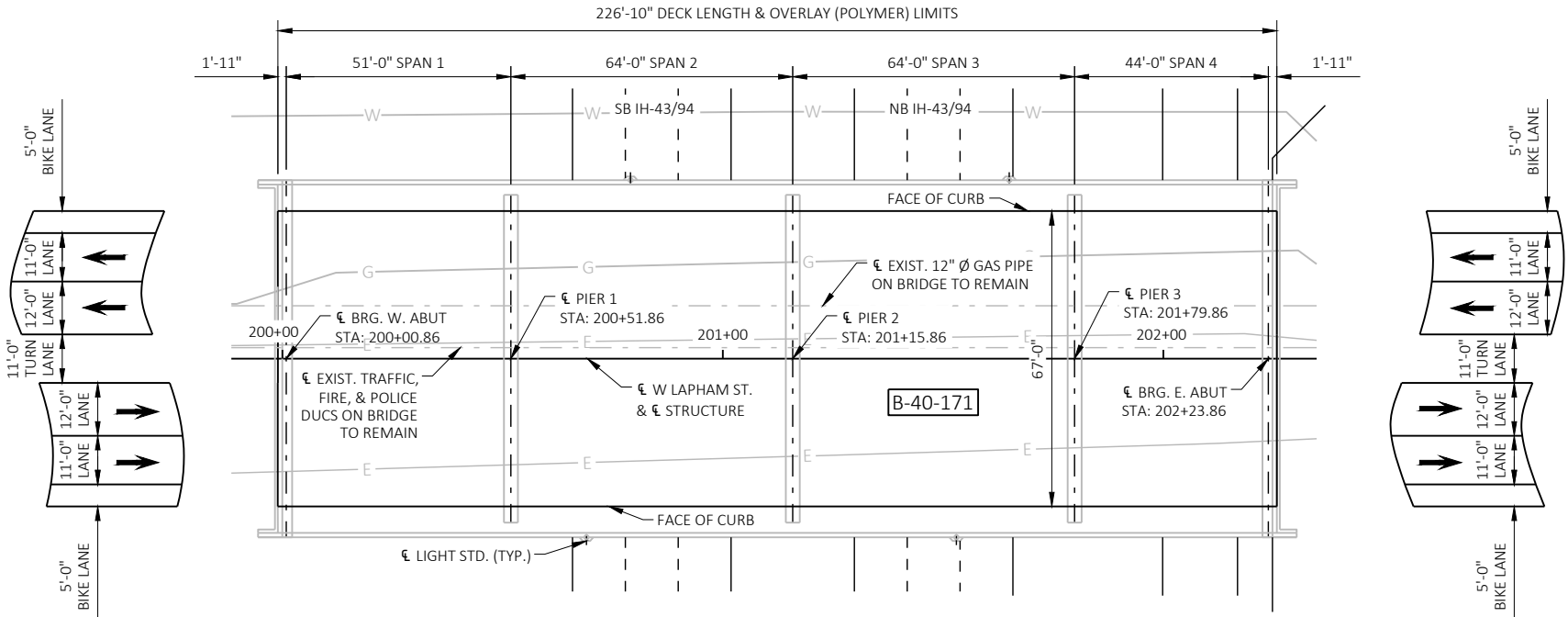
LIST OF DRAWINGS

1. PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES
3. CONSTRUCTION DETAILS

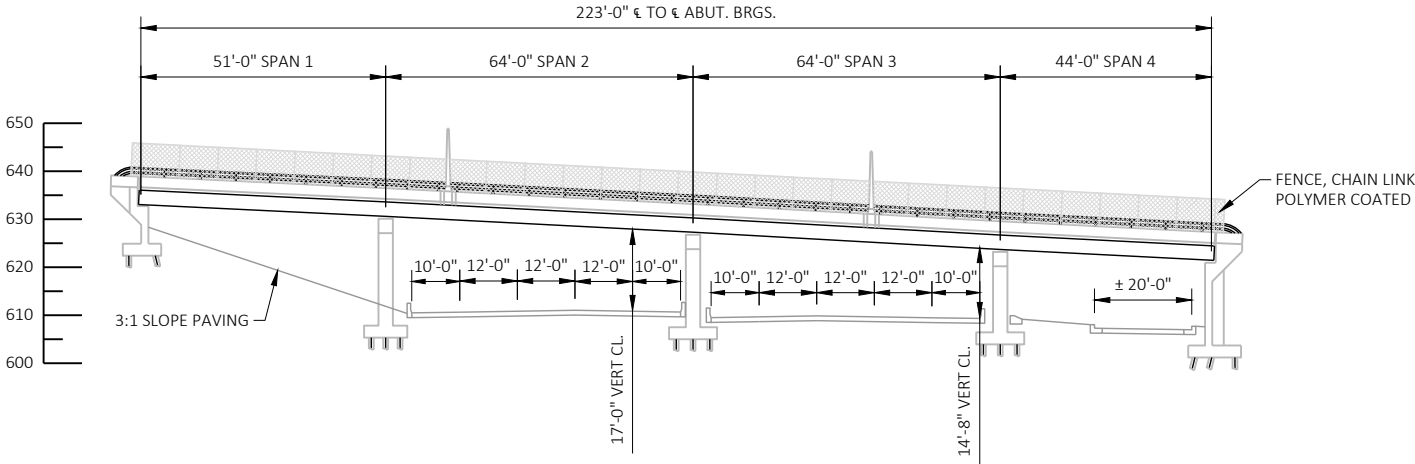


STRUCTURE DESIGN CONTACTS:  
AARON BONK (608) 261-0261

CONSULTANT CONTACT:  
MARK MUTZIGER (414) 282-6905



PLAN B-40-171

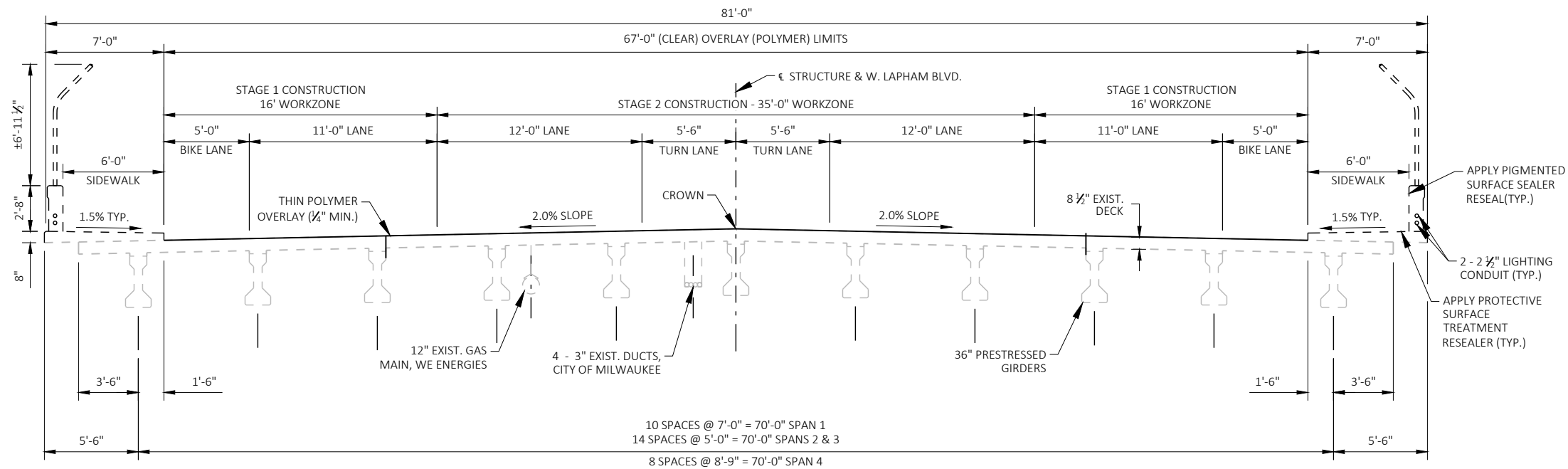


ELEVATION  
(LOOKING NORTH)

|                                                    |                    |                   |                     |
|----------------------------------------------------|--------------------|-------------------|---------------------|
| NO.                                                | DATE               | REVISION          | BY                  |
| <b>COLLINS ENGINEERS</b>                           |                    |                   |                     |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                    |                   |                     |
| ACCEPTED                                           | <i>[Signature]</i> | EMK               | 04/02/25            |
| CHIEF STRUCTURES DESIGN ENGINEER DATE              |                    |                   |                     |
| <b>STRUCTURE B-40-171</b>                          |                    |                   |                     |
| W. LAPHAM BOULEVARD OVER IH-43/94                  |                    |                   |                     |
| COUNTY                                             | MILWAUKEE          | TOWN/CITY/VILLAGE | MILWAUKEE           |
| DESIGN SPEC.<br>REHABILITATION N/A                 |                    |                   |                     |
| DESIGNED BY                                        | JGC                | DESIGNED CK'D     | MJM                 |
| DRAWN BY                                           | MDG                | PLANS CK'D        | MJM                 |
| <b>PLAN &amp; ELEVATION</b>                        |                    |                   | SHEET 1 OF 3<br>403 |

I.D.

DATE:



**CROSS SECTION THRU ROADWAY**  
(LOOKING EAST)

**TOTAL ESTIMATED QUANTITIES**

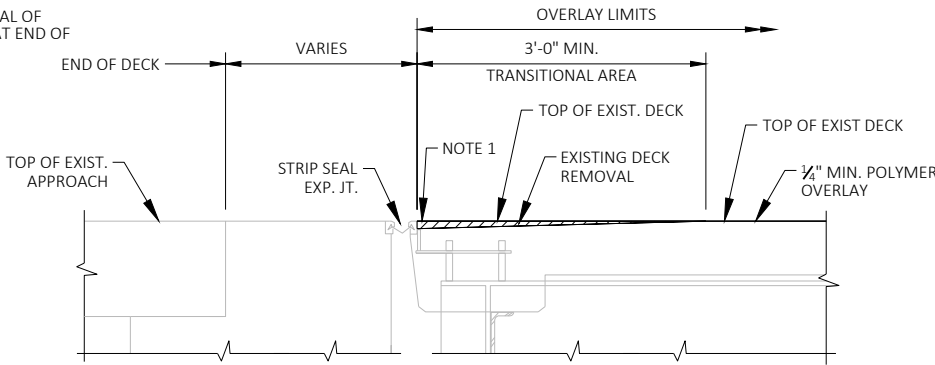
| BID ITEM NUMBER | BID ITEMS                                 | UNIT | TOTALS |
|-----------------|-------------------------------------------|------|--------|
| 502.3205        | PIGMENTED SURFACE SEALER RESEAL           | SY   | 187    |
| 502.3210        | PROTECTIVE SURFACE TREATMENT RESEAL       | SY   | 328    |
| 509.1500        | CONCRETE SURFACE REPAIR                   | SF   | 10     |
| 509.5100.S      | POLYMER OVERLAY                           | SY   | 1689   |
| 509.9025.S      | EPOXY INJECTION CRACK REPAIR              | LF   | 184    |
| SPV.0060.01     | CLEANING AND SEALING CONCRETE GIRDER ENDS | EACH | 11     |
| SPV.0060.02     | EMBEDDED GALVANIC ANODES                  | EACH | 3      |
| SPV.0165.01     | REMOVING LOOSE CONCRETE                   | SF   | 73     |

|                                                    |      |                |    |
|----------------------------------------------------|------|----------------|----|
|                                                    |      |                |    |
| NO.                                                | DATE | REVISION       | BY |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |    |
| STRUCTURE B-40-171                                 |      |                |    |
| DRAWN BY MDG                                       |      | PLANS CK'D MJM |    |
| CROSS SECTION & QUANTITIES                         |      | SHEET 2 OF 3   |    |
|                                                    |      | 404            |    |



NOTES:

1. 1/4" MIN. REMOVAL OF EXISTING DECK AT END OF TRANSITION.



SECTION THRU ABUTMENT  
TRANSITIONAL AREA ON DECK  
AT EXPANSION JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NOTES:

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT AND PAYMENT INFORMATION.

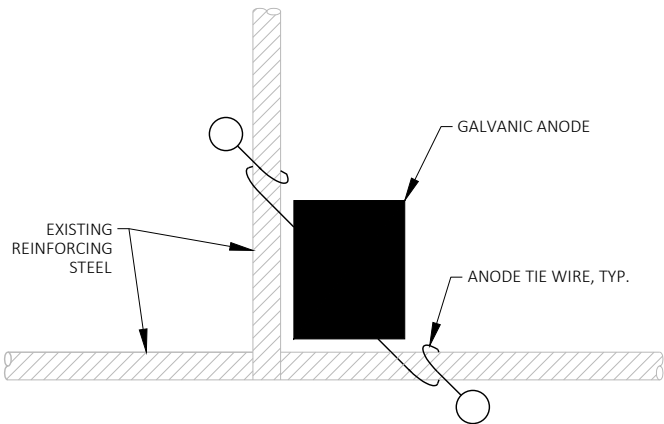
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.

LOCATIONS OF GALVANIC ANODES SHOULD BE WITHIN 6" OF THE EDGE OF THE REPAIR AREA.

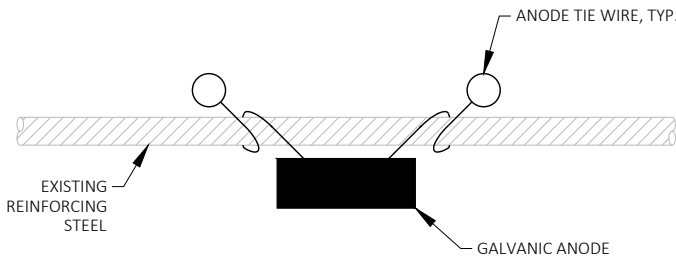
AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1 1/2" AND A MINIMUM BOTTOM COVER OF 3/4".

PROVIDE GALVANIC ANODES IN CONCRETE SURFACE REPAIR AREAS IN SUBSTRUCTURE ONLY.

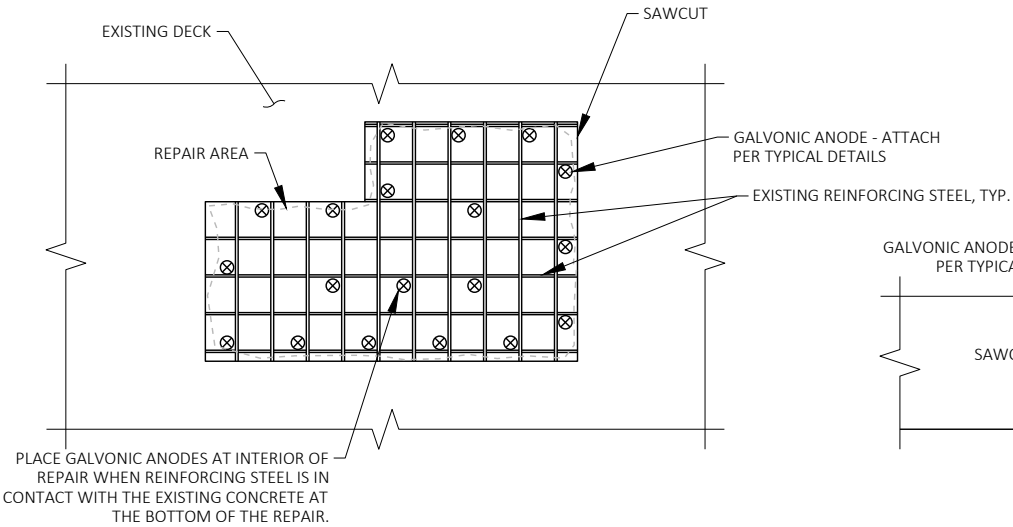
THE ESTIMATED ANODE QUANTITY ON PLANS IS BASED ON A MAXIMUM SPACING OF 24" AROUND PERIMETER OF THE CONCRETE SURFACE REPAIR AREA. PLACE ADDITIONAL ANODES AT THE INTERIOR OF REPAIRED AREA SO CENTER TO CENTER SPACING OF ANODES IS NOT GREATER THAN 24" IN ANY DIRECTION.



TYPICAL ANODE INSTALLATION  
AT BAR STEEL INTERSECTION

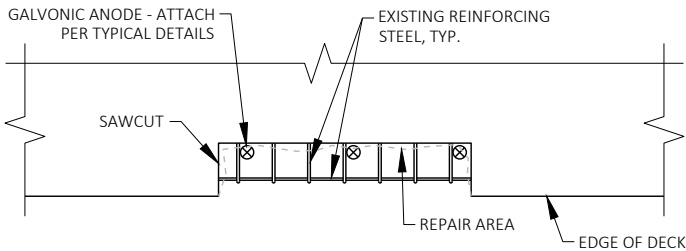


TYPICAL ANODE INSTALLATION  
FOR BAR STEEL



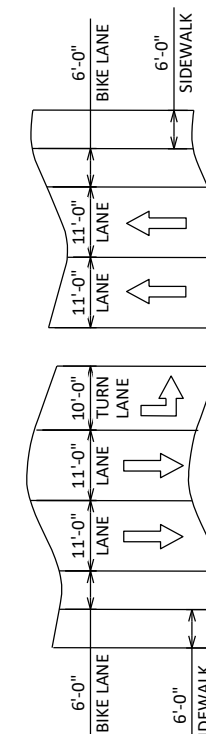
PART. PLAN TYPICAL REPAIR DETAIL

509.1500 CONCRETE SURFACE REPAIR  
SPV.0060 EMBEDDED GALVANIC ANODE



|                                                    |      |                |    |
|----------------------------------------------------|------|----------------|----|
|                                                    |      |                |    |
| NO.                                                | DATE | REVISION       | BY |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |    |
| STRUCTURE B-40-171                                 |      |                |    |
| DRAWN BY MDG                                       |      | PLANS CK'D MJM |    |
| CONSTRUCTION<br>DETAILS                            |      | SHEET 3 OF 3   |    |
|                                                    |      | 405            |    |

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. GIRDER & DIAPHRAGM DETAILS
4. 36" PRESTRESSED GIRDER DETAILS
5. DECK LAYOUT
6. VERTICAL FACE PARAPET 'A'
7. CHAIN LINK FENCE DETAILS
8. LIGHT STANDARD
9. STEEL DIAPHRAGM
10. CONSTRUCTION DETAILS



FOUR-SPAN PRESTRESSED CONCRETE GIRDER BRIDGE

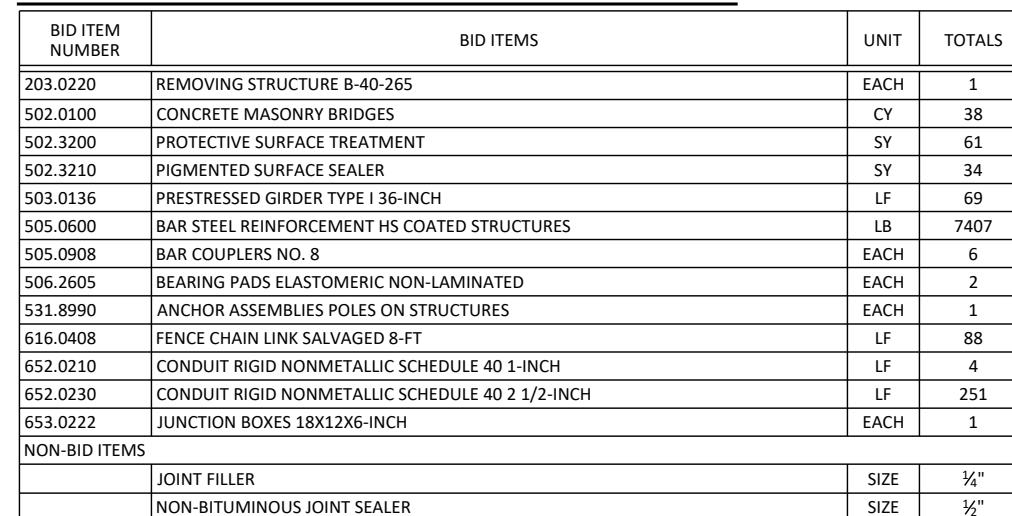


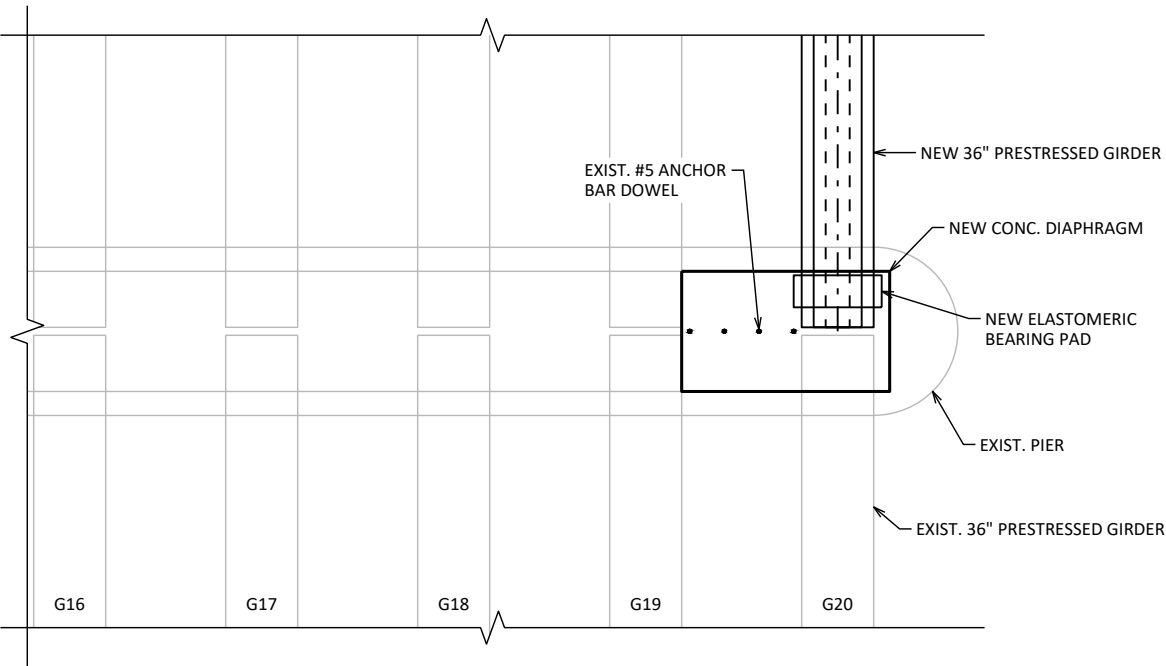
(LOOKING NORTH)

|                                                                                                         |                                                                                                                           |                   |                  |            |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|------------|
| NO.                                                                                                     | DATE                                                                                                                      | REVISION          |                  | BY         |
| <h1 style="text-align: center;">COLLINS</h1> <h2 style="text-align: center;">ENGINEERS<sup>®</sup></h2> |                                                                                                                           |                   |                  |            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                                                      |                                                                                                                           |                   |                  |            |
| ACCEPTED                                                                                                | <br>CHIEF STRUCTURES DESIGN ENGINEER |                   | MJT<br>3/20/2025 | DATE       |
| <h2>STRUCTURE B-40-265</h2>                                                                             |                                                                                                                           |                   |                  |            |
| W. HOWARD AVENUE OVER IH-43/94                                                                          |                                                                                                                           |                   |                  |            |
| COUNTY                                                                                                  | MILWAUKEE                                                                                                                 | TOWN/CITY/VILLAGE |                  | MILWAUKEE  |
| DESIGN SPEC.                                                                                            |                                                                                                                           |                   |                  |            |
| AASHTO LRFD 8TH EDITION                                                                                 |                                                                                                                           |                   |                  |            |
| DESIGNED BY                                                                                             | JLM                                                                                                                       | DESIGNED CK'D     | MJM              |            |
|                                                                                                         |                                                                                                                           | DRAWN BY          | MDG              | PLANS CK'D |
|                                                                                                         |                                                                                                                           |                   |                  | MJM        |
| <h1>GENERAL PLAN</h1>                                                                                   |                                                                                                                           |                   | SHEET 1 OF 10    |            |
|                                                                                                         |                                                                                                                           |                   | 406              |            |



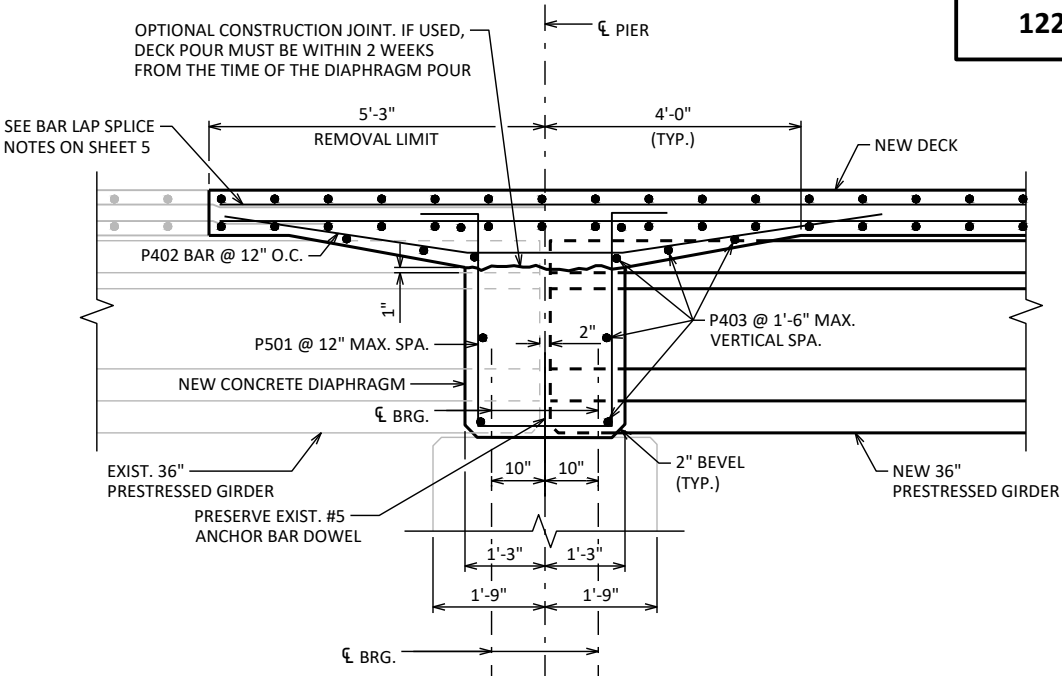
THE LIGHT POLE INSTALLATION AND ITS PERTAINING WIRING TO BE  
WORK BY OTHERS.



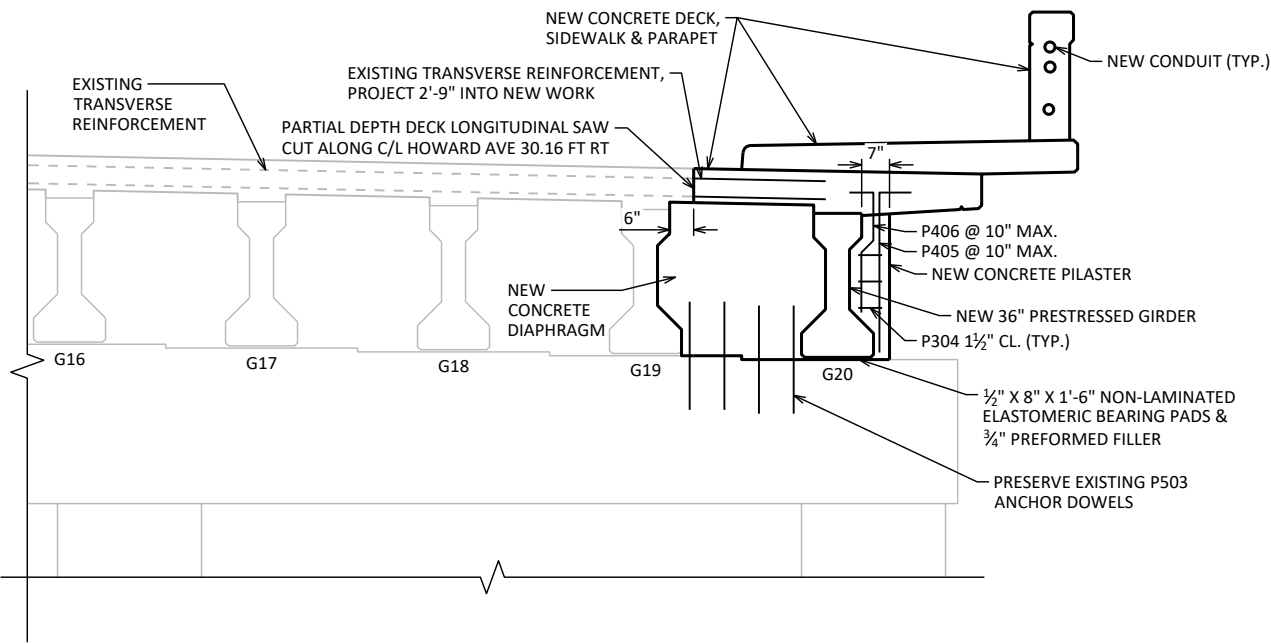


GIRDER AT PIER 2 - PART. PLAN

(PIER 3 IS SIMILAR)

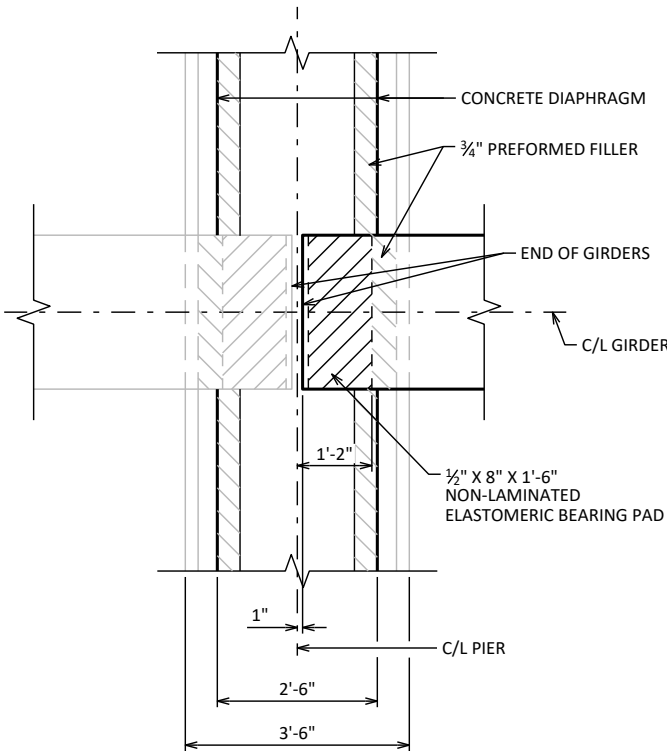


PIER DIAPHRAGM



GIRDER AT PIER 2 - PART. ELEVATION

(PIER 3 IS SIMILAR)



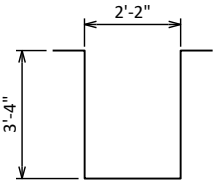
BEARING PAD DETAIL

BILL OF BARS

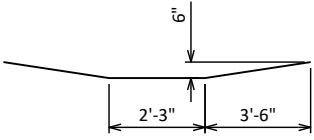
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                       |
|----------|------|------------|--------|------|------------|--------------------------------|
| P501     | X    | 8          | 9'-4"  | X    |            | PIER DIAPHRAGM VERT.           |
| P402     | X    | 8          | 9'-3"  | X    |            | PIER DIAPHRAGM HAUNCH - HORIZ. |
| P403     | X    | 20         | 2'-4"  |      |            | PIER DIAPHRAGM HORIZ.          |
| P304     | X    | 6          | 5'-11" | X    |            | PIER PILASTER HORIZ.           |
| P405     | X    | 8          | 3'-9"  | X    |            | PIER PILASTER VERT.            |
| P406     | X    | 8          | 2'-11" | X    |            | PIER PILASTER VERT.            |

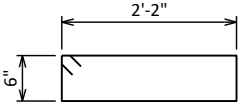
TOTAL WEIGHT = 207 LBS



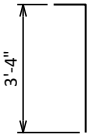
P501



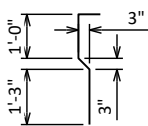
P402



P304



P405



P406

| NO.                                                | DATE | REVISION             | BY             |
|----------------------------------------------------|------|----------------------|----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                      |                |
| STRUCTURE B-40-265                                 |      |                      |                |
| DRAWN BY                                           |      | MDG                  | PLANS CK'D MJM |
| GIRDER & DIAPHRAGM DETAILS                         |      | SHEET 3 OF 10<br>408 |                |





TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

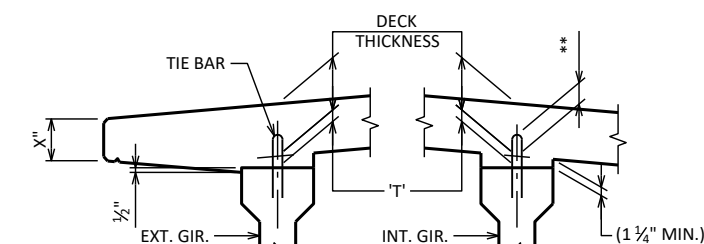
PRESTRESSING STRANDS SHALL BE 0.5" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4 1/2" AND #5 STIRRUPS 6".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

(A) DETAIL TYP. AT EACH END

(B) 2 #5 BARS BEND DOWN 16 BAR DIA. AT ENDS



### DECK HAUNCH DETAIL

IF 1½" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,  
 \*\* IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

\*\* IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT  $\frac{1}{10}$  POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE  
- TOP OF GIRDER ELEVATION  
+ DEAD LOAD DEFLECTION  
- DECK THICKNESS  
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY  
"CONCRETE MASONRY BRIDGES".



\* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

| SPAN | CAMBER (IN.) |
|------|--------------|
| 3    | 1 3/8"       |
|      |              |
|      |              |
|      |              |
|      |              |

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T',  
USE ACTUAL GIRDER SHOTS.  
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

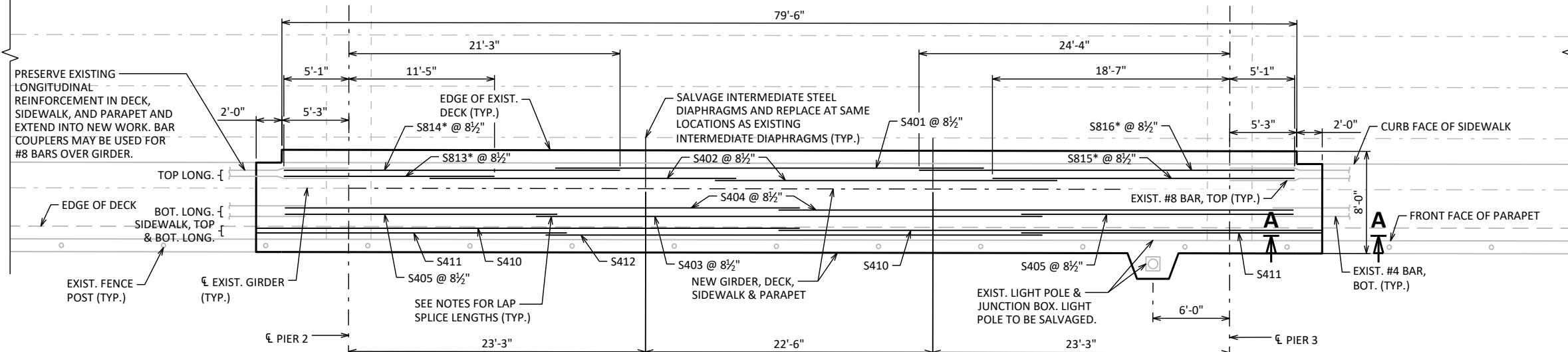
\* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

## GIRDER DATA

[illegible]



1. THE BOTTOM TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF THE SLAB TO SUPPORT THE ENDS OF THE BOTTOM TRANSVERSE BAR STEEL.
2. THE TOP LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS IN TRANSVERSE DIRECTION ON 4'-0" CENTERS.
3. LAP LONGITUDINAL SPLICES AT 1'-8" MIN. FOR #4 BARS, 2'-7" MIN. FOR #5 BARS AND 5'-1" MIN. FOR #8 BARS.



### TOP OF DECK ELEVATIONS - SPAN 3

| LOCATION  | C/L<br>PIER 2 | 1/10 PT. | 2/10 PT. | 3/10 PT. | 4/10 PT. | 5/10 PT. | 6/10 PT. | 7/10 PT. | 8/10 PT. | 9/10 PT. | C/L<br>PIER 3 |
|-----------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------------|
| GIRDER 20 | 698.76        | 698.79   | 698.82   | 698.86   | 698.89   | 698.93   | 698.96   | 699.00   | 699.03   | 699.07   | 699.10        |
| S. EOD    | 698.70        | 698.73   | 698.76   | 698.80   | 698.83   | 698.87   | 698.90   | 698.94   | 698.97   | 699.01   | 699.04        |

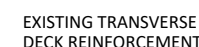
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                               |
|----------|------|------------|--------|------|------------|----------------------------------------|
| S401     | X    | 5          | 33'-8" |      |            | LONGITUDINAL - TOP                     |
| S402     | X    | 10         | 25'-6" |      |            | LONGITUDINAL - TOP                     |
| S403     | X    | 5          | 39'-8" |      |            | LONGITUDINAL - BOTTOM                  |
| S404     | X    | 10         | 40'-7" |      |            | LONGITUDINAL - BOTTOM                  |
| S405     | X    | 10         | 21'-7" |      |            | LONGITUDINAL - BOTTOM                  |
| S506     | X    | 156        | 7'-3"  | X    |            | TRANSVERSE SIDEWALK                    |
| S407     | X    | 52         | 3'-4"  |      |            | TRANSVERSE SIDEWALK                    |
| S408     | X    | 334        | 2'-8"  | X    |            | SIDEWALK DECK DOWELS                   |
| S409     | X    | 274        | 5'-10" |      |            | SPAN 2, 3, & 4 TRANSVERSE TOP & BOTTOM |
| S410     | X    | 14         | 42'-7" |      |            | LONGITUDINAL SIDEWALK - TOP & BOTTOM   |
| S411     | X    | 14         | 23'-7" |      |            | LONGITUDINAL SIDEWALK - TOP & BOTTOM   |
| S412     | X    | 7          | 39'-8" |      |            | LONGITUDINAL SIDEWALK - TOP & BOTTOM   |
| S813     | X    | 5          | 16'-8" |      |            | CONTINUITY - PIER 2                    |
| S814     | X    | 5          | 26'-6" |      |            | CONTINUITY - PIER 2                    |
| S815     | X    | 5          | 23'-9" |      |            | CONTINUITY - PIER 3                    |
| S816     | X    | 5          | 29'-6" |      |            | CONTINUITY - PIER 3                    |

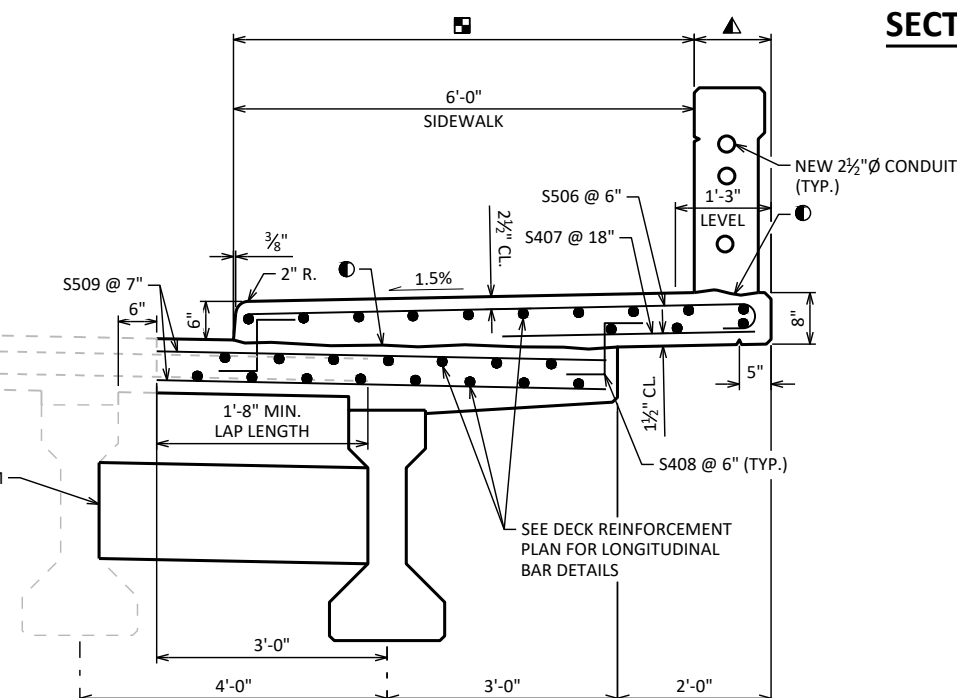
Diagram of a 90-degree elbow with dimensions:  $D = 3\frac{3}{4}$  inch, 5 inch, and 6'-8 inch.

**S506**

**S408**

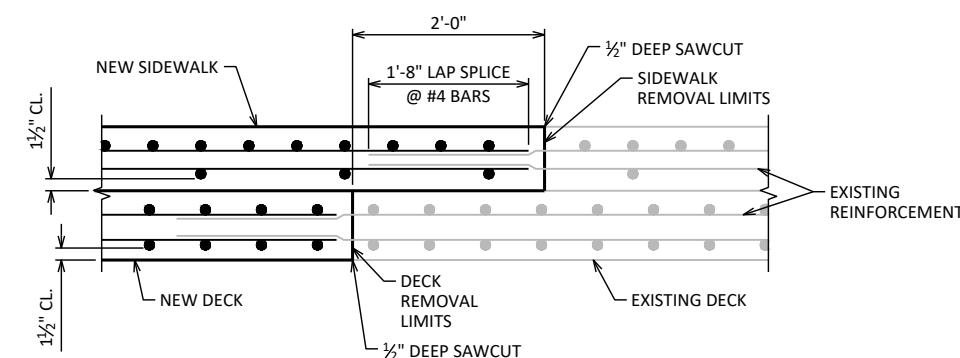


EXISTING STEEL DIAPHRAGM  
TO BE SALVAGED. USE NEW  
FASTENERS.



### **CROSS SECTION THRU DECK & SIDEWALK**

(SHOWING DRIP GROOVE AND CONCRETE SEALING FOR ALL PARAPETS)



## SECTION A-A

- CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH
- PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SIDEWALK.
- ▲ PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE VERTICAL FACE AND TOP OF PARAPET.
- \* EVERY OTHER LONGITUDINAL BAR IN THE TOP MAT OVER PIER

|                                                    |      |               |               |
|----------------------------------------------------|------|---------------|---------------|
|                                                    |      |               |               |
| NO.                                                | DATE | REVISION      | BY            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |               |               |
| <b>STRUCTURE B-40-265</b>                          |      |               |               |
|                                                    |      | DRAWN<br>BY   | PLANS<br>CK'D |
|                                                    |      | MDG           | MJM           |
| <b>DECK LAYOUT</b>                                 |      | SHEET 5 OF 10 |               |
|                                                    |      | 410           |               |





GIRDER STRUCTURES AND SLAB STRUCTURES WITH A SIDEWALK SHOULD HAVE A DEFLECTION JOINT IN THE SIDEWALK AND PARAPET OVER THE PIER.

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

## BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR<br>MARK | COAT | NO.<br>REQ'D. | LENGTH | BENT | BAR<br>SERIES | LOCATION       |
|-------------|------|---------------|--------|------|---------------|----------------|
| R501        | X    | 83            | 7'-2"  | X    |               | PARAPET VERT.  |
| R402        | X    | 12            | 35'-2" |      |               | PARAPET HORIZ. |
| R403        | X    | 12            | 7'-0"  |      |               | PARAPET HORIZ. |

TOTAL WEIGHT = 958 LBS



## LEGEND

■ HORIZ. CONST. JOINT-STRIKE OFF AS SHOWN  
AND LEAVE ROUGH.

|                                                    |      |                      |               |
|----------------------------------------------------|------|----------------------|---------------|
|                                                    |      |                      |               |
| NO.                                                | DATE | REVISION             | BY            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                      |               |
| <b>STRUCTURE</b>                                   |      | <b>B-40-265</b>      |               |
|                                                    |      | DRAWN<br>BY          | PLANS<br>CK'D |
|                                                    |      | MDG                  | MJM           |
| <b>VERTICAL FACE<br/>PARAPET 'A'</b>               |      | SHEET 6 OF 10<br>411 |               |



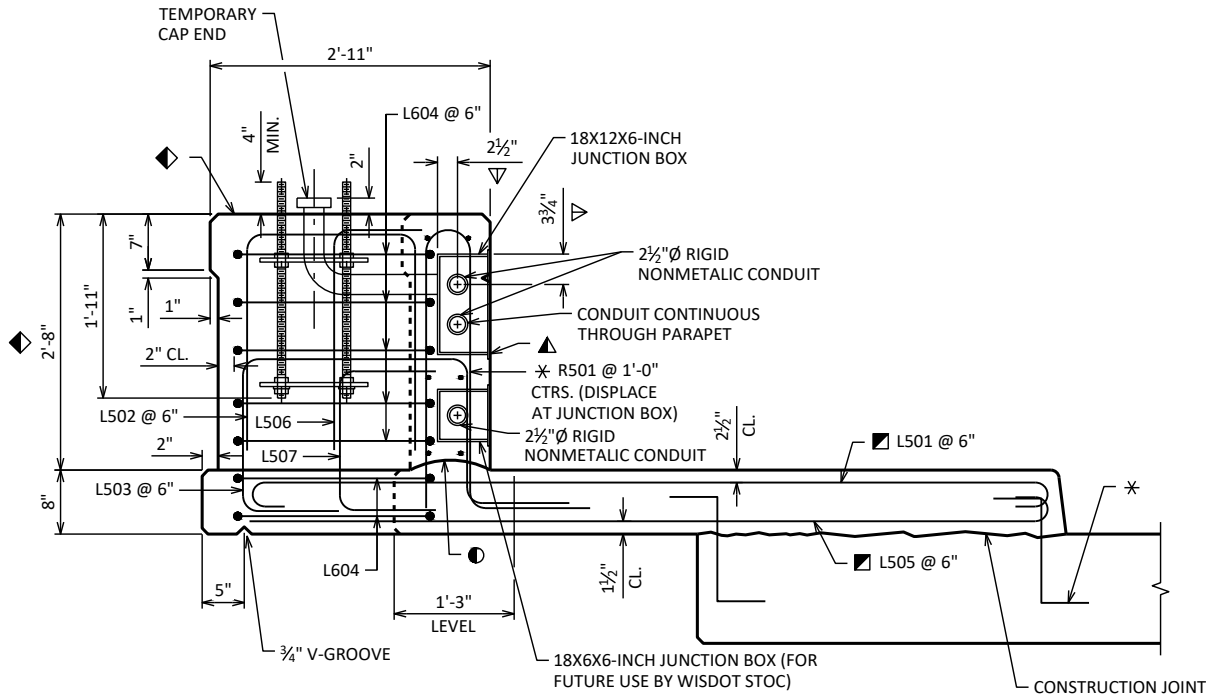


BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                       |
|----------|------|------------|--------|------|------------|--------------------------------|
| L501     | X    | 12         | 7'-10" | X    |            | SIDEWALK HORIZ. @ JUNCTION BOX |
| L502     | X    | 4          | 6'-0"  | X    |            | PARAPET VERT. @ JUNCTION BOX   |
| L503     | X    | 4          | 6'-11" | X    |            | PARAPET VERT. @ LIGHT STD.     |
| L604     | X    | 7          | 10'-0" | X    |            | PARAPET HORIZ. @ LIGHT STD.    |
| L505     | X    | 12         | 7'-3"  | X    |            | SIDEWALK HORIZ. @ JUNCTION BOX |
| L506     | X    | 2          | 3'-2"  | X    |            | PARAPET VERT. @ LIGHT STD.     |
| L507     | X    | 2          | 3'-4"  | X    |            | PARAPET VERT. @ LIGHT STD.     |

TOTAL WEIGHT = 362 LBS



SECTION A-A

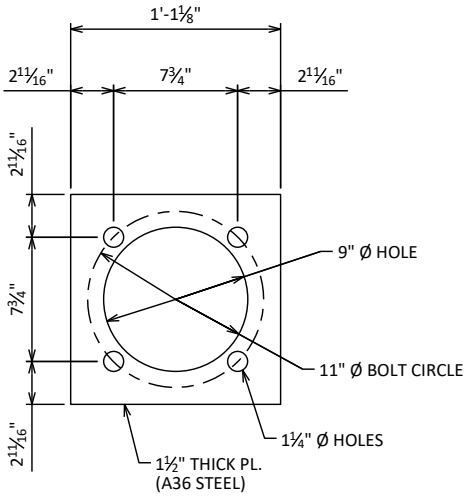
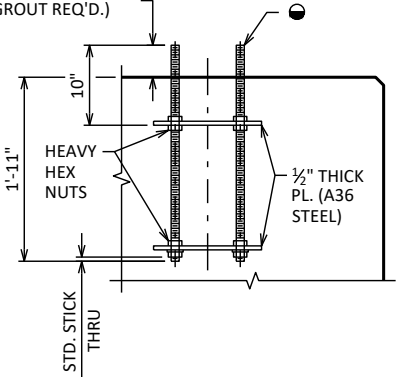


PLATE DETAIL

(2 REQ'D.)

4" MIN. BOLT PROJECTION  
(NO GROUT REQ'D.)

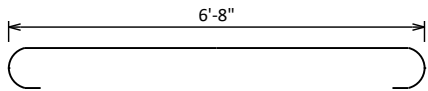


ANCHORAGE DETAIL

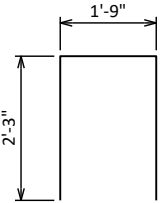
(1 REQ'D.)

LEGEND

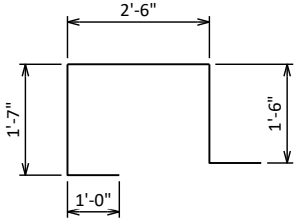
- CONSTR. JT. STRIKE OFF AS SHOWN
- ▲ CUT OUT ±1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- ▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
- 1" Ø THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.
- \* SEE "DECK & SLAB DETAILS" AND "VERTICAL FACE PARAPET A" SHEETS FOR ADDITIONAL BAR DETAILS.
- ◆ TOP SURFACE OF LIGHT STANDARD TO BE LEVEL IN DIRECTION PARALLEL TO PARAPET AND SLOPE 1/8" PER FOOT AWAY FROM PARAPET. 2'-8" DIMENSION IS MAXIMUM AND WILL VARY BASED ON SLOPE OF GRADE.



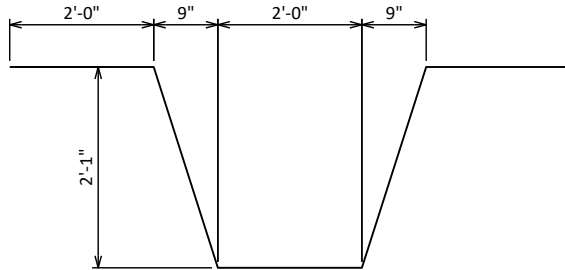
L501



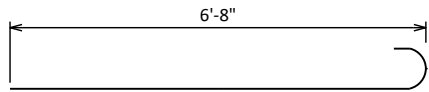
L502



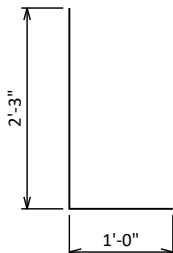
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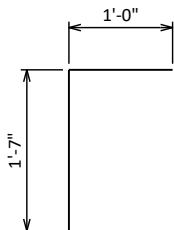
L604



L505



L506

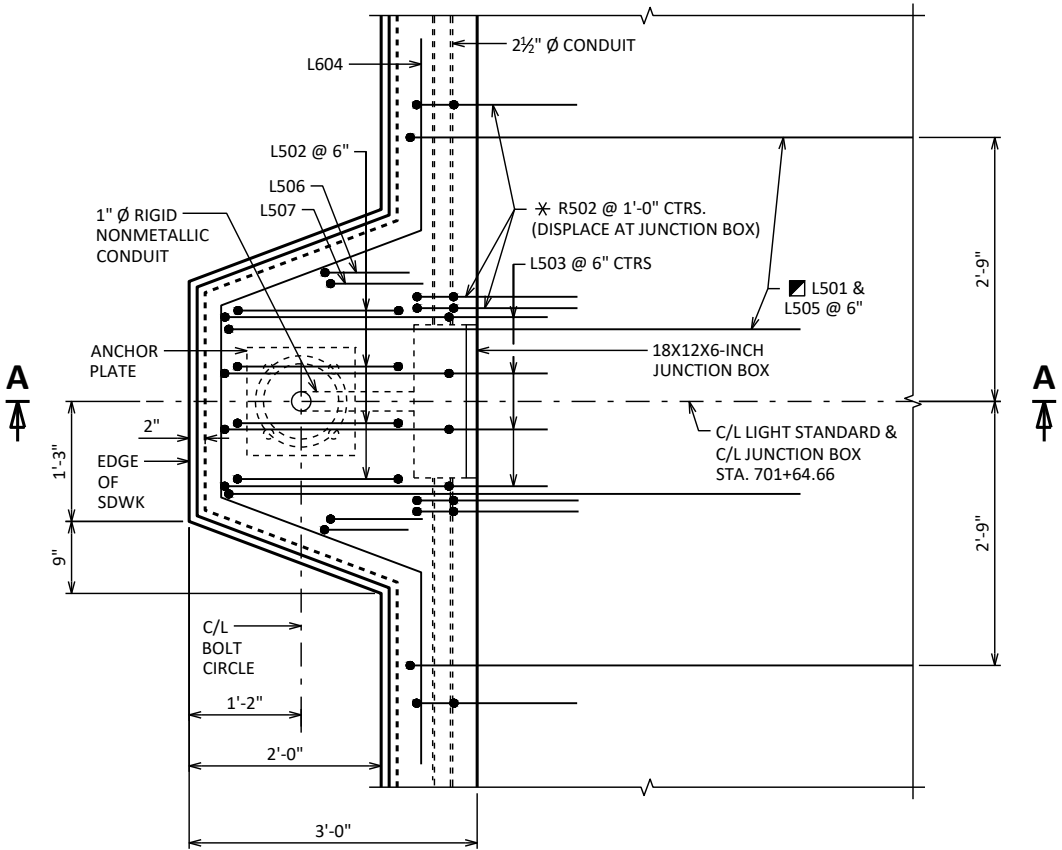


L507

NOTES

BID ITEMS SHALL BE:  
"JUNCTION BOXES 18X12X6-INCH"  
"ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES"  
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH"  
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:  
SEE APPROVED MATERIAL LIST.



PLAN AT LIGHT STANDARD

|                                                    |      |                      |                |
|----------------------------------------------------|------|----------------------|----------------|
| NO.                                                | DATE | REVISION             | BY             |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                      |                |
| STRUCTURE B-40-265                                 |      |                      |                |
| DRAWN BY                                           |      | MDG                  | PLANS CK'D MJM |
| LIGHT STANDARD                                     |      | SHEET 8 OF 10<br>413 |                |

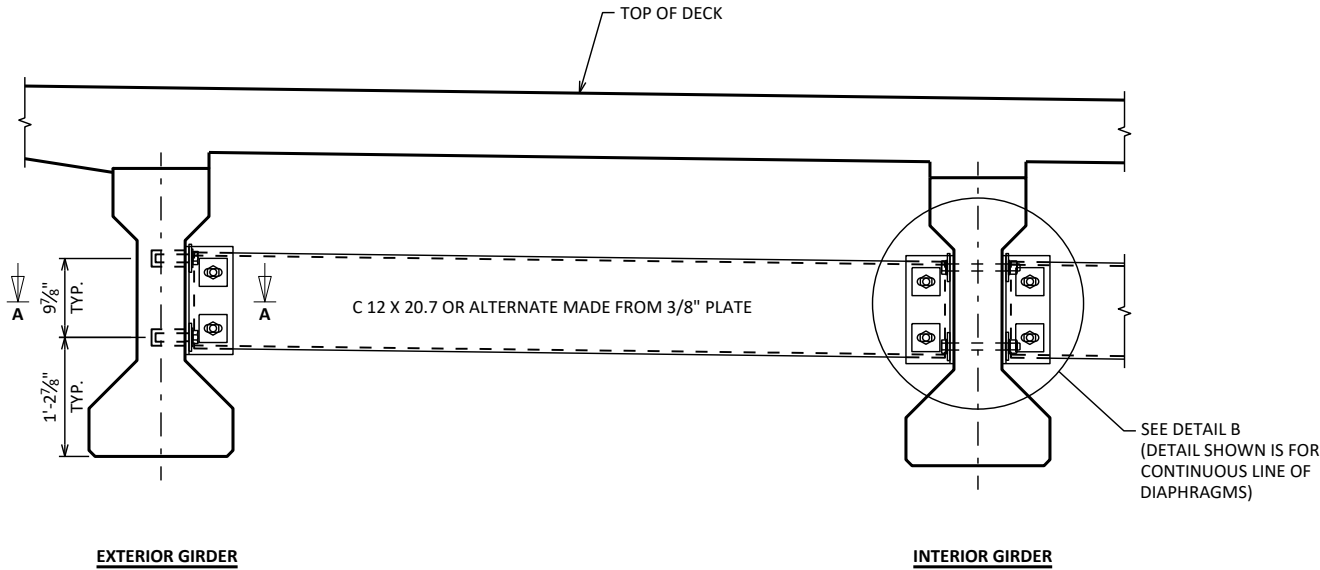
NOTES

CONTRACTOR SHALL REMOVE EXISTING STEEL DIAPHRAGMS CONNECTING EXTERIOR GIRDER TO ALLOW FOR REMOVAL AND REPLACEMENT. REPLACE ALL REMOVED BOLT SETS. ALL WORK RELATED TO REMOVING AND REPLACING DIAPHRAGMS INCIDENTAL TO PRESTRESSED GIRDER. ALL STRUCTURAL STEEL MAY BE REUSED. NOTIFY THE ENGINEER IF DAMAGE IS OBSERVED.

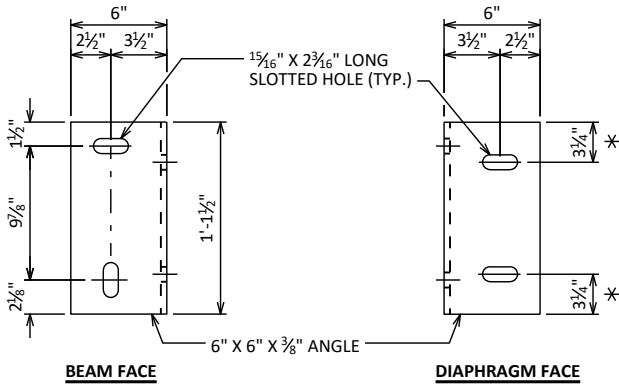
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

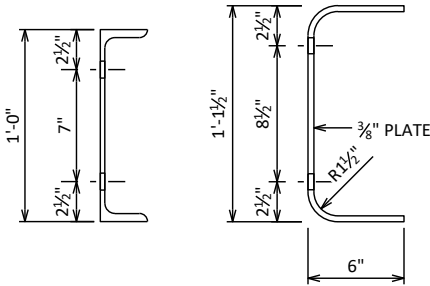


PART TRANSVERSE SECTION AT DIAPHRAGM



DIAPHRAGM SUPPORT

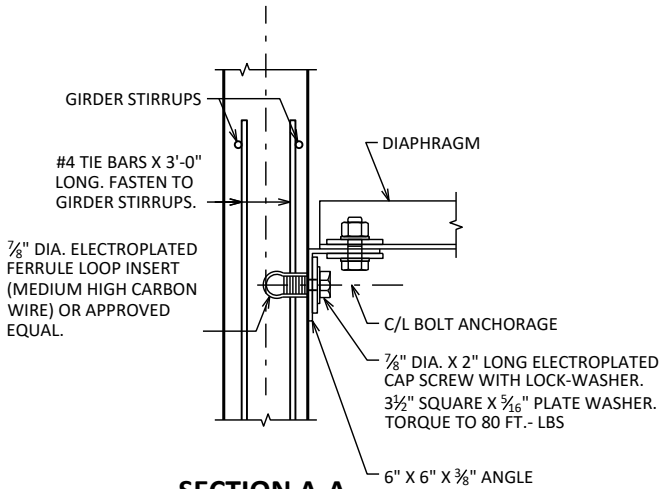
\* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



C12X20.7

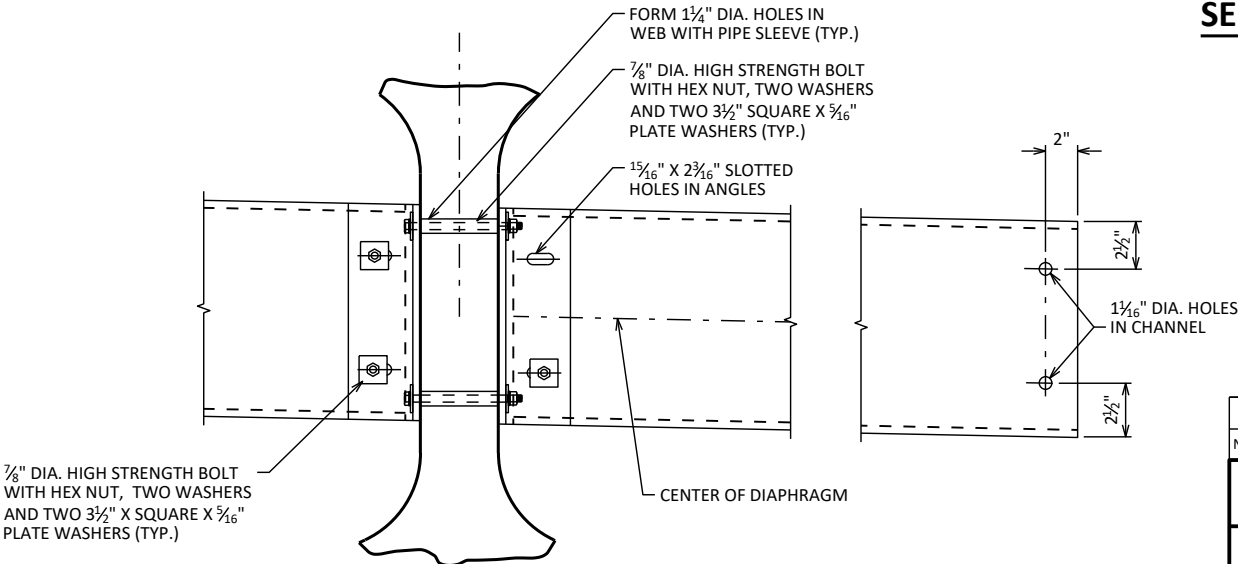
ALTERNATE DIAPHRAGM

SECTION THRU DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

| NO.                                                | DATE | REVISION             | BY             |
|----------------------------------------------------|------|----------------------|----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                      |                |
| STRUCTURE B-40-265                                 |      |                      |                |
| DRAWN BY                                           |      | MDG                  | PLANS CK'D MJM |
| STEEL DIAPHRAGM                                    |      | SHEET 9 OF 10<br>414 |                |



NOTES

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT AND PAYMENT INFORMATION.

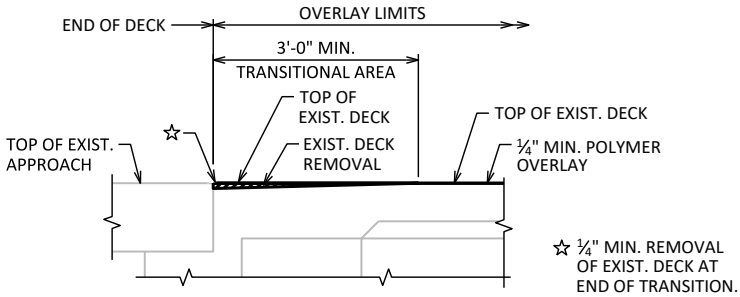
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.

LOCATIONS OF GALVANIC ANODES SHOULD BE WITHIN 6" OF THE EDGE OF THE REPAIR AREA.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1 1/2" AND A MINIMUM BOTTOM COVER OF 3/4".

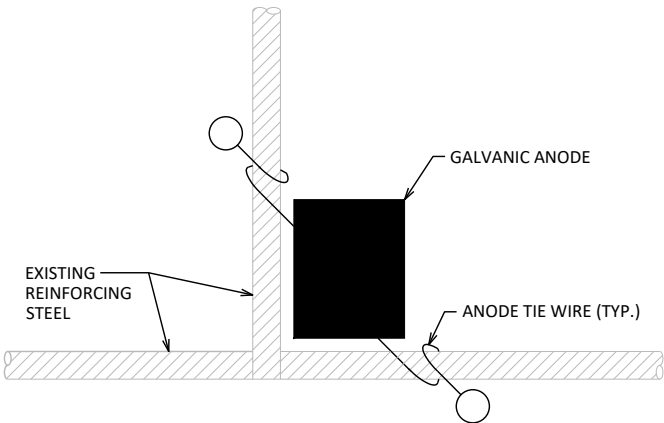
PROVIDE GALVANIC ANODES IN CONCRETE SURFACE REPAIR AREAS IN SUBSTRUCTURE ONLY.

THE ESTIMATED ANODE QUANTITY ON PLANS IS BASED ON A MAXIMUM SPACING OF 24" AROUND PERIMETER OF THE CONCRETE SURFACE REPAIR AREA. PLACE ADDITIONAL ANODES AT THE INTERIOR OF REPAIRED AREA SO CENTER TO CENTER SPACING OF ANODES IS NOT GREATER THAN 24" IN ANY DIRECTION.

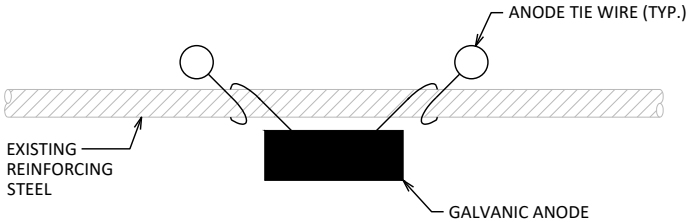


SECTION THRU ABUTMENT TRANSITIONAL AREA  
ON DECK AT SEMI-EXPANSION OR FIXED JOINT

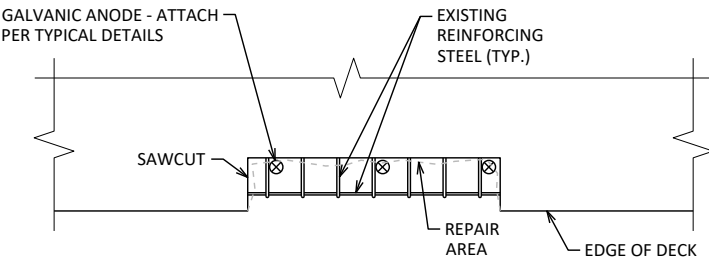
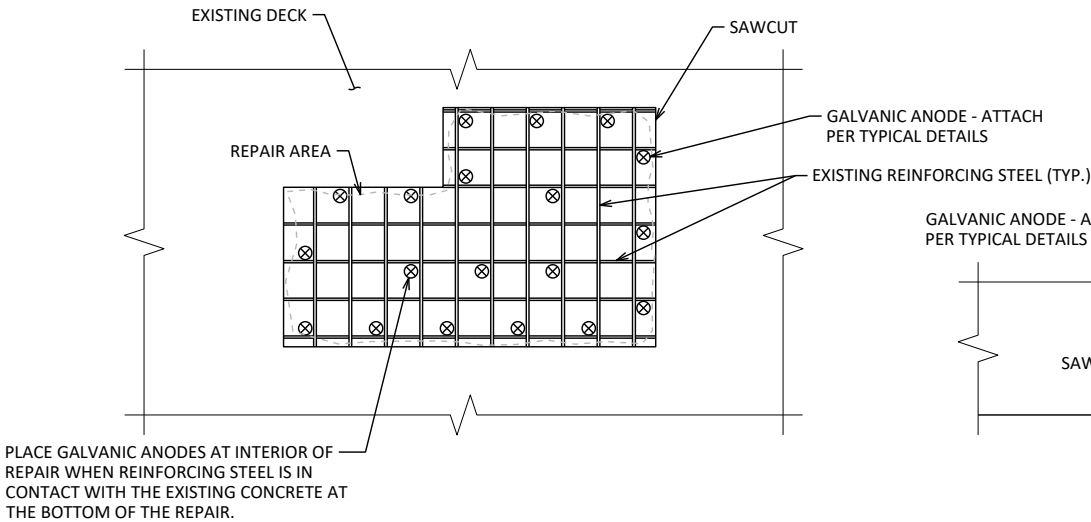
(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)  
NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT.



TYPICAL ANODE INSTALLATION  
AT BAR STEEL INTERSECTION



TYPICAL ANODE INSTALLATION  
FOR BAR STEEL



PART. PLAN TYPICAL REPAIR DETAIL

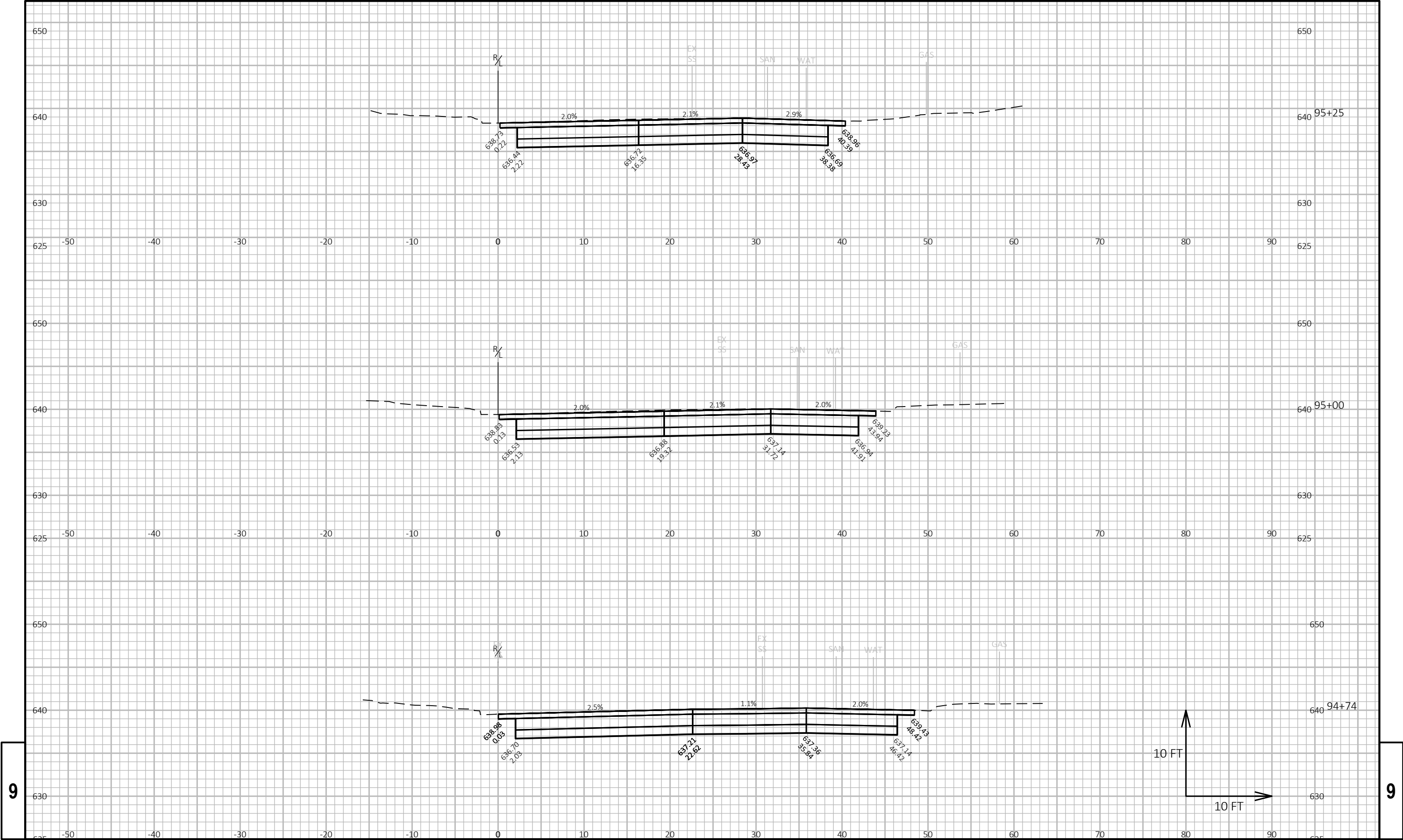
509.1500  
SPV.0060  
CONCRETE SURFACE REPAIR  
EMBEDDED GALVANIC ANODE

|                                                    |      |                |                      |
|----------------------------------------------------|------|----------------|----------------------|
|                                                    |      |                |                      |
| NO.                                                | DATE | REVISION       | BY                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |                      |
| STRUCTURE B-40-265                                 |      |                |                      |
| DRAWN<br>BY                                        |      | MDG            | PLANS<br>CK'D<br>MJM |
| CONSTRUCTION<br>DETAILS                            |      | SHEET 10 OF 10 |                      |
|                                                    |      | 415            |                      |

| DIVISION 1 - HOLTNB2 |              |          |           |                                     |      |                                   |                                     |        |                     |                       |               |
|----------------------|--------------|----------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|--------|---------------------|-----------------------|---------------|
| STATION              | REAL STATION | DISTANCE | AREA (SF) |                                     |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                     |        | CUMULATIVE VOL (CY) |                       |               |
|                      |              |          | CUT       | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT                               | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL   | CUT<br>1.00         | EXPANDED FILL<br>1.20 | MASS ORDINATE |
|                      |              |          |           |                                     |      |                                   |                                     |        |                     |                       |               |
|                      |              |          |           |                                     |      | NOTE 1                            | NOTE 2                              | NOTE 3 | NOTE 1              |                       | NOTE 4        |
| 94+73.72             | 9473.72      | 0.00     | 130.89    | 36.00                               | 0.00 | 0                                 | 0                                   | 0      | 0                   | 0                     | 0             |
| 95+00.00             | 9500.00      | 26.28    | 119.99    | 33.00                               | 0.00 | 122                               | 34                                  | 0      | 122                 | 0                     | 88            |
| 95+25.00             | 9525.00      | 25.00    | 108.85    | 30.00                               | 0.00 | 106                               | 29                                  | 0      | 228                 | 0                     | 165           |
| 95+50.00             | 9550.00      | 25.00    | 101.18    | 28.50                               | 0.00 | 97                                | 27                                  | 0      | 325                 | 0                     | 235           |
| 95+75.00             | 9575.00      | 25.00    | 96.38     | 27.00                               | 0.00 | 91                                | 26                                  | 0      | 416                 | 0                     | 300           |
| 96+00.00             | 9600.00      | 25.00    | 96.24     | 27.00                               | 0.00 | 89                                | 25                                  | 0      | 505                 | 0                     | 364           |
| 96+25.00             | 9625.00      | 25.00    | 97.29     | 27.75                               | 0.00 | 90                                | 25                                  | 0      | 595                 | 0                     | 429           |
| 96+50.00             | 9650.00      | 25.00    | 106.67    | 29.25                               | 0.00 | 94                                | 26                                  | 0      | 689                 | 0                     | 497           |
| 96+75.00             | 9675.00      | 25.00    | 117.87    | 32.25                               | 0.00 | 104                               | 28                                  | 0      | 793                 | 0                     | 573           |
| 97+00.00             | 9700.00      | 25.00    | 133.49    | 36.75                               | 0.00 | 116                               | 32                                  | 0      | 909                 | 0                     | 657           |
| 97+25.00             | 9725.00      | 25.00    | 129.03    | 38.25                               | 0.00 | 122                               | 35                                  | 0      | 1,031               | 0                     | 744           |
| 97+50.00             | 9750.00      | 25.00    | 127.86    | 37.88                               | 0.00 | 119                               | 35                                  | 0      | 1,150               | 0                     | 828           |
| 97+75.00             | 9775.00      | 25.00    | 132.33    | 39.75                               | 0.00 | 120                               | 36                                  | 0      | 1,270               | 0                     | 912           |
| 98+01.00             | 9801.00      | 26.00    | 169.99    | 48.00                               | 0.00 | 146                               | 42                                  | 0      | 1,416               | 0                     | 1,016         |

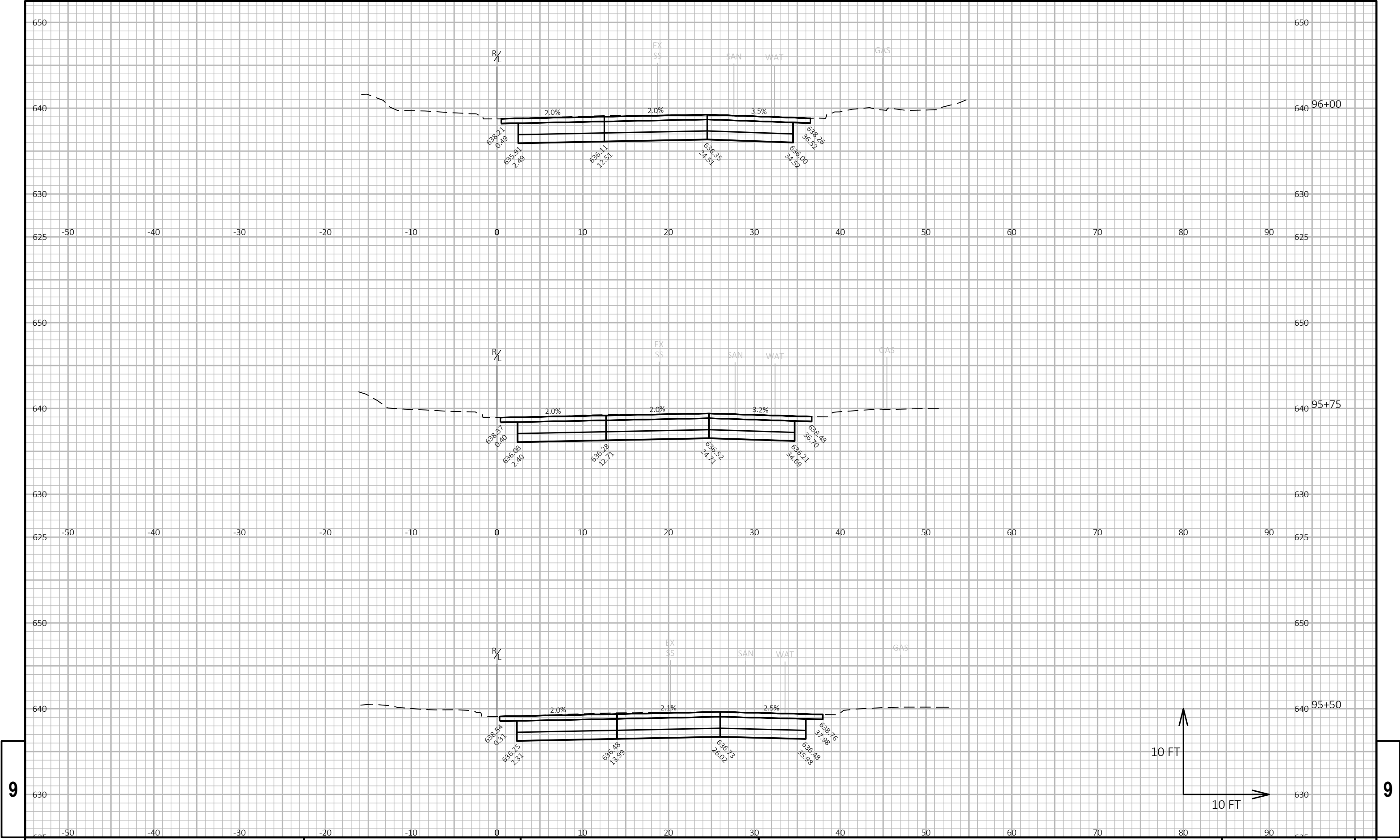
| NOTES:                                  |                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL<br>THIS DOES NOT SHOW UP IN CROSS SECTIONS<br>DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME<br>[CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)] |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL |                                                                                                                                                                                                |
| 3 - FILL                                |                                                                                                                                                                                                |
| 4 - MASS ORDINATE                       |                                                                                                                                                                                                |





9

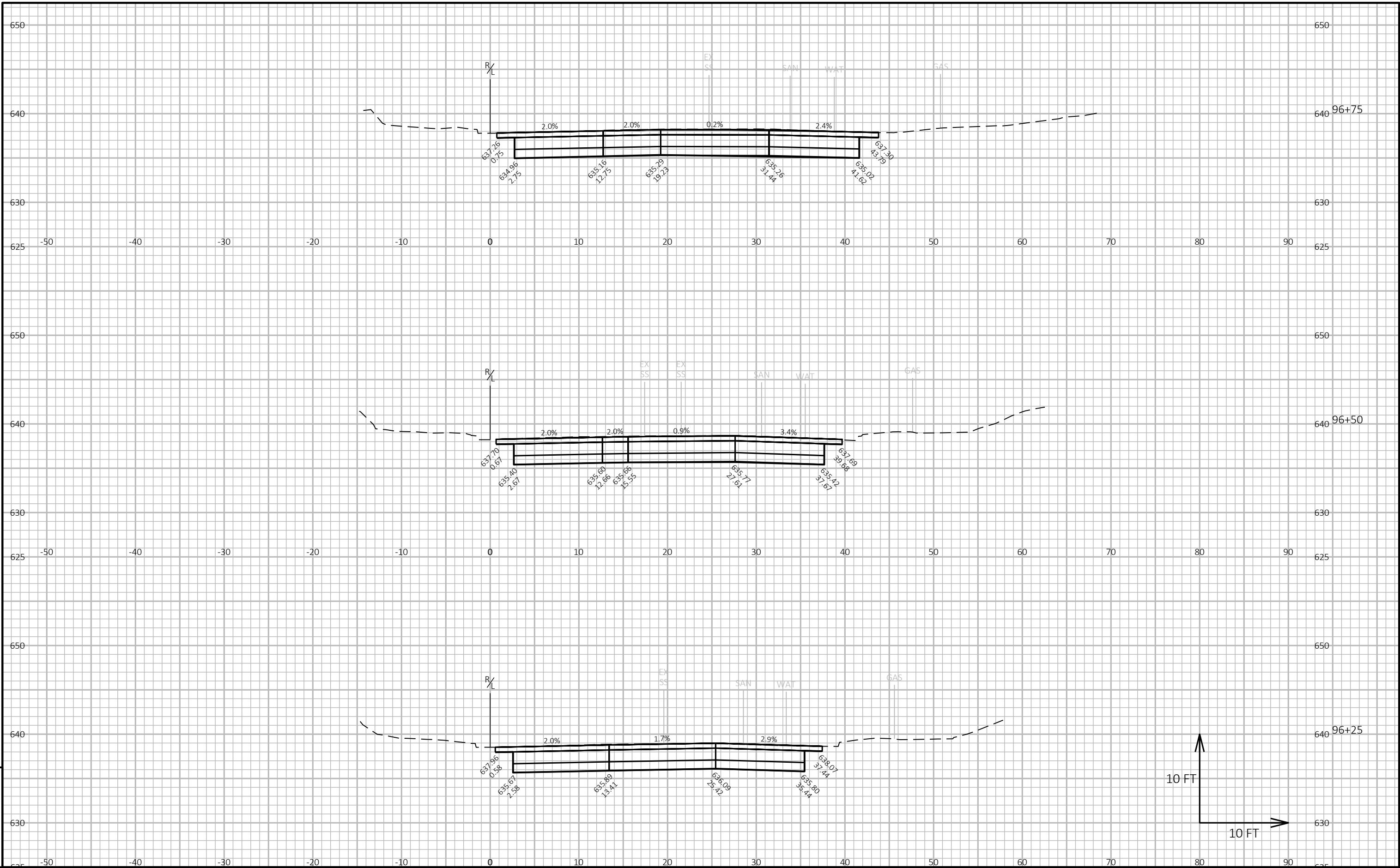
9

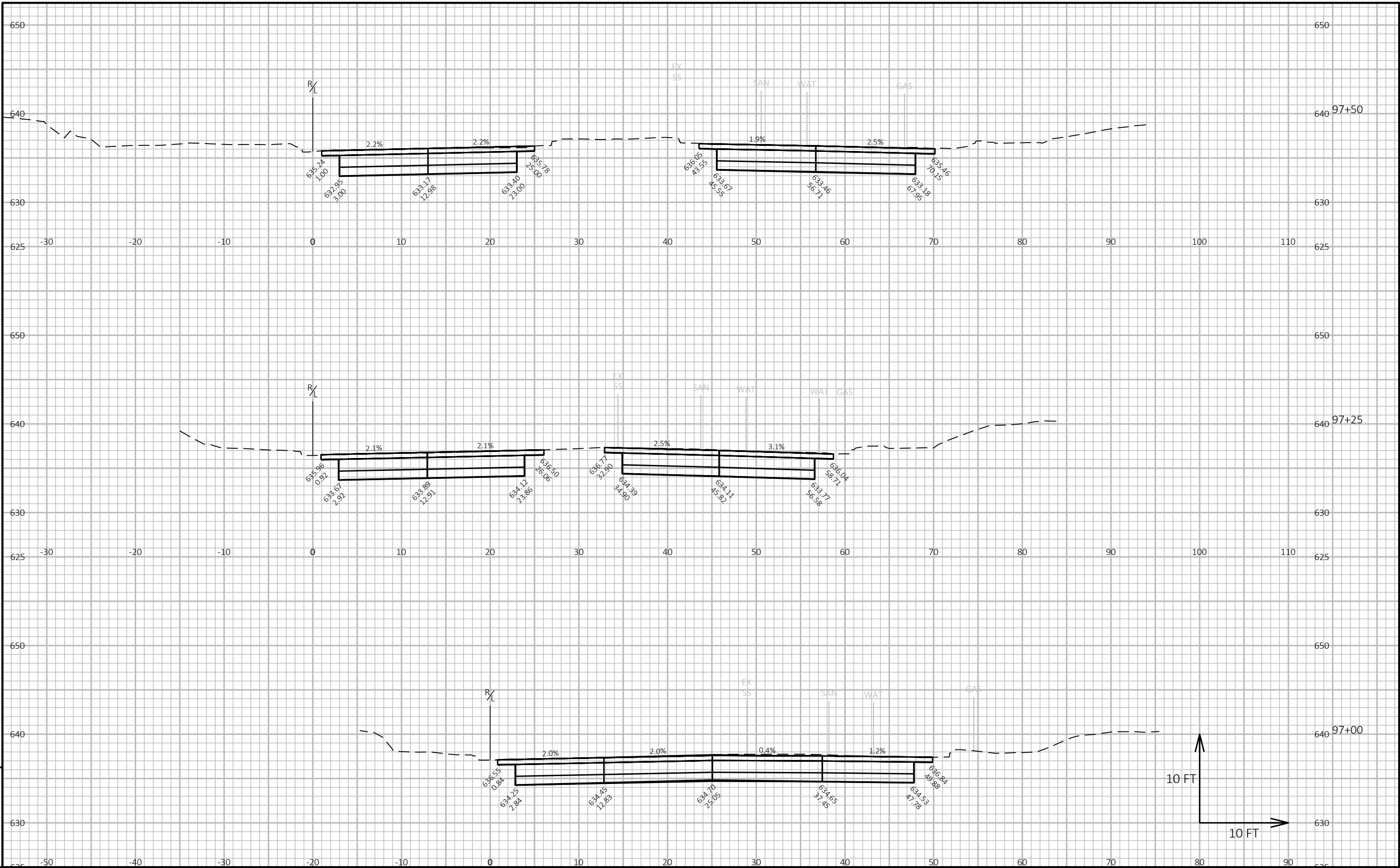


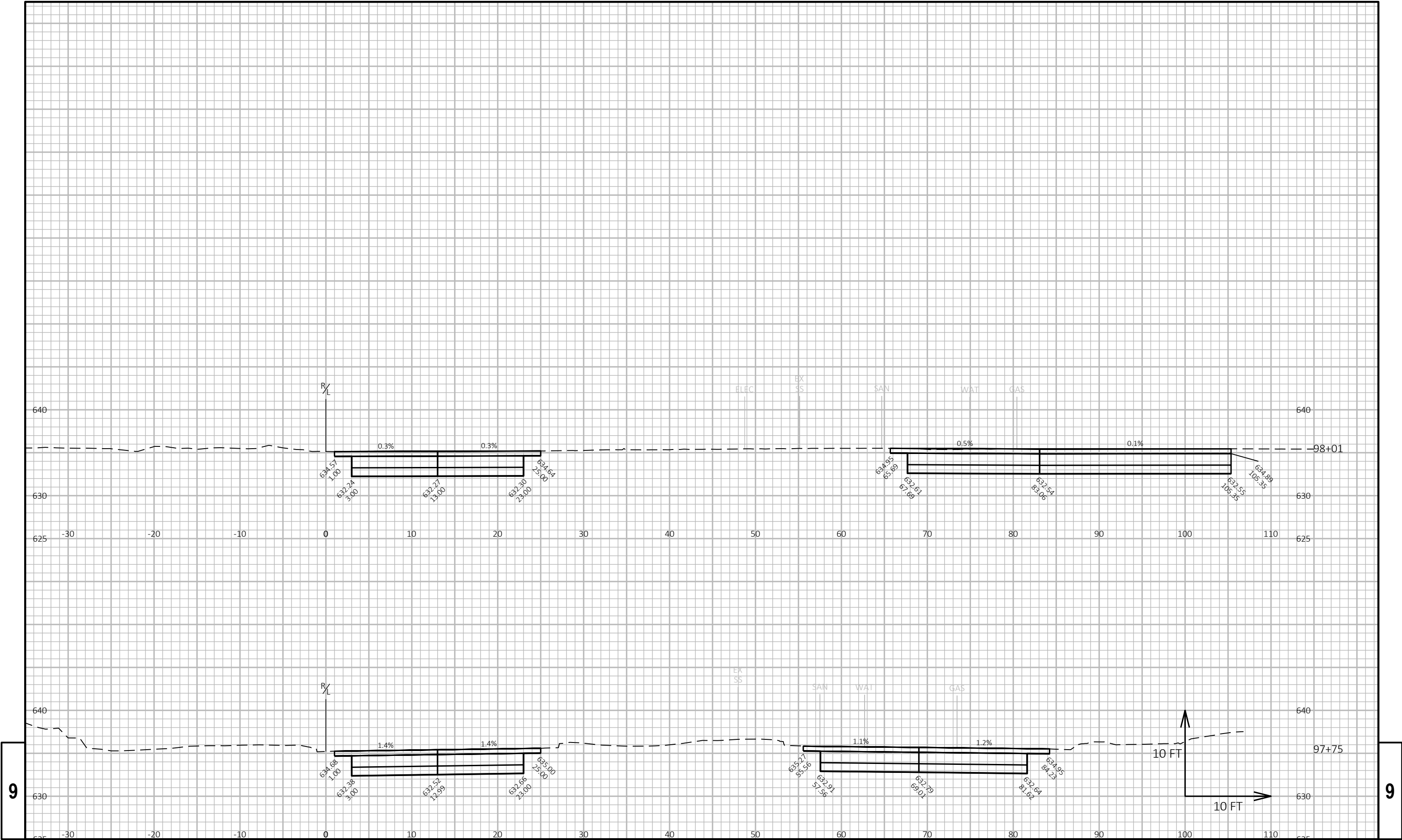
9

9

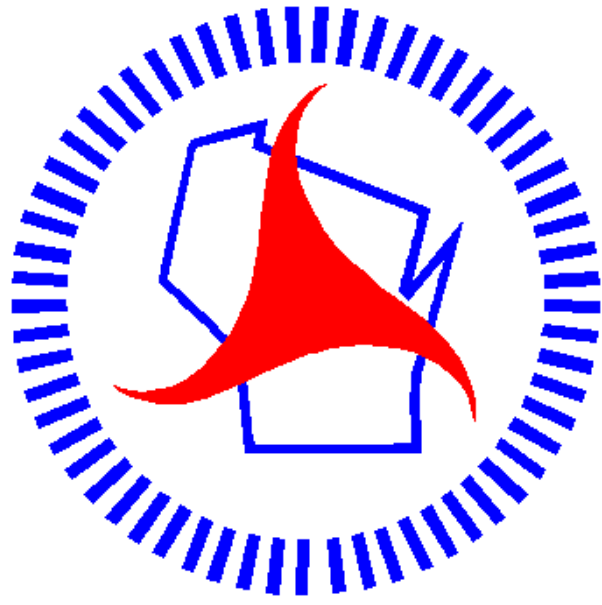












## ***Wisconsin Department of Transportation***

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