

GENERAL NOTES:

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND.

ALIGNMENT WAS BASED ON CENTERLINE SHOTS, IF ADJUSTMENTS TO THE ALIGNMENT ARE NEEDED IN THE FIELD, THE ADJUSTMENTS WILL BE APPROVED BY THE ENGINEER. ADJUSTMENTS SHALL BE INCIDENTAL TO THE PROJECT.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

VERTICAL REFERENCE DATUM IS NAVD 88 (2012).

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUSIVE OF ROADBED, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

USE SEED MIXTURE NO. 30, EROSION MAT CLASS I TYPE B AND FERTILIZER TYPE B UNLESS OTHERWISE NOTED.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESS:

PAVEMENT THICKNESS (INCH)	LOWER (INCH)	UPPER (INCH)
5.0	3.0	2.0

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 3.55 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.28 ACRES

STANDARD ABBREVIATIONS:

CE	COMMERCIAL ENTRANCE
CL OR C/L OR ☿	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
DWY	DRIVEWAY
EOR	END POINT OF RADIUS
ENT	ENTRANCE
FE	FIELD ENTRANCE
FO	FIBER OPTIC
CWT	HUNDREDWEIGHT
IP	IRON PIPE OR PIN
L	LENGTH OF CURVE
SY	SQUARE YARD
CY	CUBIC YARD
NC	NORMAL CROWN
PAVT	PAVEMENT
PE	PRIVATE ENTRANCE
R	RADIUS
R/W	RIGHT-OF-WAY
RDWY	ROADWAY
R/L OR ☿	REFERENCE LINE
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
TV	CABLE TV
OH	OVERHEAD LINE
T	TELEPHONE
E	ELECTRICAL

UTILITY CONTACTS

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EMAIL:j.jolicoeur@xcelenergy.com



ORDER OF TYPICAL SECTION AND DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
TRAFFIC CONTROL/STAGING PLANS
ALIGNMENT DIAGRAM
PLAN & PROFILE

MUNICIPALITY CONTACT

CHIPPEWA COUNTY HIGHWAY DEPARTMENT
801 E. GRAND AVENUE
CHIPPEWA FALLS, WI 54729
TELEPHONE: (715)726-7914
ATTENTION: FRED ANDERSON, PROJECT MANAGER
EMAIL: fanderson@co.chippewa.wi.us

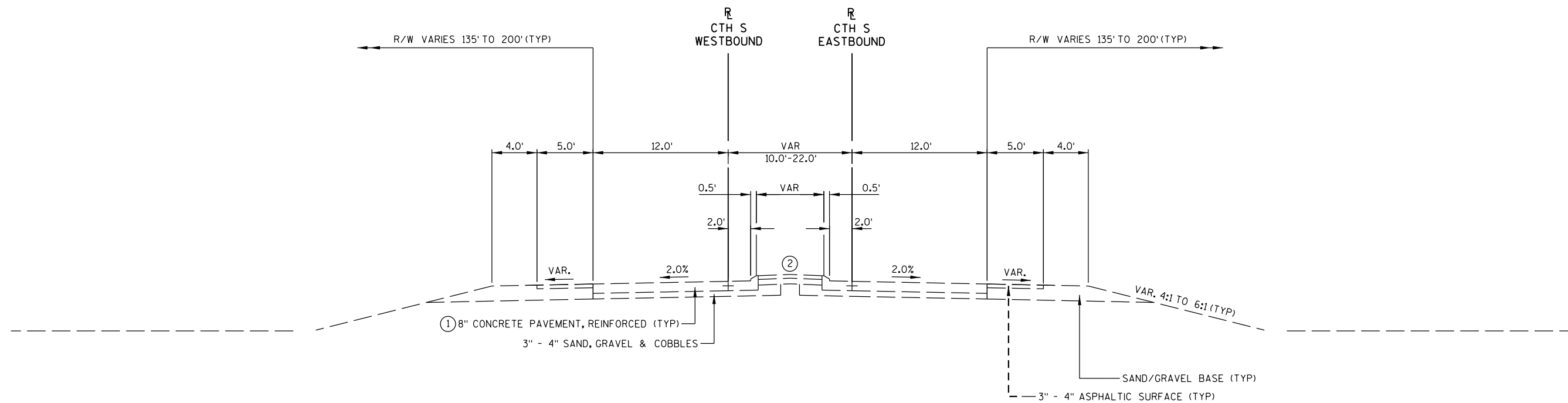
WISCONSIN DNR LIASON

DEPARTMENT OF NATURAL RESOURCES
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
TELEPHONE: (715)934-9014
ATTENTION: LEAH NICOL
EMAIL: leah.nicol@wisconsin.gov

DESIGN CONTACT

CBS SQUARED INC.
770 TECHNOLOGY WAY
CHIPPEWA FALLS, WI 54729
TELEPHONE: (715)861-5226
ATTENTION: JOHN BECKFIELD, PE

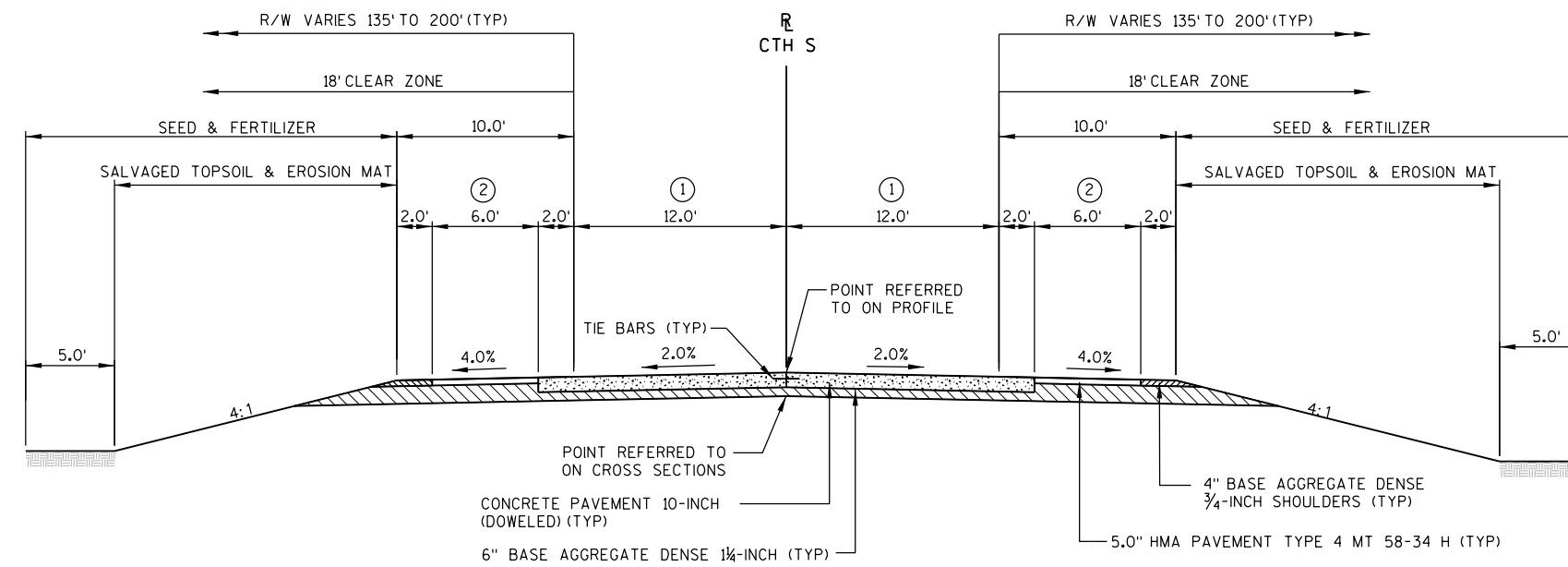
CONTROL POINTS						
POINT #	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESC.
1	140477.7719	162864.0388	947.798	11+77.51	103.04 LT (EB) 81.04' LT (WB)	3/4-INCH REBAR
2	140302.602	163829.5214	952.3872	21+45.10	60.05' RT (EB) 82.05 RT (WB)	3/4-INCH REBAR
3	140420.0134	165430.9651	941.1991	-	-	3/4-INCH REBAR



TYPICAL EXISTING SECTION
CTH S
STA 13+54.00 TO STA 30+00.00 EB

NOTES:

- ① EXISTING PAVEMENT IS ASPHALTIC FROM
STA 12+92 TO STA 13+88 WB
STA 13+04 TO STA 15+28 EB
STA 29+71 TO STA 30+00 EB
- ② MEDIAN LOCATION VARIES



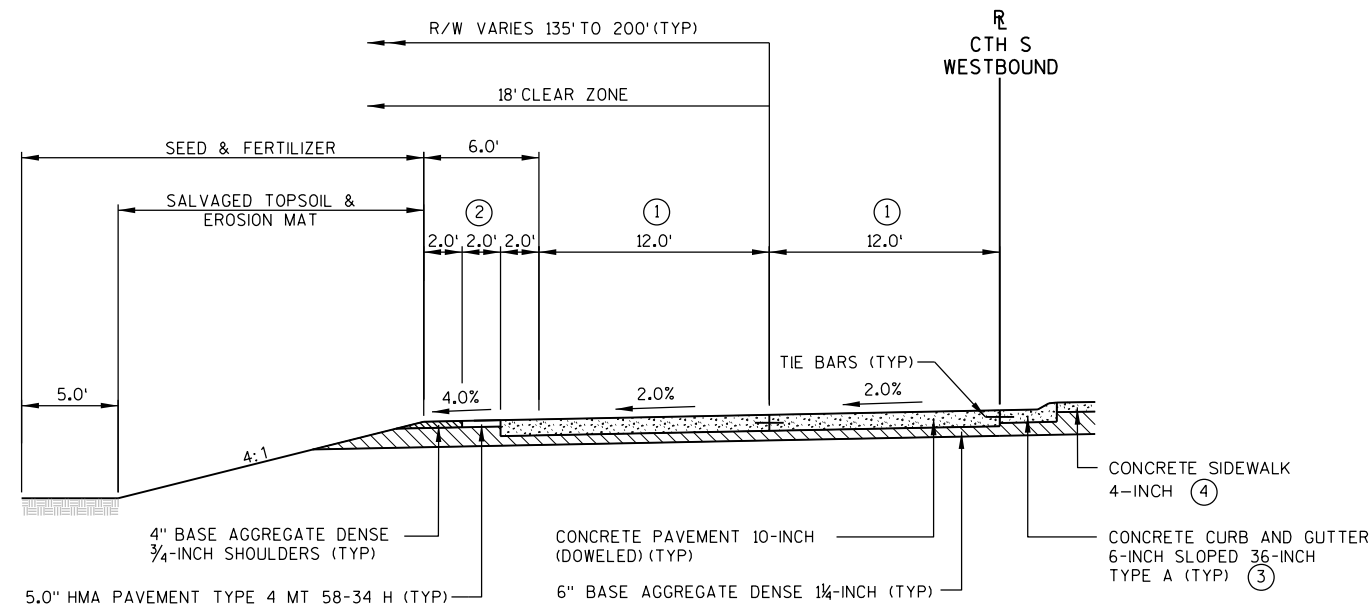
TYPICAL FINISHED SECTION

CTH S
STA 13+54.00 TO STA 30+00.00

NOTES:

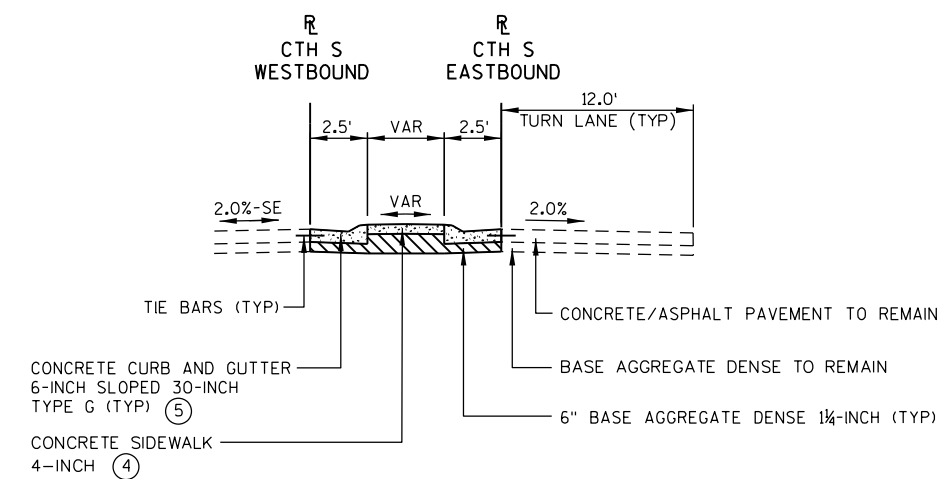
- ① REFER TO INTERSECTION DETAIL SHEETS FOR LANE WIDTHS, TURN LANES AND MEDIAN ISLAND LOCATIONS.
- ② 10' MAX FOR TRAFFIC STAGING. REFER TO INTERSECTION DETAIL SHEETS FOR PAVED SHOULDER LOCATIONS.
- ③ USE REVERSE SLOPE GUTTER.
- ④ CONCRETE SIDEWALK 4-INCH
STA 11+49.10 EB - STA 12+97.35 EB
STA 17+18.38 EB - STA 18+56.00 EB
STA 19+36.00 EB - STA 20+98.26 EB
- ⑤ USE A GUTTER SLOPE OF 6.25%.

SALVAGED TOPSOIL, SEED, FERTILIZER & MULCH
STA 10+90.00 EB - STA 11+49.10 EB
STA 13+60.84 EB - STA 17+18.38 EB
STA 20+98.26 EB - STA 26+30.00 EB



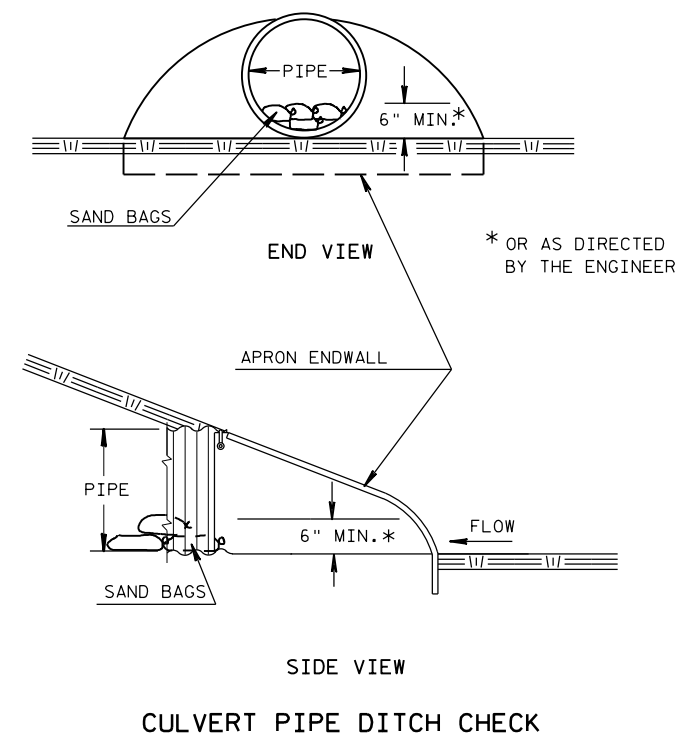
TYPICAL FINISHED SECTION RIGHT TURN LANE

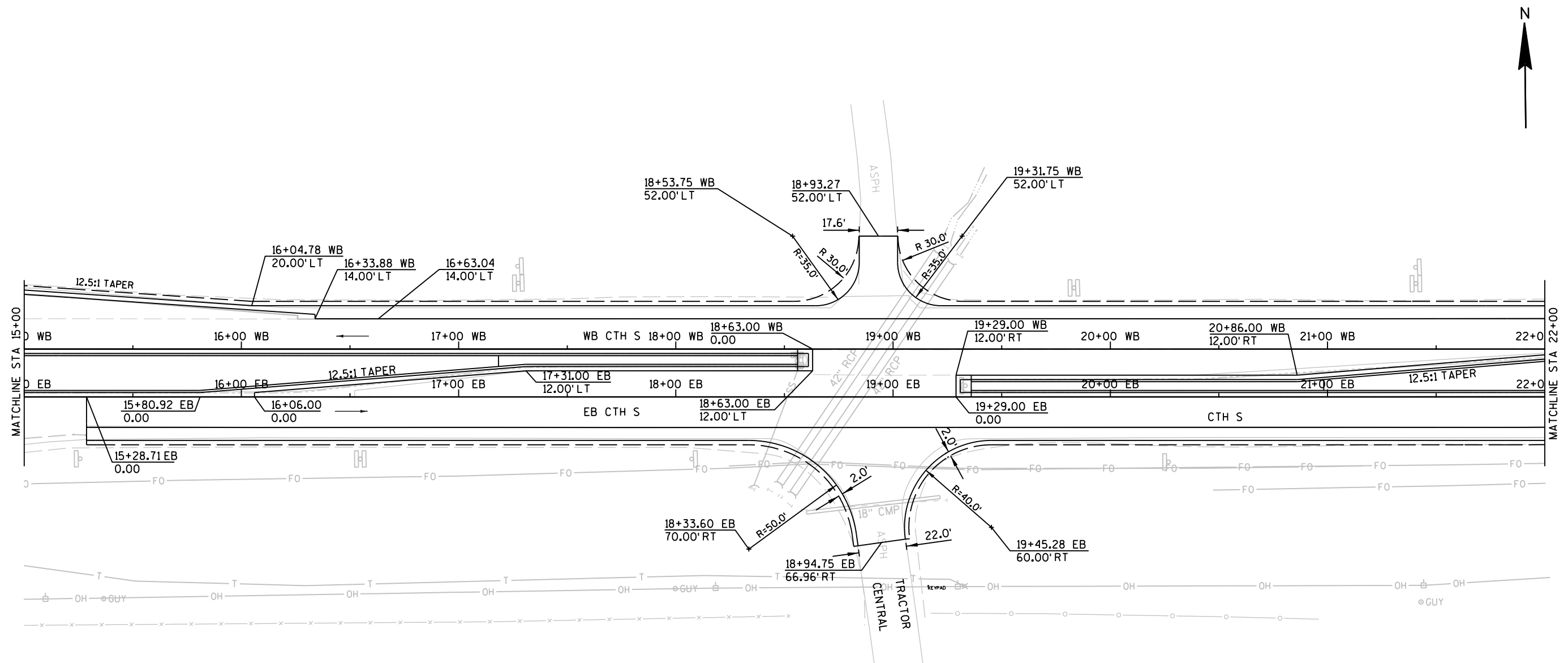
CTH S
STA 13+88.04 WB TO STA 16+33.88 WB

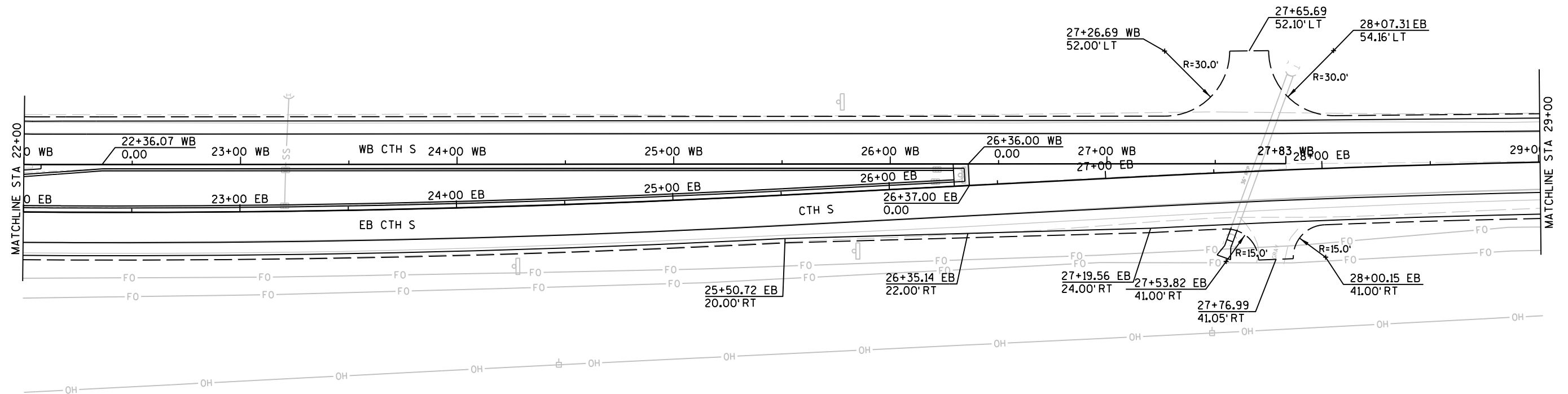


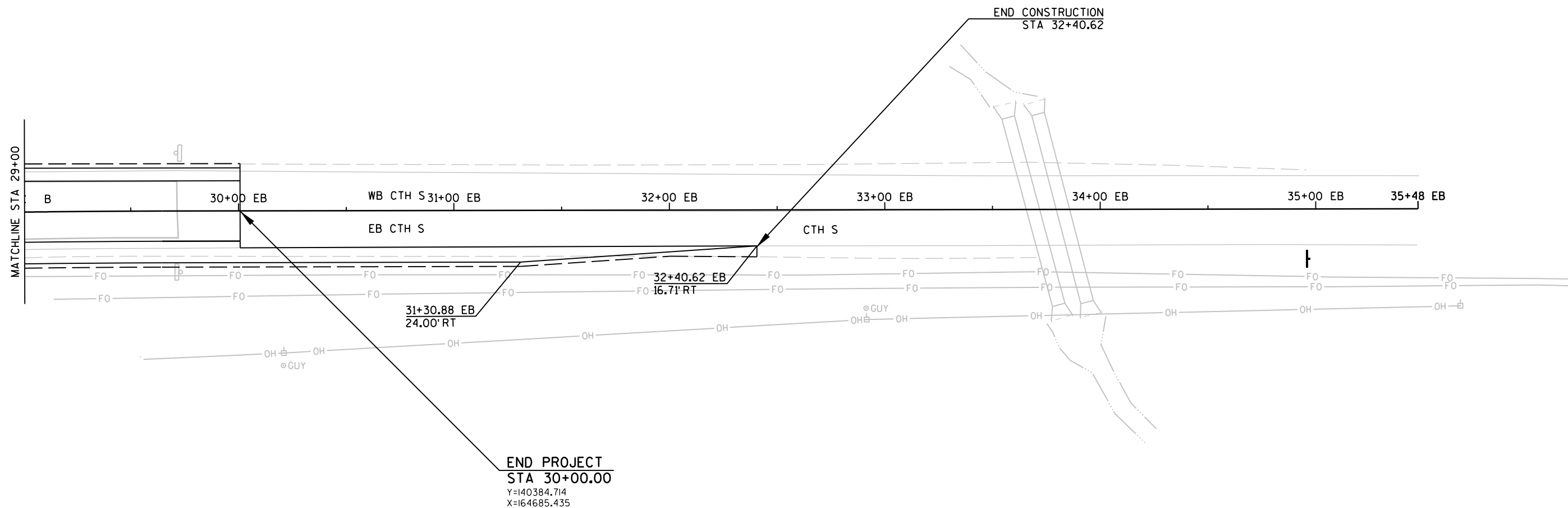
TYPICAL FINISHED SECTION MEDIAN REPLACEMENT

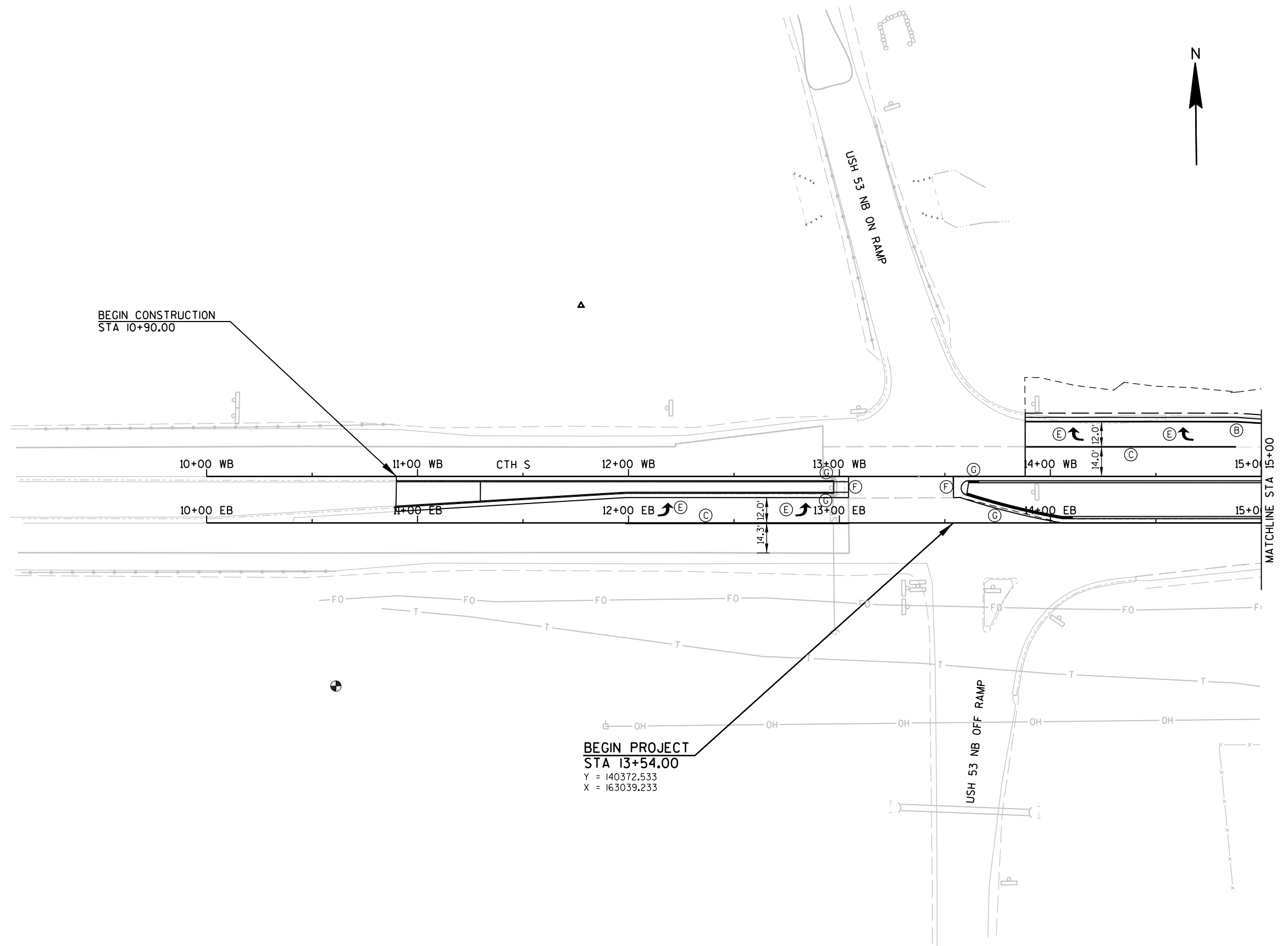
CTH S
STA 10+90.00 TO STA 13+04.40 EB

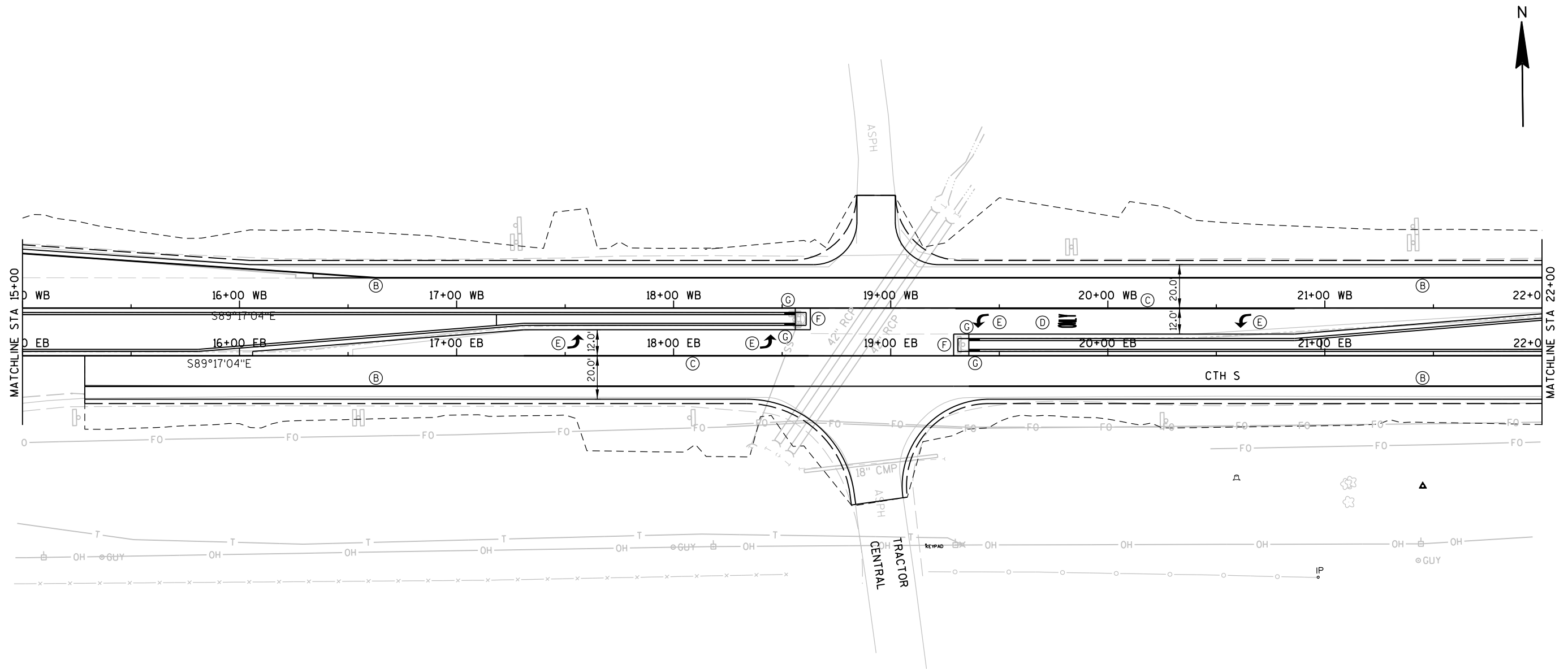




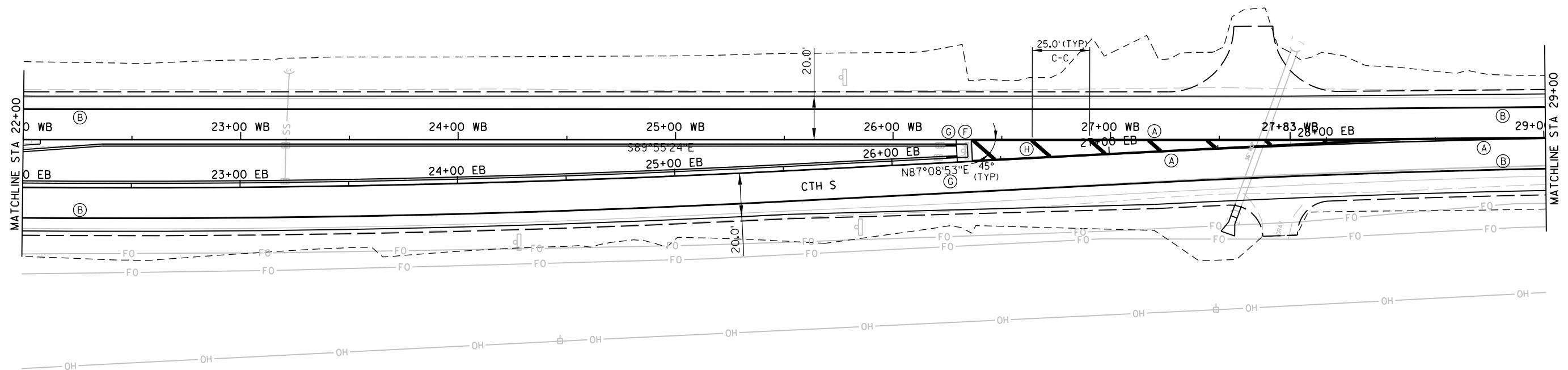








MARKING LEGEND	
(A)	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
(B)	MARKING LINE EPOXY 4-INCH (WHITE)
(C)	MARKING LINE EPOXY 8-INCH (WHITE)
(D)	MARKING WORD EPOXY (ONLY, WHITE)
(E)	MARKING ARROW EPOXY (TYPE 2, WHITE)
(F)	MARKING ISLAND NOSE EPOXY (YELLOW)
(G)	MARKING CURB EPOXY (YELLOW)
(H)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)



MARKING LEGEND

- (A) MARKING LINE EPOXY
4-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY
4-INCH (WHITE)
- (C) MARKING LINE EPOXY
8-INCH (WHITE)
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EPOXY (ONLY, WHITE)
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EPOXY (TYPE 2, WHITE)
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EPOXY 12-INCH (YELLOW)

PROJECT NO: 8896-01-03

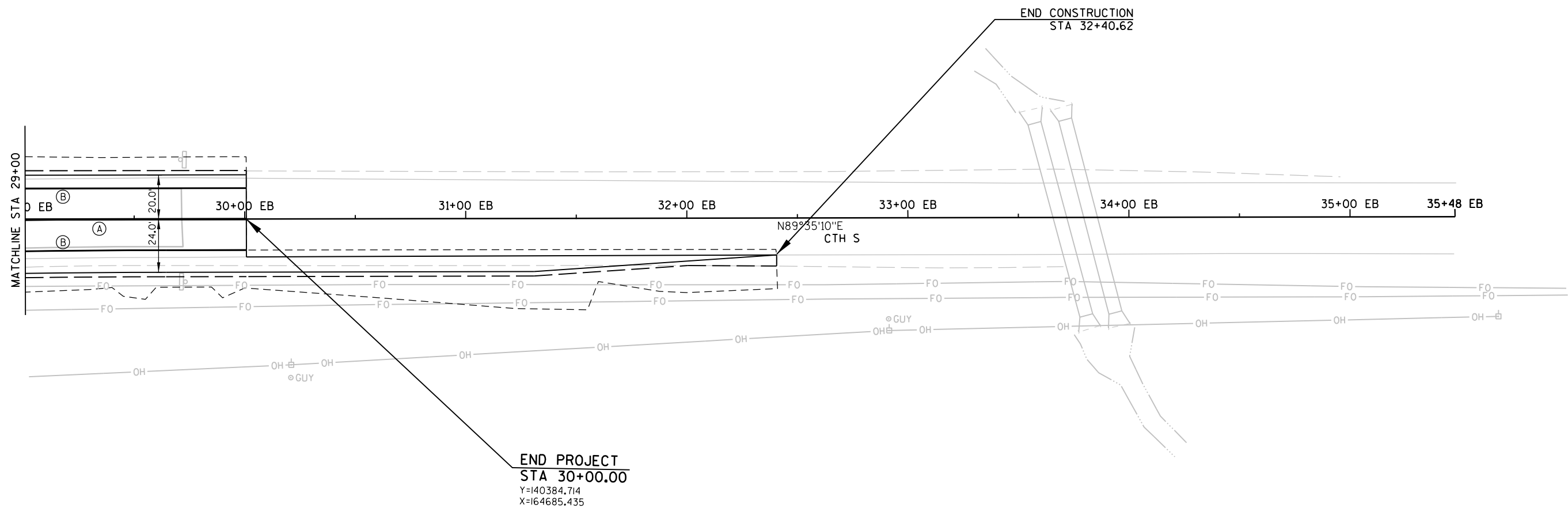
HWY: CTH S

COUNTY: CHIPPEWA

PAVEMENT MARKING

SHEET

E

**MARKING LEGEND**

- (A) MARKING LINE EPOXY
4-INCH (DOUBLE YELLOW)
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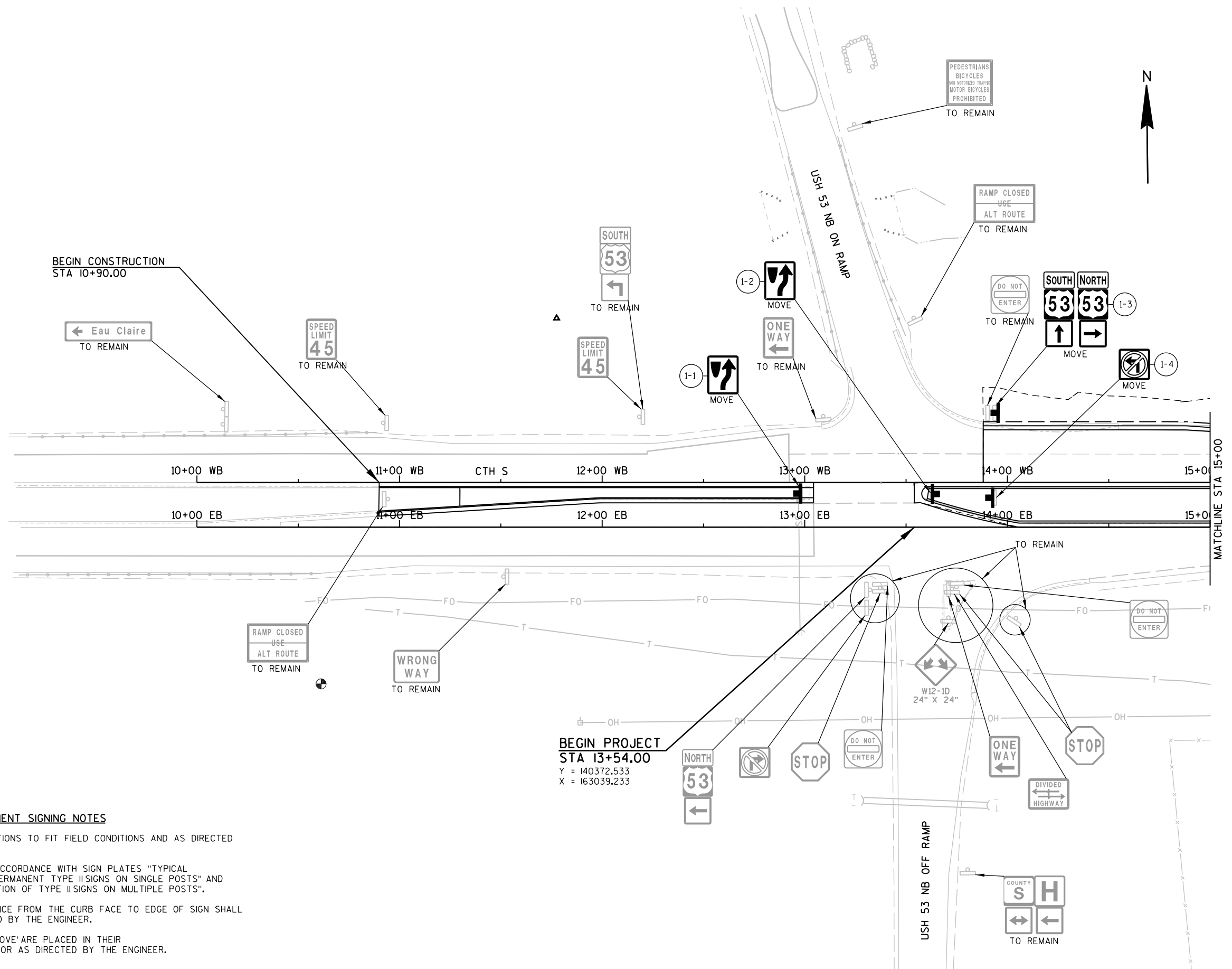
HWY: CTH S

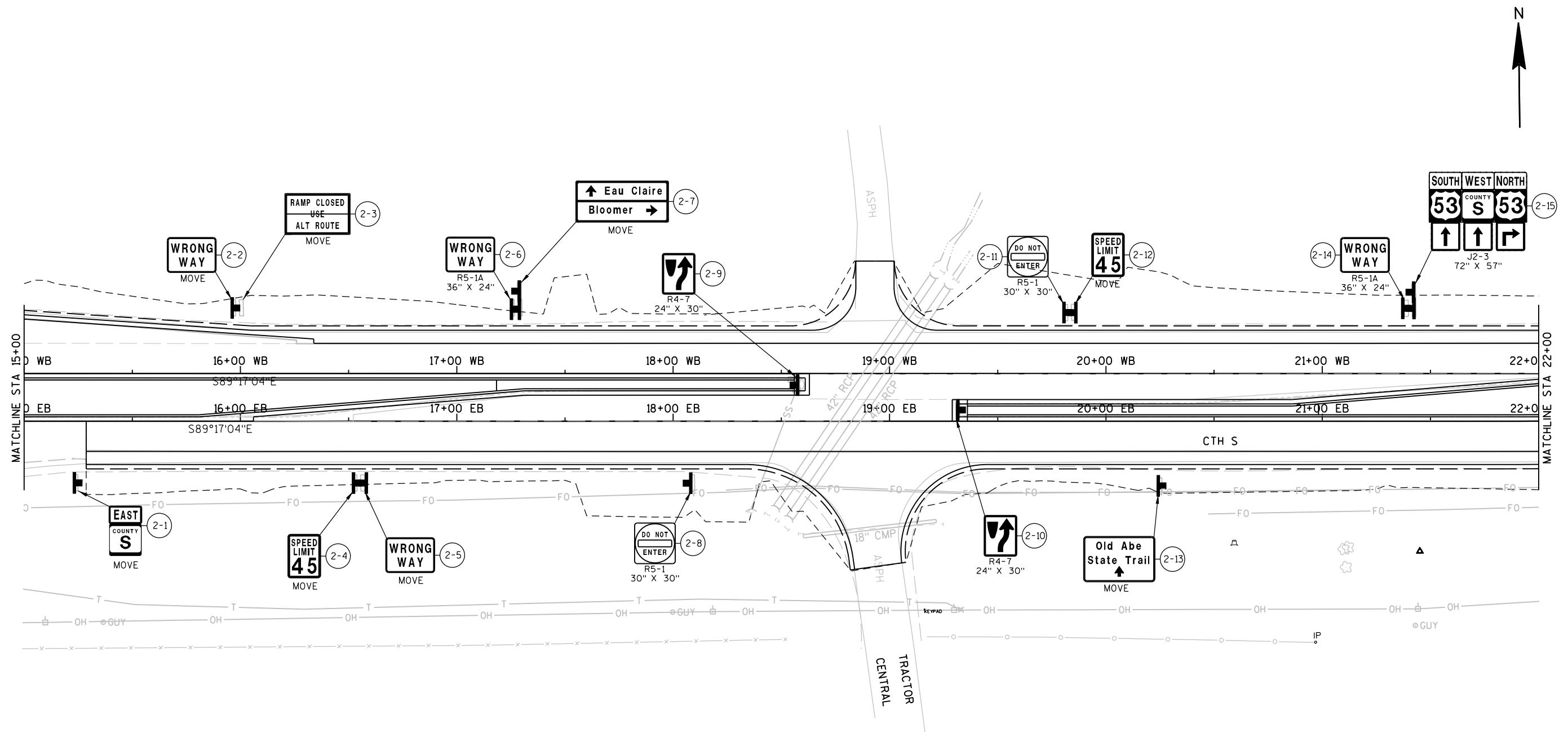
COUNTY: CHIPPEWA

PAVEMENT MARKING

SHEET

E



**GENERAL PERMANENT SIGNING NOTES**

ADJUST SIGN LOCATIONS TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

INSTALL SIGNS IN ACCORDANCE WITH SIGN PLATES "TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS" AND "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS".

THE OFFSET DISTANCE FROM THE CURB FACE TO EDGE OF SIGN SHALL BE 1' WHEN DIRECTED BY THE ENGINEER.

SIGNS NOTED AS 'MOVE' ARE PLACED IN THEIR ORIGINAL LOCATION OR AS DIRECTED BY THE ENGINEER.

LEGEND

- SIGN(S) ON TUBULAR STEEL POST
- SIGN(S) ON LIGHT/SIGNAL POST
- SIGN(S) ON WOOD POST
- SIGN GROUP NUMBER
- BAND SIGN TO STREET LIGHT /TRAFFIC SIGNAL POLE

PROJECT NO: 8896-01-03

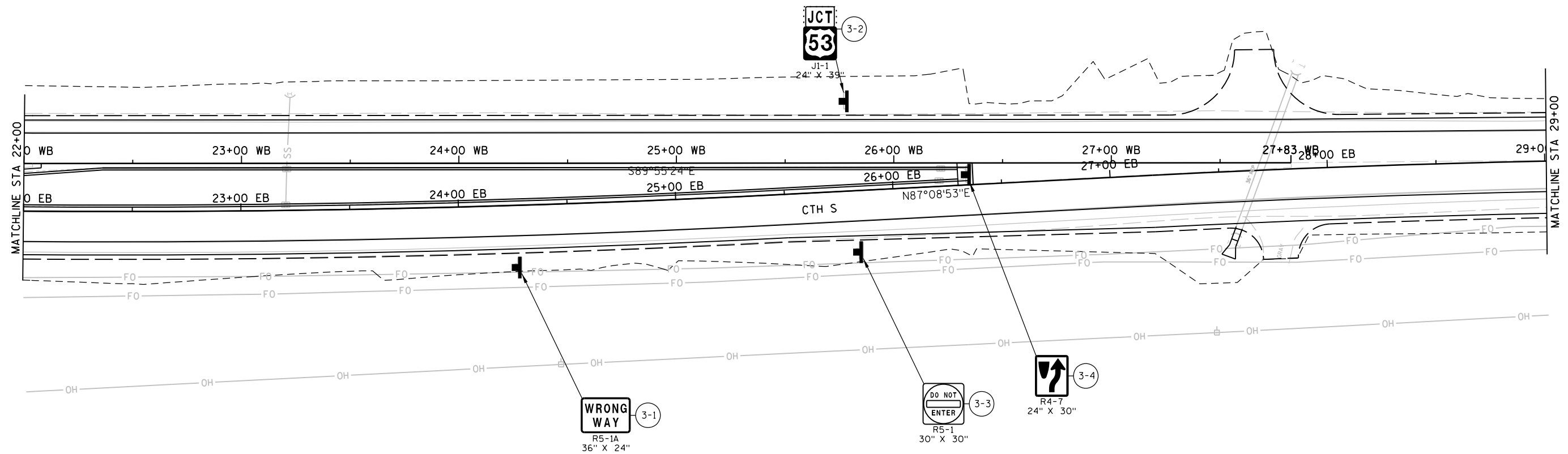
HWY: CTH S

COUNTY: CHIPPEWA

PERMANENT SIGNING

SHEET

E

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PROJECT NO: 8896-01-03

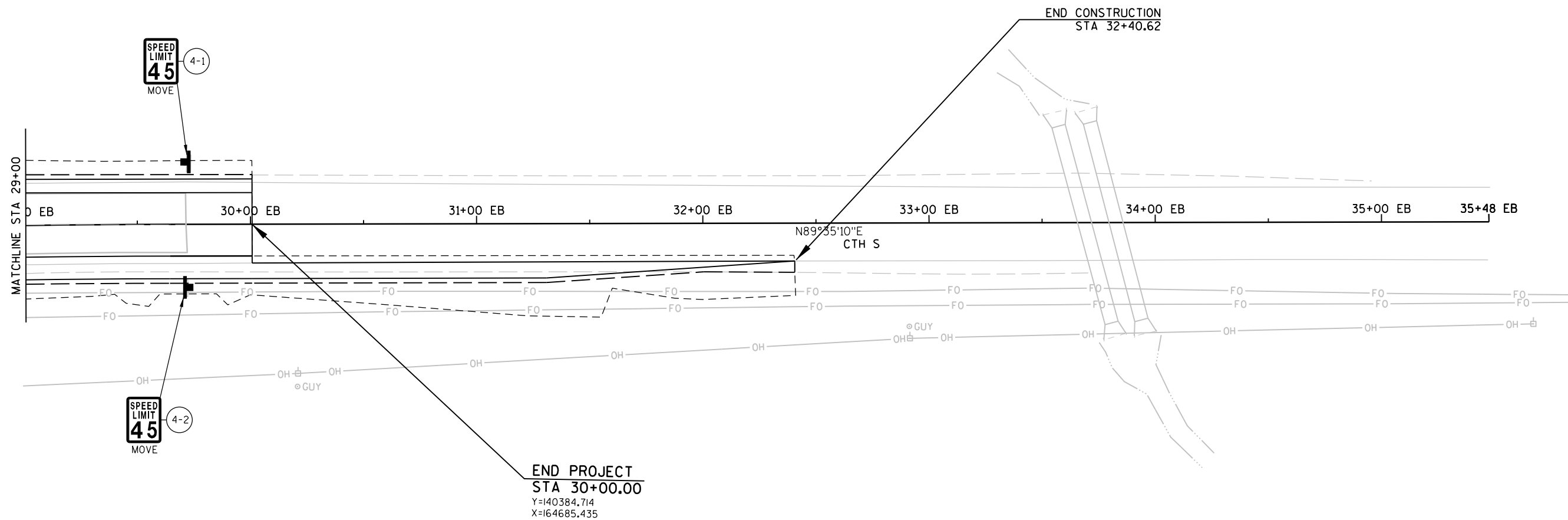
HWY: CTH S

COUNTY: CHIPPEWA

PERMANENT SIGNING

SHEET

E

**GENERAL PERMANENT SIGNING NOTES**






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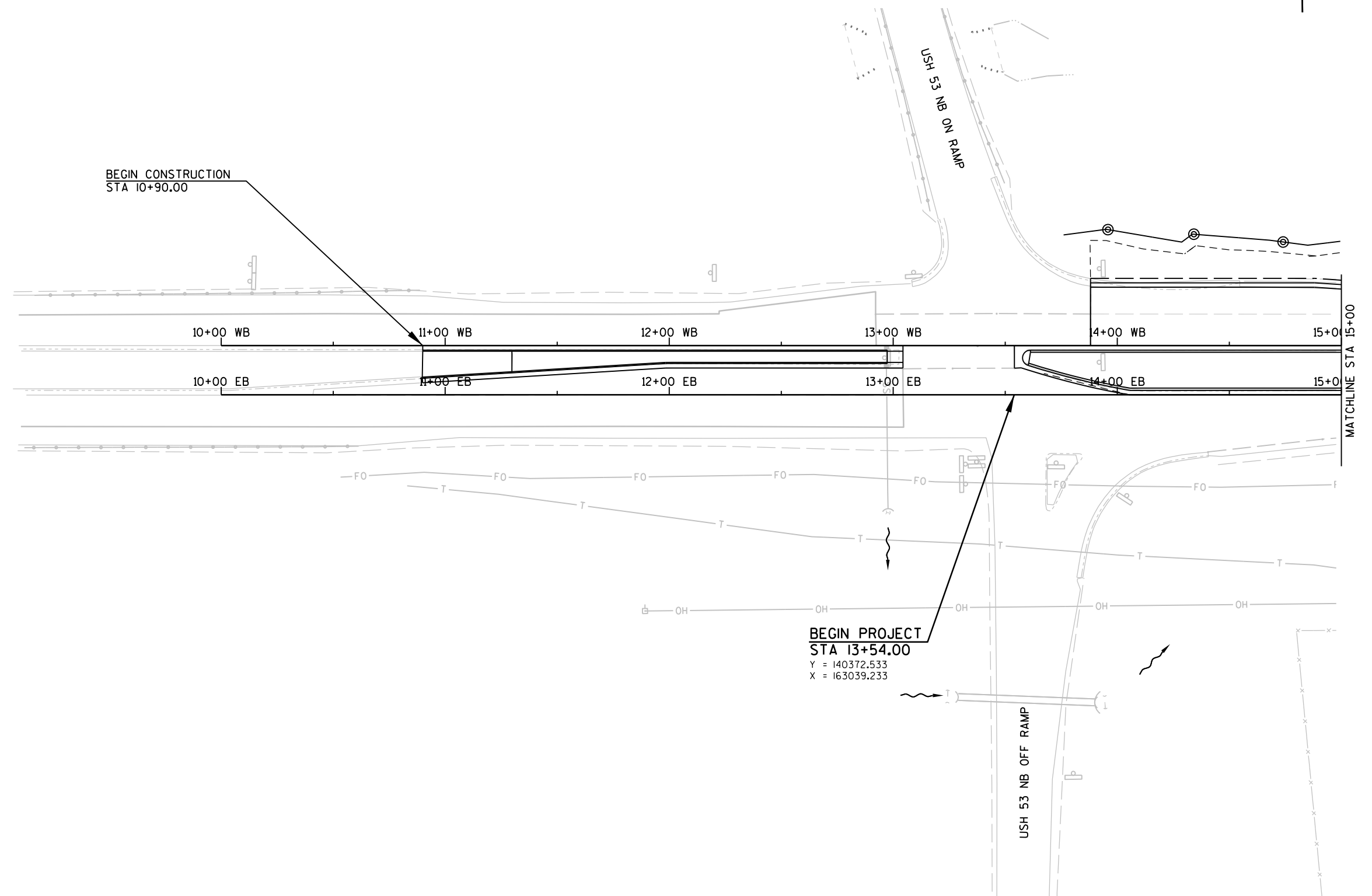
HWY: CTH S

COUNTY: CHIPPEWA

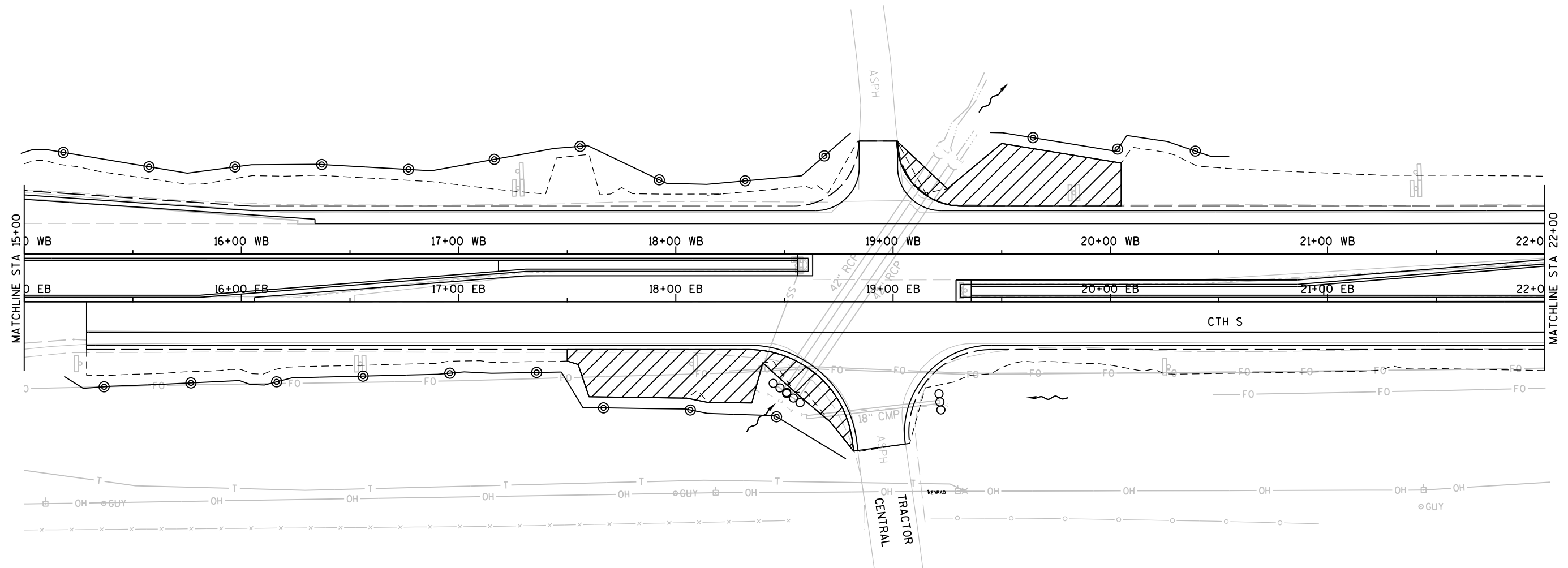
PERMANENT SIGNING

SHEET

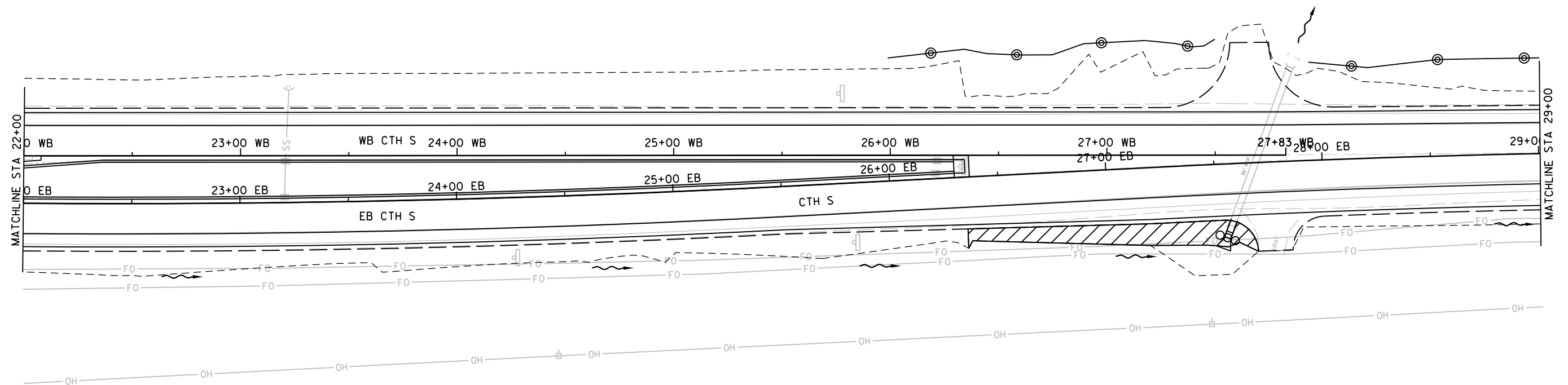
E





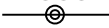

- LEGEND
- EROSION MAT CLASS I TYPE B
 - CULVERT PIPE CHECKS
 - SILT FENCE
 - DRAINAGE FLOW

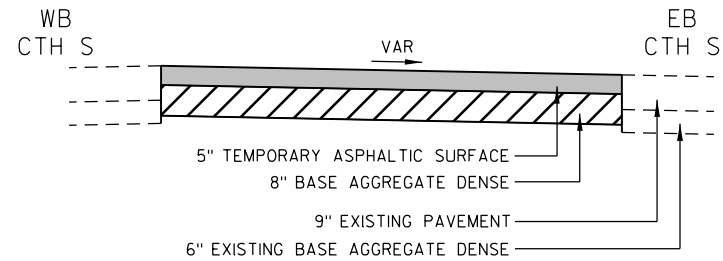


- LEGEND
- EROSION MAT CLASS I TYPE B
 - CULVERT PIPE CHECKS
 - SILT FENCE
 - DRAINAGE FLOW



LEGEND

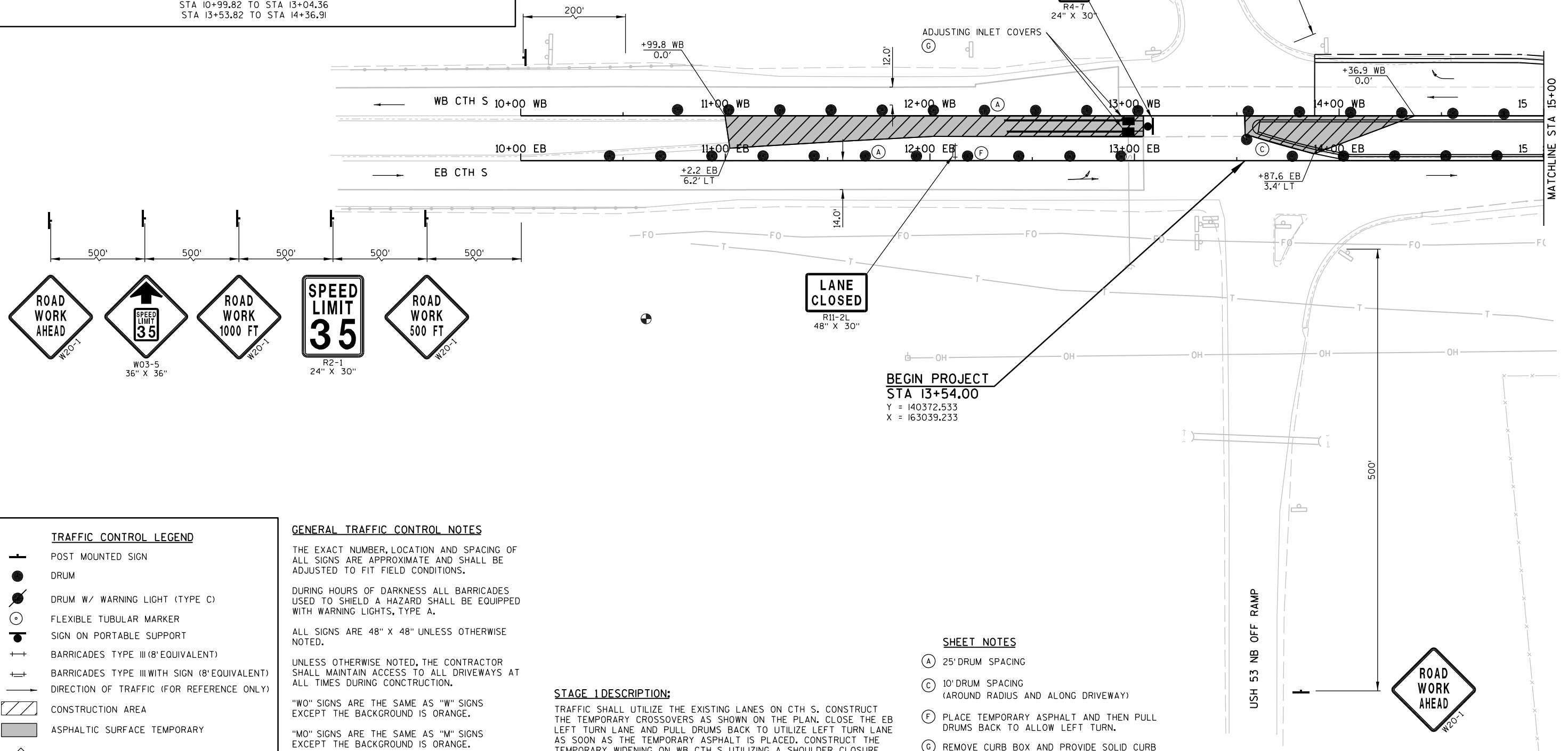
-  EROSION MAT CLASS I TYPE B
-  CULVERT PIPE CHECKS
-  SILT FENCE
-  DRAINAGE FLOW

**TEMPORARY ASPHALTIC SURFACE TYPICAL SECTION**

CTH S - ALL STAGES
STA 10+99.82 TO STA 13+04.36
STA 13+53.82 TO STA 14+36.91

END
ROAD WORK
G20-2A
48" X 24"

END
ROAD WORK
G20-2A
48" X 24"

**TRAFFIC CONTROL LEGEND**

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

GENERAL TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS ARE APPROXIMATE AND SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

DURING HOURS OF DARKNESS ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE A.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, WHICH MAY CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN SHALL BE REMOVED OR COVERED.

STAGE 1 DESCRIPTION:

TRAFFIC SHALL UTILIZE THE EXISTING LANES ON CTH S. CONSTRUCT THE TEMPORARY CROSSOVERS AS SHOWN ON THE PLAN. CLOSE THE EB LEFT TURN LANE AND PULL DRUMS BACK TO UTILIZE LEFT TURN LANE AS SOON AS THE TEMPORARY ASPHALT IS PLACED. CONSTRUCT THE TEMPORARY WIDENING ON WB CTH S UTILIZING A SHOULDER CLOSURE AND A FLAGGING OPERATION. DURING THE FLAGGING OPERATION INSTALL TRAFFIC CONTROL DEVICES AND SIGNS ACCORDING TO SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION". MAINTAIN A MINIMUM OF 12 FEET LANE WIDTHS DURING THIS STAGE.

SHEET NOTES

- (A) 25' DRUM SPACING
- (C) 10' DRUM SPACING (AROUND RADIUS AND ALONG DRIVEWAY)
- (F) PLACE TEMPORARY ASPHALT AND THEN PULL DRUMS BACK TO ALLOW LEFT TURN.
- (G) REMOVE CURB BOX AND PROVIDE SOLID CURB PLATE FOR EXISTING INLET COVERS DURING STAGE 1 CONSTRUCTION. REMOVE CURB BOX AND INSTALL SOLID CURB PLATE IS INCIDENTAL TO ADJUSTING INLET COVERS

2

VAR (H) 2.0'

VAR (H)

5" TEMPORARY ASPHALTIC SURFACE

11" BASE AGGREGATE 1 1/4" - INCH

9" EXISTING PAVEMENT

6" EXISTING BASE AGGREGATE DENSE

5" BASE AGGREGATE 3/4" - INCH

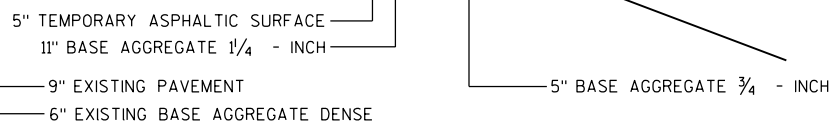
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TEMPORARY ASPHALTIC SURFACE TYPICAL SECTION

TEMPORARY WIDENING

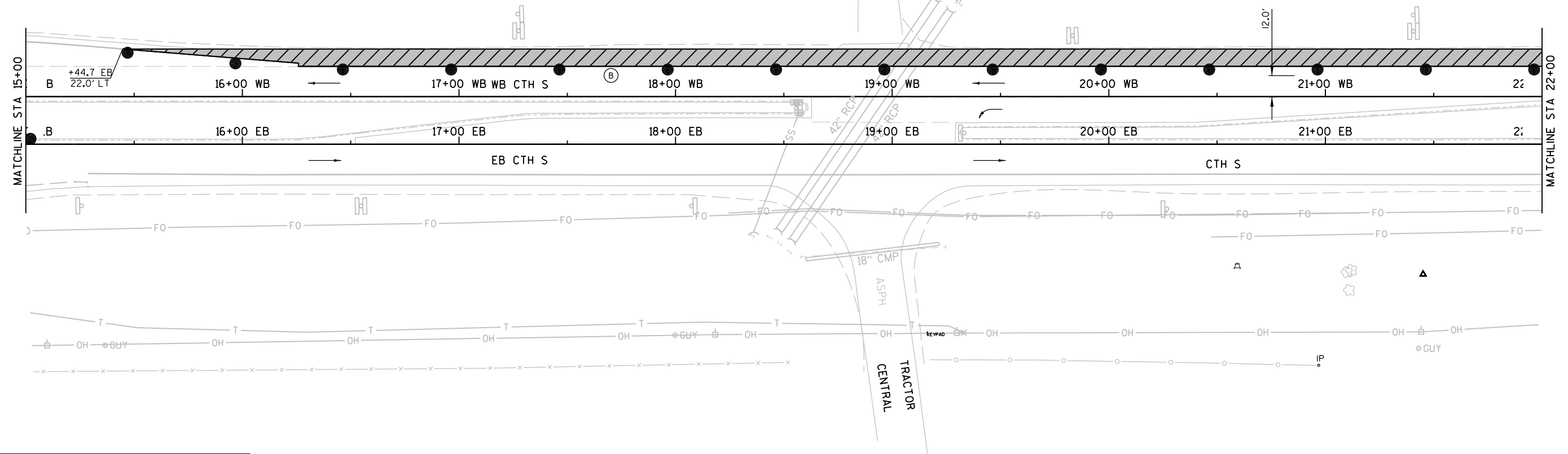
STA 15+44.70 to 32+75.00

2














TEMPORARY ASPHALTIC SURFACE TYPICAL SECTION

TEMPORARY WIDENING
STA 15+44.70 to 32+75.00



TRAFFIC CONTROL LEGEND

- | | |
|---|---|
|  | POST MOUNTED SIGN |
|  | DRUM |
|  | DRUM W/ WARNING LIGHT (TYPE C) |
|  | FLEXIBLE TUBULAR MARKER |
|  | SIGN ON PORTABLE SUPPORT |
|  | BARRICADES TYPE III (8' EQUIVALENT) |
|  | BARRICADES TYPE III WITH SIGN (8' EQUIVALENT) |
|  | DIRECTION OF TRAFFIC (FOR REFERENCE ONLY) |
|  | CONSTRUCTION AREA |
|  | ASPHALTIC SURFACE TEMPORARY |
|  | FLAGS, 16"X16" MINIMUM (ORANGE) |

SHEET NOTES

- (B) 50' DRUM SPACING
- (H) REFER TO CROSS SECTION AND TRAFFIC CONTROL SHEETS FOR TEMPORARY ASPHALTIC SURFACE LOCATIONS, WIDTHS AND CROSS SECTIONS.

PROJECT NO: 8896-01-03

HWY: CTH S

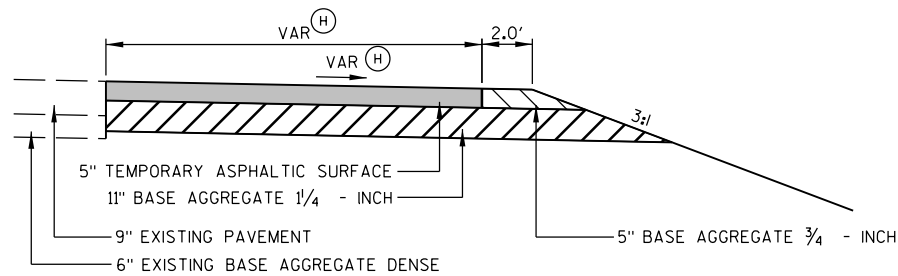
COUNTY: CHIPPEWA

TRAFFIC CONTROL - STAGE 1

SHEET

E

2

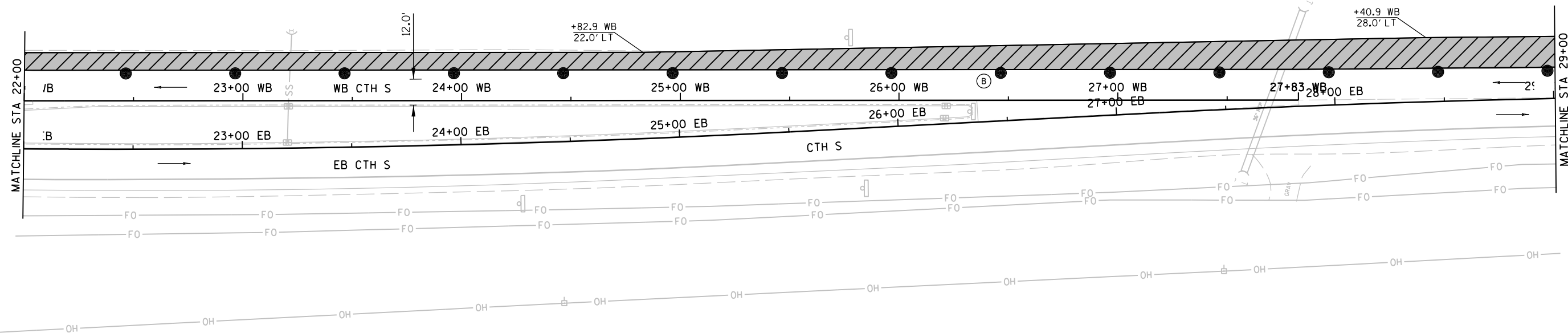


TEMPORARY ASPHALTIC SURFACE TYPICAL SECTION

TEMPORARY WIDENING
STA 15+44.70 to 32+75.00



2



TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
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- CONSTRUCTION AREA
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SHEET NOTES

- (B) 50' DRUM SPACING

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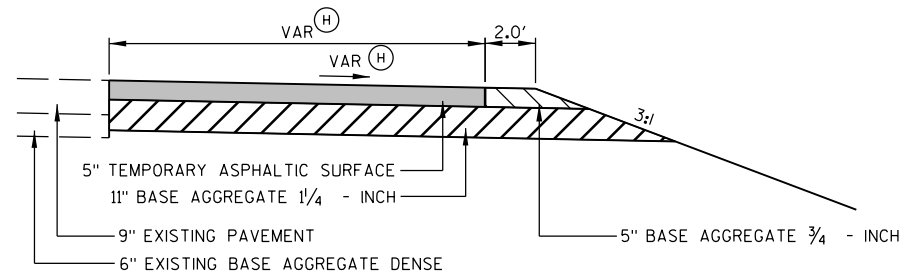
HWY: CTH S

COUNTY: CHIPPEWA

TRAFFIC CONTROL - STAGE 1

SHEET

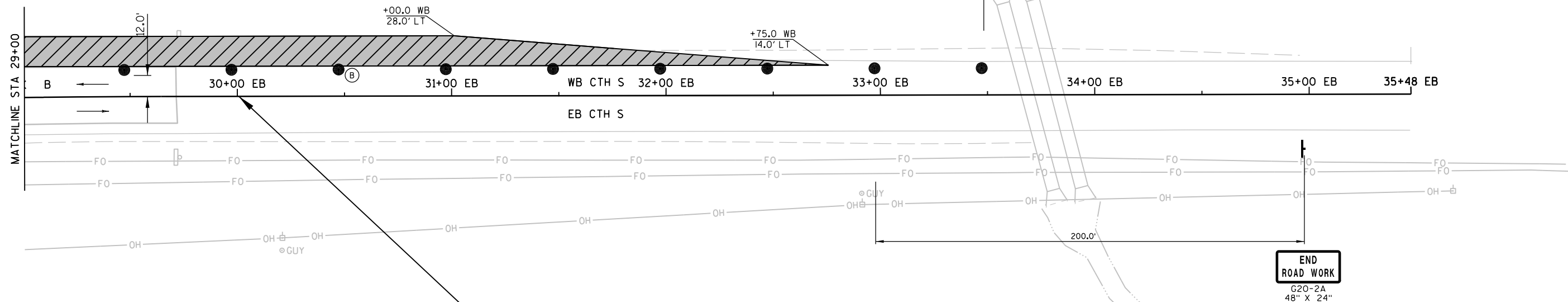
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**TEMPORARY ASPHALTIC SURFACE TYPICAL SECTION**

TEMPORARY WIDENING
STA 15+44.70 to 32+75.00



INSTALL TRAFFIC CONTROL DEVICES,
INCLUDING ADVANCE WARNING SIGNS
ACCORDING TO SDD "TRAFFIC CONTROL,
WORK ON SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY".



END PROJECT
STA 30+00.00

Y=140384.714
X=164685.435

TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

- (B) 50' DRUM SPACING

PROJECT NO: 8896-01-03

HWY: CTH S

COUNTY: CHIPPEWA

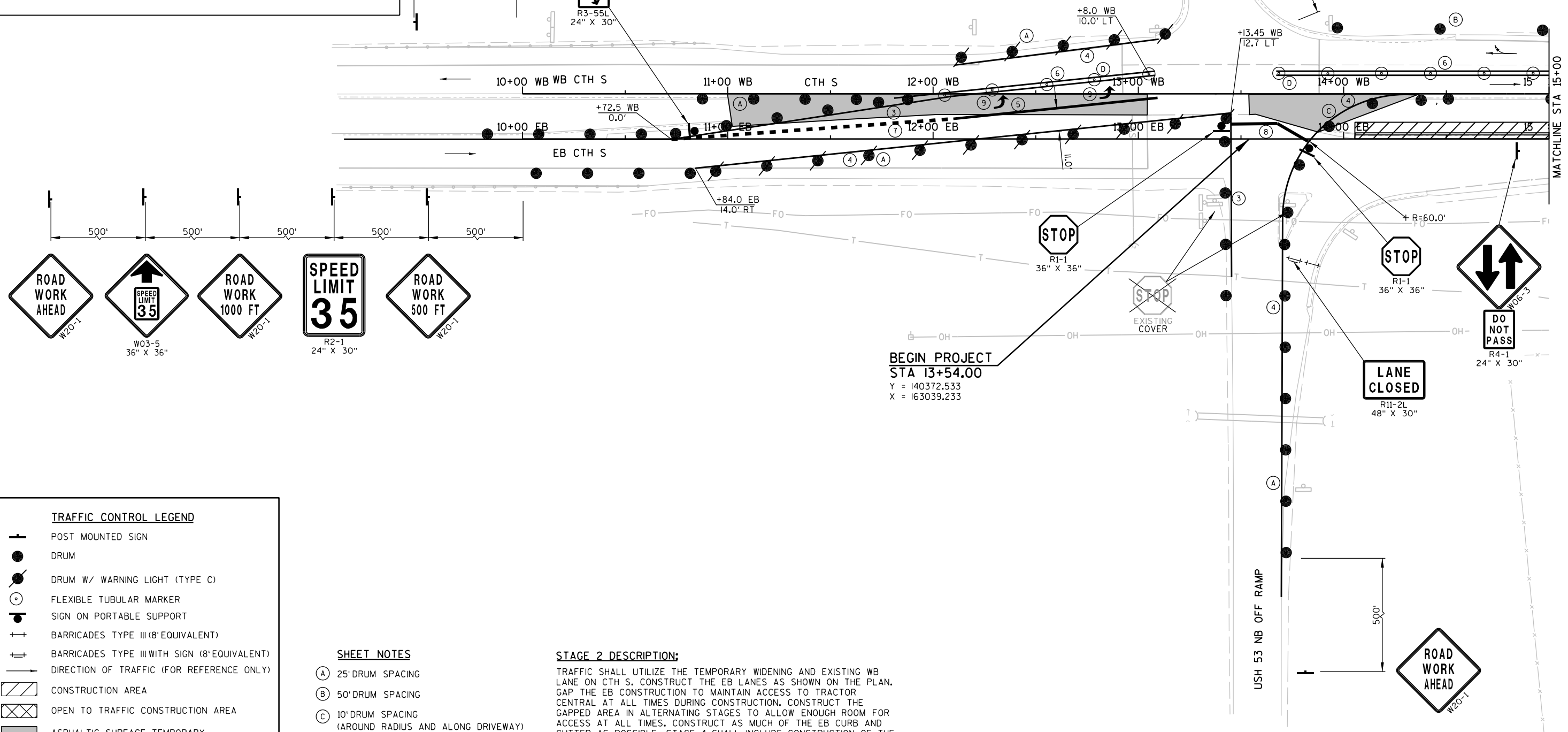
TRAFFIC CONTROL - STAGE 1

SHEET

E

TEMPORARY PAVEMENT MARKING LEGEND

- ① TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- ② TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- ③ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- ④ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- ⑤ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- ⑥ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- ⑦ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- ⑧ TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- ⑨ TEMPORARY MARKING ARROW REMOVABLE TAPE

END
ROAD WORK
G20-2A
48" X 24"LEFT
TURN
LANE
R3-55L
24" X 30"END
ROAD WORK
G20-2A
48" X 24"

TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- OPEN TO TRAFFIC CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

- (A) 25' DRUM SPACING
- (B) 50' DRUM SPACING
- (C) 10' DRUM SPACING (AROUND RADIUS AND ALONG DRIVEWAY)
- (D) 25' TUBULAR MARKER SPACING

STAGE 2 DESCRIPTION:

TRAFFIC SHALL UTILIZE THE TEMPORARY WIDENING AND EXISTING WB LANE ON CTH S. CONSTRUCT THE EB LANES AS SHOWN ON THE PLAN. GAP THE EB CONSTRUCTION TO MAINTAIN ACCESS TO TRACTOR CENTRAL AT ALL TIMES DURING CONSTRUCTION. CONSTRUCT THE GAPPED AREA IN ALTERNATING STAGES TO ALLOW ENOUGH ROOM FOR ACCESS AT ALL TIMES. CONSTRUCT AS MUCH OF THE EB CURB AND GUTTER AS POSSIBLE. STAGE 4 SHALL INCLUDE CONSTRUCTION OF THE LEFT TURN LANE CURB AND GUTTER FOR BOTH EB AND WB LANES. MAINTAIN MINIMUM LANE WIDTHS OF 11 FEET DURING THIS STAGE.

PROJECT NO: 8896-01-03

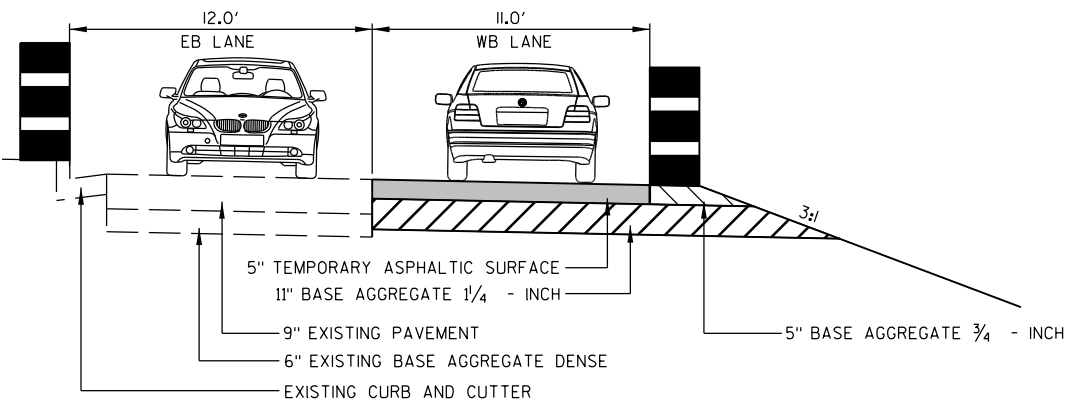
HWY: CTH S

COUNTY: CHIPPEWA

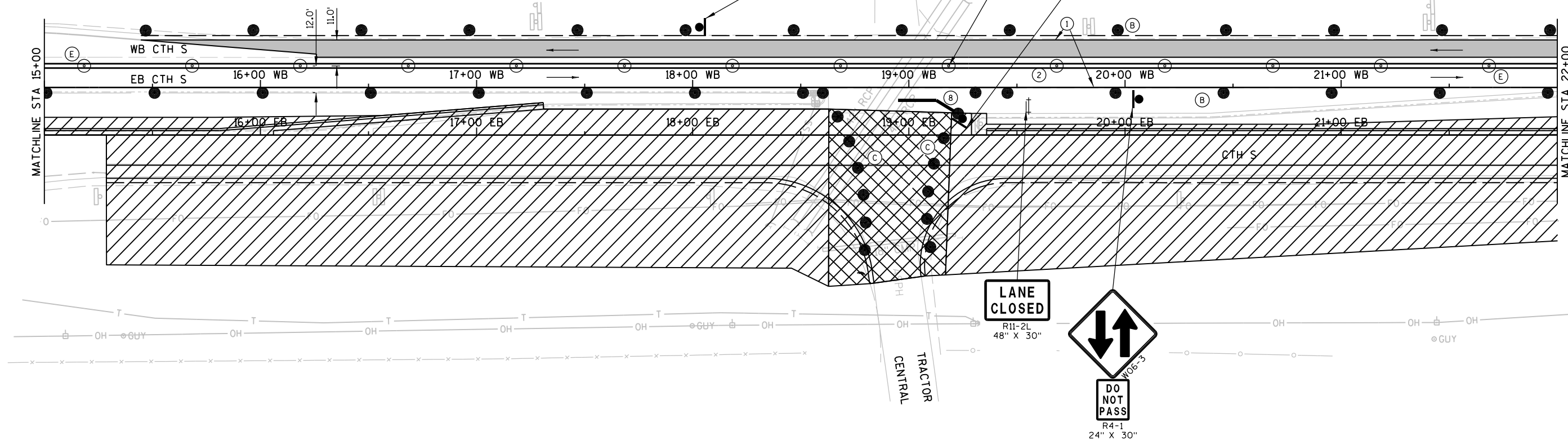
TRAFFIC CONTROL - STAGE 2

SHEET

E



STAGE 2 TYPICAL SECTION
CTH S - LOOKING WB



TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- OPEN TO TRAFFIC CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

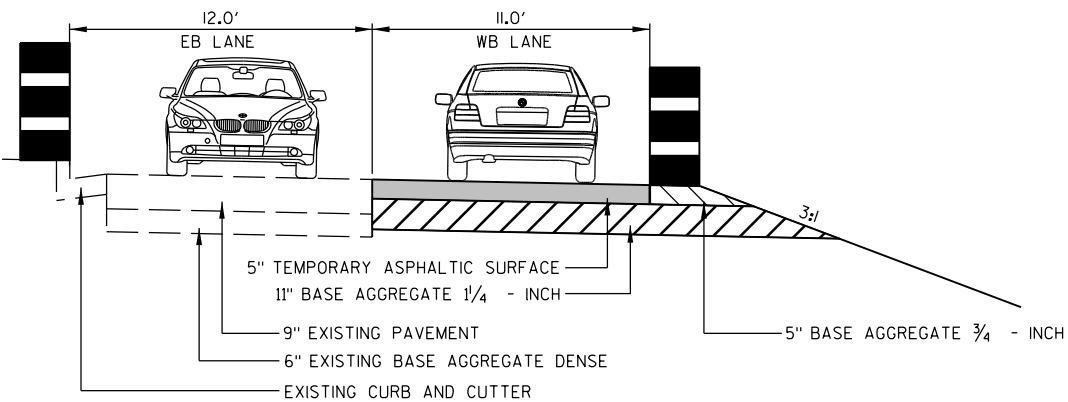
- (B) 50' DRUM SPACING
- (C) 10' DRUM SPACING (AROUND RADIUS AND ALONG DRIVEWAY)
- (E) 50' TUBULAR MARKER SPACING

TEMPORARY PAVEMENT MARKING LEGEND

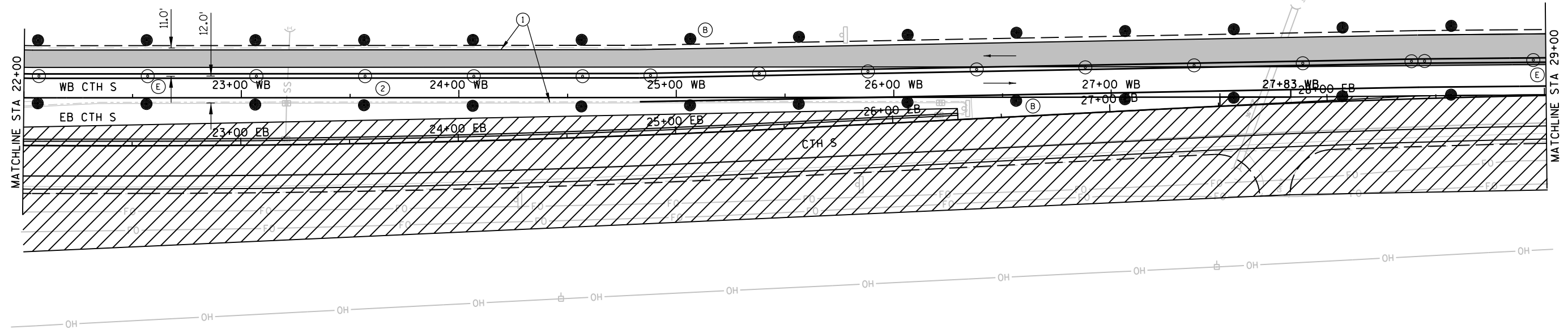
- (1) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (2) TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- (3) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (4) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (5) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- (6) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- (7) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- (8) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- (9) TEMPORARY MARKING ARROW REMOVABLE TAPE

2

2



STAGE 2 TYPICAL SECTION
CTH S - LOOKING WB



TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- OPEN TO TRAFFIC CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

- (B) 50' DRUM SPACING
- (E) 50' TUBULAR MARKER SPACING

TEMPORARY PAVEMENT MARKING LEGEND

- (1) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (2) TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- (3) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (4) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (5) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
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- (7) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- (8) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- (9) TEMPORARY MARKING ARROW REMOVABLE TAPE

PROJECT NO: 8896-01-03

HWY: CTH S

COUNTY: CHIPPEWA

TRAFFIC CONTROL - STAGE 2

SHEET

E

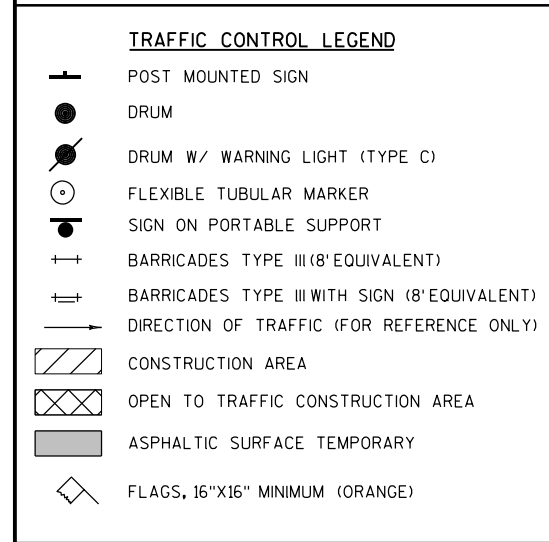
2

Diagram illustrating the Stage 2 Typical Section for CTH S - Looking WB. The diagram shows two lanes: EB LANE (12.0' wide) and WB LANE (11.0' wide). The EB LANE is shown with a car icon. The WB LANE is shown with a car icon. The diagram includes various pavement layers and dimensions:

- 5" TEMPORARY ASPHALTIC SURFACE
- 11" BASE AGGREGATE $\frac{1}{4}$ - INCH
- 9" EXISTING PAVEMENT
- 6" EXISTING BASE AGGREGATE DENSE
- EXISTING CURB AND CUTTER
- 5" BASE AGGREGATE $\frac{3}{4}$ - INCH
- 3:1 slope

STAGE 2 TYPICAL SECTION
CTH S - LOOKING WB

The diagram shows a road layout with a north arrow pointing upwards, labeled 'N'. The road is divided into two lanes by a dashed line. On the left side of the road, there is a 'ROAD WORK AHEAD' sign. On the right side, there is a 'ROAD WORK AHEAD' sign, a 'SPEED LIMIT 25' sign, and another 'ROAD WORK AHEAD' sign. A dashed line indicates a lane change or a specific road boundary.



- ## TEMPORARY PAVEMENT MARKING LEGEND
- ① TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
 - ② TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
 - ③ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
 - ④ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
 - ⑤ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
 - ⑥ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
 - ⑦ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
 - ⑧ TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
 - ⑨ TEMPORARY MARKING ARROW REMOVABLE TAPE

TEMPORARY PAVEMENT MARKING LEGEND

- ① TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- ② TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- ③ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- ④ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- ⑤ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- ⑥ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- ⑦ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- ⑧ TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- ⑨ TEMPORARY MARKING ARROW REMOVABLE TAPE

END
ROAD WORK
G20-2A
48" X 24"

200'

+63.9 WB
14.1' LT

10+00 WB WB CTH S

11+00 WB

12+00 WB

13+00 WB

14+00 WB

15+00

10+00 EB

11+00 EB

12+00 EB

13+00 EB

14+00 EB

15+00

EB CTH S

FO

FO

FO

FO

FO

FO

FO

MATCHLINE STA 15+00

BEGIN PROJECT
STA 13+54.00
Y = 140372.533
X = 163039.233

USH 53 NB OFF RAMP

LEAVE IN PLACE
FROM STAGE 2

TRAFFIC CONTROL LEGEND

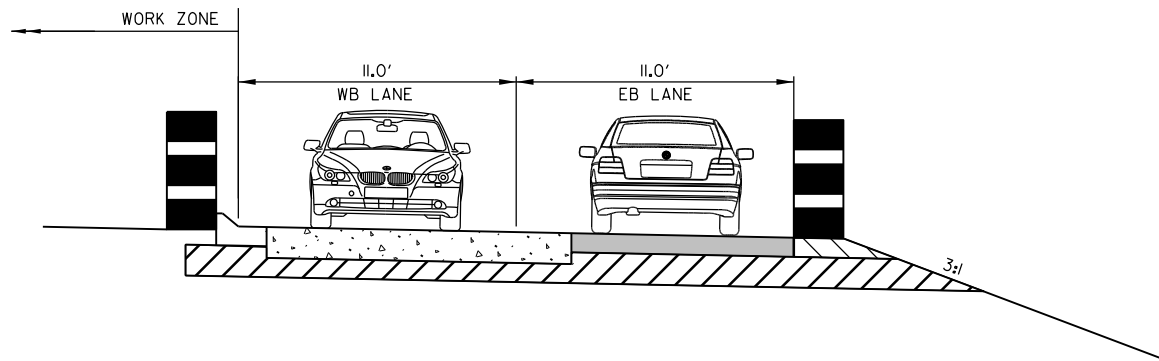
- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- OPEN TO TRAFFIC CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

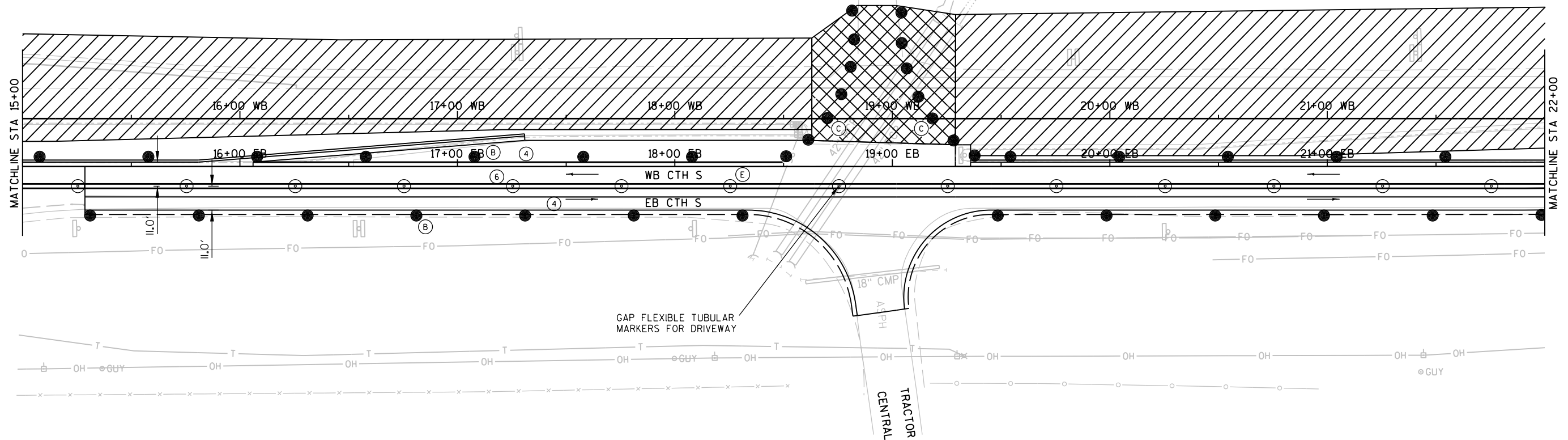
- (A) 25' DRUM SPACING
- (B) 50' DRUM SPACING
- (C) 10' DRUM SPACING
(AROUND RADIUS AND ALONG DRIVEWAY)
- (E) 50' TUBULAR MARKER SPACING

STAGE 3 DESCRIPTION:

TRAFFIC SHALL UTILIZE THE NEWLY CONSTRUCTED EB LANE AND SHOULDER ON CTH S. CONSTRUCT THE WB LANES AS SHOWN ON THE PLAN. GAP THE WB CONSTRUCTION TO MAINTAIN ACCESS TO THE FIELD ENTRANCE NEAR STA 19+00 LT AT ALL TIMES DURING CONSTRUCTION. CONSTRUCT THE GAPPED AREA IN ALTERNATING STAGES. CONSTRUCT AS MUCH OF THE WB CURB AND GUTTER AS POSSIBLE. STAGE 4 SHALL INCLUDE CONSTRUCTION OF THE LEFT TURN LANE CURB AND GUTTER FOR BOTH EB AND WB LANES. MAINTAIN MINIMUM LANE WIDTHS OF 11 FEET DURING THIS STAGE.



STAGE 3 TYPICAL SECTION
CTH S - LOOKING EB



TRAFFIC CONTROL LEGEND

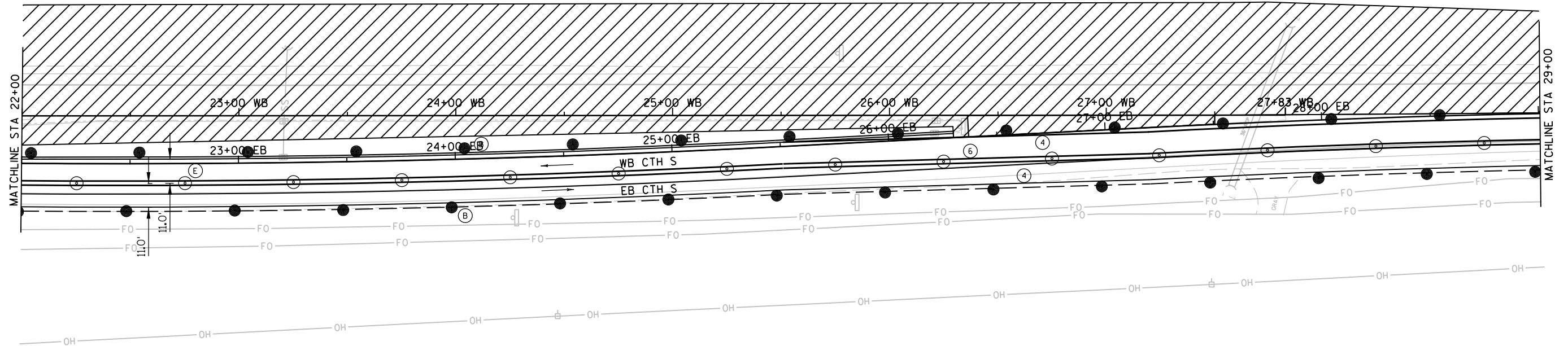
- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- OPEN TO TRAFFIC CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES













- (B) 50' DRUM SPACING
- (C) 10' DRUM SPACING (AROUND RADIUS AND ALONG DRIVEWAY)
- (E) 50' TUBULAR MARKER SPACING

TEMPORARY PAVEMENT MARKING LEGEND

- (1) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (2) TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- (3) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (4) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (5) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- (6) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- (7) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- (8) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- (9) TEMPORARY MARKING ARROW REMOVABLE TAPE



TRAFFIC CONTROL LEGEND

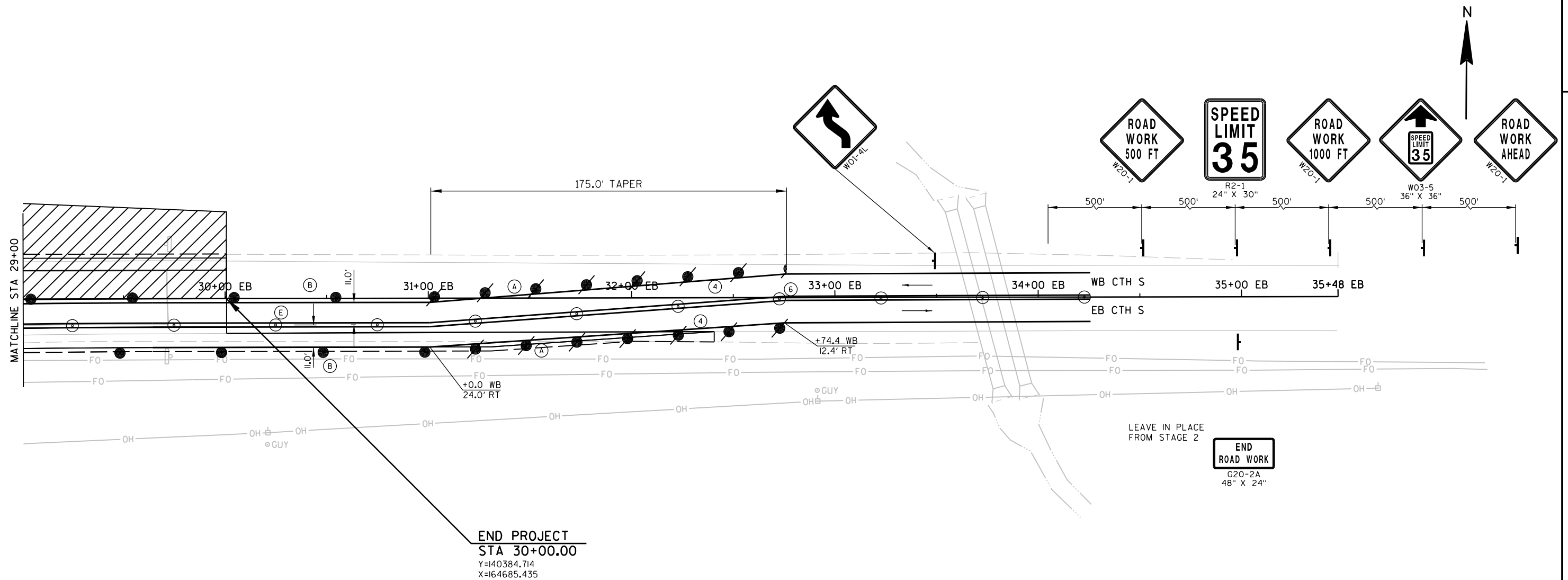
-  POST MOUNTED SIGN
-  DRUM
-  DRUM W/ WARNING LIGHT (TYPE C)
-  FLEXIBLE TUBULAR MARKER
-  SIGN ON PORTABLE SUPPORT
-  BARRICADES TYPE III (8' EQUIVALENT)
-  BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
-  DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
-  CONSTRUCTION AREA
-  OPEN TO TRAFFIC CONSTRUCTION AREA
-  ASPHALTIC SURFACE TEMPORARY
-  FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES













- (B) 50' DRUM SPACING
- (E) 50' TUBULAR MARKER SPACING

TEMPORARY PAVEMENT MARKING LEGEND

- ① TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- ② TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- ③ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
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- ⑨ TEMPORARY MARKING ARROW REMOVABLE TAPE



TRAFFIC CONTROL LEGEND

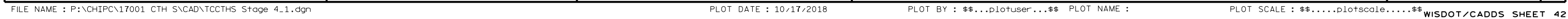
- | | |
|---|---|
|  | POST MOUNTED SIGN |
|  | DRUM |
|  | DRUM W/ WARNING LIGHT (TYPE C) |
|  | FLEXIBLE TUBULAR MARKER |
|  | SIGN ON PORTABLE SUPPORT |
|  | BARRICADES TYPE III (8' EQUIVALENT) |
|  | BARRICADES TYPE III WITH SIGN (8' EQUIVALENT) |
|  | DIRECTION OF TRAFFIC (FOR REFERENCE ONLY) |
|  | CONSTRUCTION AREA |
|  | OPEN TO TRAFFIC CONSTRUCTION AREA |
|  | ASPHALTIC SURFACE TEMPORARY |
|  | FLAGS, 16"X16" MINIMUM (ORANGE) |

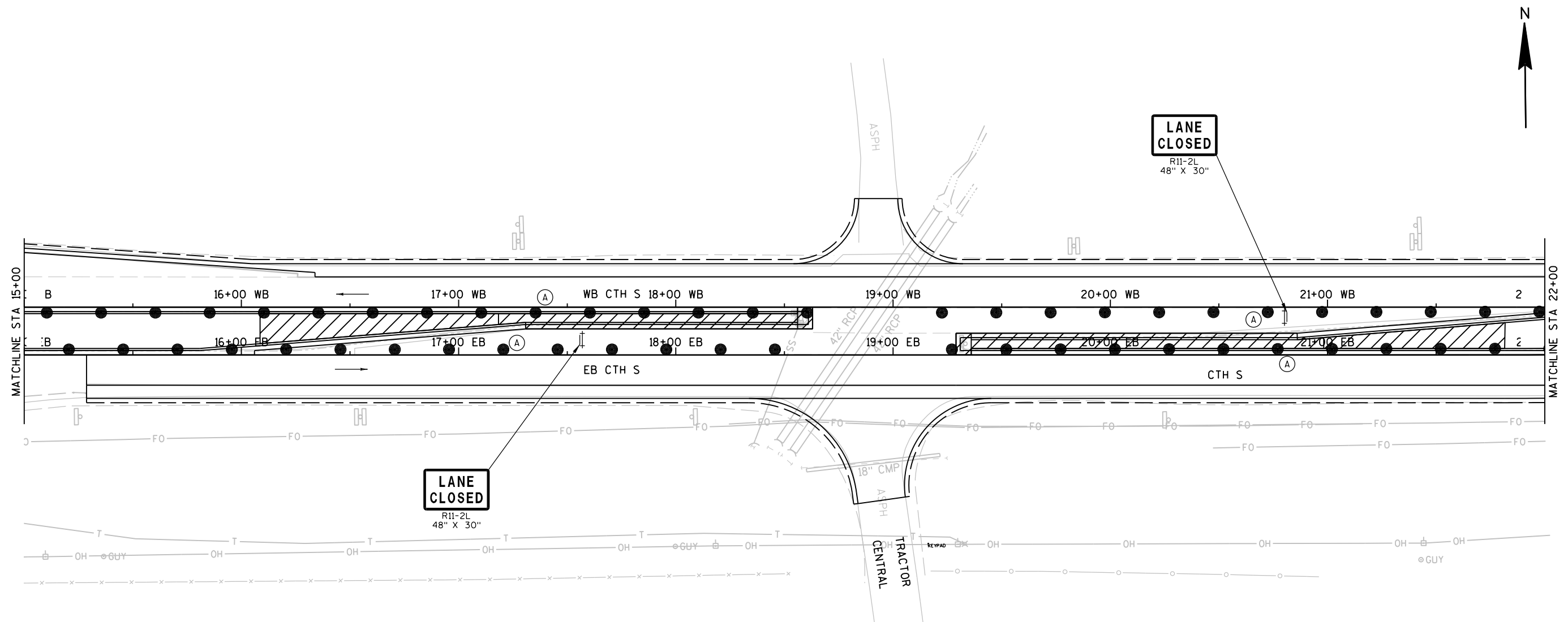
SHEET NOTES

- (A) 25' DRUM SPACING
- (B) 50' DRUM SPACING
- (E) 50' TUBULAR MARKER SPACING

TEMPORARY PAVEMENT MARKING LEGEND

- ① TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- ② TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- ③ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- ④ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- ⑤ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- ⑥ TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- ⑦ TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE, SHORT SKIP)
- ⑧ TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- ⑨ TEMPORARY MARKING ARROW REMOVABLE TAPE



**TRAFFIC CONTROL LEGEND**

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

- (A) 25' DRUM SPACING

PROJECT NO: 8896-01-03

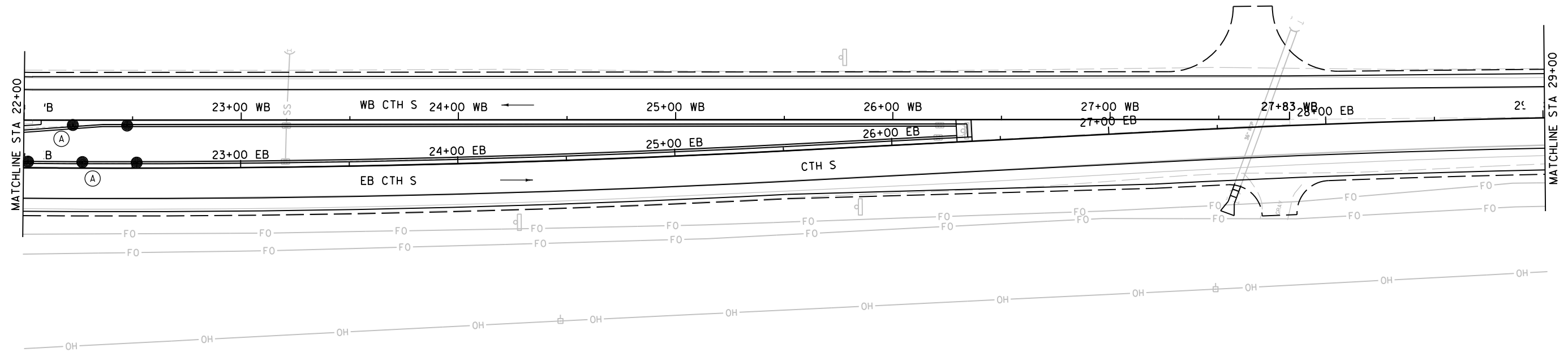
HWY: CTH S

COUNTY: CHIPPEWA












TRAFFIC CONTROL - STAGE 4

SHEET

E



TRAFFIC CONTROL LEGEND

-  POST MOUNTED SIGN
-  DRUM
-  DRUM W/ WARNING LIGHT (TYPE C)
-  FLEXIBLE TUBULAR MARKER
-  SIGN ON PORTABLE SUPPORT
-  BARRICADES TYPE III (8' EQUIVALENT)
-  BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
-  DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
-  CONSTRUCTION AREA
-  ASPHALTIC SURFACE TEMPORARY
-  FLAGS, 16"X16" MINIMUM (ORANGE)

SHEET NOTES

- (A) 25' DRUM SPACING

PROJECT NO: 8896-01-03

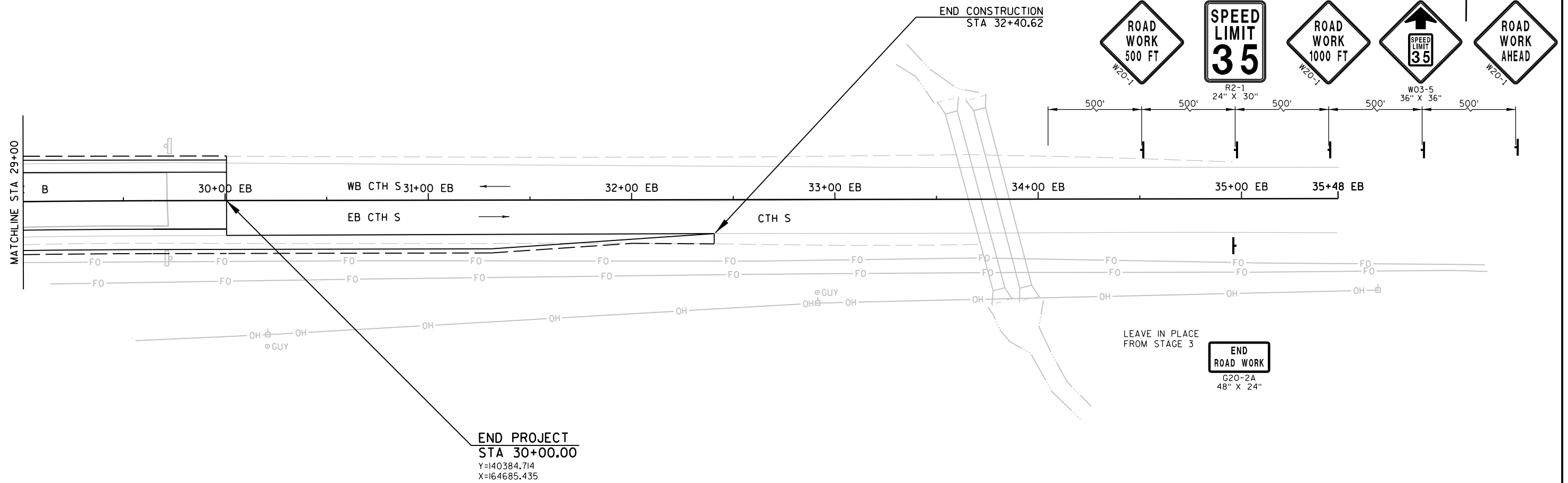
HWY: CTH S

COUNTY: CHIPPEWA

TRAFFIC CONTROL - STAGE 4

SHEET

E



TRAFFIC CONTROL LEGEND

- POST MOUNTED SIGN
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- FLEXIBLE TUBULAR MARKER
- SIGN ON PORTABLE SUPPORT
- BARRICADES TYPE III (8' EQUIVALENT)
- BARRICADES TYPE III WITH SIGN (8' EQUIVALENT)
- DIRECTION OF TRAFFIC (FOR REFERENCE ONLY)
- CONSTRUCTION AREA
- ASPHALTIC SURFACE TEMPORARY
- FLAGS, 16"X16" MINIMUM (ORANGE)

Estimate Of Quantities

8896-01-03

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Pavement	SY	5,736.000	5,736.000
0004	204.0150	Removing Curb & Gutter	LF	2,852.000	2,852.000
0006	204.0155	Removing Concrete Sidewalk	SY	110.000	110.000
0008	204.0220	Removing Inlets	EACH	6.000	6.000
0010	204.0220	Removing Inlets 01. 12-Inch	EACH	162.000	162.000
0012	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	162.000	162.000
0014	205.0100	Excavation Common	CY	3,212.000	3,212.000
0016	208.0100	Borrow	CY	163.000	163.000
0018	211.0200	Prepare Foundation for Concrete Pavement (project) 01. 8896-01-03	LS	1.000	1.000
0020	213.0100	Finishing Roadway (project) 01. 8896-01-03	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	478.000	478.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,993.000	5,993.000
0026	305.0500	Shaping Shoulders	STA	18.000	18.000
0028	415.0100	Concrete Pavement 10-Inch	SY	5,905.000	5,905.000
0030	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000
0032	416.0610	Drilled Tie Bars	EACH	140.000	140.000
0034	455.0605	Tack Coat	GAL	179.000	179.000
0036	460.2000	Incentive Density HMA Pavement	DOL	380.000	380.000
0038	460.6444	HMA Pavement 4 MT 58-34 H	TON	584.000	584.000
0040	465.0125	Asphaltic Surface Temporary	TON	600.000	600.000
0042	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0044	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	6.000	6.000
0046	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0048	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	416.000	416.000
0050	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	2,185.000	2,185.000
0052	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	197.000	197.000
0054	602.0405	Concrete Sidewalk 4-Inch	SF	1,816.000	1,816.000
0056	611.0630	Inlet Covers Type HM-GJ	EACH	2.000	2.000
0058	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8896-01-03	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	620.0200	Concrete Median Blunt Nose	SF	70.000	70.000
0066	620.0300	Concrete Median Sloped Nose	SF	280.000	280.000
0068	624.0100	Water	MGAL	130.000	130.000
0070	625.0500	Salvaged Topsoil	SY	5,376.000	5,376.000
0072	627.0200	Mulching	SY	7,268.000	7,268.000
0074	628.1504	Silt Fence	LF	1,820.000	1,820.000

Estimate Of Quantities

8896-01-03

Line	Item	Item Description	Unit	Total	Qty
0076	628.1520	Silt Fence Maintenance	LF	455.000	455.000
0078	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0082	628.2004	Erosion Mat Class I Type B	SY	690.000	690.000
0084	628.7555	Culvert Pipe Checks	EACH	27.000	27.000
0086	629.0210	Fertilizer Type B	CWT	5.100	5.100
0088	630.0130	Seeding Mixture No. 30	LB	143.000	143.000
0090	630.0200	Seeding Temporary	LB	195.000	195.000
0092	630.0300	Seeding Borrow Pit	LB	40.000	40.000
0094	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	8.000	8.000
0096	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000
0098	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0100	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	1.000	1.000
0102	637.2210	Signs Type II Reflective H	SF	86.750	86.750
0104	638.2102	Moving Signs Type II	EACH	14.000	14.000
0106	638.2602	Removing Signs Type II	EACH	11.000	11.000
0108	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0110	638.4000	Moving Small Sign Supports	EACH	12.000	12.000
0112	642.5001	Field Office Type B	EACH	1.000	1.000
0114	643.0300	Traffic Control Drums	DAY	25,434.000	25,434.000
0116	643.0420	Traffic Control Barricades Type III	DAY	702.000	702.000
0118	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	94.000	94.000
0120	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	94.000	94.000
0122	643.0705	Traffic Control Warning Lights Type A	DAY	1,134.000	1,134.000
0124	643.0715	Traffic Control Warning Lights Type C	DAY	2,592.000	2,592.000
0126	643.0900	Traffic Control Signs	DAY	4,104.000	4,104.000
0128	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0130	643.5000	Traffic Control	EACH	1.000	1.000
0132	646.1020	Marking Line Epoxy 4-Inch	LF	4,146.000	4,146.000
0134	646.3020	Marking Line Epoxy 8-Inch	LF	493.000	493.000
0136	646.5020	Marking Arrow Epoxy	EACH	8.000	8.000
0138	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0140	646.7120	Marking Diagonal Epoxy 12-Inch	LF	52.000	52.000
0142	646.8120	Marking Curb Epoxy	LF	97.000	97.000
0144	646.8220	Marking Island Nose Epoxy	EACH	5.000	5.000
0146	646.9000	Marking Removal Line 4-Inch	LF	13,492.000	13,492.000
0148	646.9100	Marking Removal Line 8-Inch	LF	169.000	169.000
0150	646.9200	Marking Removal Line Wide	LF	68.000	68.000
0152	646.9300	Marking Removal Special Marking	EACH	2.000	2.000
0154	649.0105	Temporary Marking Line Paint 4-Inch	LF	13,492.000	13,492.000

Estimate Of Quantities

8896-01-03

Line	Item	Item Description	Unit	Total	Qty
0156	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	10,549.000	10,549.000
0158	649.0205	Temporary Marking Line Paint 8-Inch	LF	169.000	169.000
0160	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	169.000	169.000
0162	649.0505	Temporary Marking Arrow Paint	EACH	2.000	2.000
0164	649.0550	Temporary Marking Arrow Removable Tape	EACH	2.000	2.000
0166	649.0805	Temporary Marking Stop Line Paint 18-Inch	LF	68.000	68.000
0168	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	68.000	68.000
0170	650.4500	Construction Staking Subgrade	LF	3,599.000	3,599.000
0172	650.5000	Construction Staking Base	LF	3,599.000	3,599.000
0174	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,798.000	2,798.000
0176	650.7000	Construction Staking Concrete Pavement	LF	3,084.000	3,084.000
0178	650.9910	Construction Staking Supplemental Control (project) 01. 8896-01-03	LS	1.000	1.000
0180	650.9920	Construction Staking Slope Stakes	LF	3,599.000	3,599.000
0182	690.0150	Sawing Asphalt	LF	40.000	40.000
0184	690.0250	Sawing Concrete	LF	440.000	440.000
0186	715.0415	Incentive Strength Concrete Pavement	DOL	1,775.000	1,775.000
0188	740.0440	Incentive IRI Ride	DOL	1,250.000	1,250.000
0190	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0192	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

REMOVING INLETS		
STATION	LOCATION	204.0220 EACH
CTH S WB		
18+56.5	RT	1
23+20.5	RT	1
26+21.5	RT	1
CTH S EB		
18+56.5	LT	1
23+20.5	LT	1
26+21.5	LT	1
ITEM TOTAL		6

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER
ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

BASE COURSE ITEMS				
STATION - STATION	LOCATION	305.0110	305.0120	REMARKS
		BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	
CTH S WB				
13+54-14+37	RT		45	IN MEDIAN FOR TEMP ASPHALT
13+88 - 32+75	LT & RT	270	2803	MAINLINE, SHOULDER & TEMP ASPH
18+93	LT	10	73	FIELD ENTRANCE
27+66	LT	40		FIELD ENTRANCE
CTH S EB				
10+90 - 12+97	LT		70	CURB/GUTTER
11+49 - 12+97	LT		64	SIDEWALK & TEMP ASPHALT
13+00	LT		3	NOSE
13+58	LT		3	NOSE
13+60 - 18+56	LT		185	CURB/GUTTER
15+28 - 32+40.62	LT & RT	130	2268	MAINLINE & SHOULDER
17+18 - 18+56	LT		28	SIDEWALK
18+60	LT		3	NOSE
18+95	RT	8	151	TRACTOR CENTRAL
19+32	LT		3	NOSE
19+36 - 20+98	LT		33	SIDEWALK
19+36 - 26+30	LT		258	CURB/GUTTER
26+34	LT		3	NOSE
27+77	RT	20		COMMERCIAL (FIELD) ENTRANCE
ITEM TOTALS		478	5993	

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ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

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CONCRETE PAVEMENT ITEMS

415.0100 CONCRETE PAVEMENT 10-INCH SY			
STATION - STATION	LOCATION		REMARKS
CTH S WB 13+88 - 30+00	LT & RT	3217	MAINLINE PAVEMENT
CTH S EB 15+28 - 30+00	LT & RT	2688	MAINLINE PAVEMENT
ITEM TOTAL		5905	

HMA PAVEMENT ITEMS

455.0605 460.6444 465.0125 TACK HMA ASPHALTIC COAT PAVEMENT SURFACE GAL 4 MT 58-34 H TEMPORARY			
STATION - STATION	LOCATION		REMARKS
CTH S WB 11+00 -13+04	RT	73	IN MEDIAN (STAGE 1)
13+54 - 14+37	RT	29	IN MEDIAN (STAGE 1)
13+88 - 16+05	LT	3.5	11.2
15+45 - 32+75	LT	498	LT SHOULDER (STAGE 1)
16+05 - 16+34	LT	1	2
16+34 - 30+00	LT	63.8	204
18+93	LT	5.7	18.4
CTH S EB 15+28 - 32+40.62	RT	47.7	152.8
18+95	RT	14.8	59.1
25+50 - 27+20	RT	10.5	33.6
27+20 - 30+00	RT	21.8	69.9
30+00 - 32+40	RT	10.2	32.5
ITEM TOTALS		179	584 600

CULVERT PIPE ITEMS

520.8000 522.0136 522.1036 CONCRETE CULVERT PIPE APRON ENDWALLS COLLARS REINFORCED FOR CULVERT FOR PIPE CONCRETE PIPE REINFORCED CLASS III 36-INCH CONCRETE 36-INCH			
STATION - STATION	LOCATION	EACH	REMARKS
CTH S EB 27+54	RT	1	6 1
ITEM TOTALS		1	6 1

SHAPING SHOULDERS

305.0500 SHAPING SHOULDERS STA			
STATION - STATION	LOCATION		REMARKS
CTH S WB 15+44.7 - 32+75.0	LT	18	SHAPING BASE AFTER REMOVING TEMPORARY
ITEM TOTAL		18	

CONCRETE CURB & GUTTER ITEMS

416.0610 601.0413 601.0555 601.0557 620.0200 620.0300					
CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G LF				CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF	
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF				CONCRETE MEDIAN BLUNT NOSE SF	
STATION - STATION	LOCATION	DRILLED TIE BARS EACH			
CTH S WB 10+90 - 12+97	RT	70	208		
13+61 - 18+56	RT			468	27
19+36 - 26+29	RT			694	
CTH S EB 10+90 - 12+97	LT	70	208		
13+00	LT				70
13+58	LT				
13+60 - 18+56	LT			329	170
18+60	LT				70
19+32	LT				70
19+36 - 26+30	LT			694	
26+34	LT				70
ITEM TOTALS		140	416	2185	197 70 280

CONCRETE SIDEWALK 4-INCH

602.0405 SF		
STATION - STATION	LOCATION	
CTH S EB 11+30 - 13+00	LT	940
17+18 - 18+61	LT	542
19+31.5 - 20+98.3	LT	334
ITEM TOTAL		1816

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ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

INLET COVERS

STATION - STATION	LOCATION	611.0630 TYPE HM-GJ EACH
CTH S WB 12+97	LT	1
CTH S EB 12+97	LT	1
ITEM TOTAL		2

WATER

STATION - STATION	LOCATION	624.0100 MGAL
CTH S WB 13+54-14+37	RT	1
13+88 - 32+75	LT & RT	63
18+93	LT	1
CTH S EB 10+90 - 12+97	LT	1.5
11+49 - 12+97	LT	1.5
13+60 - 18+56	LT	4
15+28 - 32+40.62	LT & RT	48
17+18 - 18+56	LT	1
18+95	RT	3
19+36 - 20+98	LT	1
19+36 - 26+30	LT	5
ITEM TOTALS		130

ADJUSTING INLET COVERS

STATION - STATION	LOCATION	611.8115 EACH	REMARKS
CTH S WB 12+97	LT	1	*
CTH S EB 12+97	LT	1	*
ITEM TOTAL		2	

* REMOVE CURB BOX AND PROVIDE SOLID CURB PLATE FOR EXISTING INLET COVERS DURING STAGE 1 CONSTRUCTION. REMOVE CURB BOX AND INSTALL SOLID CURB PLATE IS INCIDENTAL TO ADJUSTING INLET COVERS

TURF ESTABLISHMENT ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	REMARKS
CTH S WB 13+88 - 18+84	LT	601	884	0.6	16	24		
19+02 - 27+57	LT	1536	1812	1.3	37	55		
27+75 - 30+00	LT	206	334	0.2	6	9		
CTH S EB 10+90 - 11+30	LT	46	46	0.1	1	1		MEDIAN
13+60 - 18+56	LT	527	527	0.3	9	14		MEDIAN
15+28 - 18+82	RT	486	417	0.4	12	19		
19+36 - 26+30	LT	695	695	0.4	13	19		MEDIAN
19+08 - 27+69	RT	851	1205	0.8	24	36		
27+85 - 32+41	RT	428	673	0.4	12	18		
UNDISTRIBUTED			675	0.5	13		40	
ITEM TOTAL		5376	7268	5.1	143	195	40	

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EACH	628.1910 MOBILIZATIONS EMERGENCY EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.7555 CULVERT PIPE CHECKS EACH	REMARKS
CTH S 14+00 - 20+50	LT	650	163			228		EMAT 19+20 - 20+05
15+00 - 19+00	RT	400	100			272		EMAT 17+50 - 19+00
18+48	RT						8	42-INCH CULVERT PIPE
18+54	RT						8	42-INCH CULVERT PIPE
19+22	RT						3	18-INCH CULVERT PIPE
26+00 - 27+60	LT	160	40					
26+37 - 27+60	RT					127		
27+55	RT						5	36-INCH CULVERT PIPE
28+00 - 32+40	LT	470	117					
31+00 - 32+40	RT	140	35					
UNDISTRIBUTED				6	3	63	3	
ITEM TOTAL		1820	455	6	3	690	27	

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CONCRETE PAVEMENT JOINT LAYOUT

STATION - STATION		LOCATION	415.5110.S LS	REMARKS
CTH S 13+88 - 30+00		LT & RT	1	
ITEM TOTAL			1	

COVERING SIGNS

643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II					
STATION - STATION	LOCATION	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	REMARKS
STAGE 2 CTH S EB					
13+37	RT	1	1	1	STOP SIGN
13+73	RT	1	1	1	STOP SIGN
ITEM TOTAL		2			

PERMANENT SIGNING ITEMS

						637.2210	638.2102	638.2602	638.3000	638.4000	634.0614	634.0616	634.0618	634.0620					
						SIGNS TYPE II	MOVING	REMOVING	REMOVING	MOVING	POSTS WOOD 4X6-INCH								
						REFLECTIVE H	SIGNS	SIGNS	SMALL SIGN	SMALL SIGN	14-FT	16-FT	18-FT	20-FT					
SIGN NO.	SIGN CODE	SIGN MESSAGE	IN	SIZE	IN	SF	TYPE II	TYPE II	TYPE II	SUPPORTS	EACH	EACH	EACH	EACH	REMARKS				
1-1	R4-7	Keep Right	24	X	30			1			1								
1-2	R4-7	Keep Right	24	X	30			1			1								
1-3	J3-2	Directional Assembly (2 Headed Route Panel)	48	X	57			1			1								
1-4	R3-2	No Left Turn Symbol	24	X	24			1			1								
2-1	J4-1	Reassurance Assembly (1 Headed Route Panel)	24	X	36			1			1								
2-2	R5-1A	Wrong Way	36	X	24			1							ON SAME POST AS 2-3				
2-3	R11-54-F	Ramp Closed Use Alt Route (Folding)	48	X	30			1			2								
2-4	R2-1	Speed Limit 45 MPH	24	X	30			1			1								
2-5	R5-1A	Wrong Way	36	X	24			1							ON SAME POST AS 2-4				
2-6	R5-1A	Wrong Way	36	X	24	6.00			1						ON SAME POST AS 2-7				
2-7	D1-2	Two Destinations (Arrows)		X				1		2		1	1						
2-8	R5-1	Do Not Enter	30	X	30	6.25			1	1		1							
2-9	R4-7	Keep Right	24	X	30	5.00			1	1		1							
2-10	R4-7	Keep Right	24	X	30	5.00			1	1		1							
2-11	R5-1	Do Not Enter	30	X	30	6.25			1	1		1							
2-12	R2-1	Speed Limit 45 MPH	24	X	30			1							ON SAME POST AS 2-11				
2-13	D7-95	Old Abe State Trail		X				1			2								
2-14	R5-1A	Wrong Way	36	X	24	6.00			1						ON SAME POST AS 2-15				
2-15	J2-3	Route Turn Assembly (3 Headed Route Panel)	72	X	57	28.50			1	2				1	1				
3-1	R5-1A	Wrong Way	36	X	24	6.00			1	1		1							
3-2	J1-1	Junction Assembly	24	X	39	6.50			1	1			1						
3-3	R5-1	Do Not Enter	30	X	30	6.25			1	1		1							
3-4	R4-7	Keep Right	24	X	30	5.00			1	1		1							
4-1	R2-1	Speed Limit 45 MPH	24	X	30			1			1								
4-2	R2-1	Speed Limit 45 MPH	24	X	30			1			1								
ITEM TOTAL						86.75		14		11		12		12		8	2	1	1

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ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

MARKING ITEMS

STATION - STATION	LOCATION	646.1020 LINE EPOXY 4-INCH		646.3020 LINE EPOXY 8-INCH	646.5020 ARROW EPOXY	646.5120 WORD EPOXY	646.8120 CURB EPOXY	646.8220 ISLAND NOSE EPOXY	646.7120 DIAGONAL EPOXY
		(YELLOW)	(WHITE)	(WHITE)	TYPE 2	"ONLY"			
		LF	LF	LF	EACH	EACH	LF	EACH	(YELLOW) LF
CTH S WB									
12+92 - 15+00	LT & RT		112	100	2		10	1	
15+00 - 22+00	LT & RT		700	156	2	1	10	1	
22+00 - 29+00	LT & RT	396	700				5		
29+00 - 30+00	LT & RT		100						
CTH S EB									
11+98.5 - 13+04.5	LT & RT			106	2		57	1	
15+00 - 22+00	LT & RT		610	131	2		10	1	
22+00 - 29+00	LT & RT	528	700				5	1	52
29+00 - 30+00	LT & RT	200	100						
ITEM TOTAL		1124	3022	493	8	1	97	5	52

TEMPORARY MARKING ITEMS

STATION - STATION	LOCATION	649.0105 LINE PAINT 4-INCH		649.0150 LINE REMOVABLE TAPE 4-INCH		649.0250 LINE REMOVABLE TAPE 8-INCH	649.0850 STOP LINE REMOVABLE TAPE 18-INCH	649.0550 ARROW REMOVABLE TAPE	646.9000 MARKING REMOVAL LINE 4-INCH	646.9100 MARKING REMOVAL LINE 8-INCH	646.9200 MARKING REMOVAL LINE WIDE	646.9300 MARKING REMOVAL SPECIAL MARKING
		(YELLOW) LF	(WHITE) LF	(YELLOW) LF	(WHITE) LF	(WHITE) LF	(WHITE) LF	(WHITE) EACH	LF	LF	LF	EACH
STAGE 2												
CTH S												
10+00 - 13+45				606	362	169		2	968	169		2
13+45 - 18+95		1066	350		285		40		1701		40	
18+95 - 25+00		1210	900				28		2110		28	
25+00 - 30+00		1004	1004						2008			
30+00 - 34+25				852	852				1704			
STAGE 3												
CTH S												
10+00 - 13+45				526	544				1070			
13+45 - 18+95				1064	587				1651			
18+95 - 25+00				1202	557				1759			
25+00 - 30+00				1004	1004				2008			
30+00 - 32+75				552	552				1104			
ITEM TOTAL		5534		10549		169	68	2	16083	169	68	2

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ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.7000 CONCRETE PAVEMENT LF	650.9910 SUPPLEMENTAL CONTROL 8896-01-03 LS	650.9920 SLOPE STAKES LF	REMARKS
CTH S WB								
13+88 - 32+75	LT & RT	1887	1887		1612		1887	INCLUDES STAGE 1 WIDENING
10+90 - 12+97	RT			208				
13+61 - 18+56	RT			495				
19+36 - 26+29	RT			694				
CTH S EB								
15+28 - 32+40	LT & RT	1712	1712		1472		1712	
10+90 - 12+97	LT			208				
13+60 - 18+56	LT			499				
19+36 - 26+30	LT			694				
PROJECT ID 8896-01-03						1		
ITEM TOTAL		3599	3599	2798	3084	1	3599	

SAWING

STATION - STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	COMMENTS
CTH S				
19+00 WB	LT	17.5		FIELD ENTRANCE
19+00 EB	RT	22.5		TRACTOR CENTRAL DRIVEWAY
10+90 - 13+04 EB & WB	LT EB, CL WB		440	SAW AROUND MEDIAN FLAGLINE FOR REMOVING C&G
ITEM TOTALS		40	440	

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ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

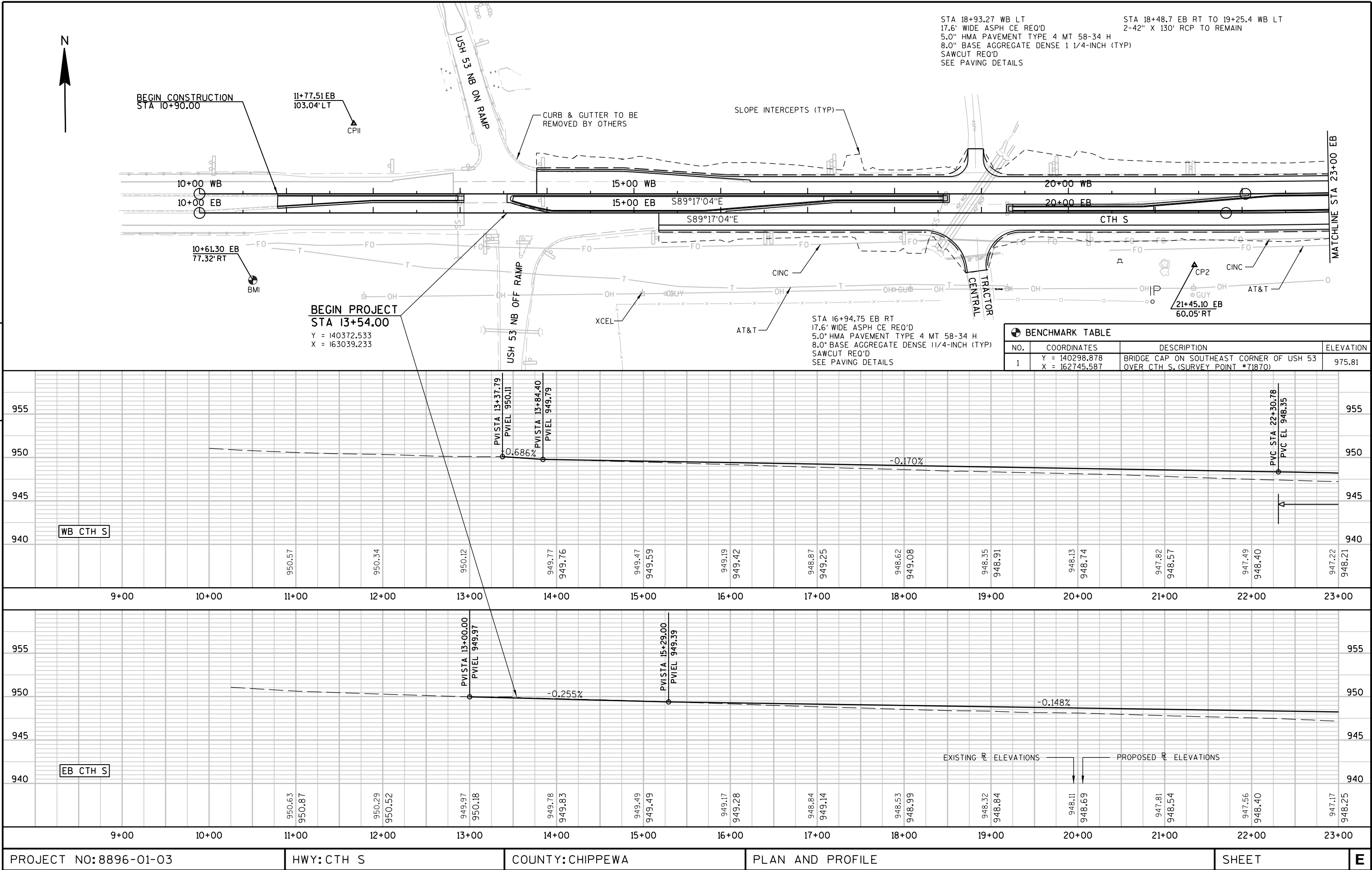
TRAFFIC CONTROL

STATION - STATION	DAYS	LOCATION	643.0300		643.0500	643.0600	643.0900		643.0420	643.0705		643.0715		
			NO.	DAY	DRUMS	FLEXIBLE TUBULAR MARKER	POSTS	BASES	SIGNS	BARRICADES	WARNING LIGHTS		TYPE C	
											TYPE A	TYPE C		
			NO.	DAY	POSTS	EACH	EACH	NO.	DAY	NO.	DAY	NO.	DAY	
8896-01-03														
STAGE 1			7				7		7		7		7	
CTHS														
10+00 - 13+04			LT & RT	22	0	0	8	1	2	0				
13+53 - 15+06			LT & RT	14	0	0	3	0	0	0				
15+45 - 33+55			LT & RT	43	0	0	2	0	0	0				
STAGE 1 SUBTOTALS			79	7	0	0	13	7	1	7	2	7	0	7
STAGE 2														
CTHS			20				20		20		20		20	
9+77 - 13+50			LT & RT	38	5	5	8	0	0	16				
13+50 - 34+25			LT & RT	112	47	47	18	3	5	16				
STAGE 2 SUBTOTALS			150	20	52	52	26	20	3	20	5	20	32	20
STAGE 3														
CTHS			20				20		20		20		20	
10+00 - 13+50			LT & RT	49	0	0	9	3	4	0				
213-95 - 220+45			LT & RT	99	42	42	11	3	4	16				
STAGE 3 SUBTOTALS			148	20	42	42	20	20	6	20	8	20	16	20
STAGE 4														
CTHS			7				7		7		7		7	
10+00 - 13+50			LT & RT	24	0	0	7	1	2	0				
13+50 - 19+00			LT & RT	42	0	0	4	1	2	0				
19+00 - 22+75			LT & RT	28	0	0	6	1	2	0				
STAGE 4 SUBTOTALS			94	7	0	0	17	7	3	7	6	7	0	7
PROJECT TOTALS			471	54	94	94	76	54	13	54	21	54	48	54
ITEM TOTAL			25434		94	94	4104		702	1134		2592		

TRAFFIC CONTROL

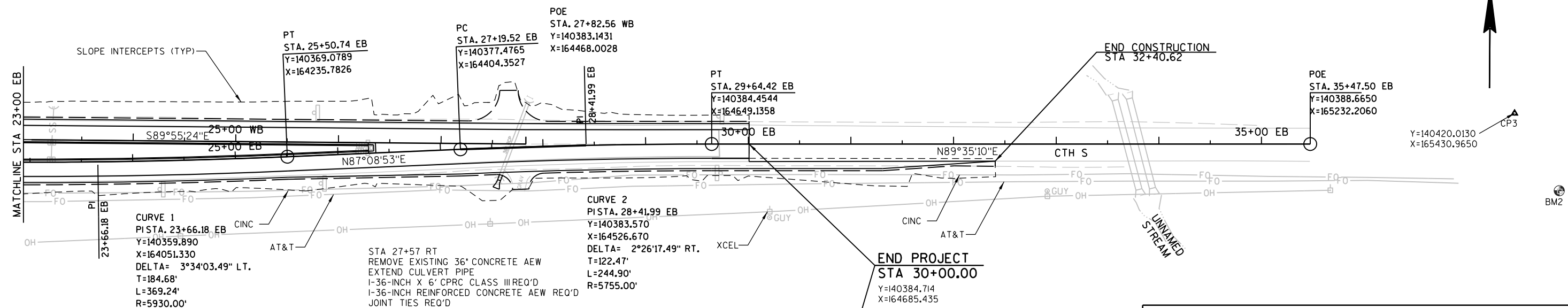
	643.5000
8896-01-03	
STATION - STATION	EACH
CTH S	
13+88 - 30+00	1
ITEM TOTAL	1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER
ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

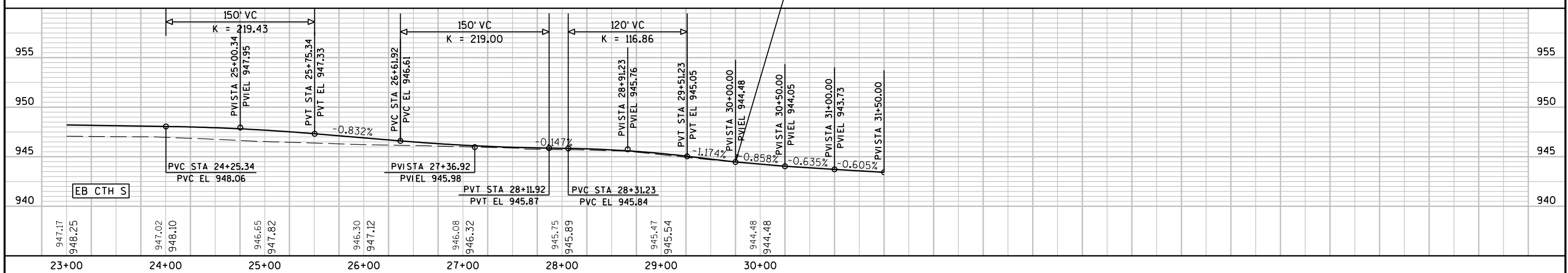
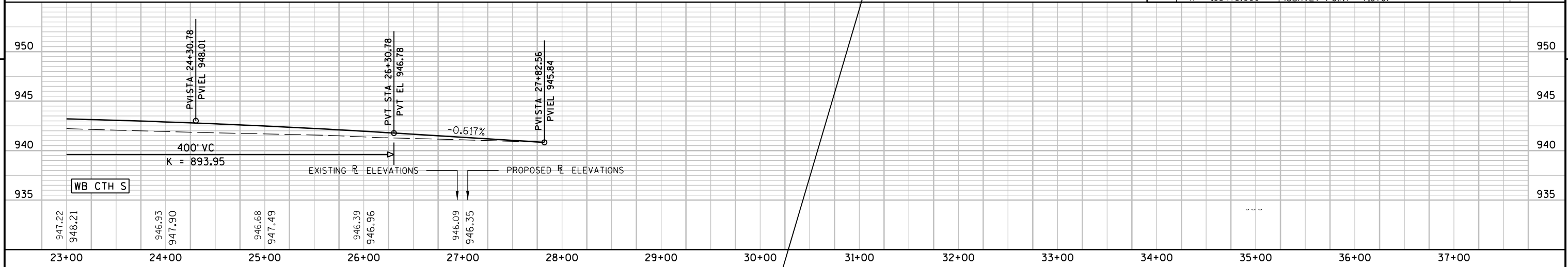


STA 27+65.69 WB LT
18' WIDE GRAV FE REQ'D
SEE PAVING DETAILS

STA 27+76.99 EB RT
16' WIDE GRAV FE REQ'D
SEE PAVING DETAILS

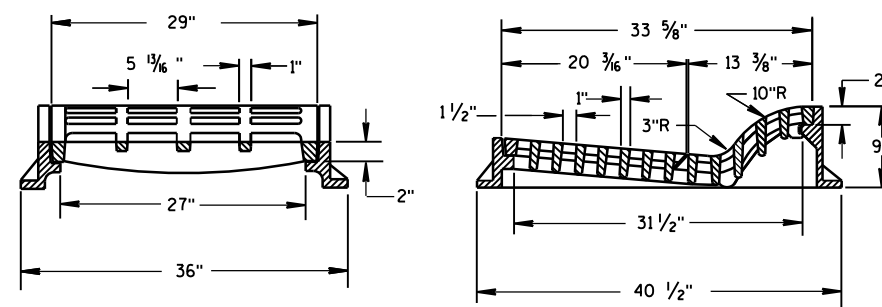
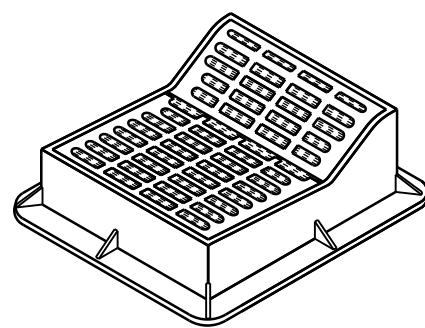


BENCHMARK TABLE			
NO.	COORDINATES	DESCRIPTION	ELEVATION
2	Y = 140344.888 X = 165475.099	RR SPIKE IN POWER POLE. (SURVEY POINT #71870)	936.98



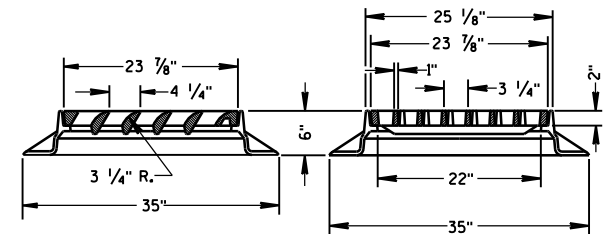
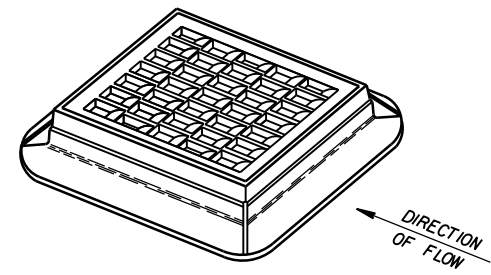
Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
13C16-02A	DETAIL FOR RIGHT TURN LANE/TEE INTERSECTION BYPASS LANE ON A CONCRETE ROADWAY
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-04	MEDIAN ISLAND MARKING
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D11-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

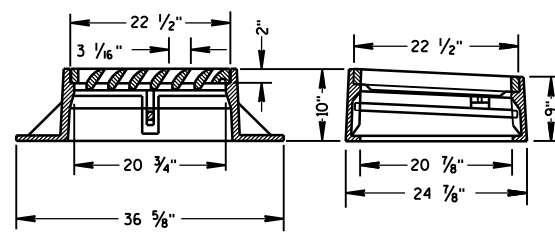
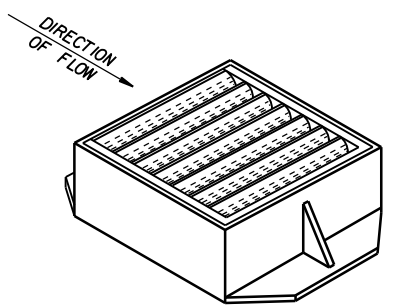


TYPE "F"

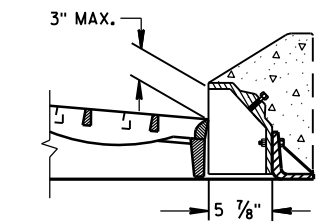
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



TYPE "S"



TYPE "V"



ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER

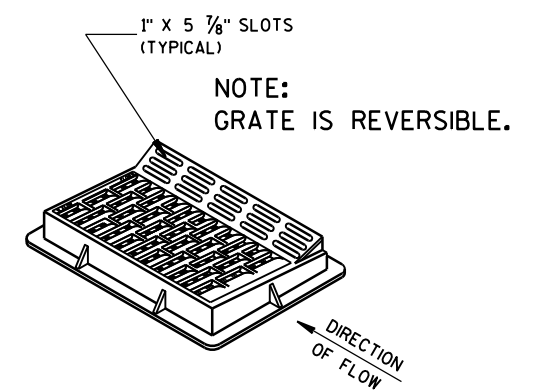
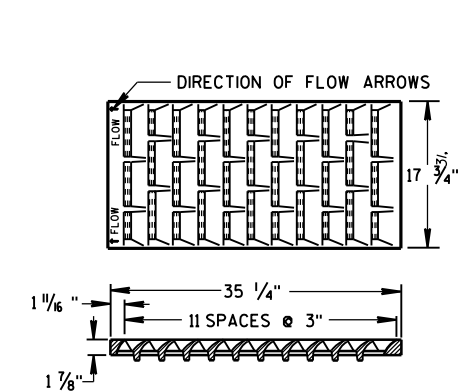
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

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.

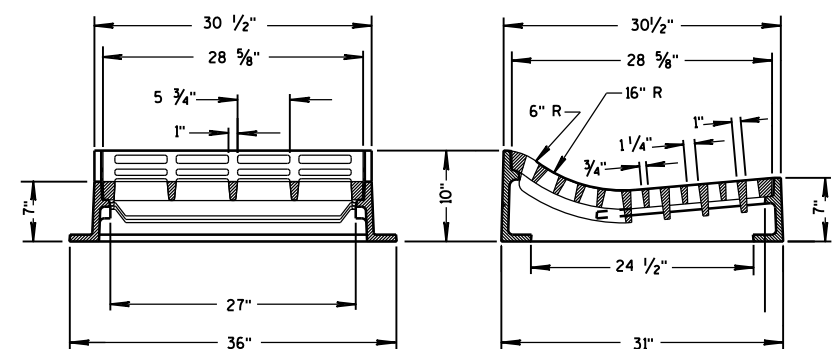
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "HM"

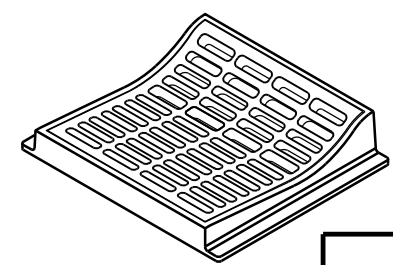
USE WITH TYPES A & D CONCRETE
CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



TYPE "T"

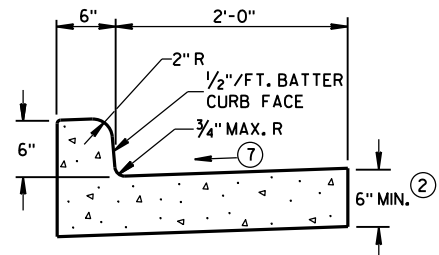
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



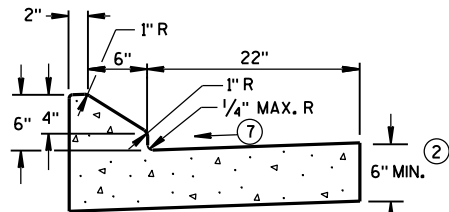
INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

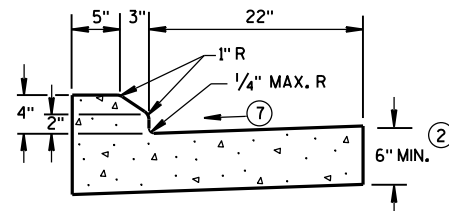
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



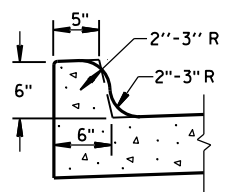
TYPES A^① & D



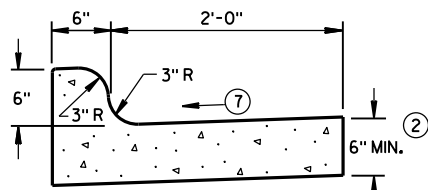
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

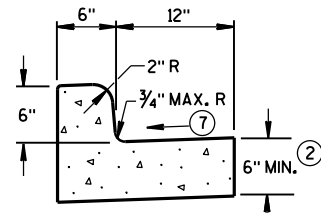


TYPES K^① & L
(OPTIONAL CURB SHAPE)



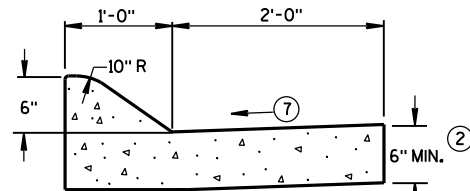
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

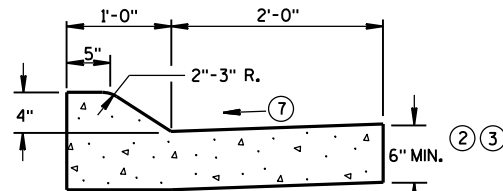


TYPES A^① & D

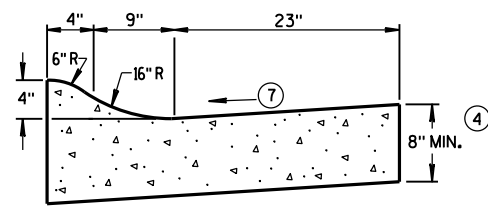
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

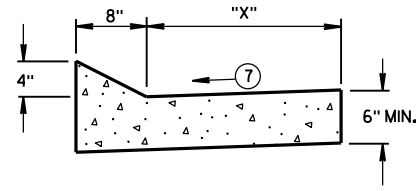


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

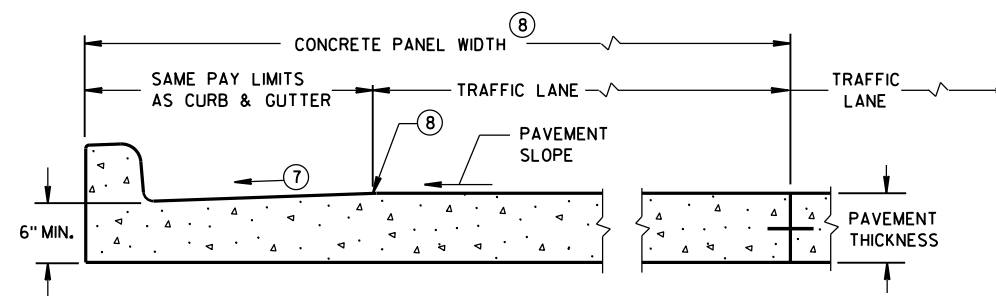
CONCRETE CURB & GUTTER 36"



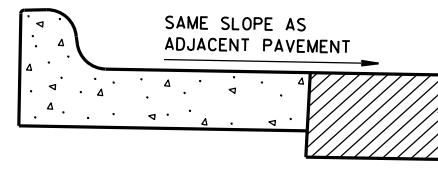
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

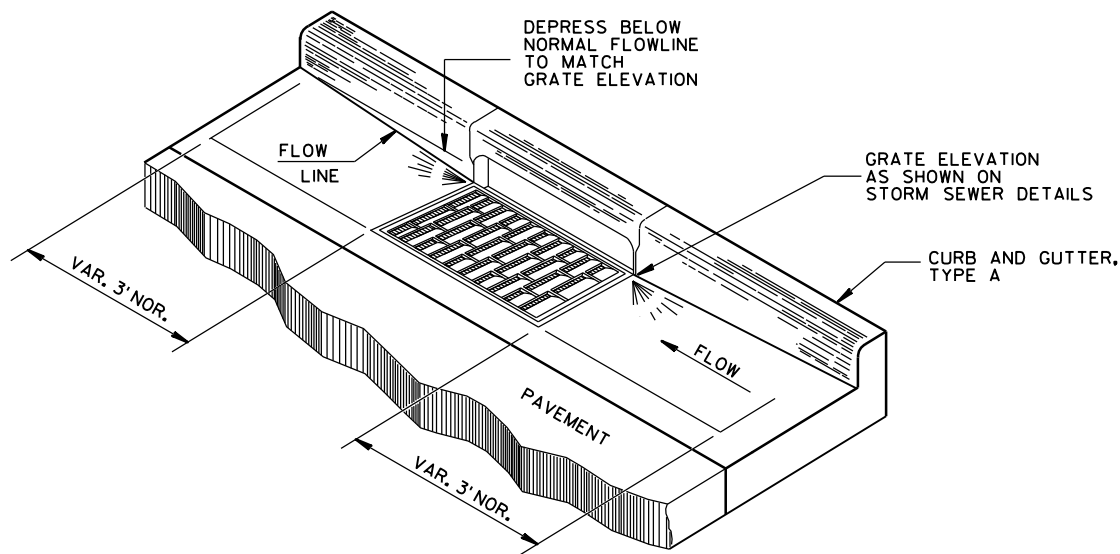
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

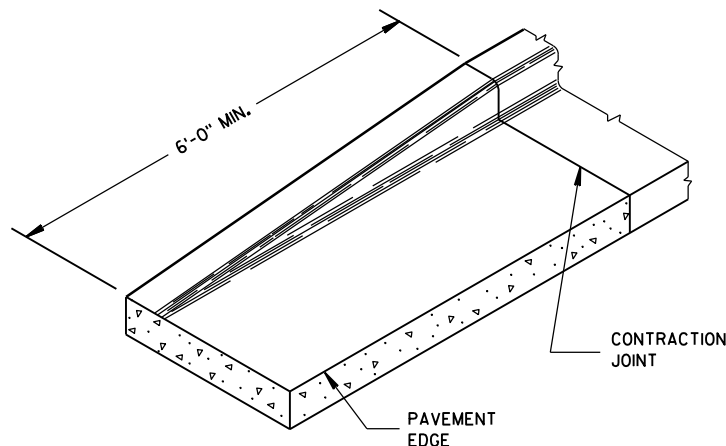
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

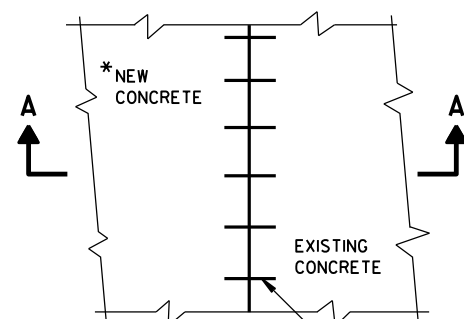
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



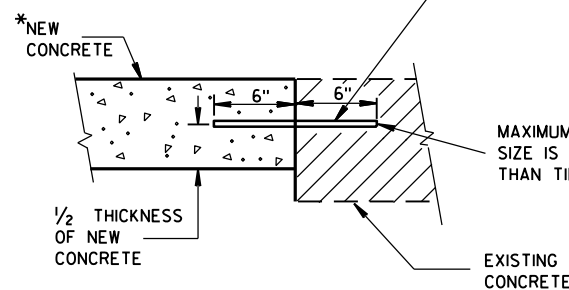
DETAIL OF CURB AND GUTTER AT INLETS
(TYPE H INLET COVER SHOWN)



END SECTION CURB & GUTTER



PLAN VIEW



TIE BARS DRILLED
INTO EXISTING PAVEMENT

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

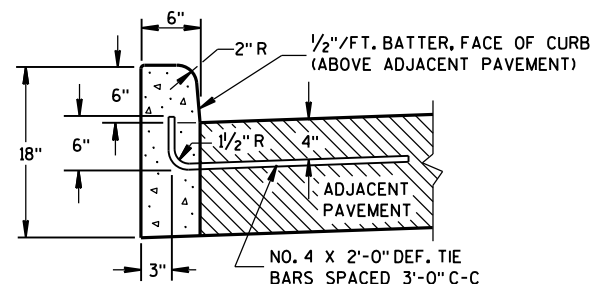
GENERAL NOTES

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

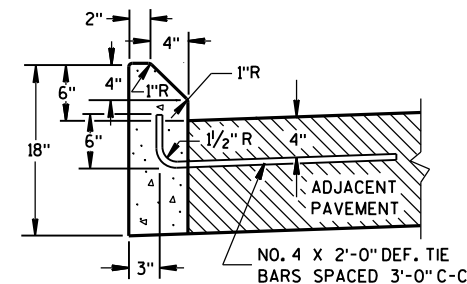
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

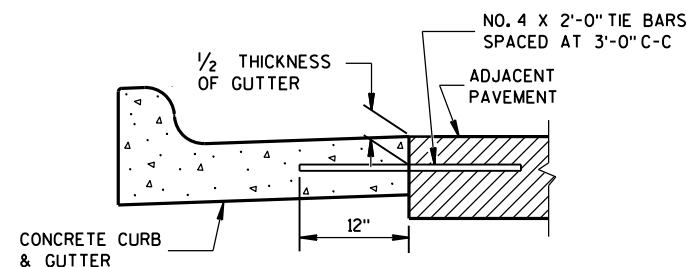


TYPES A^① & D

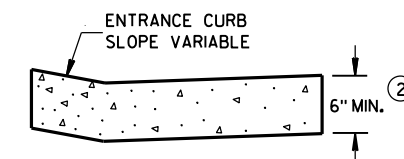


TYPES G^① & J

CONCRETE CURB

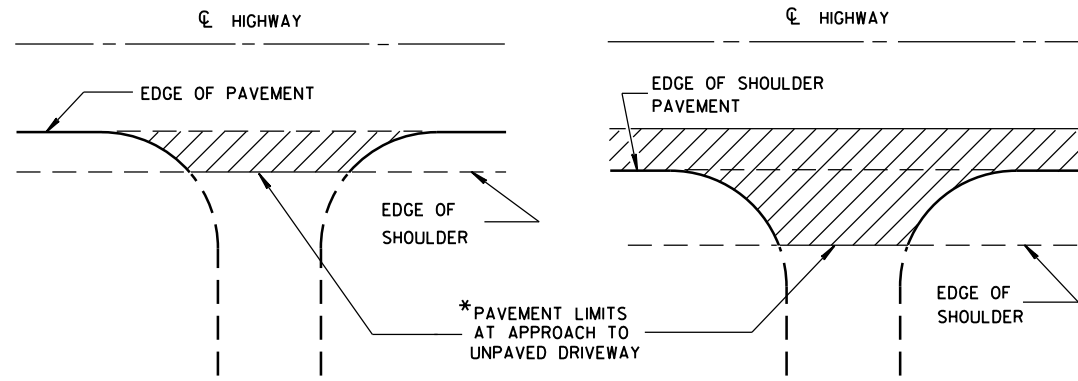


TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

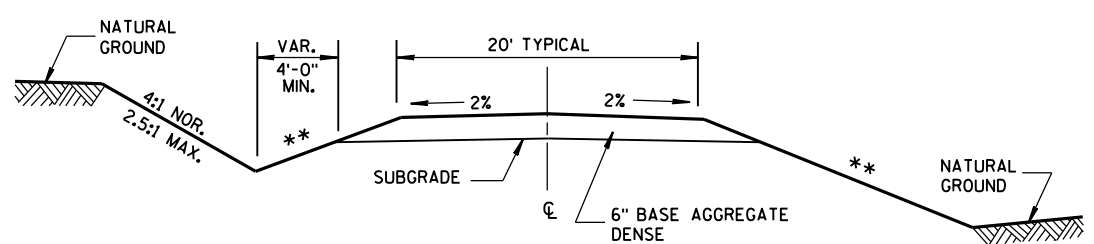


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

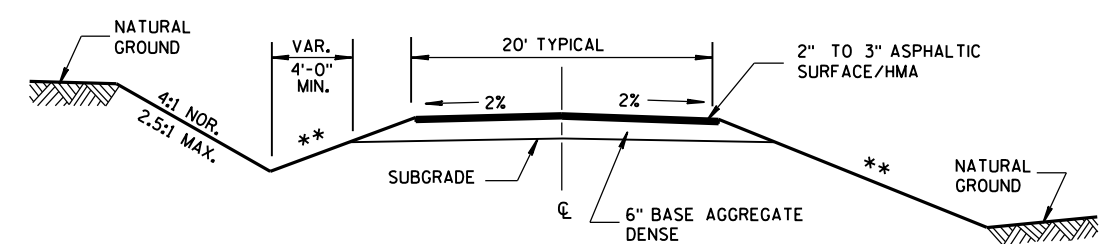
RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)



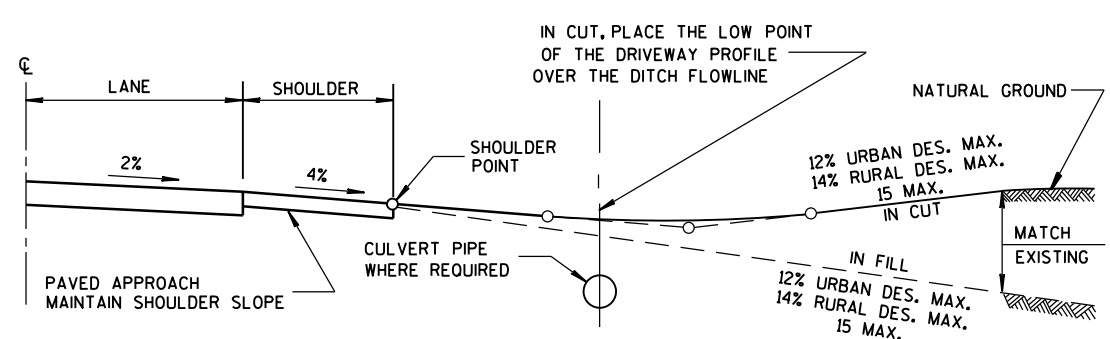
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1



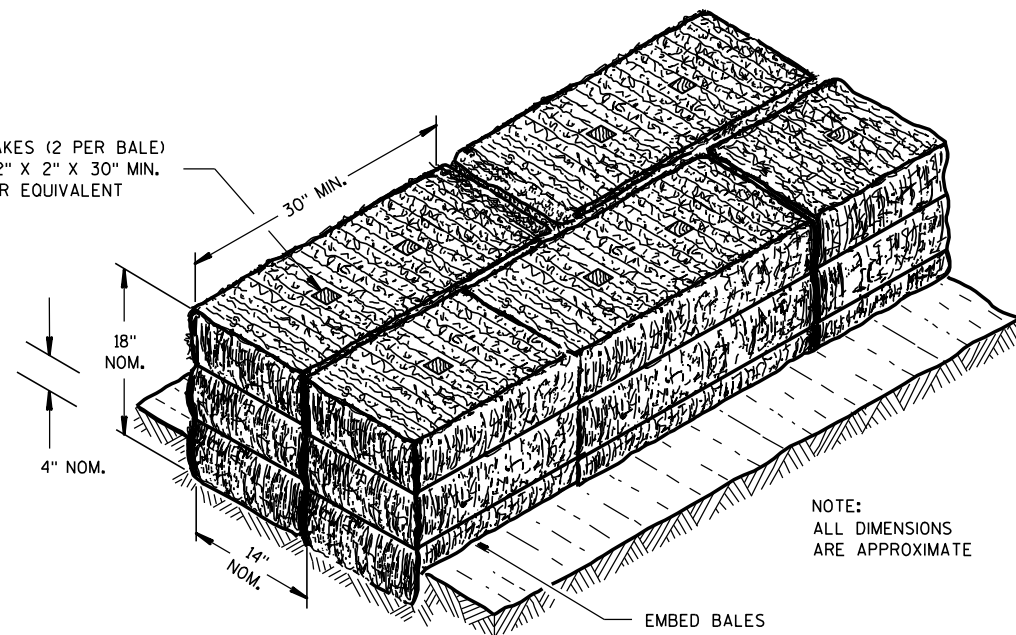
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE



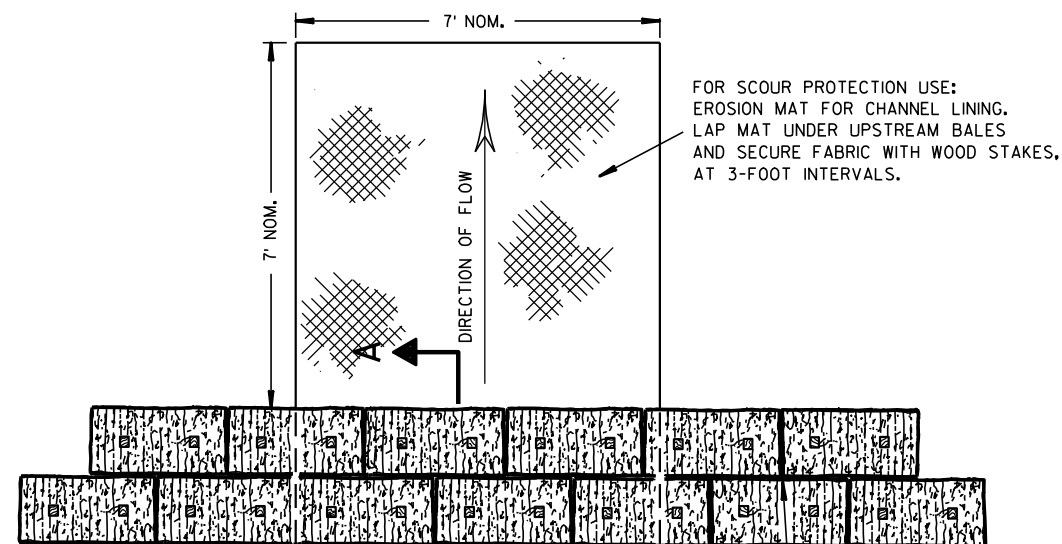
TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

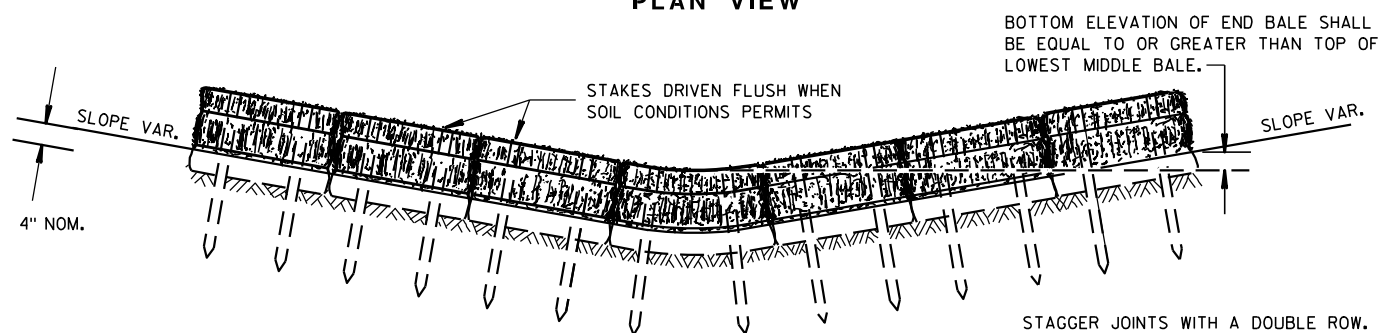
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



SECTION A-A



PLAN VIEW



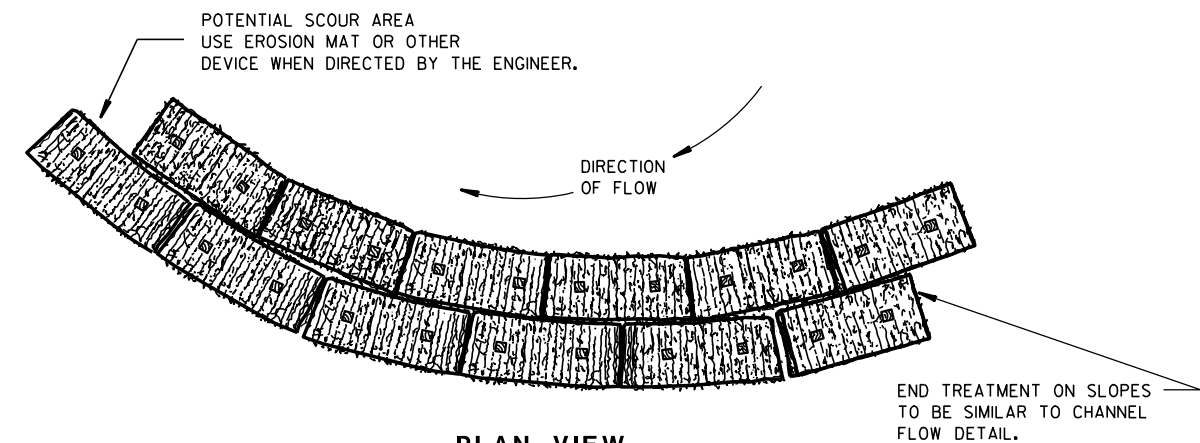
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

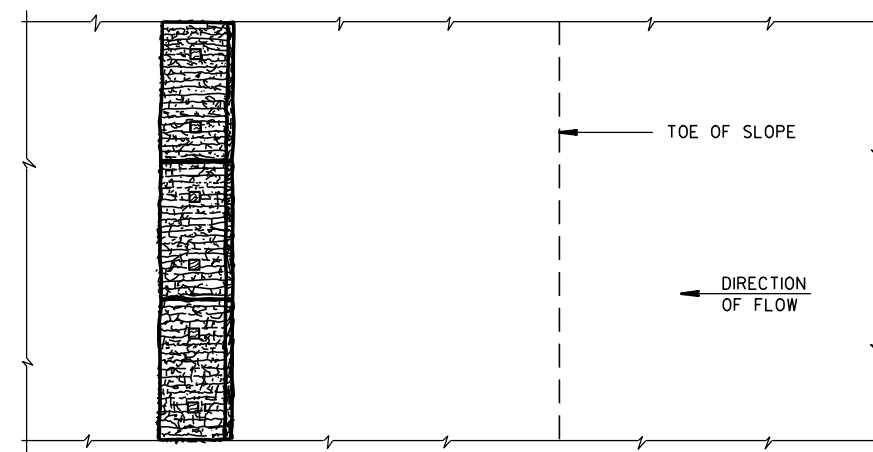
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

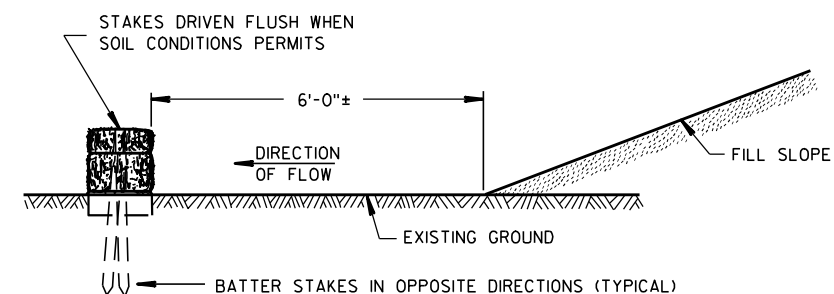


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

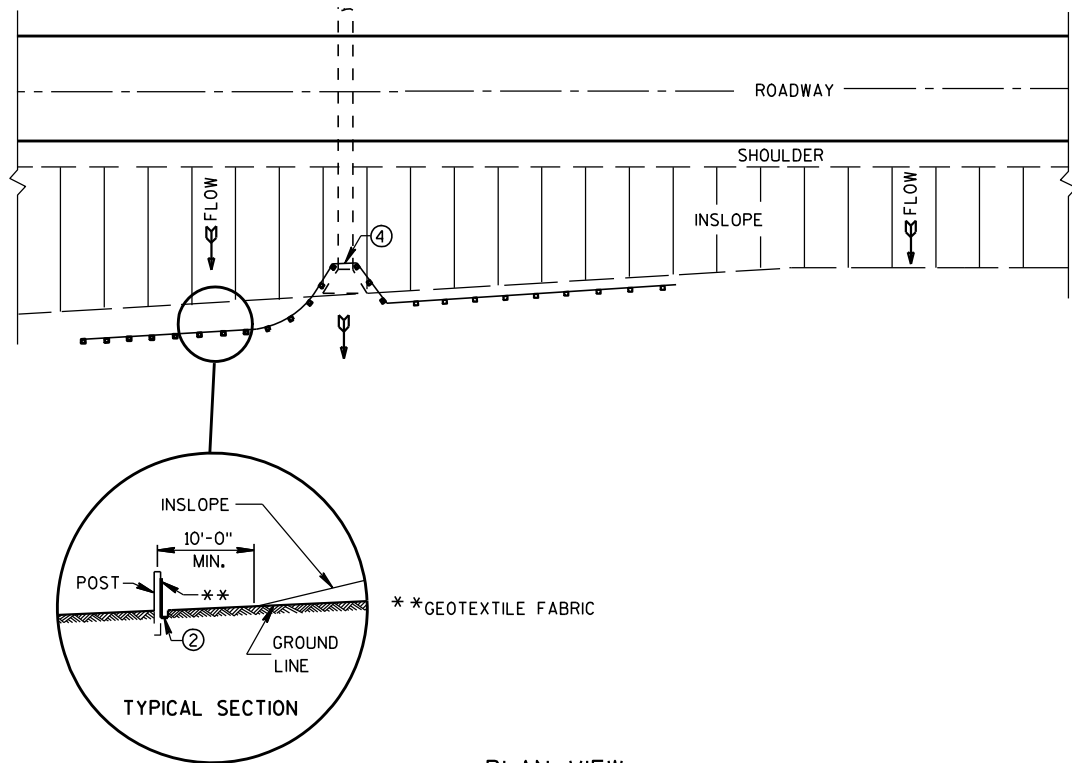
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

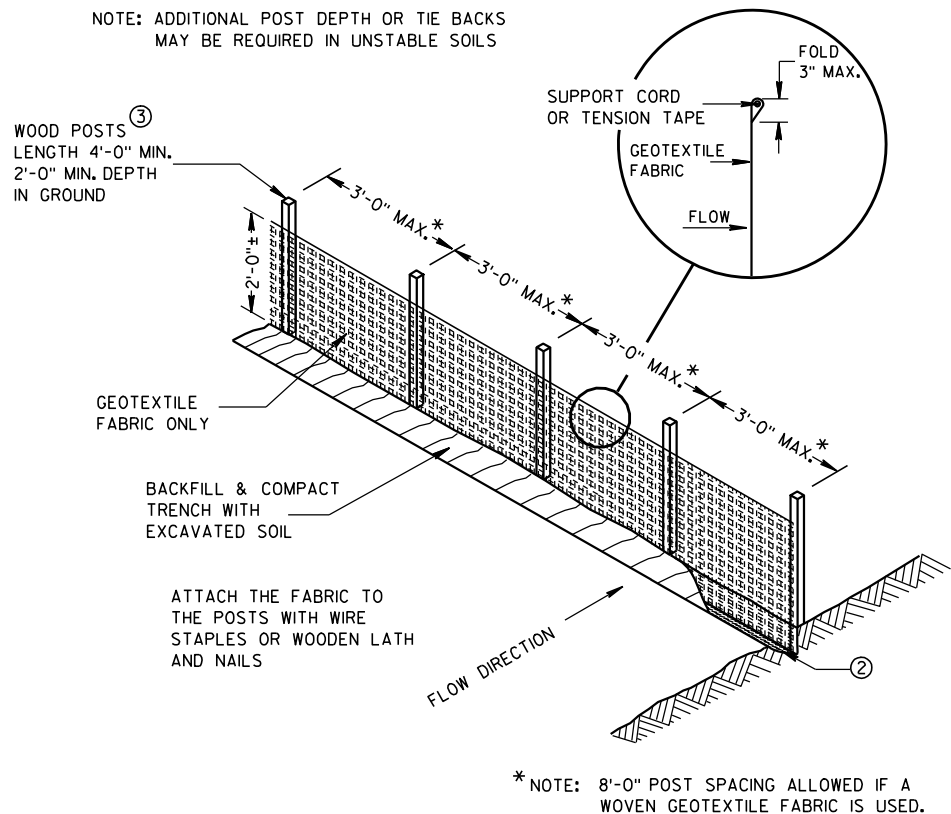
6/04/02
DATE

FHWA

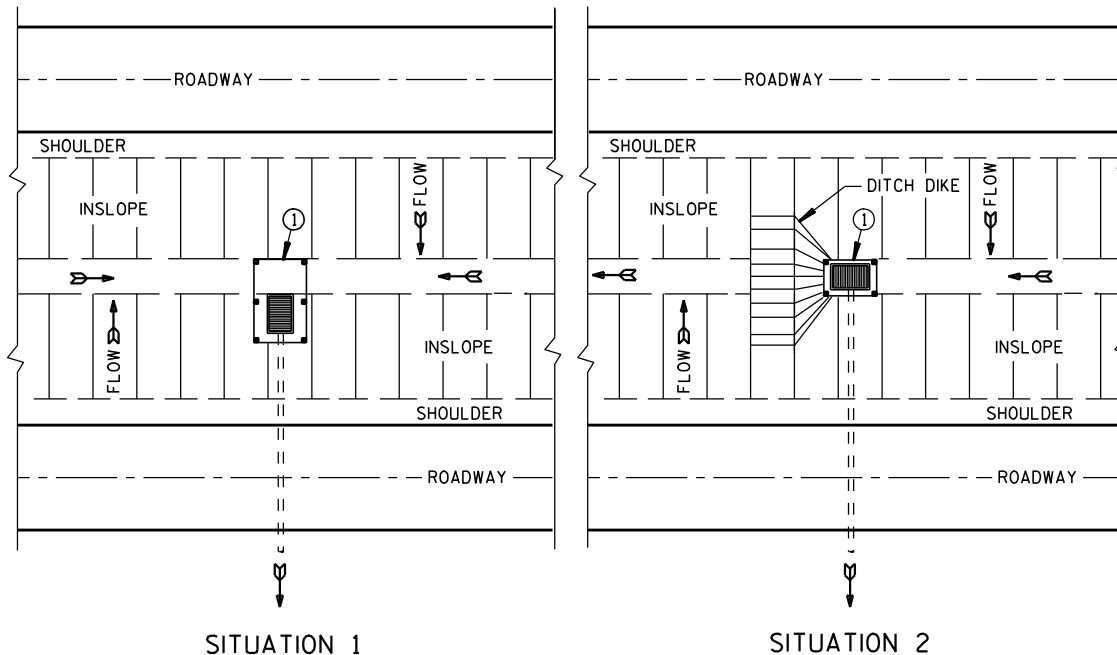
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



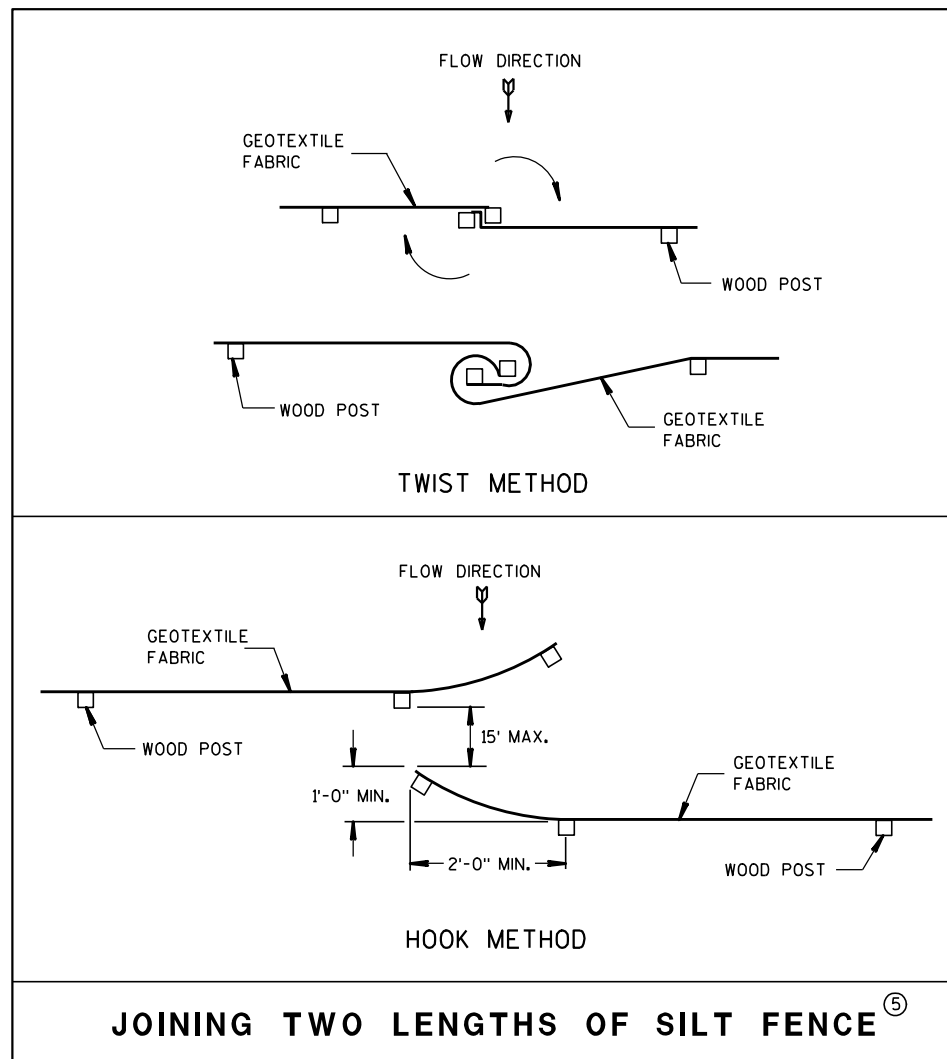
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

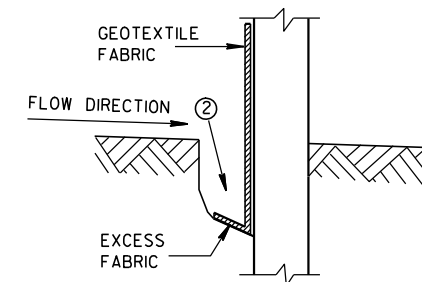


JOINING TWO LENGTHS OF SILT FENCE (5)

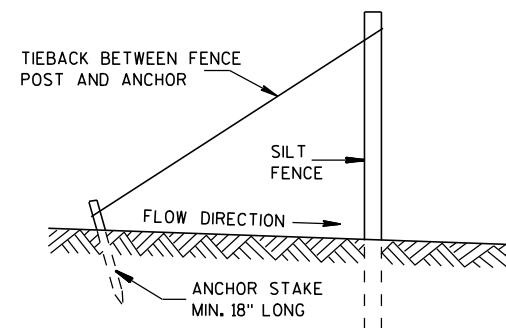
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

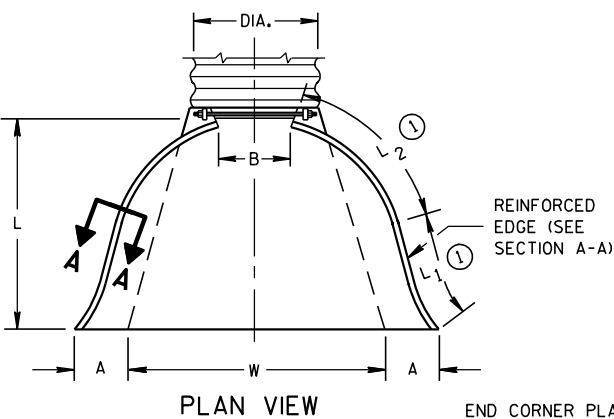
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1½")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17½	24	2½ to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21¾	30	2½ to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28¼	36	2½ to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29⅝	42	2½ to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37¼	48	2½ to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52¼	60	2½ to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59¾	72	2½ to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75⅝	84	2½ to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2¼ to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85½	102	2¼ to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1½ to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1½ to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1½ to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1½ to 1	3 Pc.	

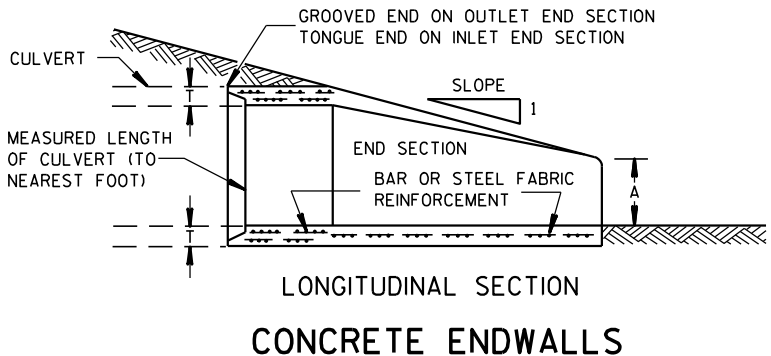
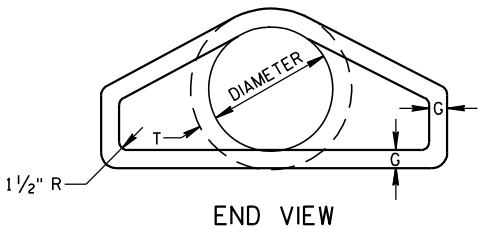
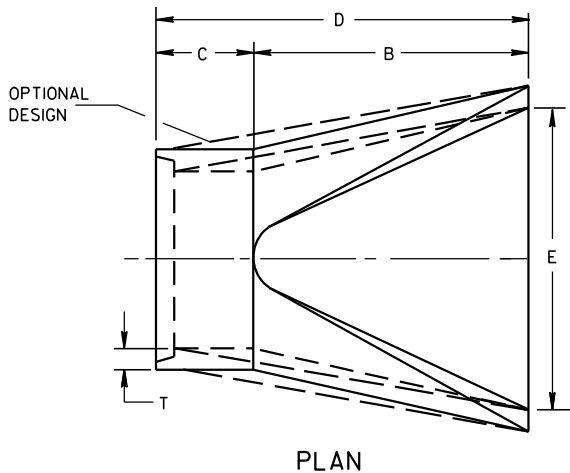
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



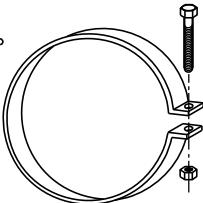
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 ¹ / ₂	30	73 ¹ / ₂	48	3	3 to 1
27	3 ¹ / ₄	10 ¹ / ₂	49 ¹ / ₂	24	73 ¹ / ₂	54	3 ¹ / ₄	3 to 1
30	3 ¹ / ₂	12	54	19 ³ / ₄	73 ¹ / ₂	60	3 ¹ / ₂	3 to 1
36	4	15	63	34 ³ / ₄	97 ³ / ₄	72	4	3 to 1
42	4 ¹ / ₂	21	63	35	98	78	4 ¹ / ₂	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 ¹ / ₂	27	65	33 ¹ / ₄ -35	98 ¹ / ₄ -100	90	5 ¹ / ₂	2 ¹ / ₂ to 1
60	6	30-35	60	39	99	96	5	2 to 1
66	6 ¹ / ₂	24-30	72-78	21-27	99	102	5 ¹ / ₂	2 to 1
72	7	24-36	78	21	99	108	6	2 to 1
78	7 ¹ / ₂	24-36	78	21	99	114	6 ¹ / ₂	2 to 1
84	8	36	90 ¹ / ₂	21	111 ¹ / ₂	120	6 ¹ / ₂	1 ¹ / ₂ to 1
90	8 ¹ / ₂	41	87 ¹ / ₂	24	111 ¹ / ₂	132	6 ¹ / ₂	1 ¹ / ₂ to 1

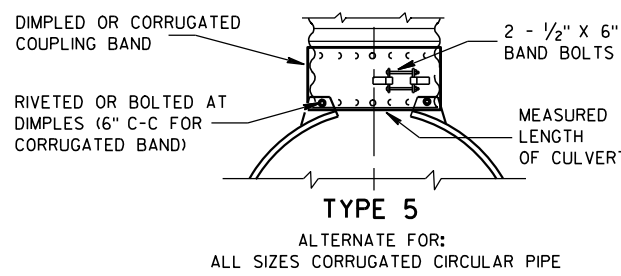
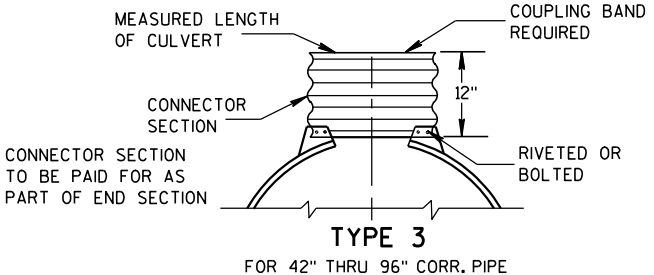
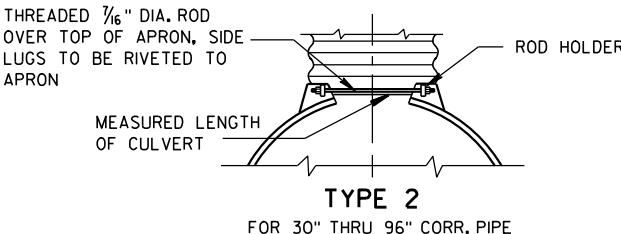
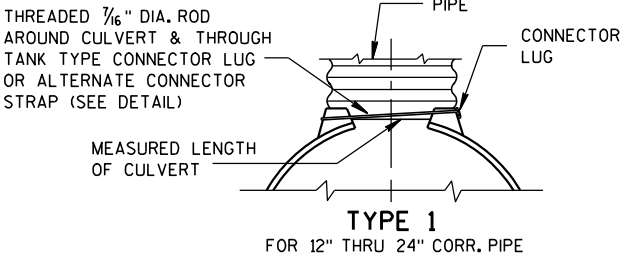
* MINIMUM
** MAXIMUM



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



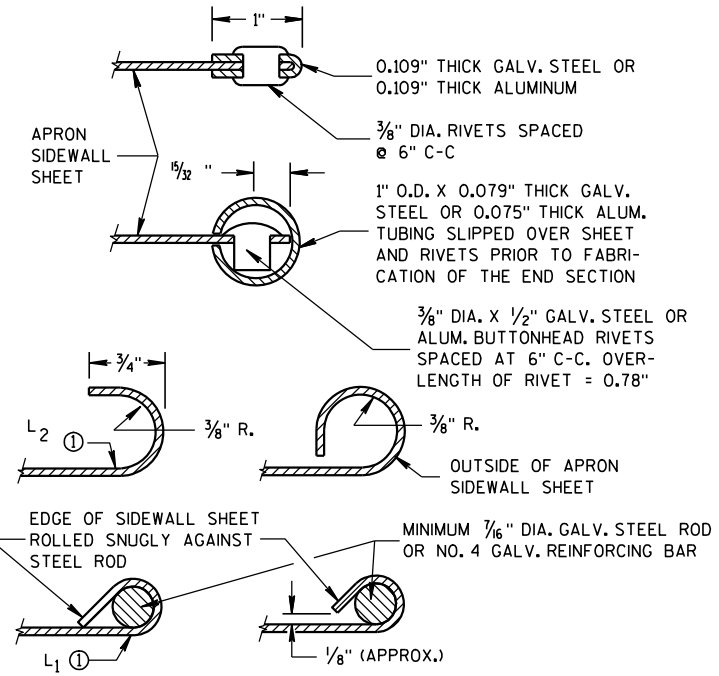
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

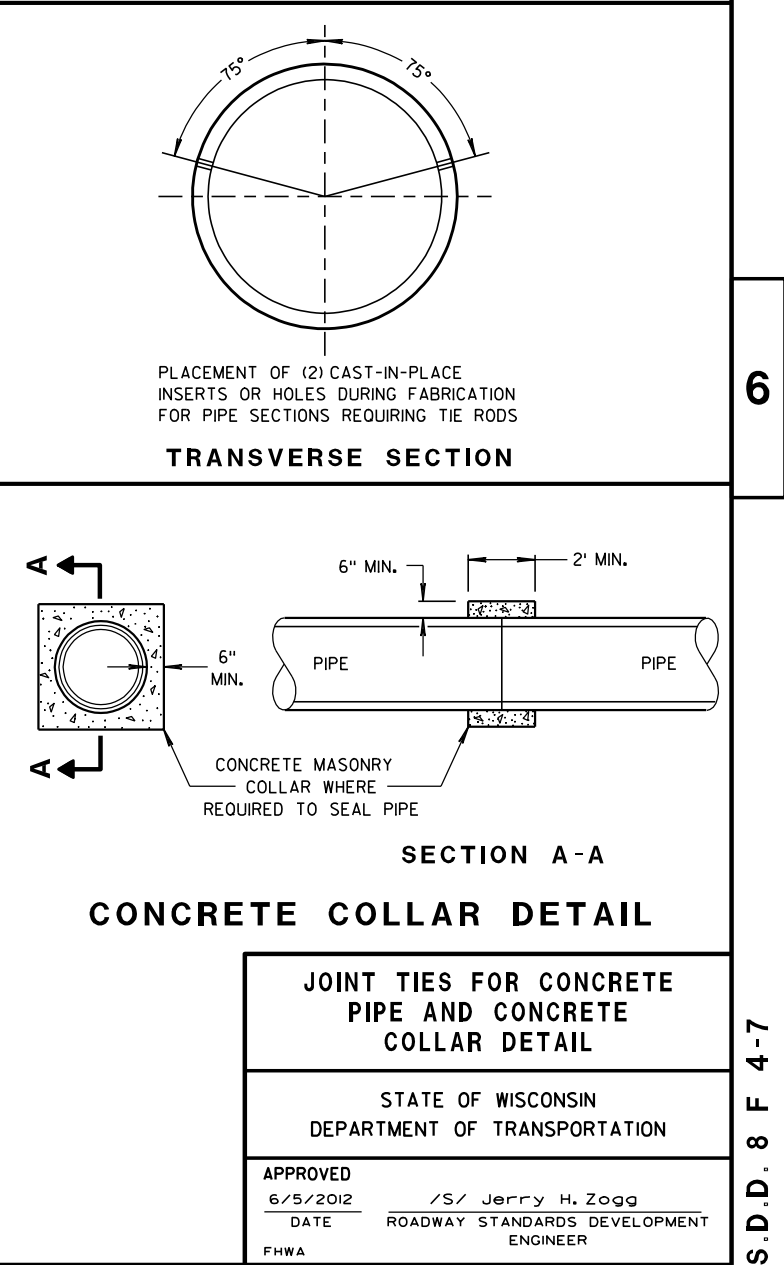
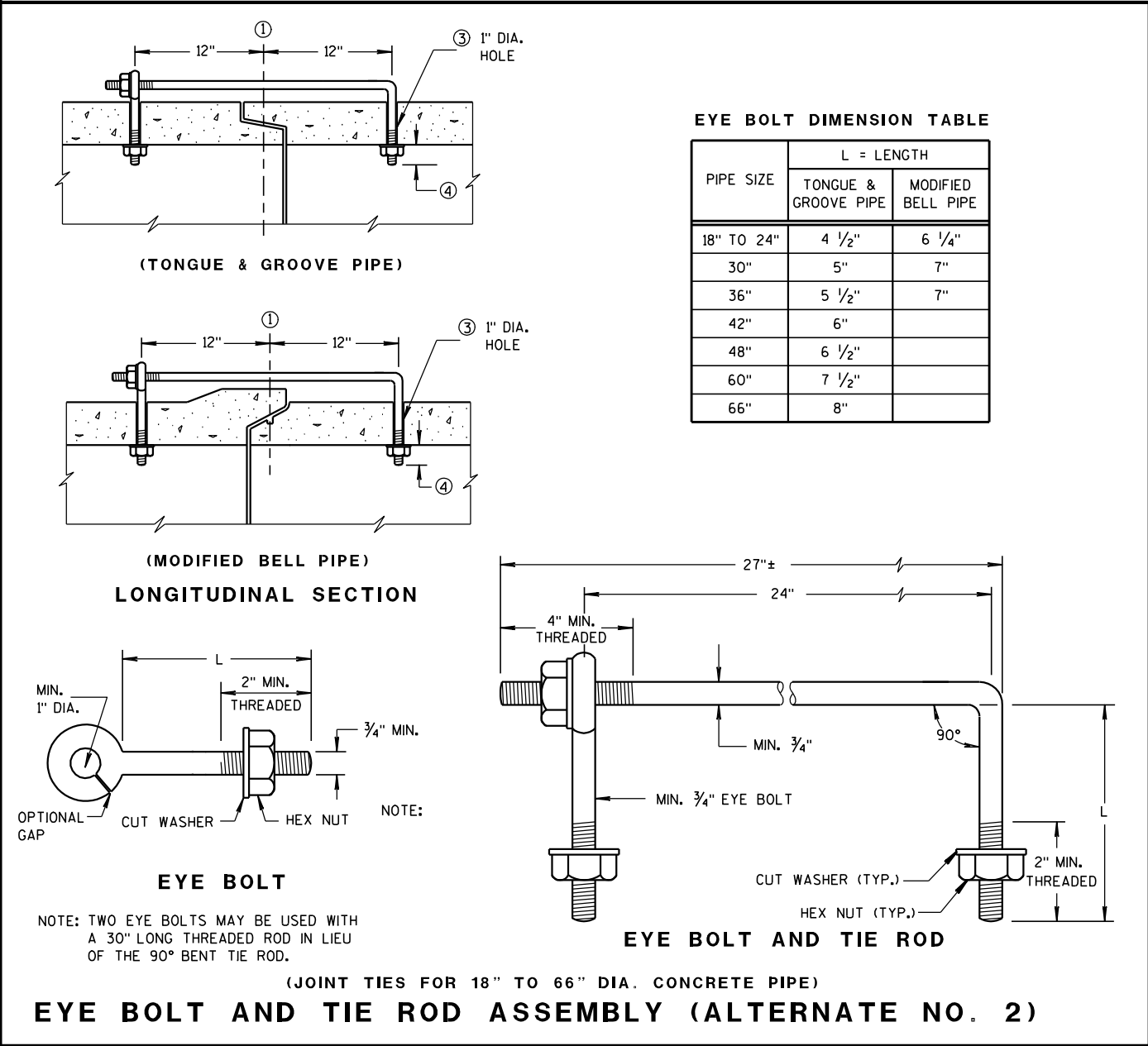
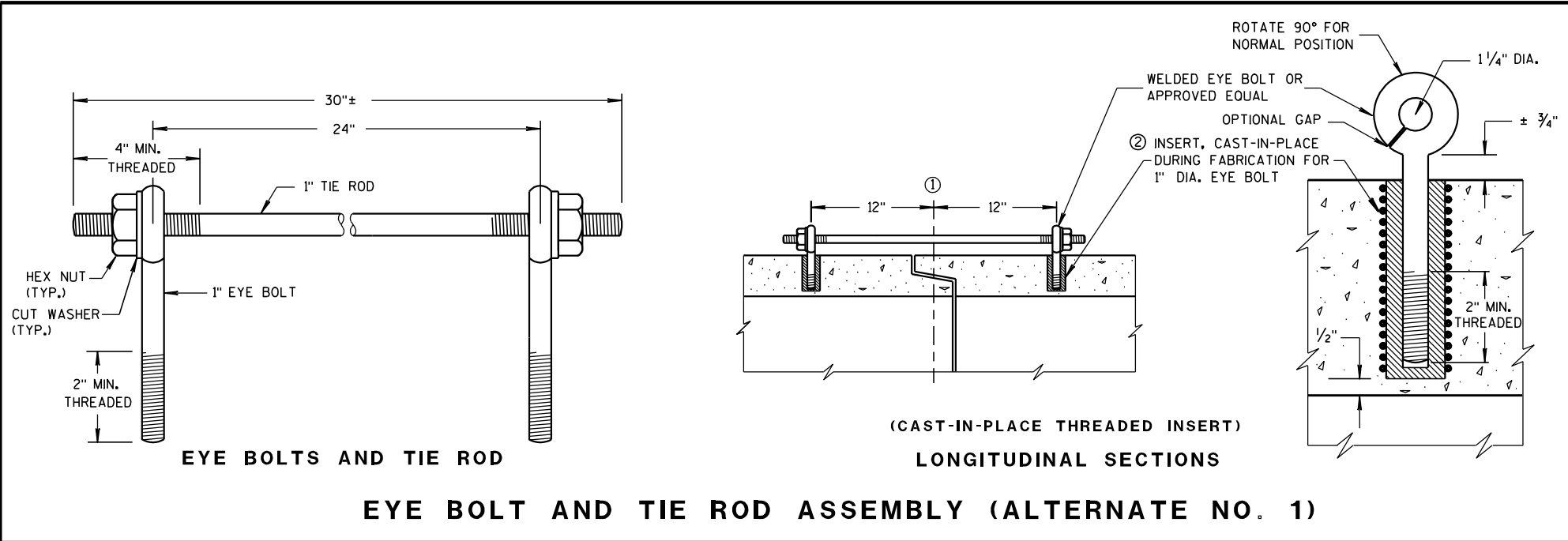
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

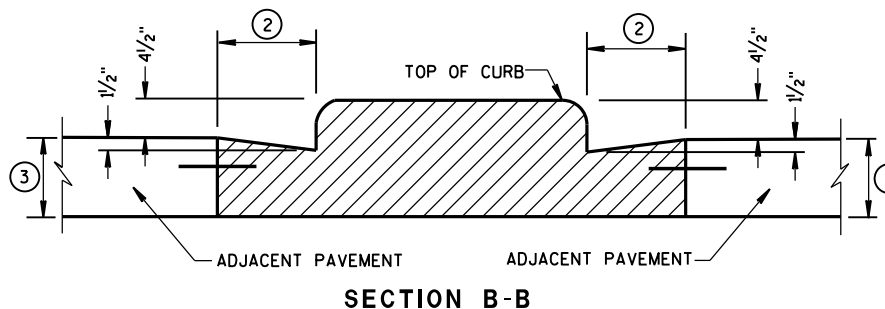
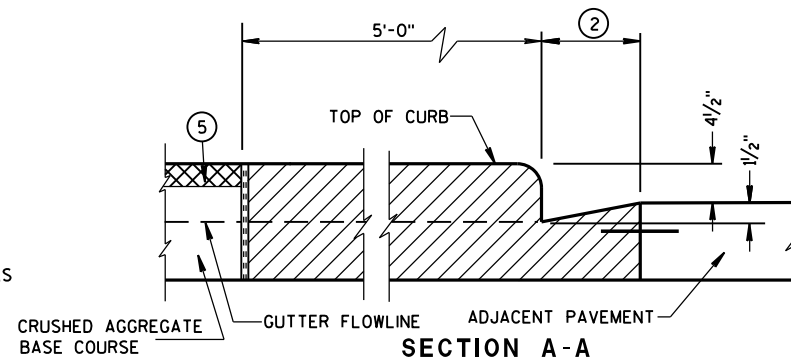
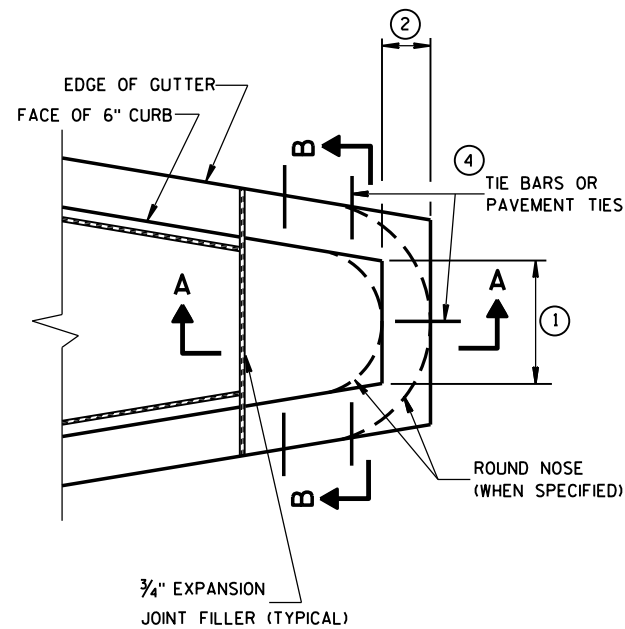
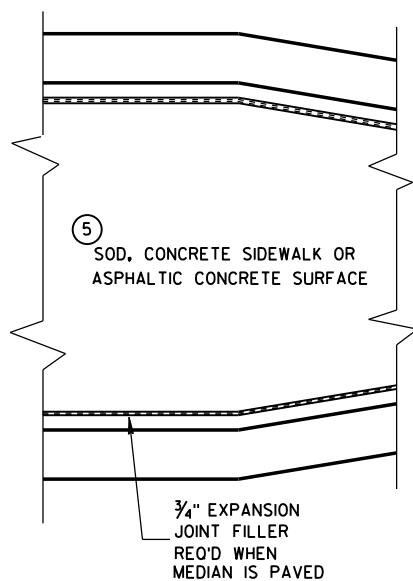
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

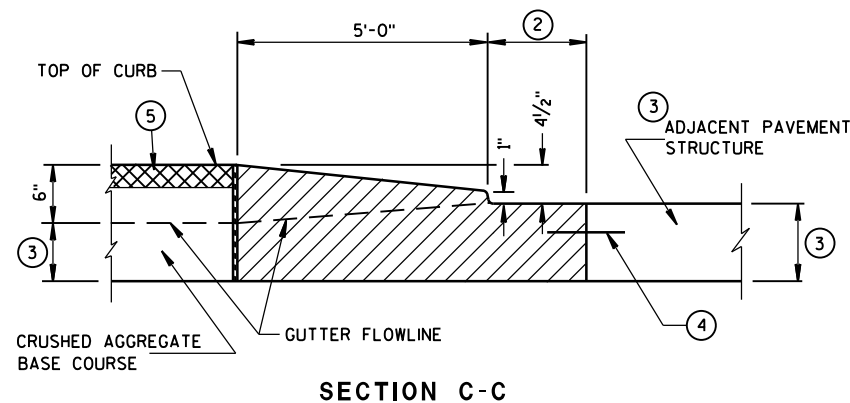
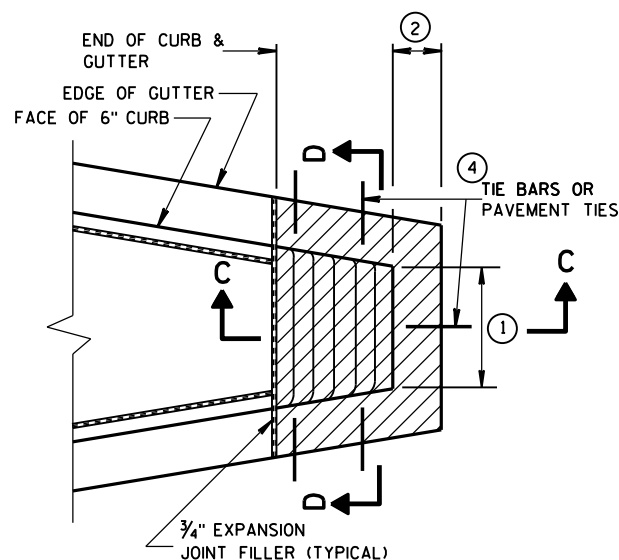
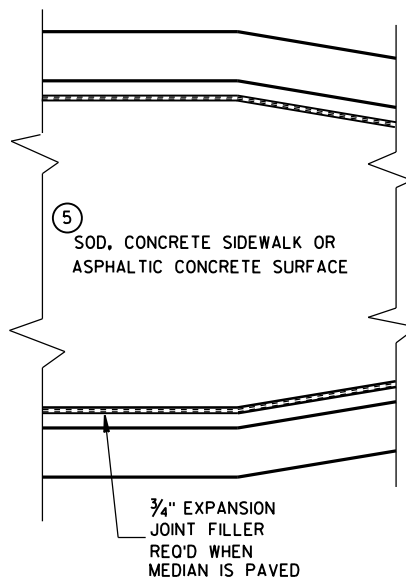
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

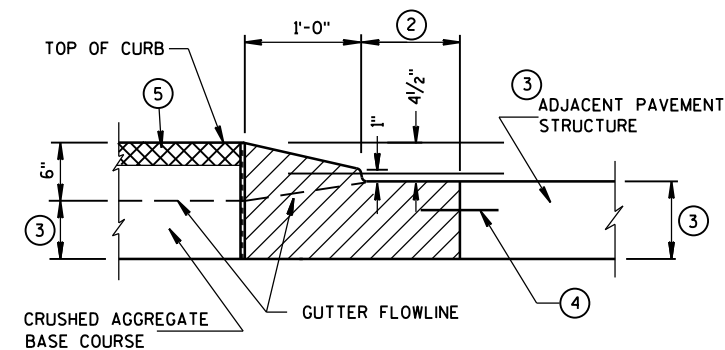
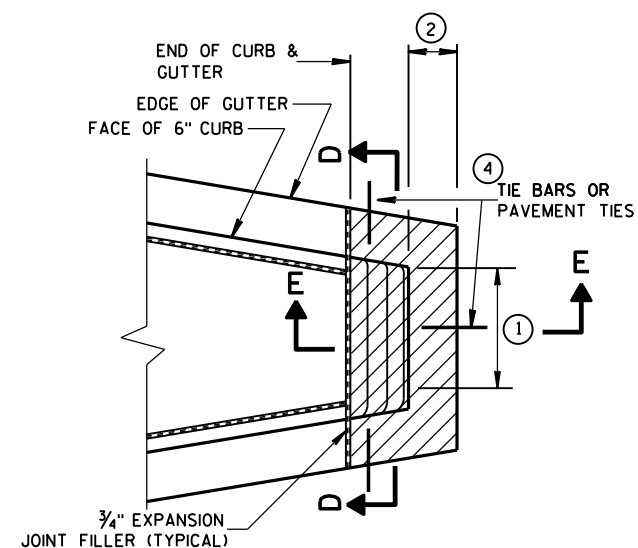




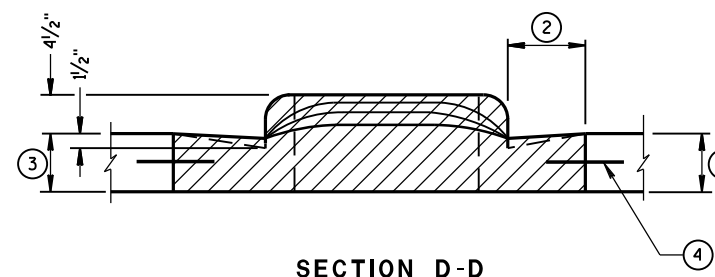
CONCRETE MEDIAN BLUNT NOSE DETAIL



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

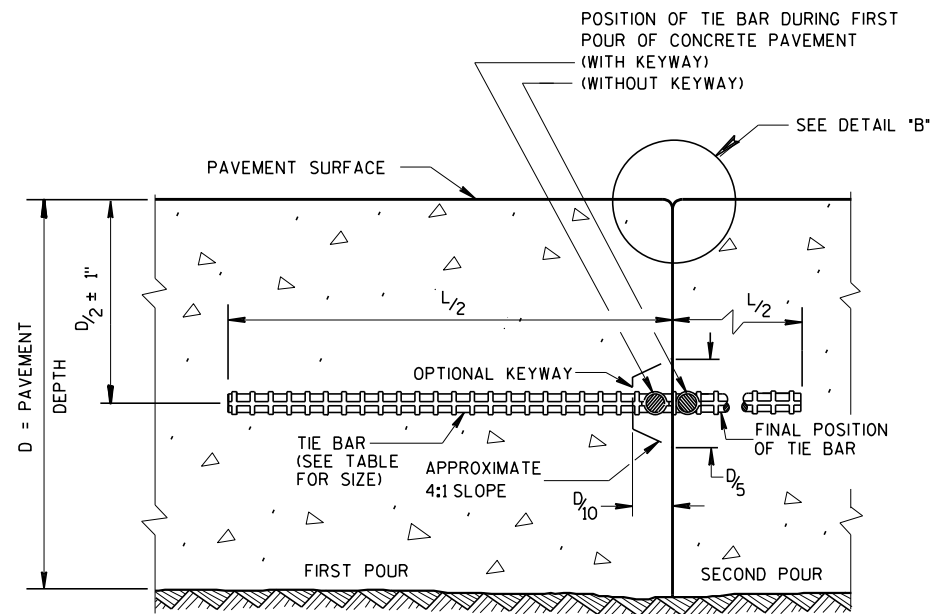
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

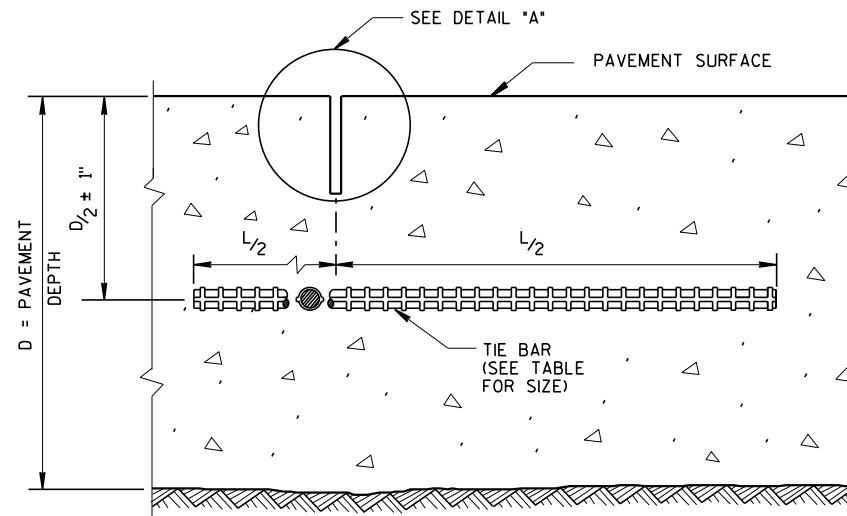
6/8/2006
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



CONSTRUCTION JOINT



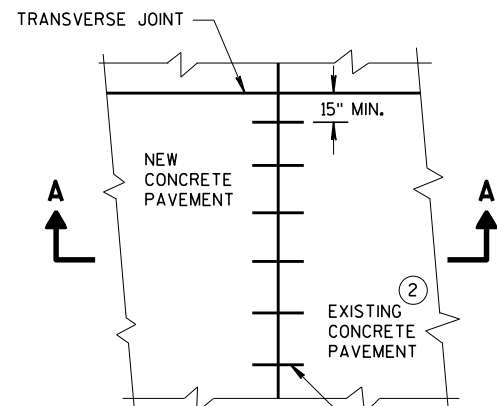
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

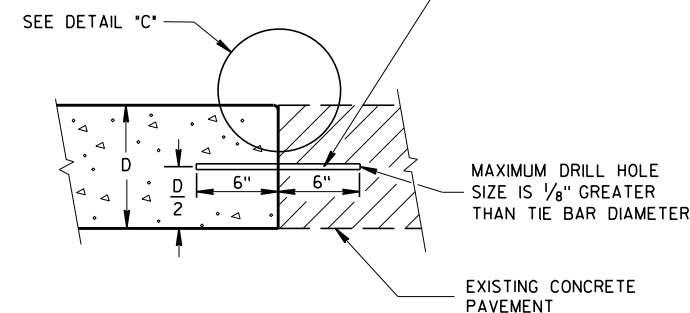
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

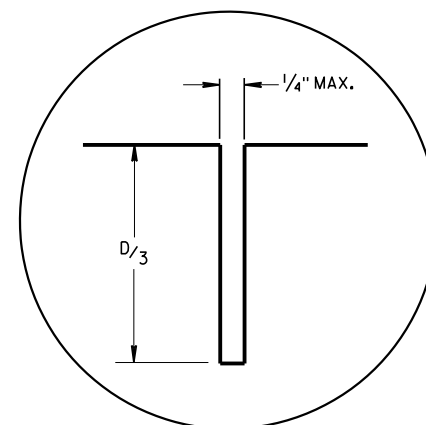


PLAN VIEW

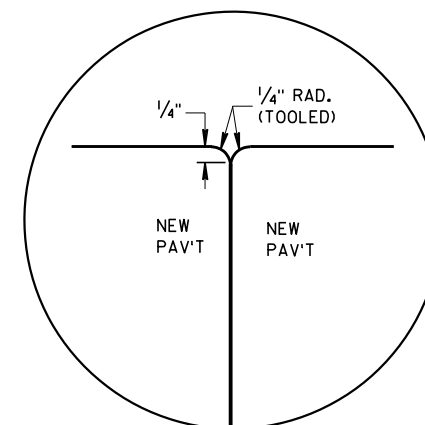
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



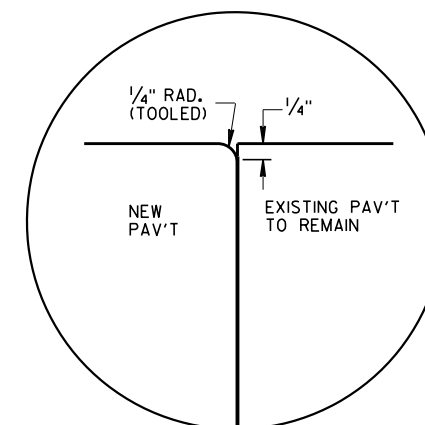
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



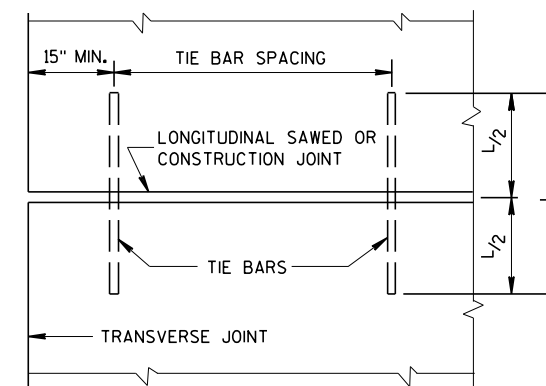
DETAIL "C"

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.

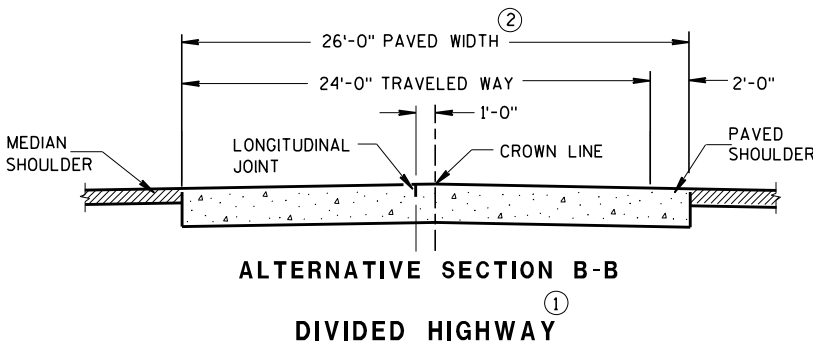
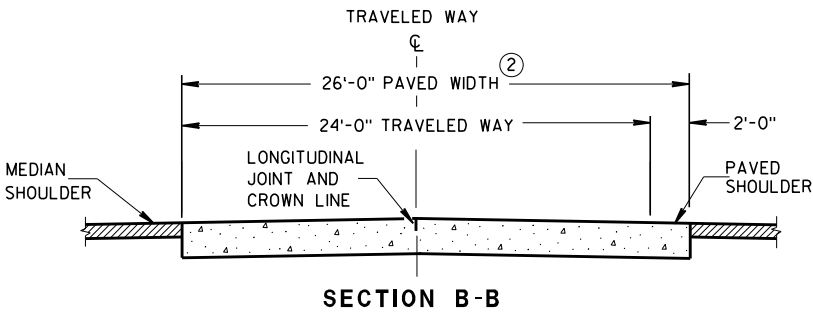
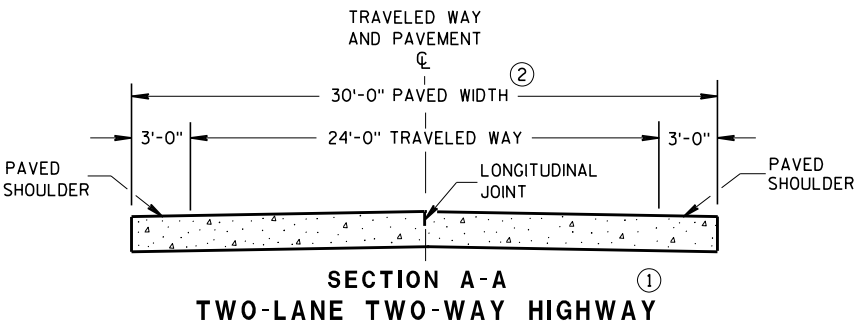


PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



GENERAL NOTES

CONSTRUCTION JOINTS
CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

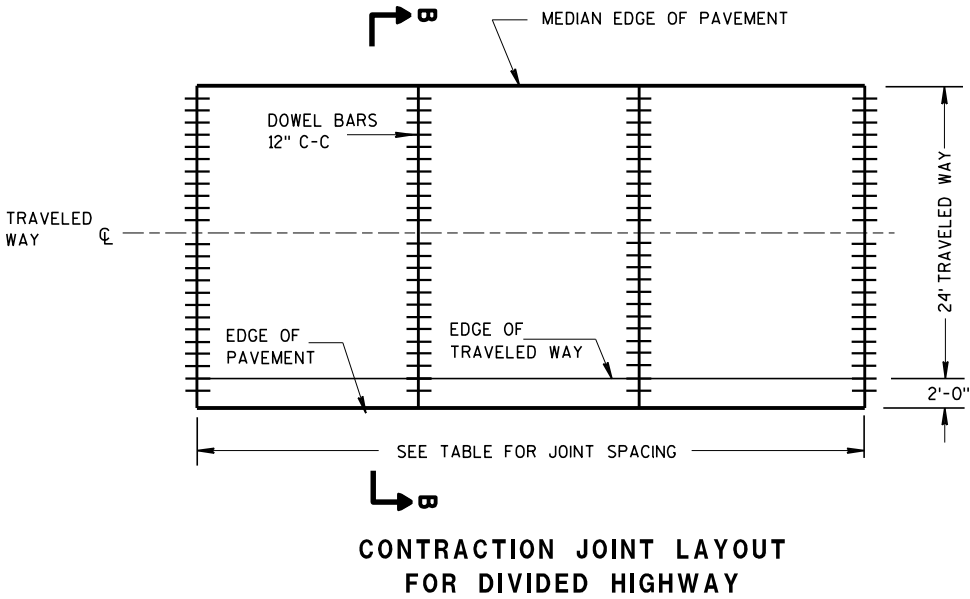
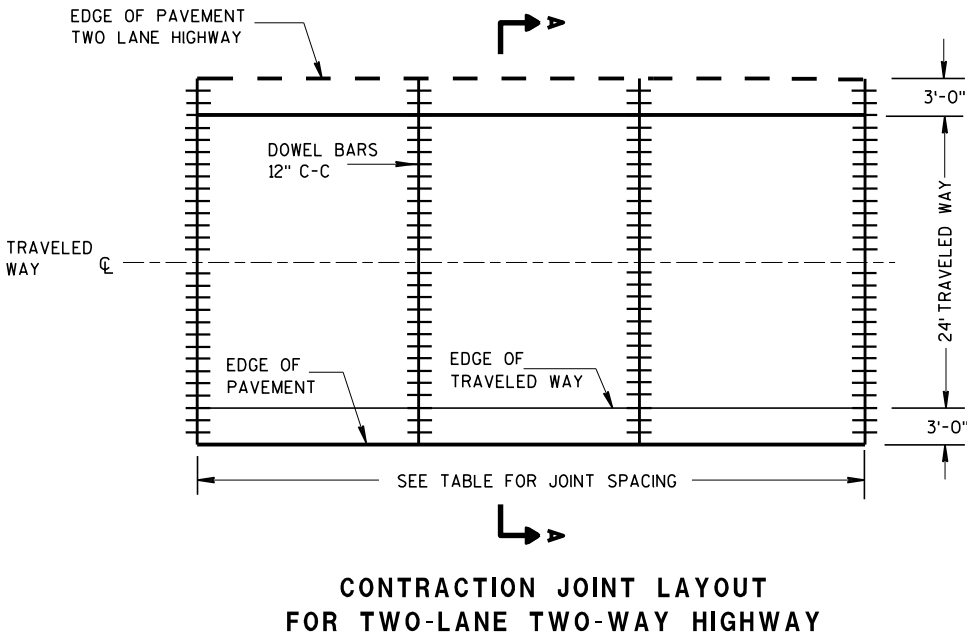
FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

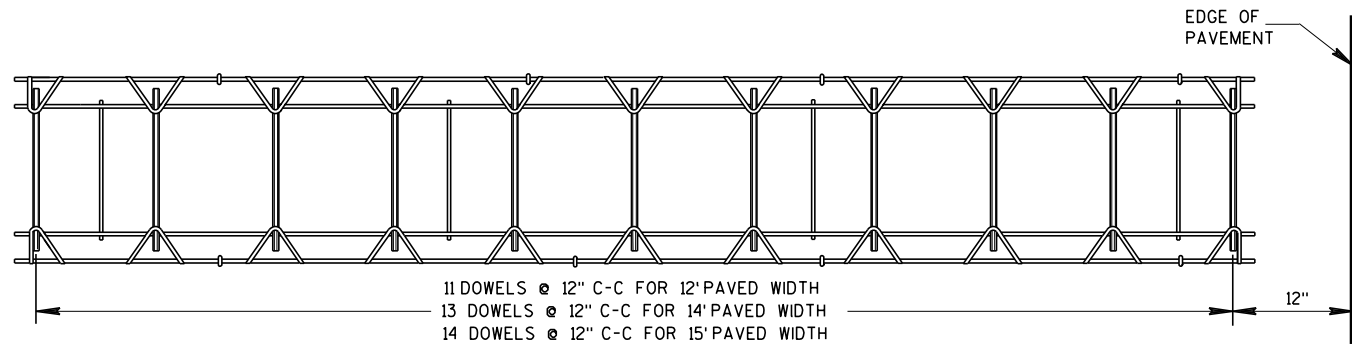
CONSTRUCTION JOINTS
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

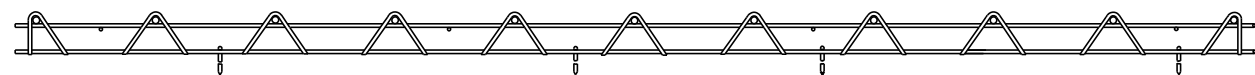
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'





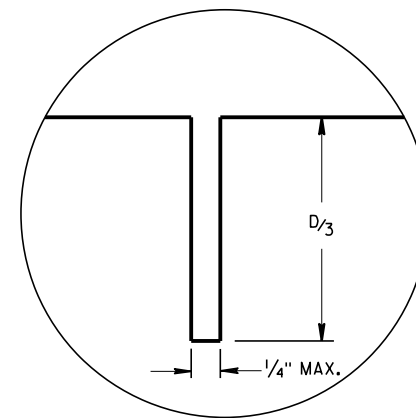
PLAN VIEW



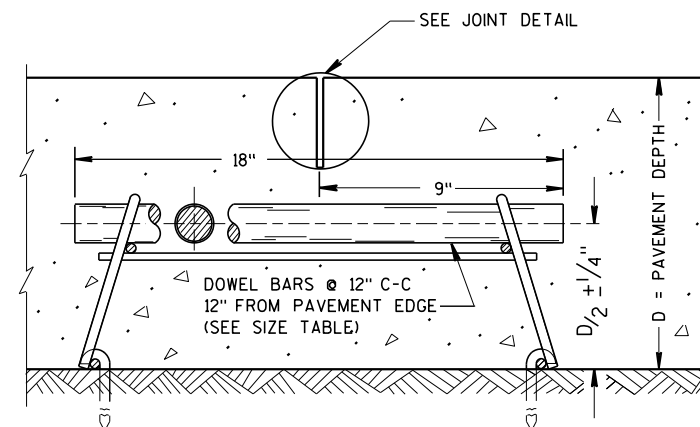
SIDE VIEW

(NORMAL TO CENTERLINE)

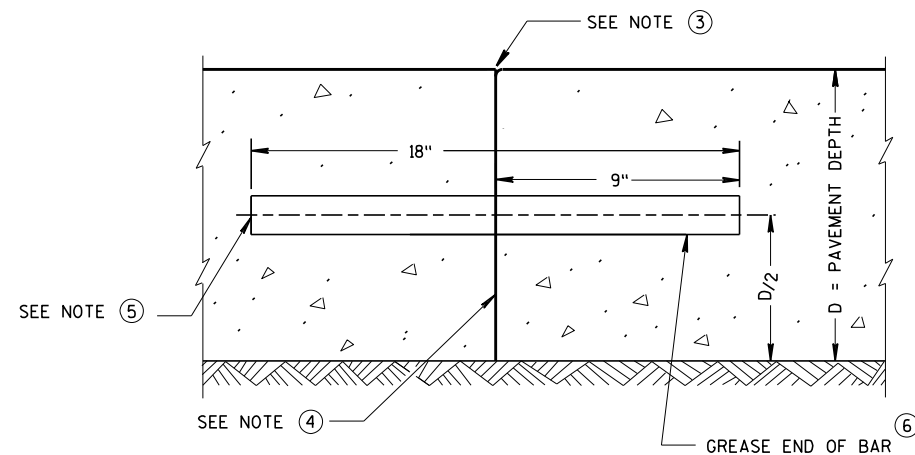
CONTRACTION JOINT DOWEL ASSEMBLY ①



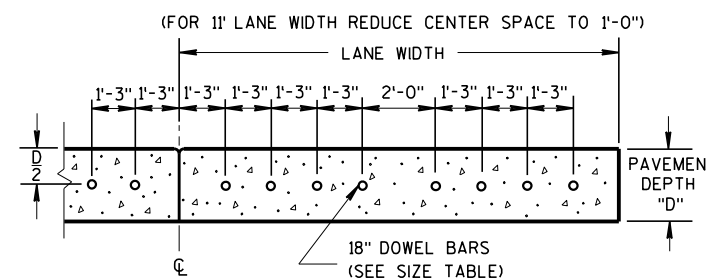
JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

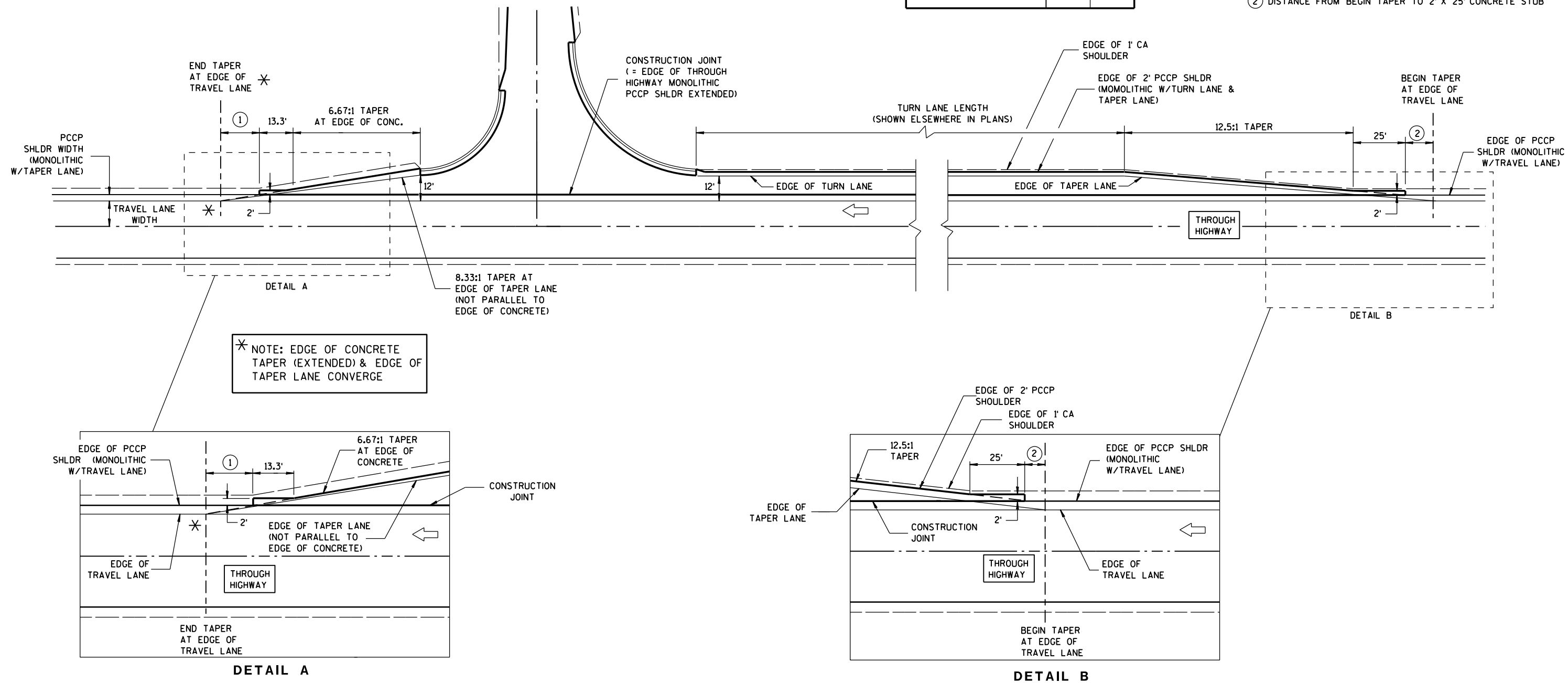
GENERAL NOTES

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A $1/4$ -INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS $1/8$ -INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

RURAL DOWELED
CONCRETE PAVEMENT

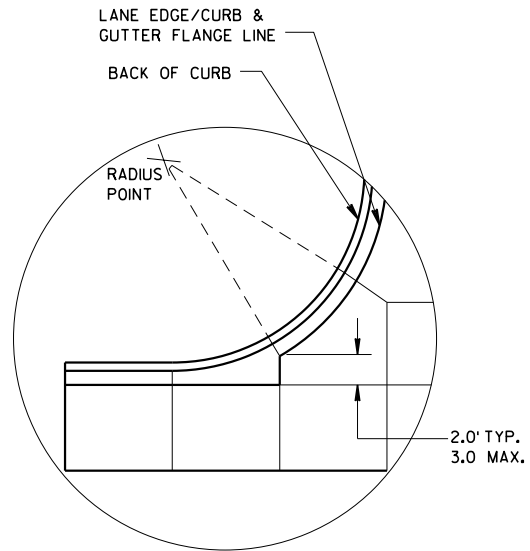
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA

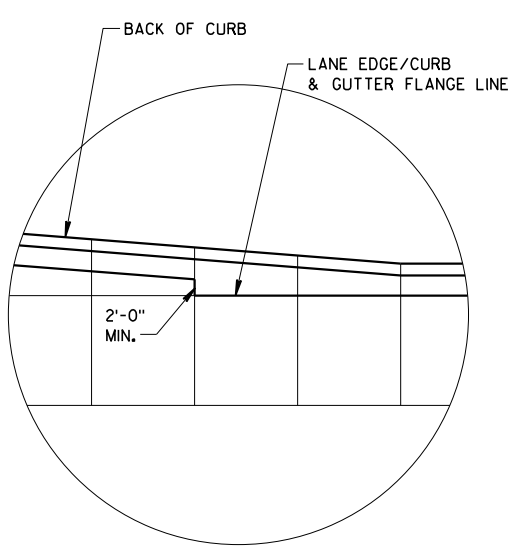


DETAIL FOR RIGHT TURN LANE/
TEE INTERSECTION BYPASS LANE
ON A CONCRETE ROADWAY

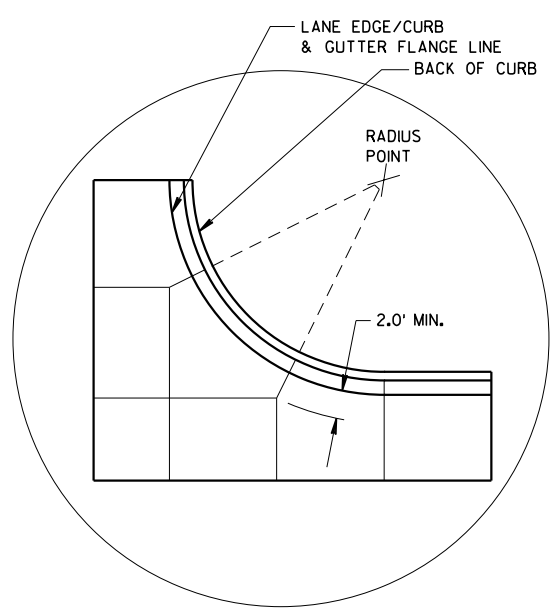
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



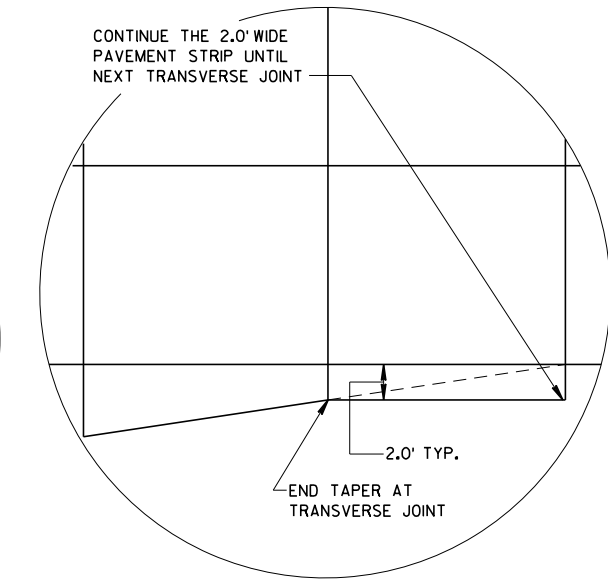
DETAIL "A"



DETAIL "B"



DETAIL "C"



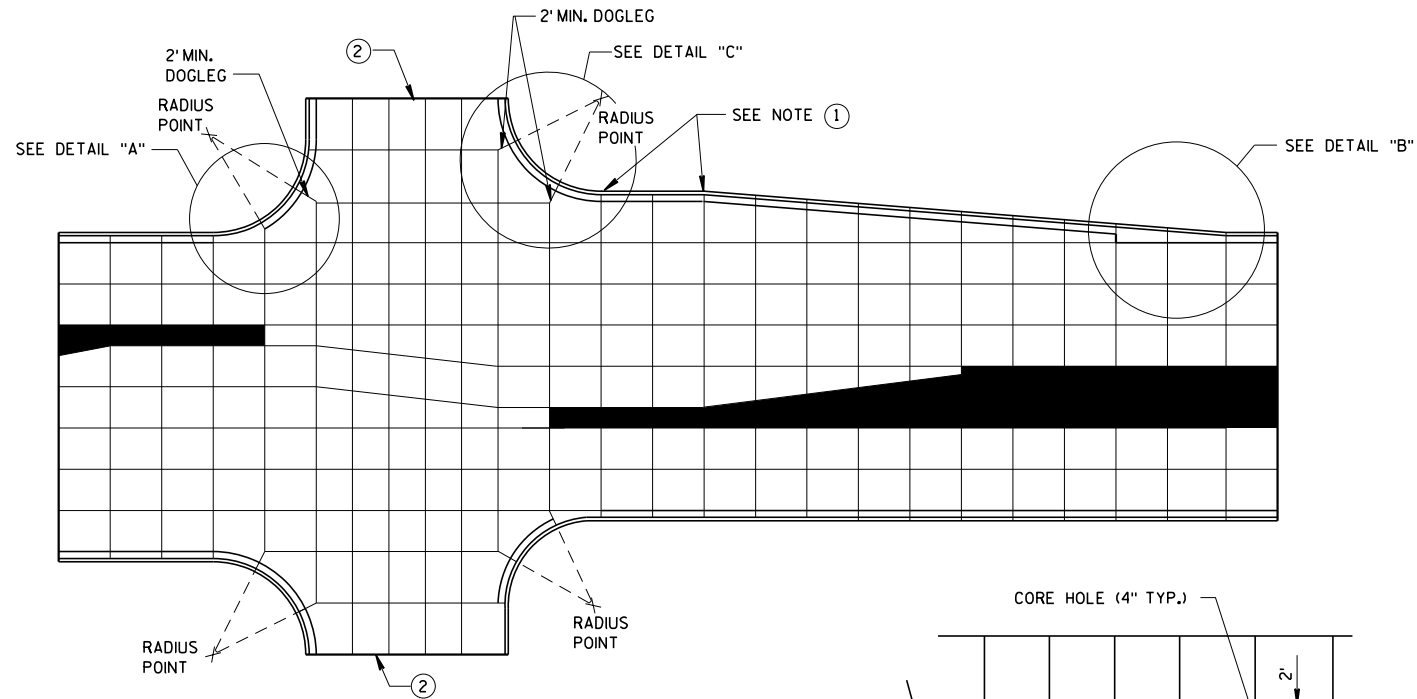
DETAIL "D"

GENERAL NOTES

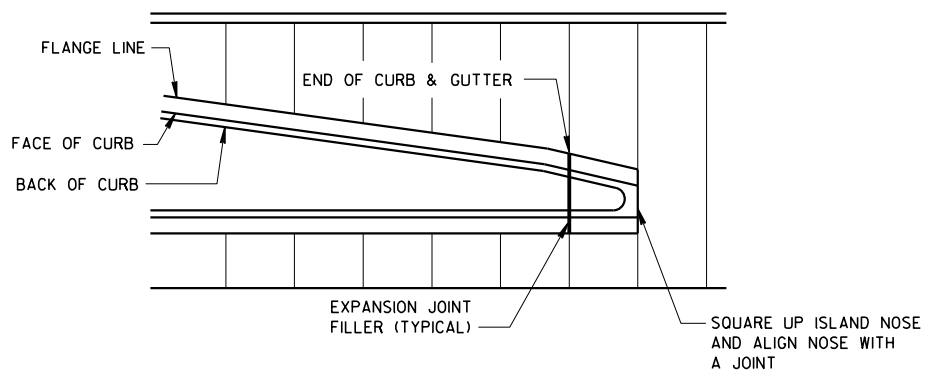
- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
 2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
 3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

PAVEMENT DEPTH AND JOINT SPACING TABLE

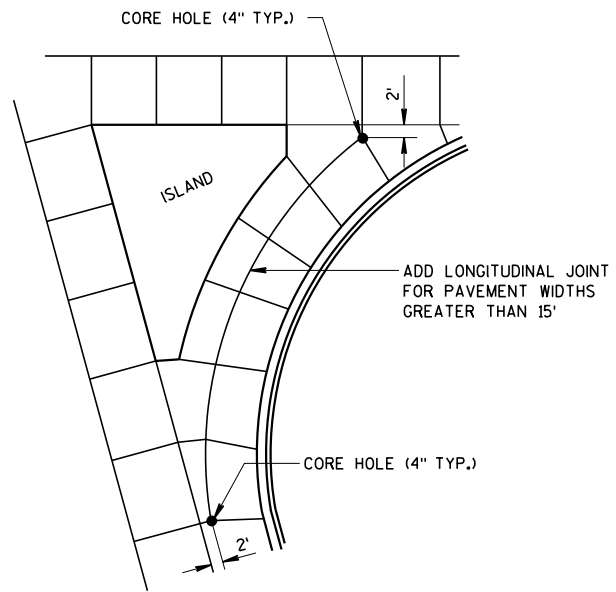
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



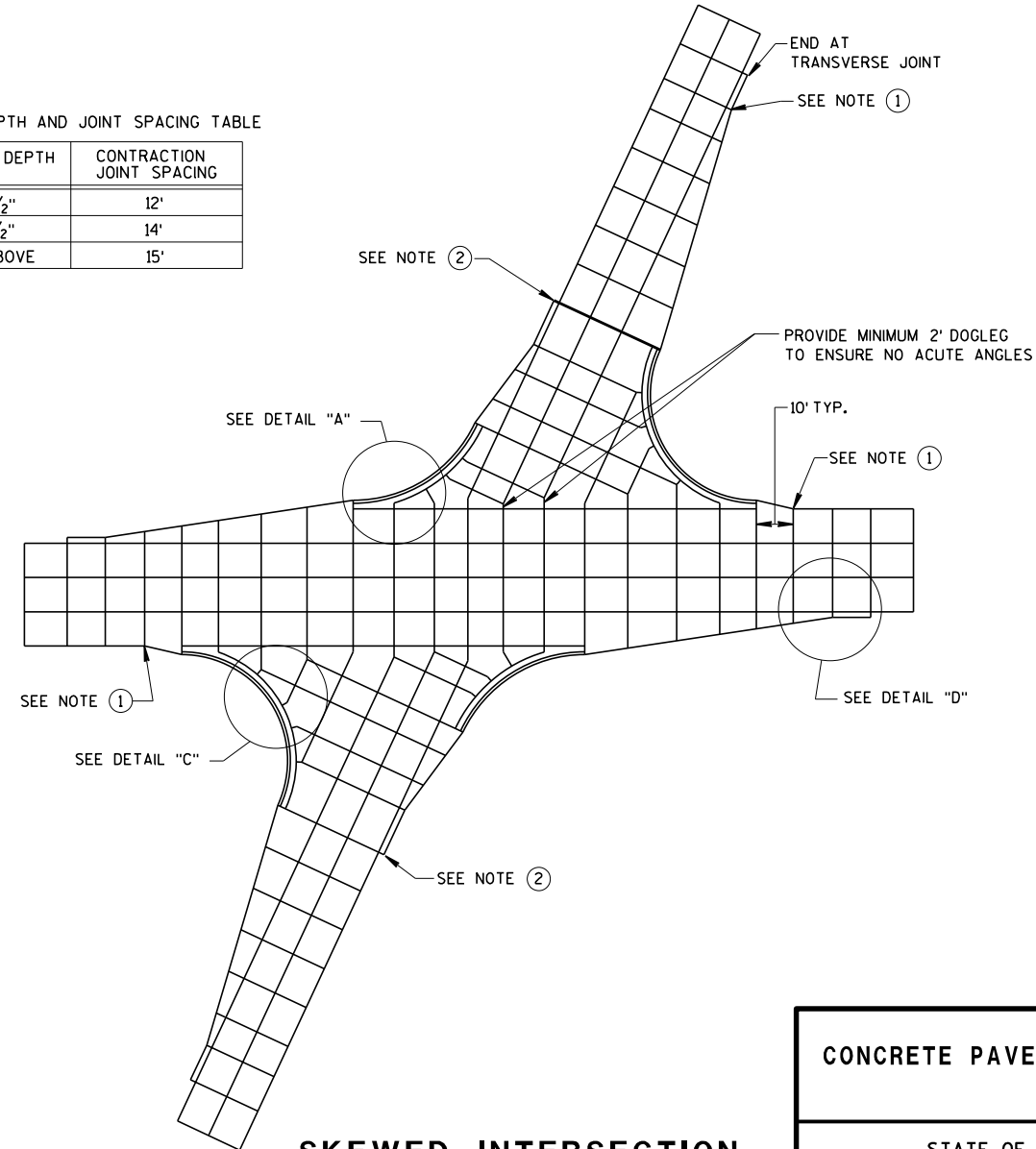
STANDARD INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN



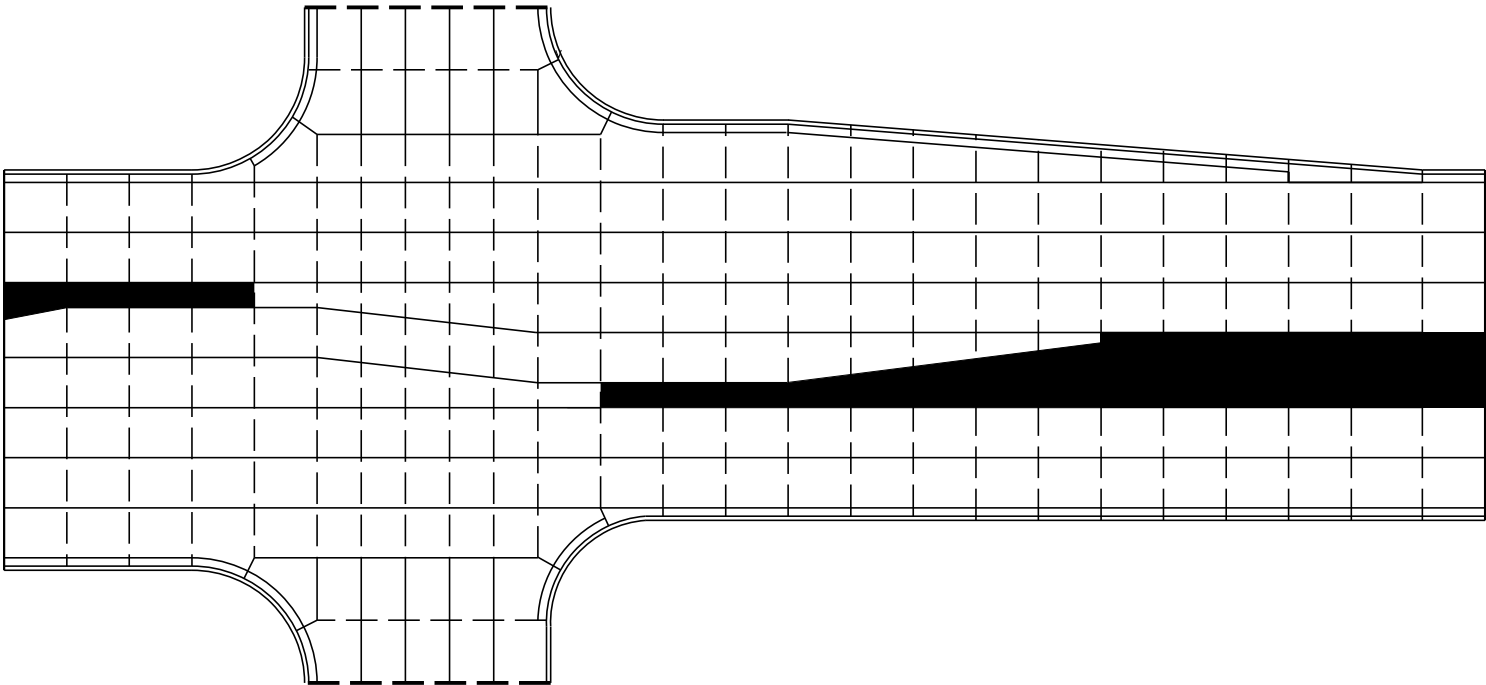
SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

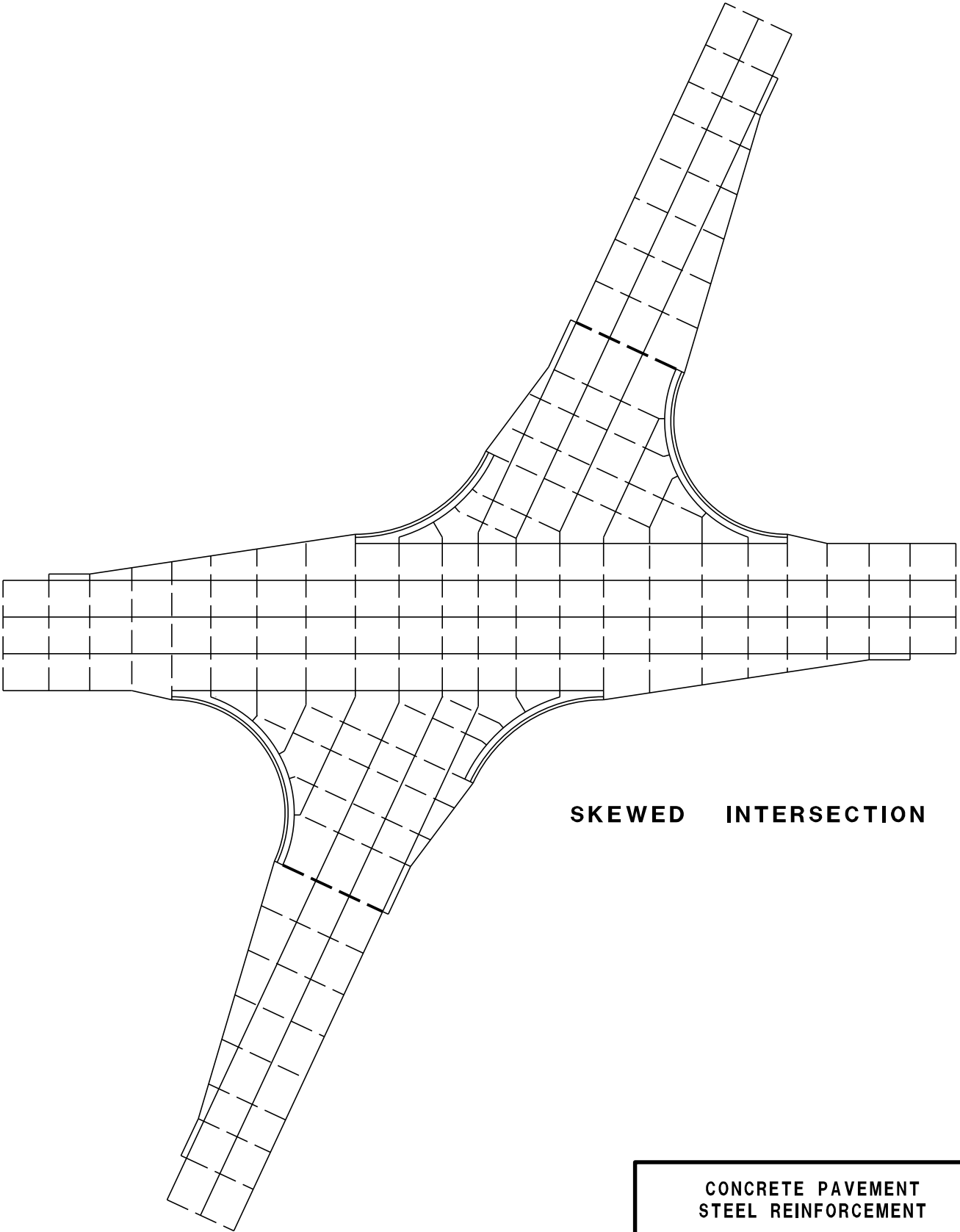
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

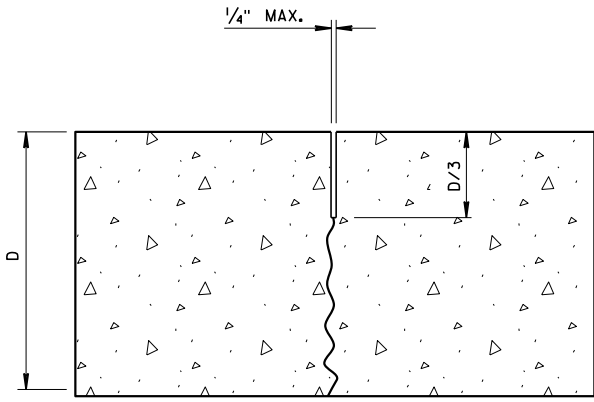
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



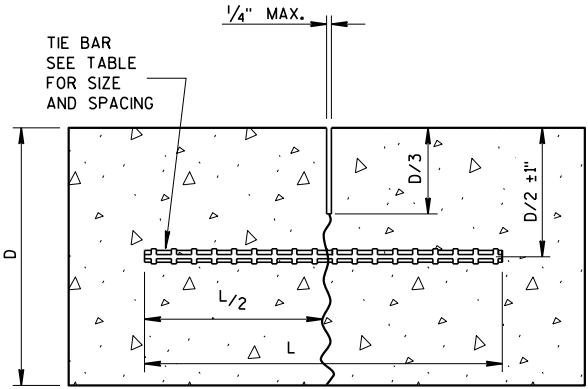
SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

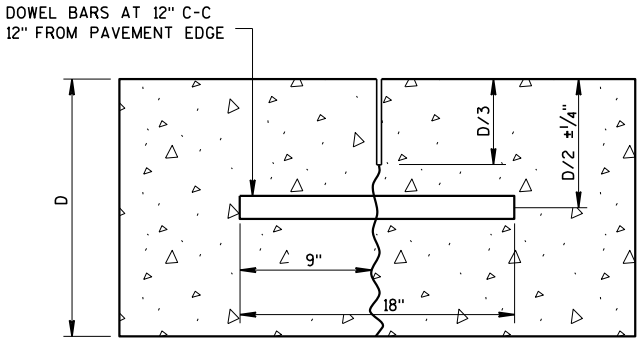
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* 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.

GENERAL NOTES

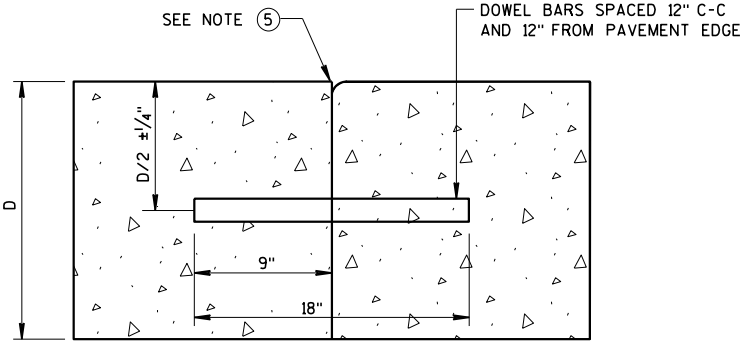
- 1 USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- 2 SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- 3 LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- 4 CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- 5 IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- 6 ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



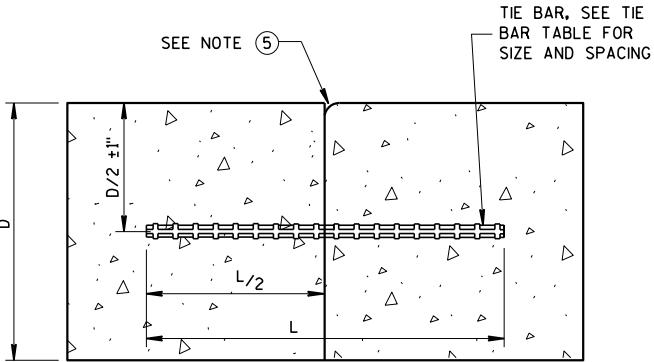
DOWELED-TRANSVERSE

CONTRACTION JOINTS

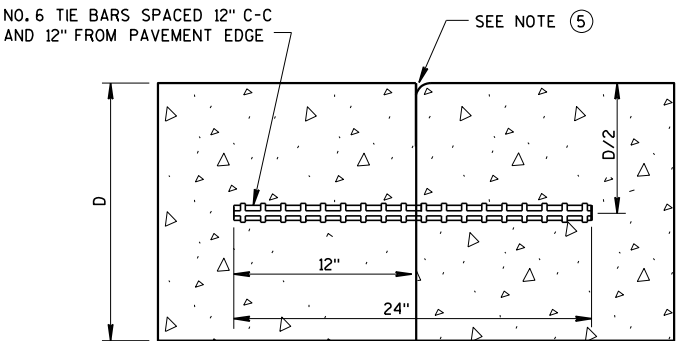
SEE NOTE 2



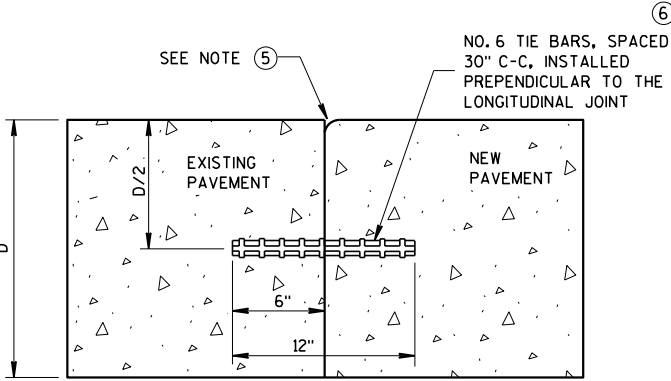
DOWELED TRANSVERSE 3



TIED LONGITUDINAL



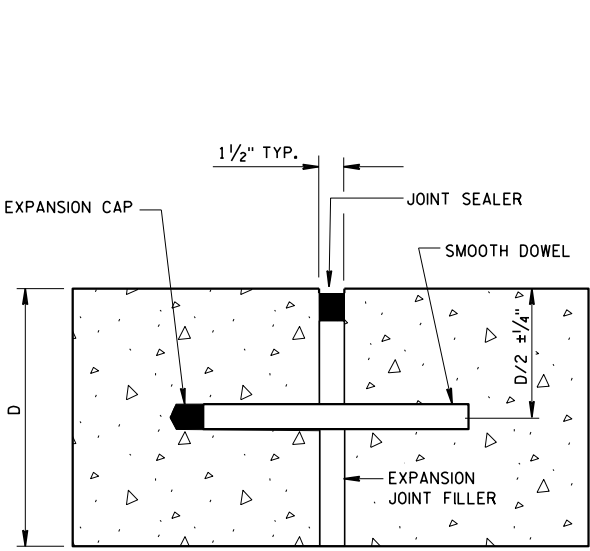
TIED TRANSVERSE 3
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

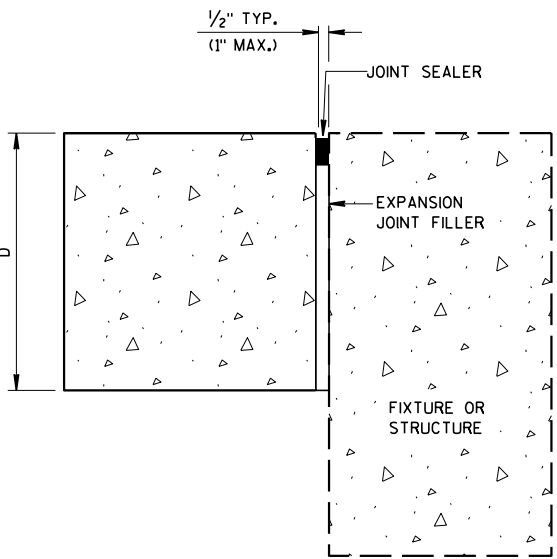
CONSTRUCTION JOINTS

SEE NOTE 4



DOWELED-TRANSVERSE

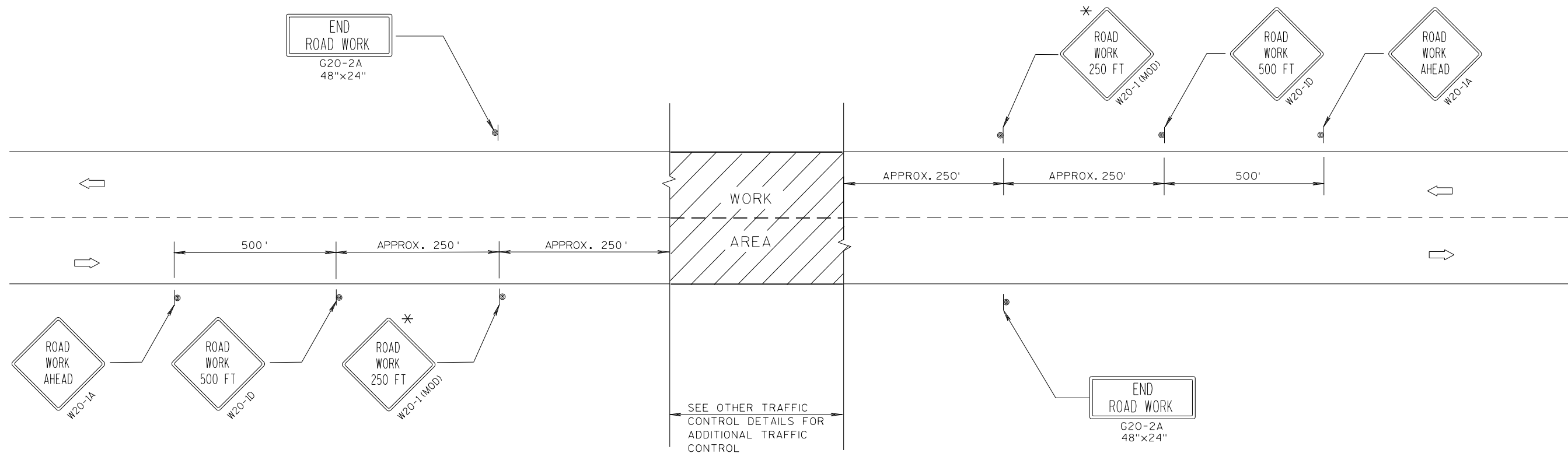
SEE NOTE 1



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT JOINT TYPES
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

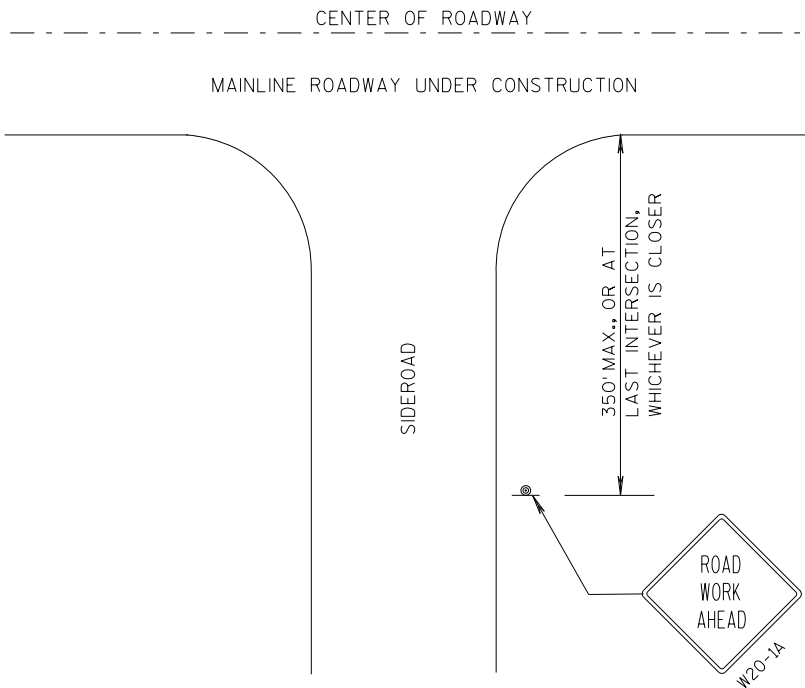
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

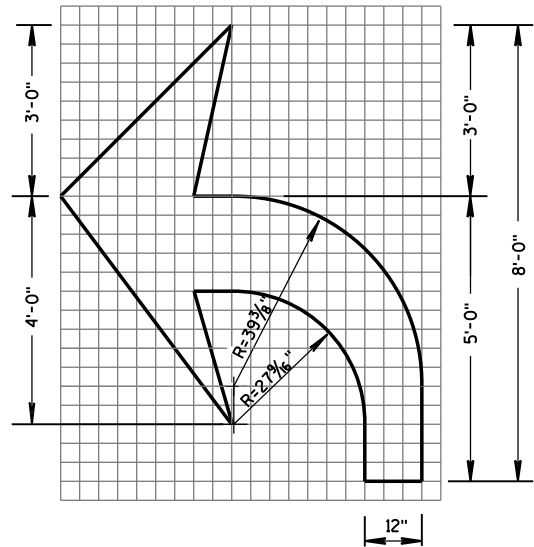
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



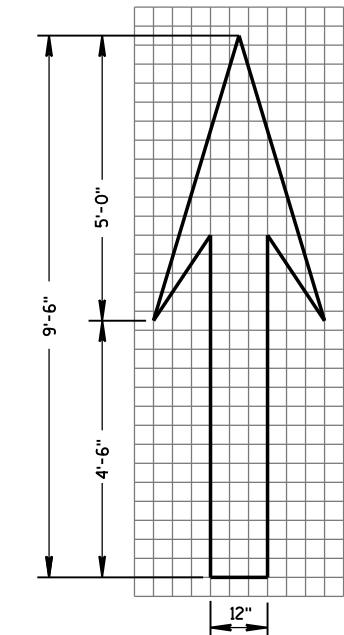
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

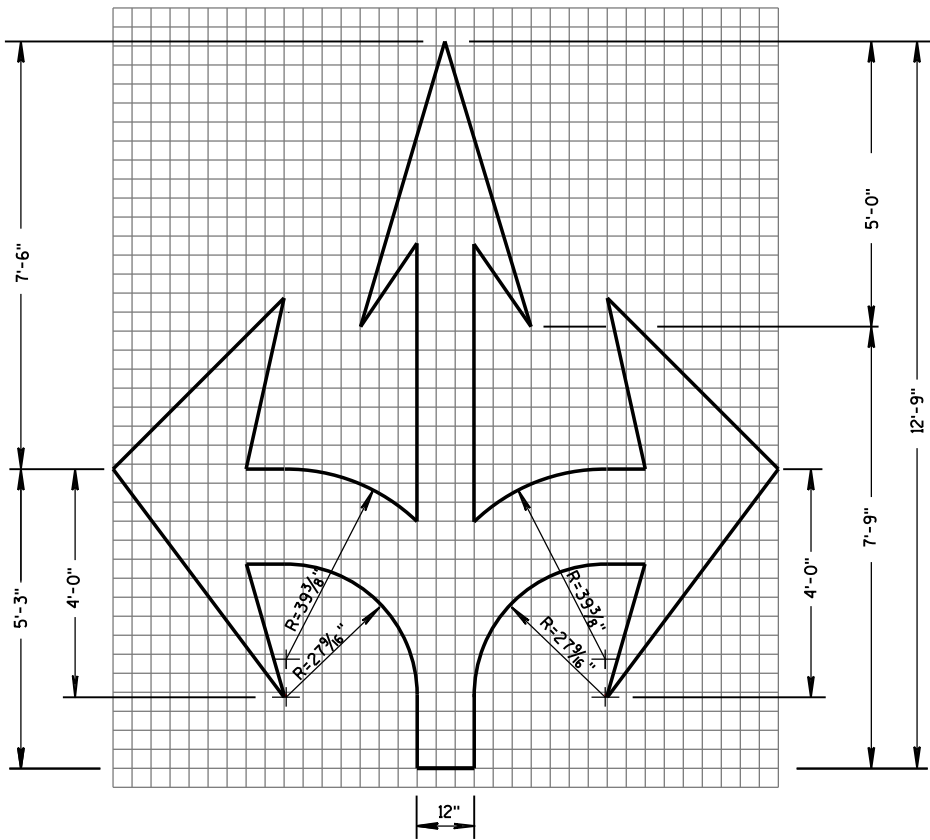
TRAFFIC CONTROL. ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



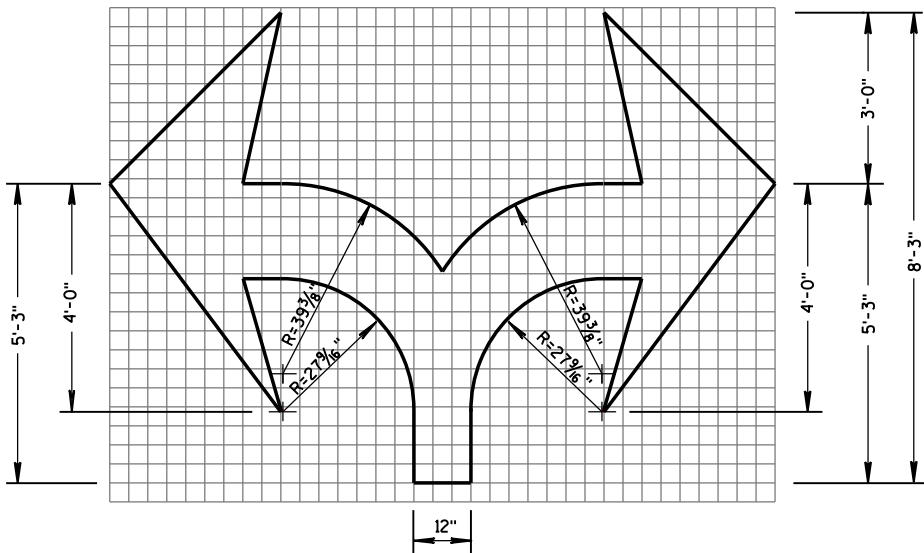
TYPE 2



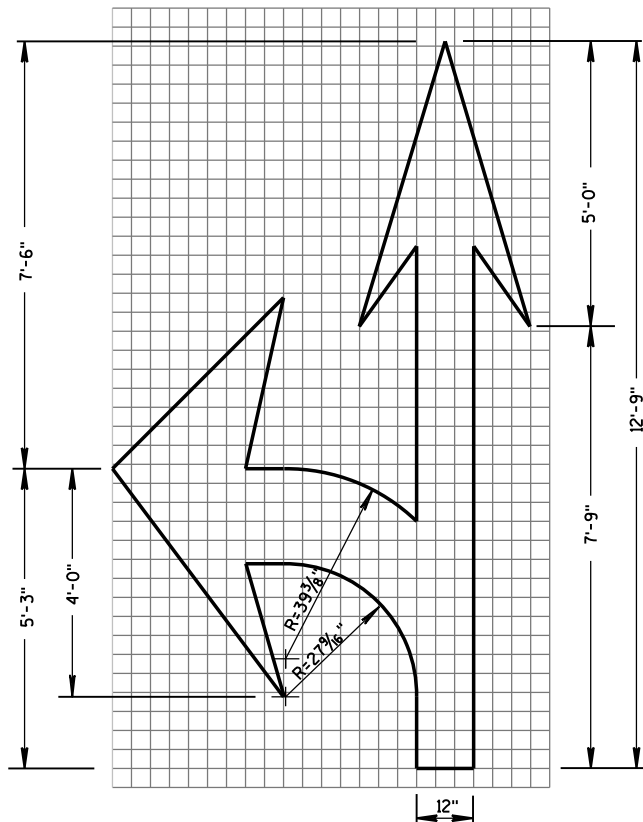
TYPE 1



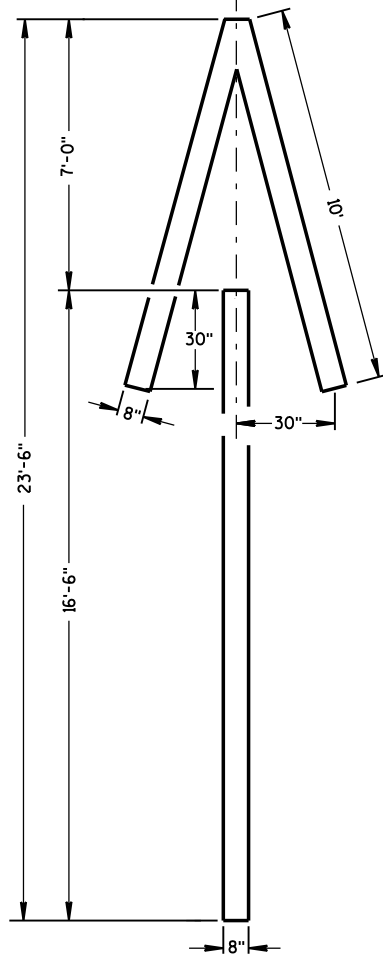
TYPE 6



TYPE 7



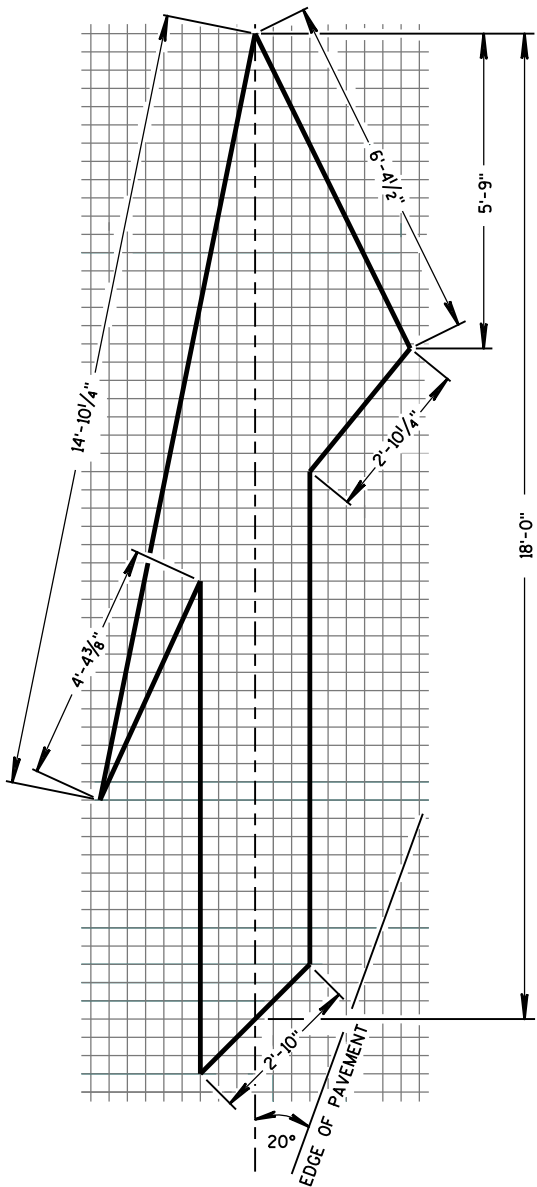
TYPE 3



TYPE 4

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.

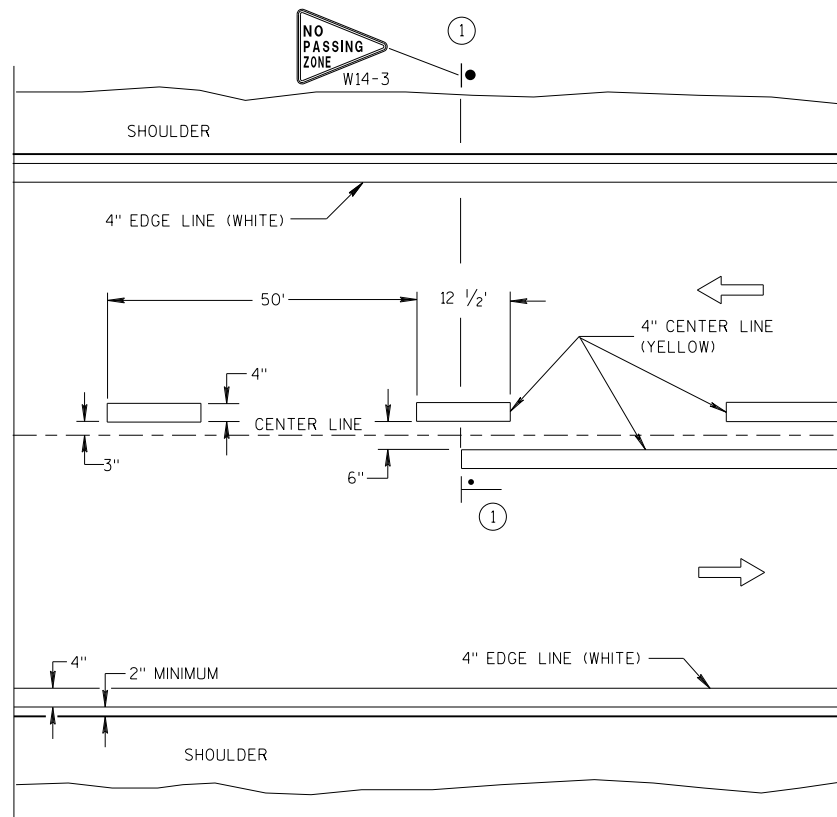


TYPE 5 LANE DROP ARROW

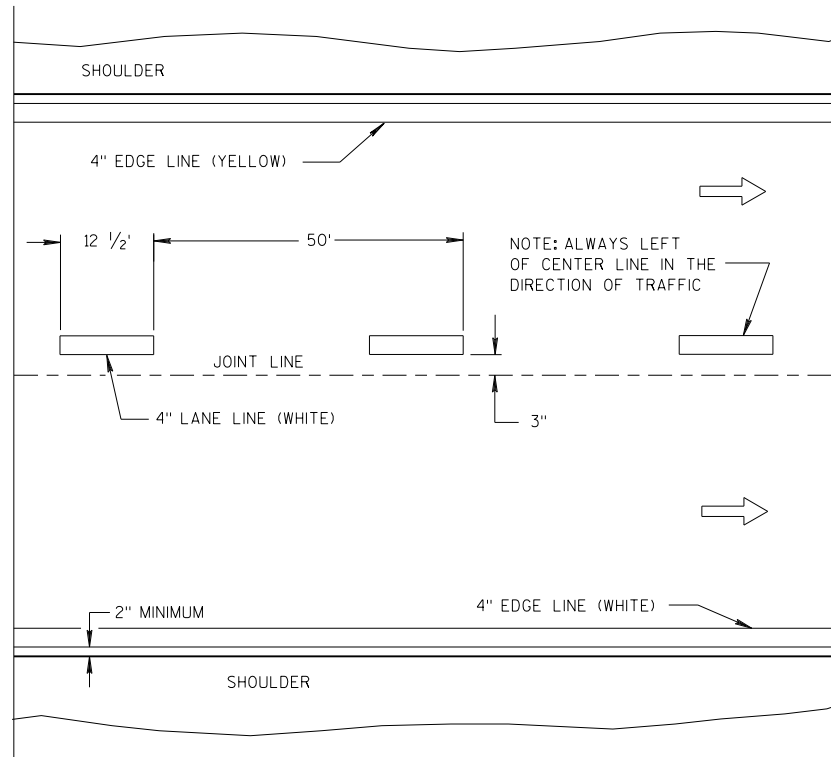
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

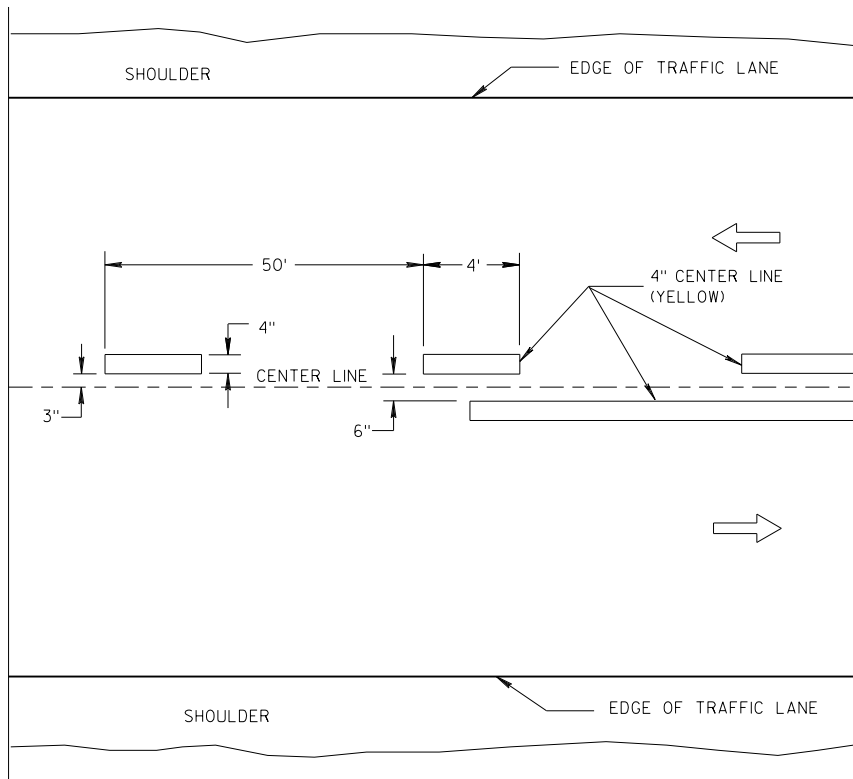


TWO WAY TRAFFIC

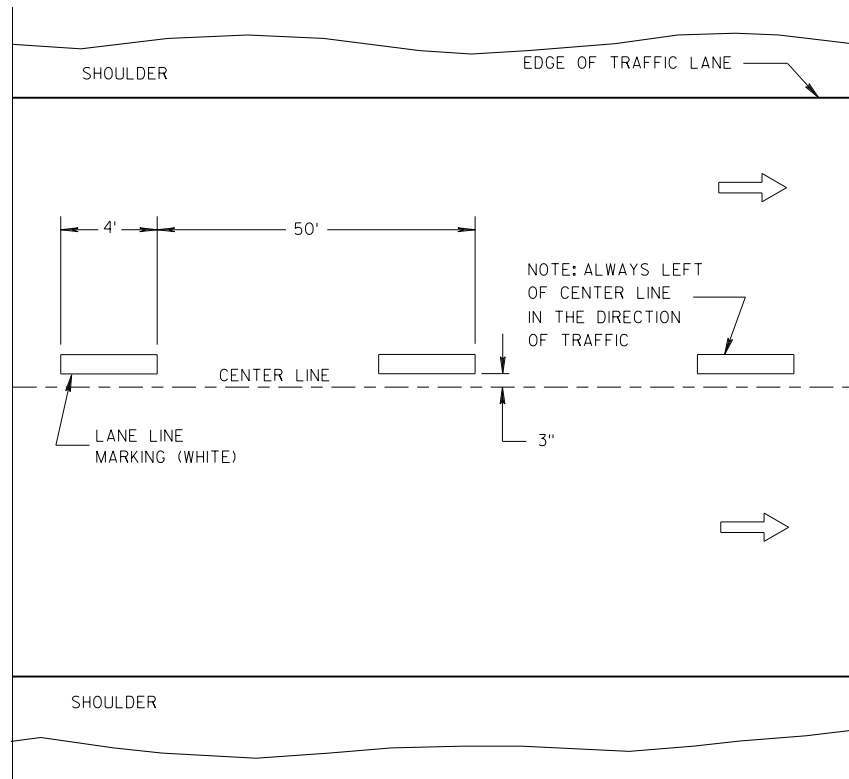


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC


TEMPORARY PAVEMENT MARKING

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.

NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

LEGEND

 "T" MARKING

 POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

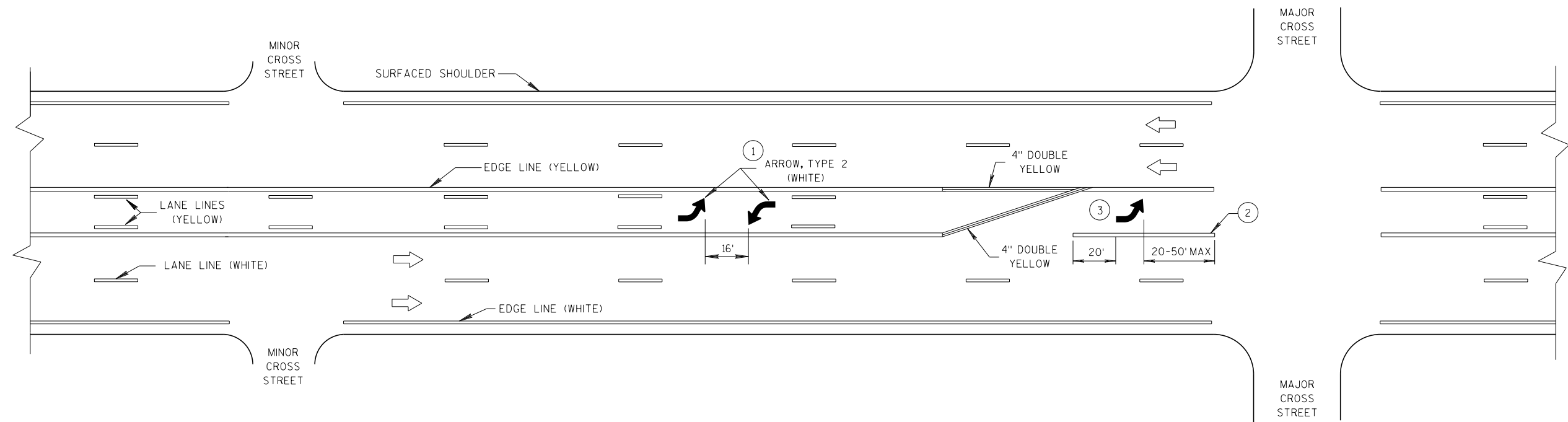
FHWA

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

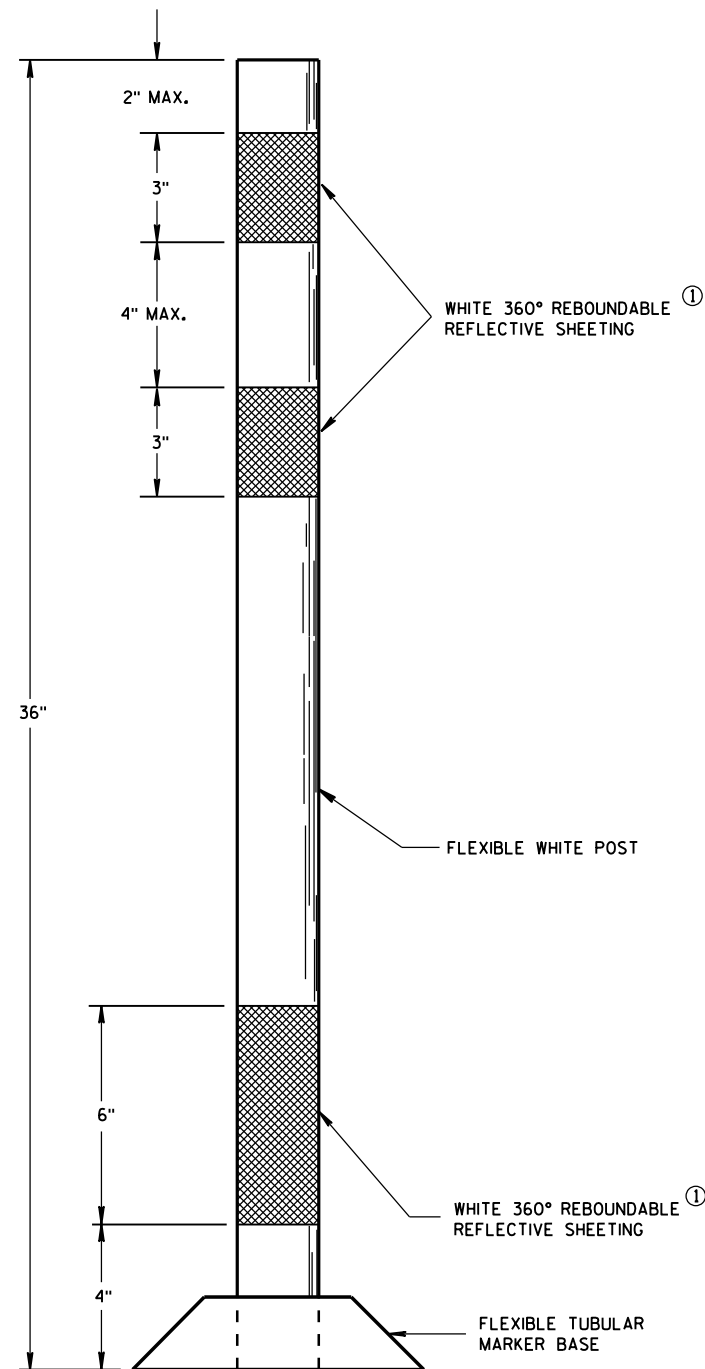
GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

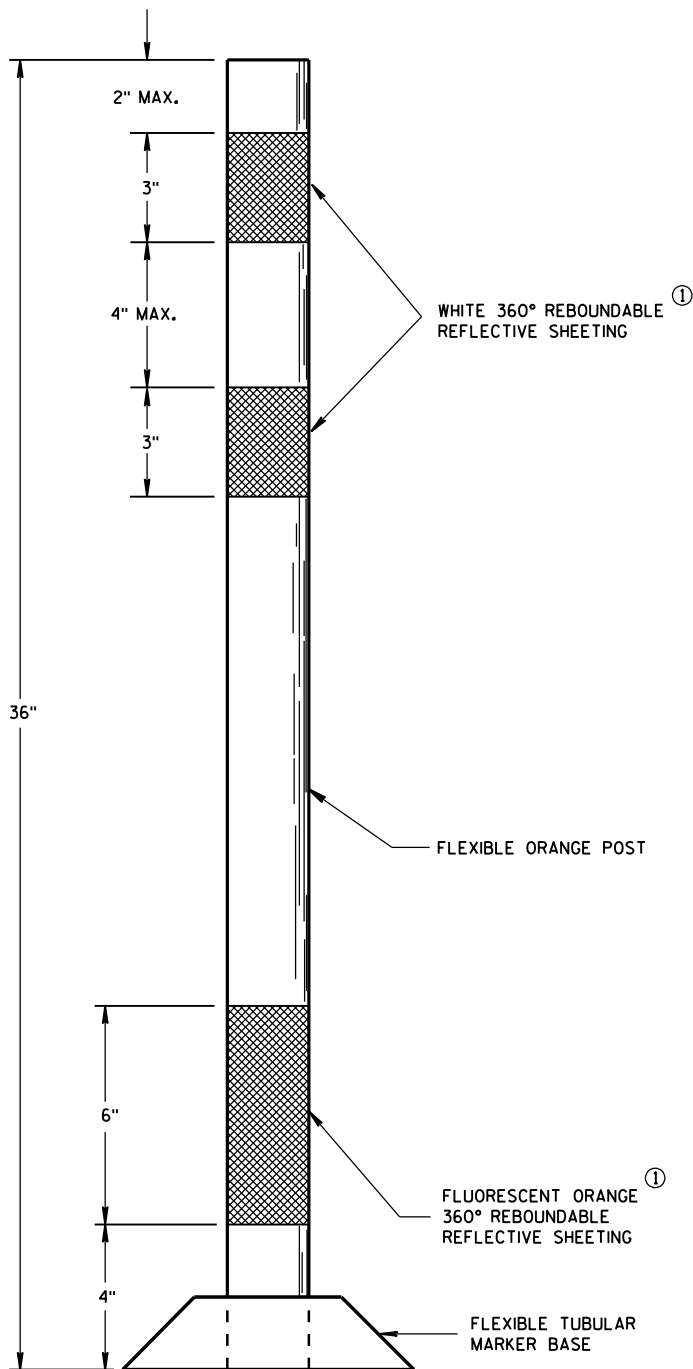
➔ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

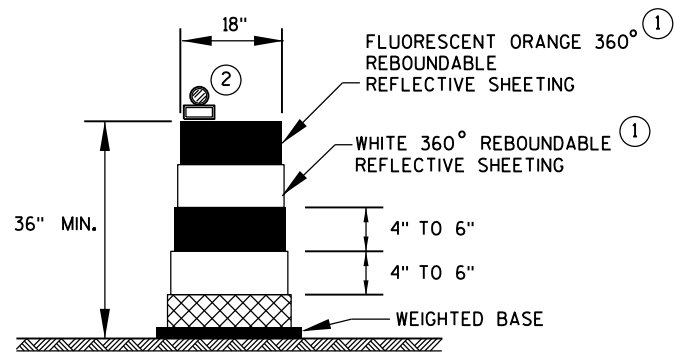
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

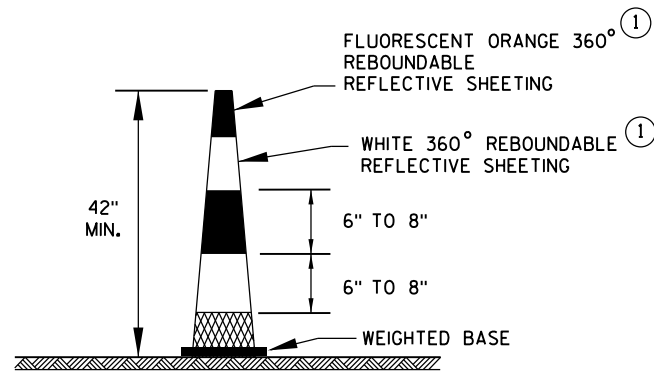
THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	



DRUM

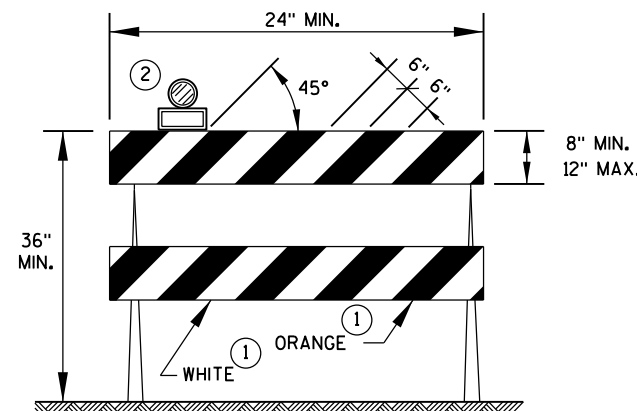


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

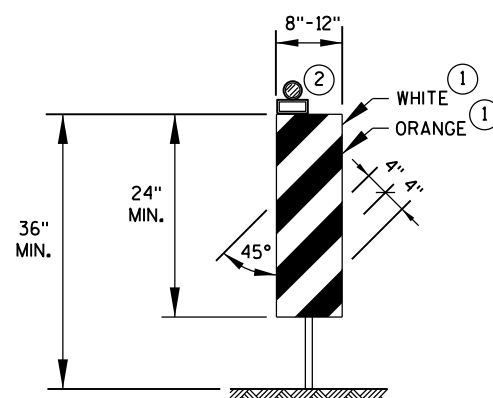
GENERAL NOTES

- 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.



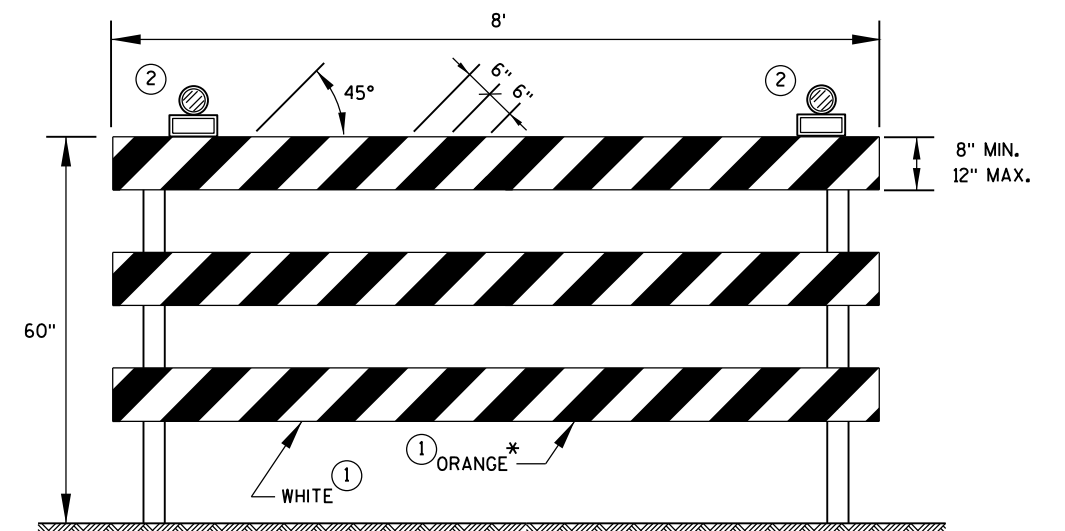
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.
ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 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.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

FHWA

/S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

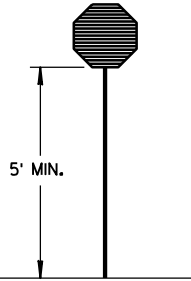
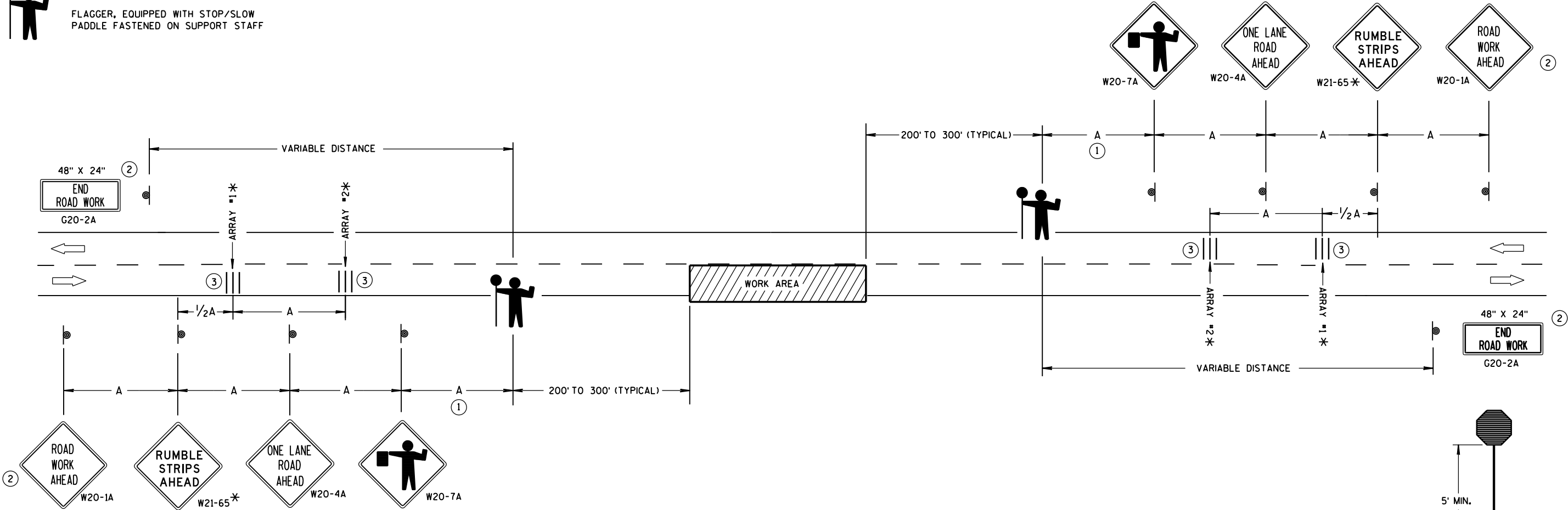
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR 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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

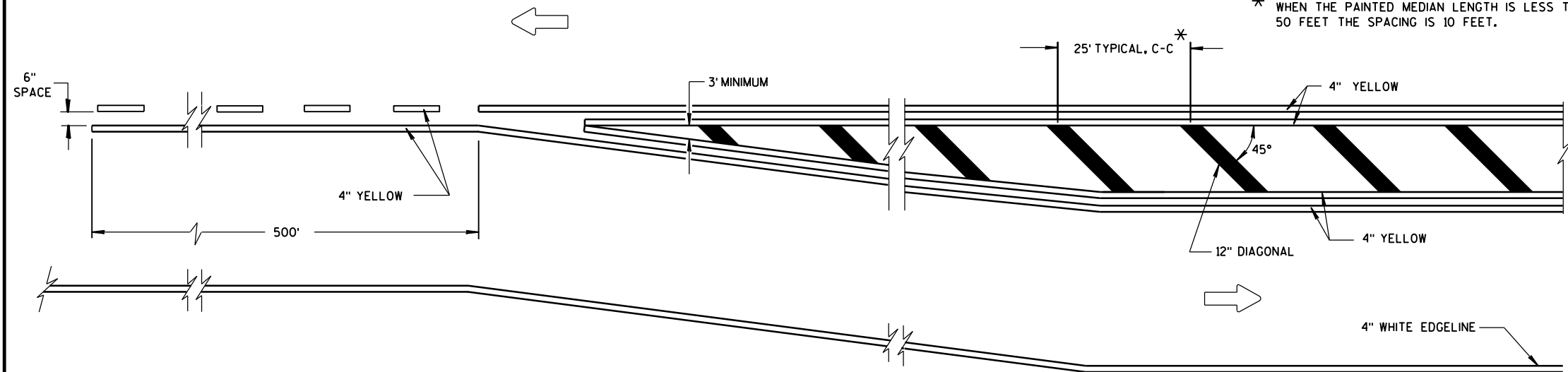
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA

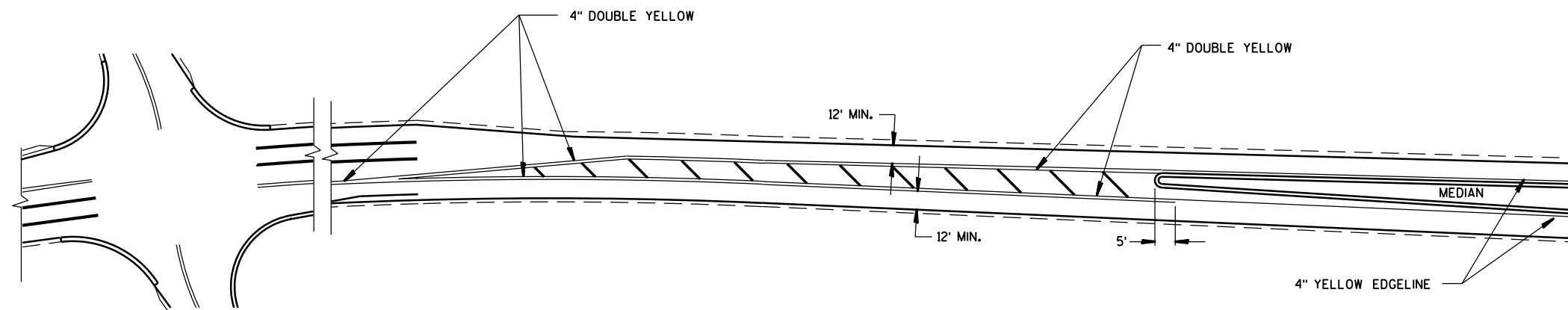


MEDIAN ISLAND DETAIL

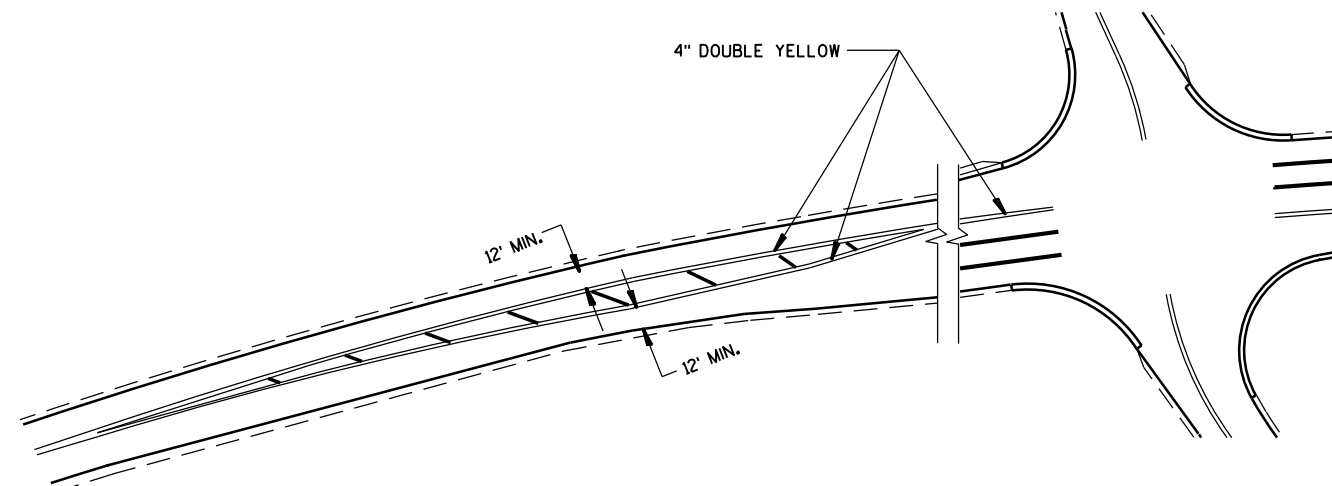
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

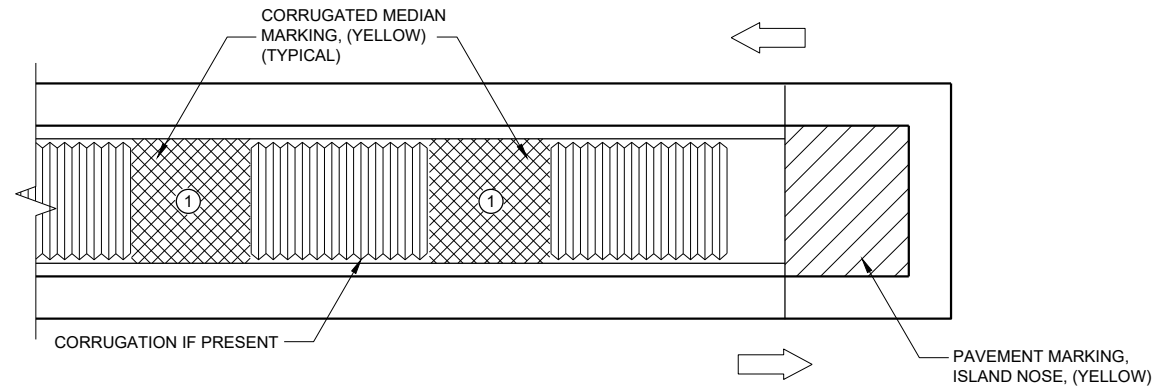


NON APPROACH MARKINGS

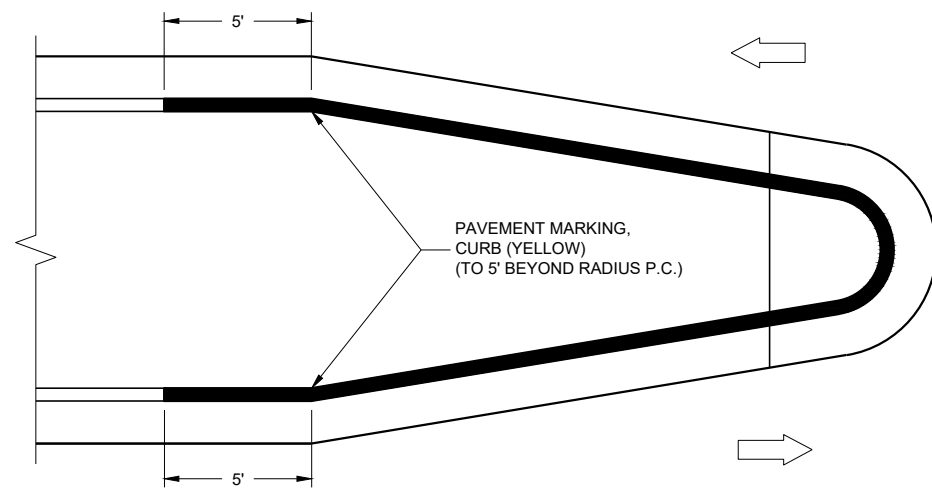
MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

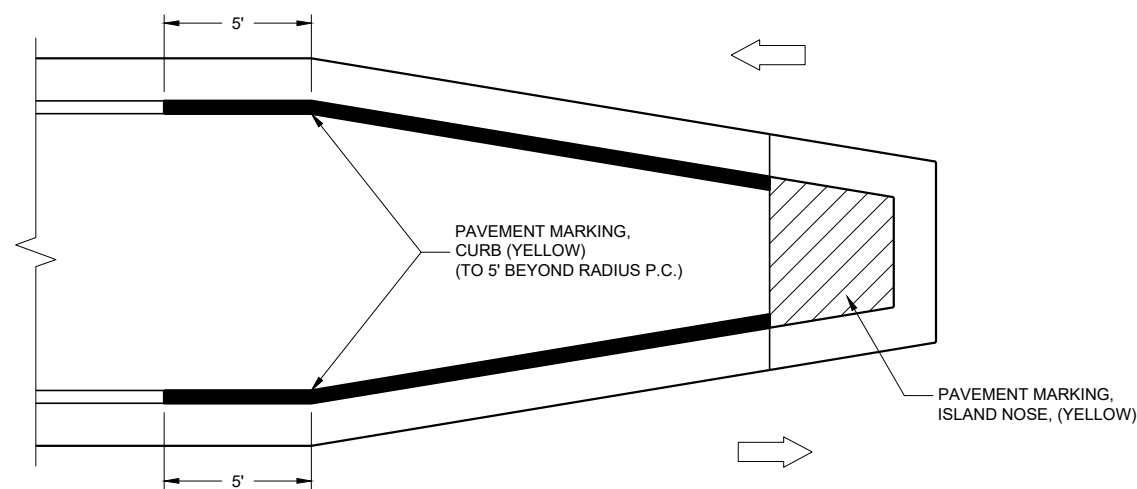
APPROVED
June 2017 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE







MEDIAN ISLAND WITH ROUND BLUNT 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.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

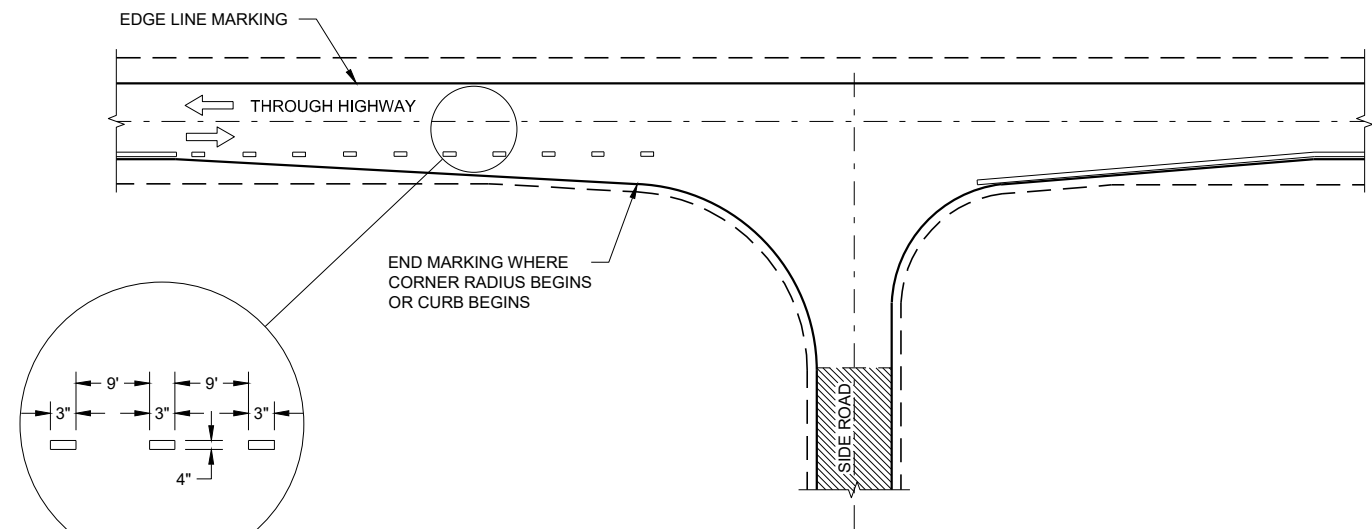
PAVEMENT MARKINGS (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

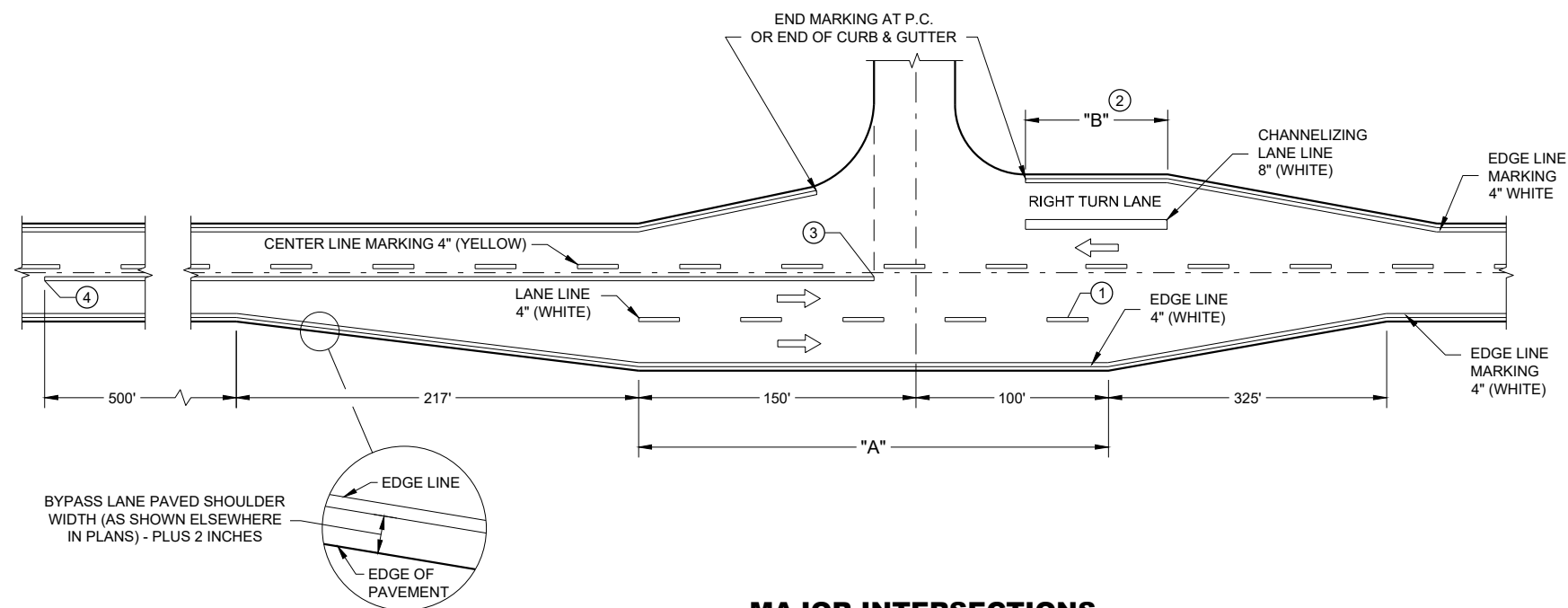
APPROVED
7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



MINOR INTERSECTION



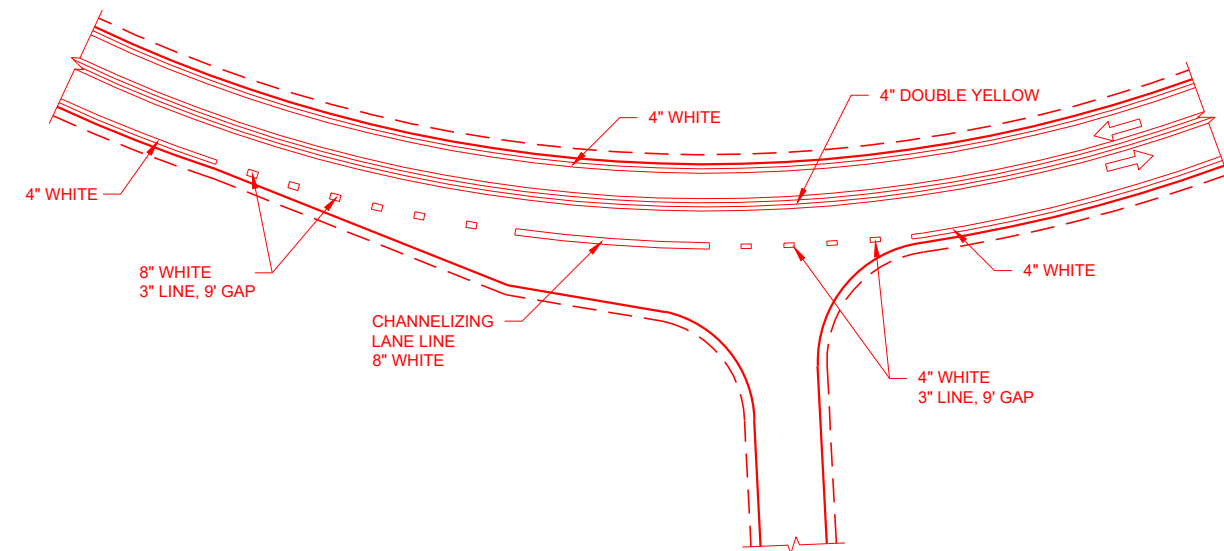
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER

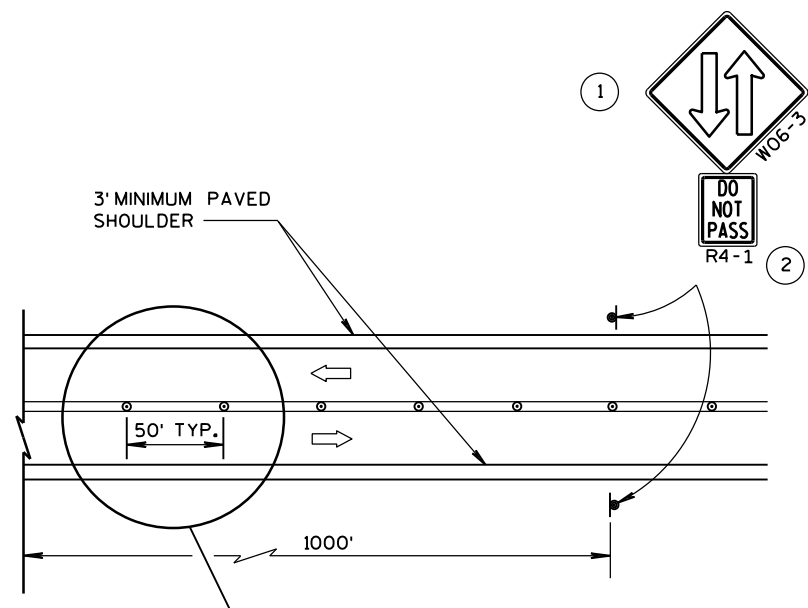
ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL



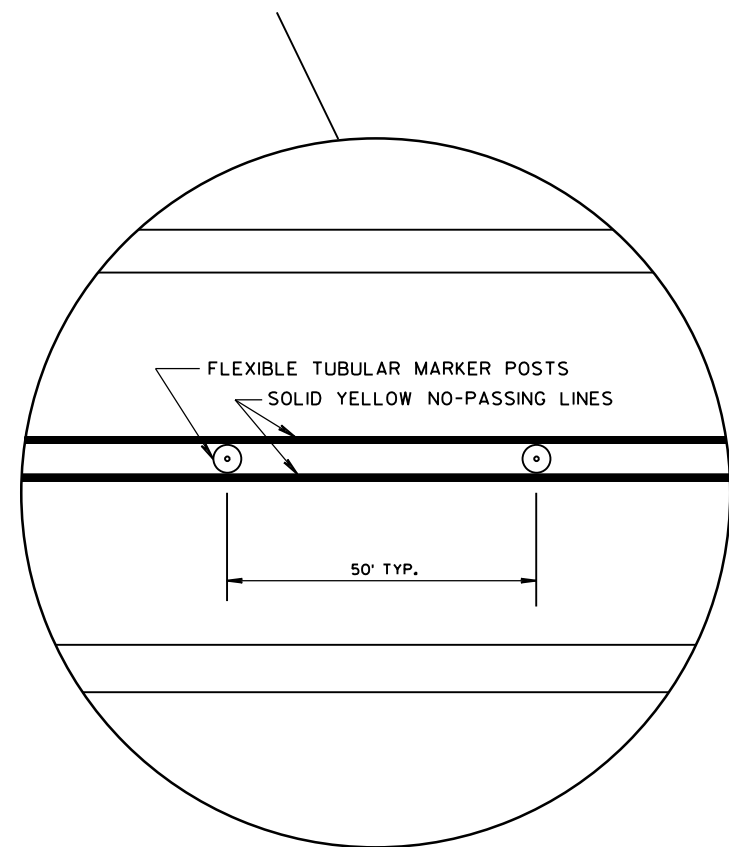
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TWO LANE, TWO WAY OPERATION



LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

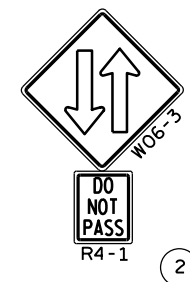
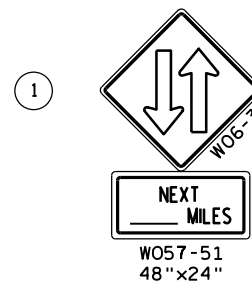
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE WO6-3 WITH THE WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE WO6-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN WO6-3 SIGNS.

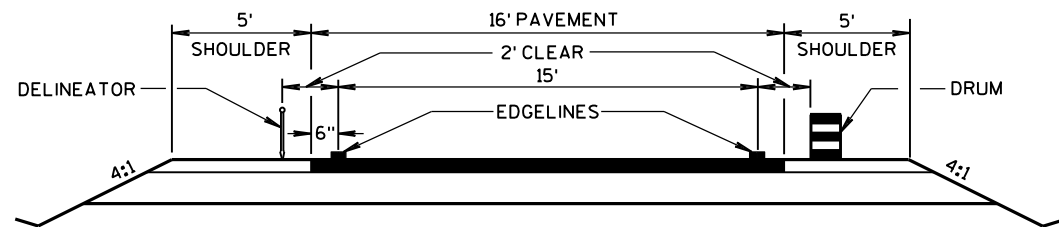
2 CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

TRAFFIC CONTROL,
TWO LANE TWO
WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

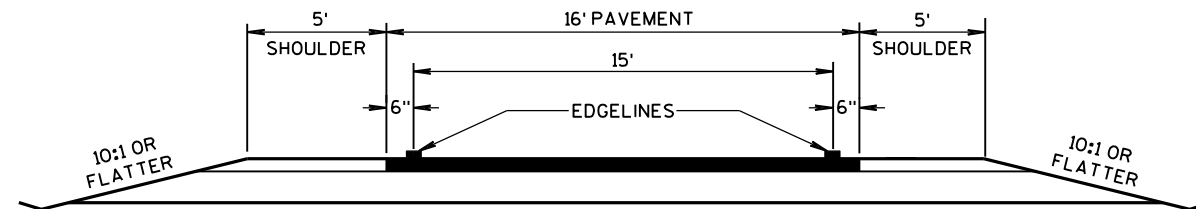
APPROVED

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



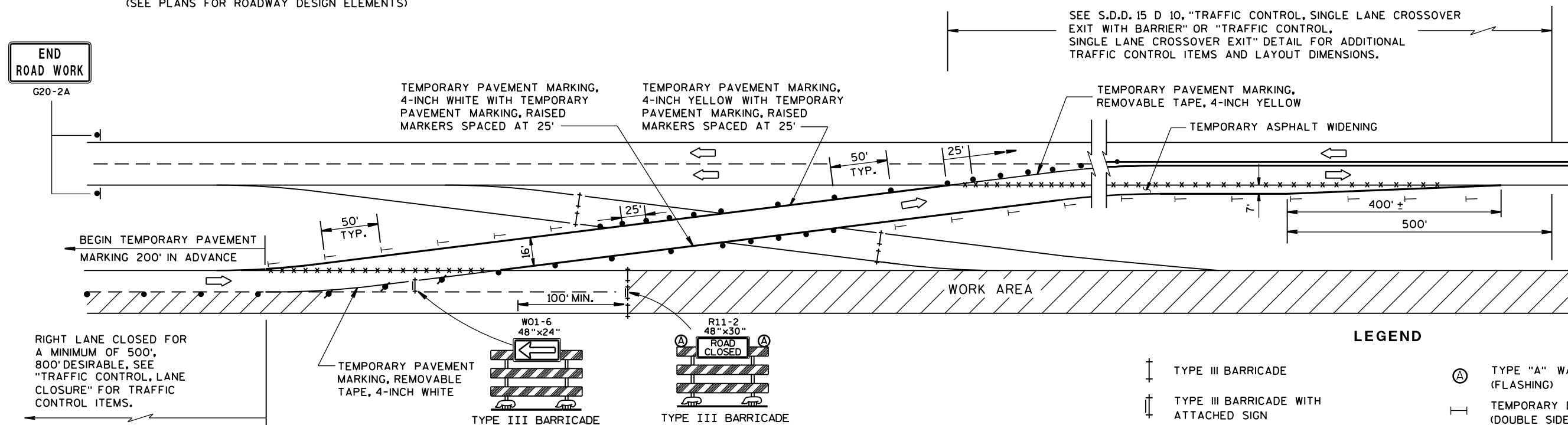
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

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 PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

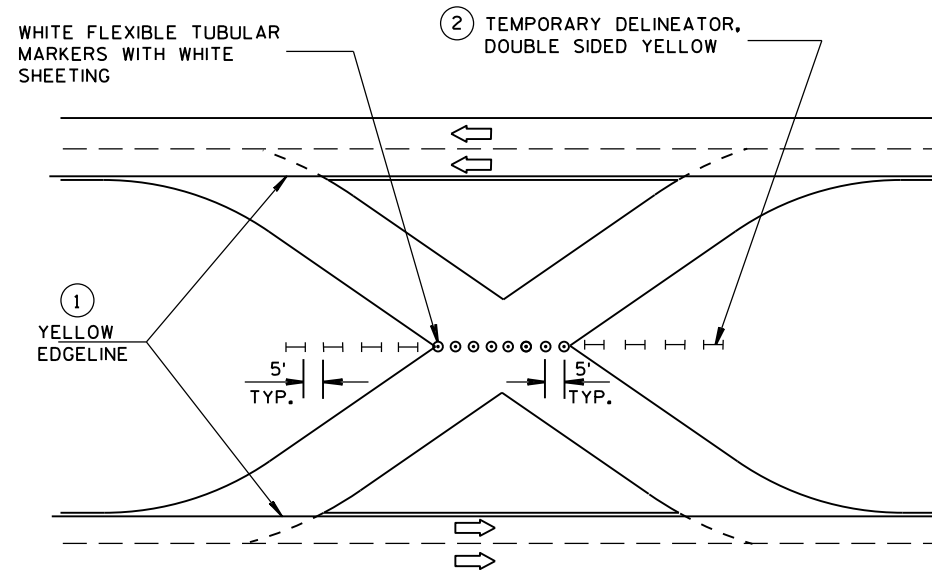
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" 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.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

- 1 FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.
- 2 FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.

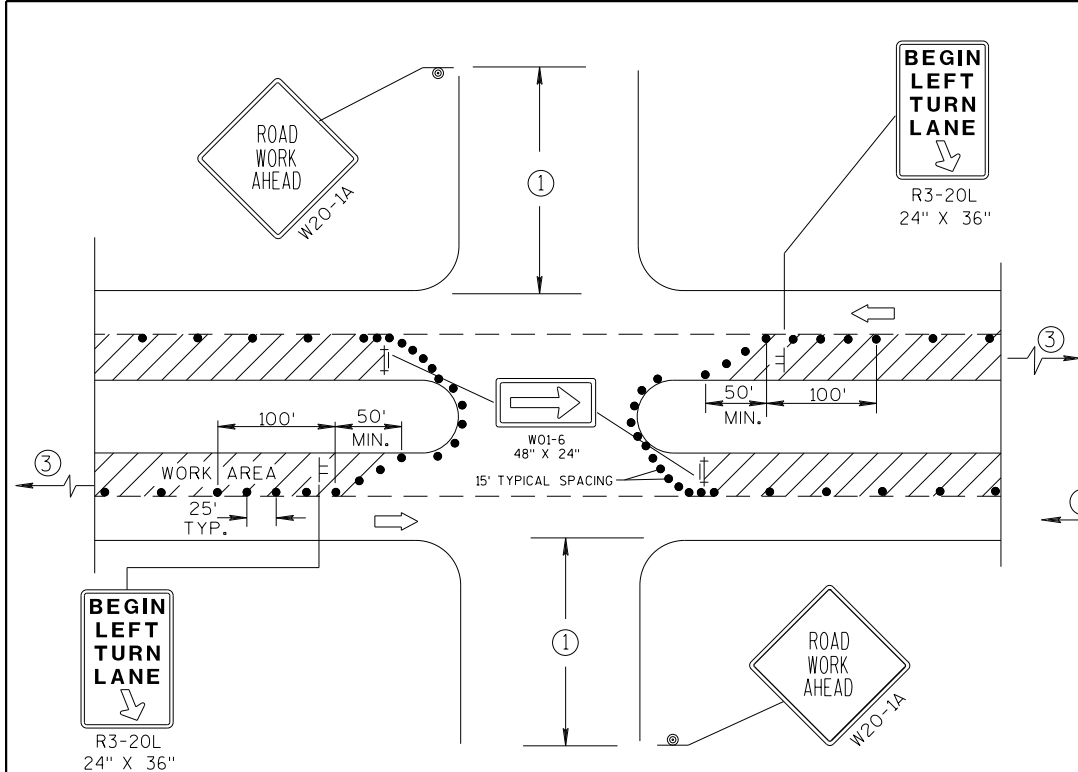


TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

**TRAFFIC CONTROL,
SINGLE LANE CROSSOVER**

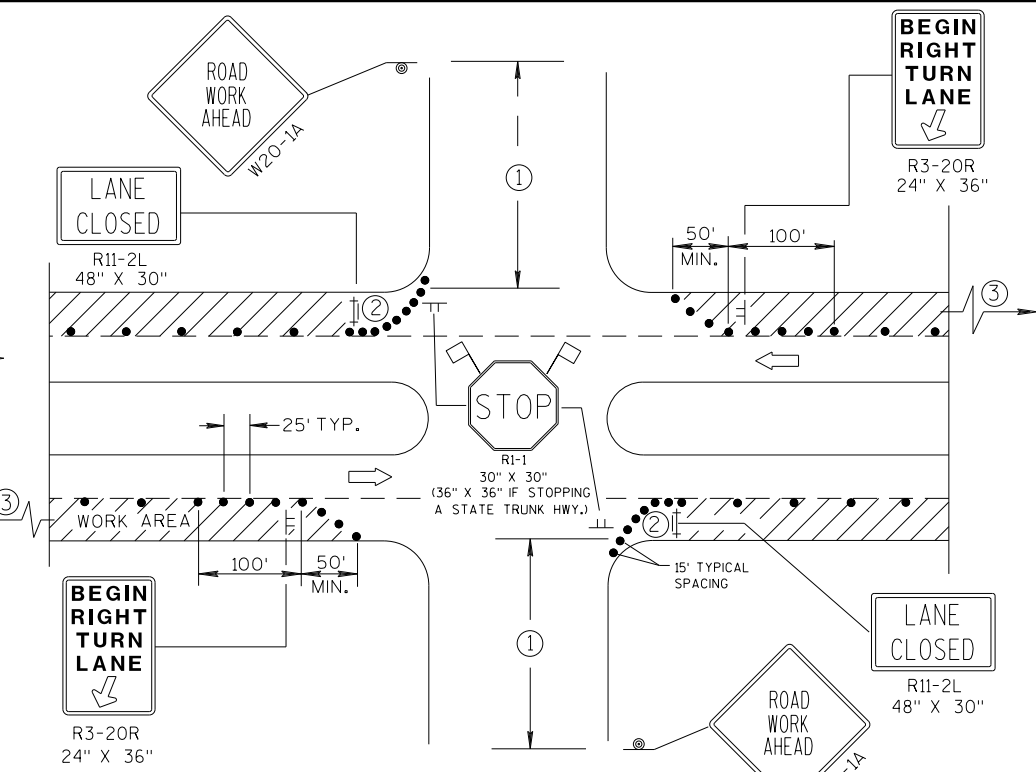
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept., 2017 /S/ Andrew Heldtke
WORK ZONE ENGINEER
FHWA



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT
INTERSECTIONS WHENEVER
STAGING OF WORK ALLOWS.
TAPER AND TURN LANE
LENGTHS BASED ON FIELD
CONDITIONS AS APPROVED
BY THE ENGINEER.



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 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.

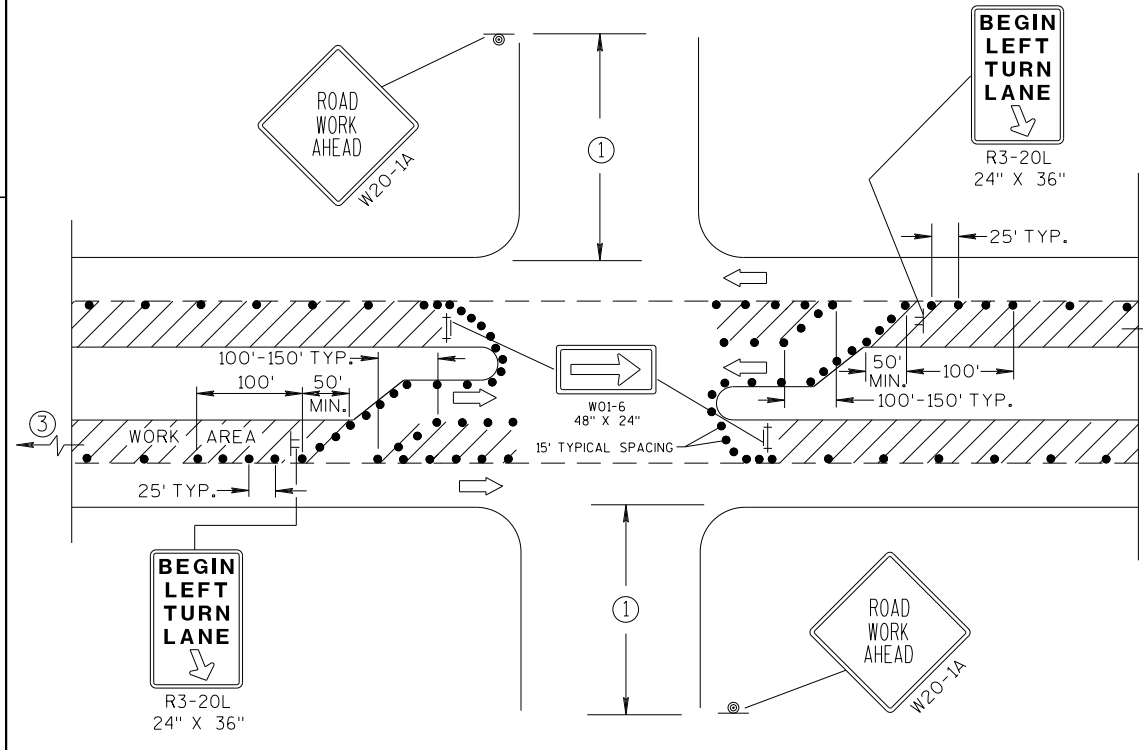
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

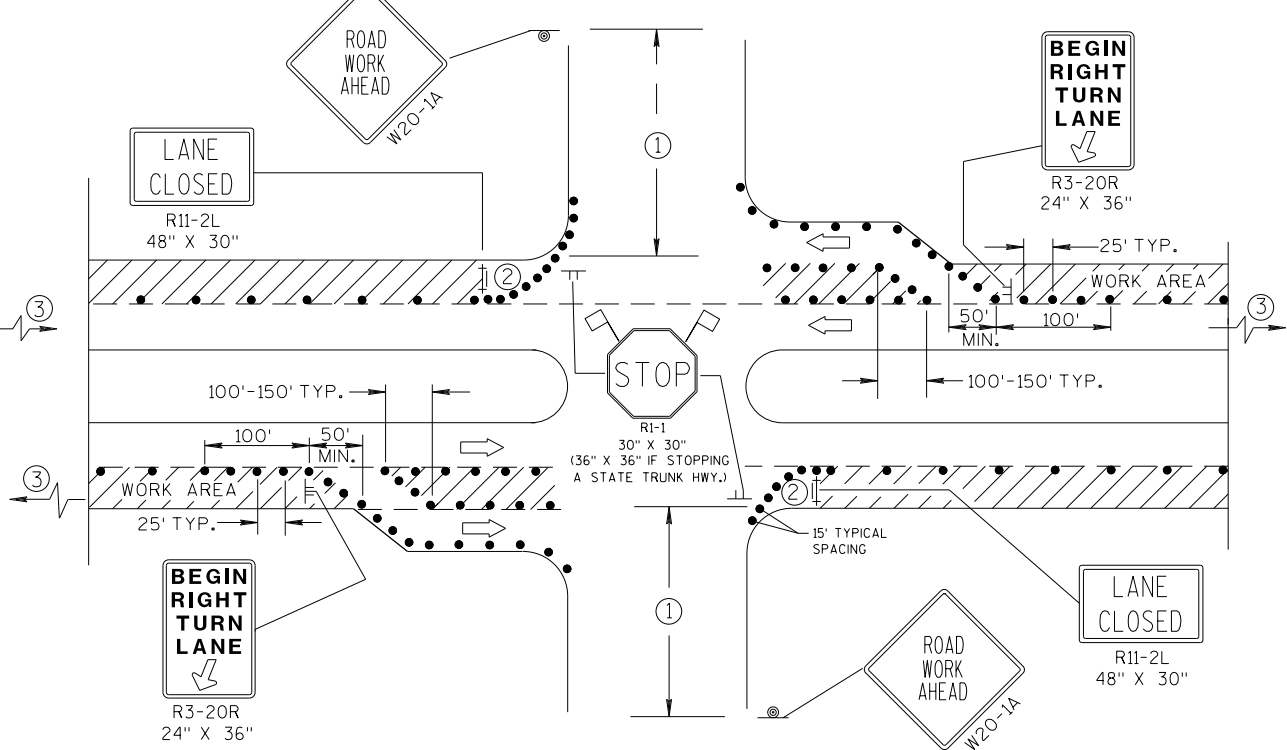
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- 🚩 FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

TRAFFIC CONTROL,
INTERSECTION WITHIN
SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.

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.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

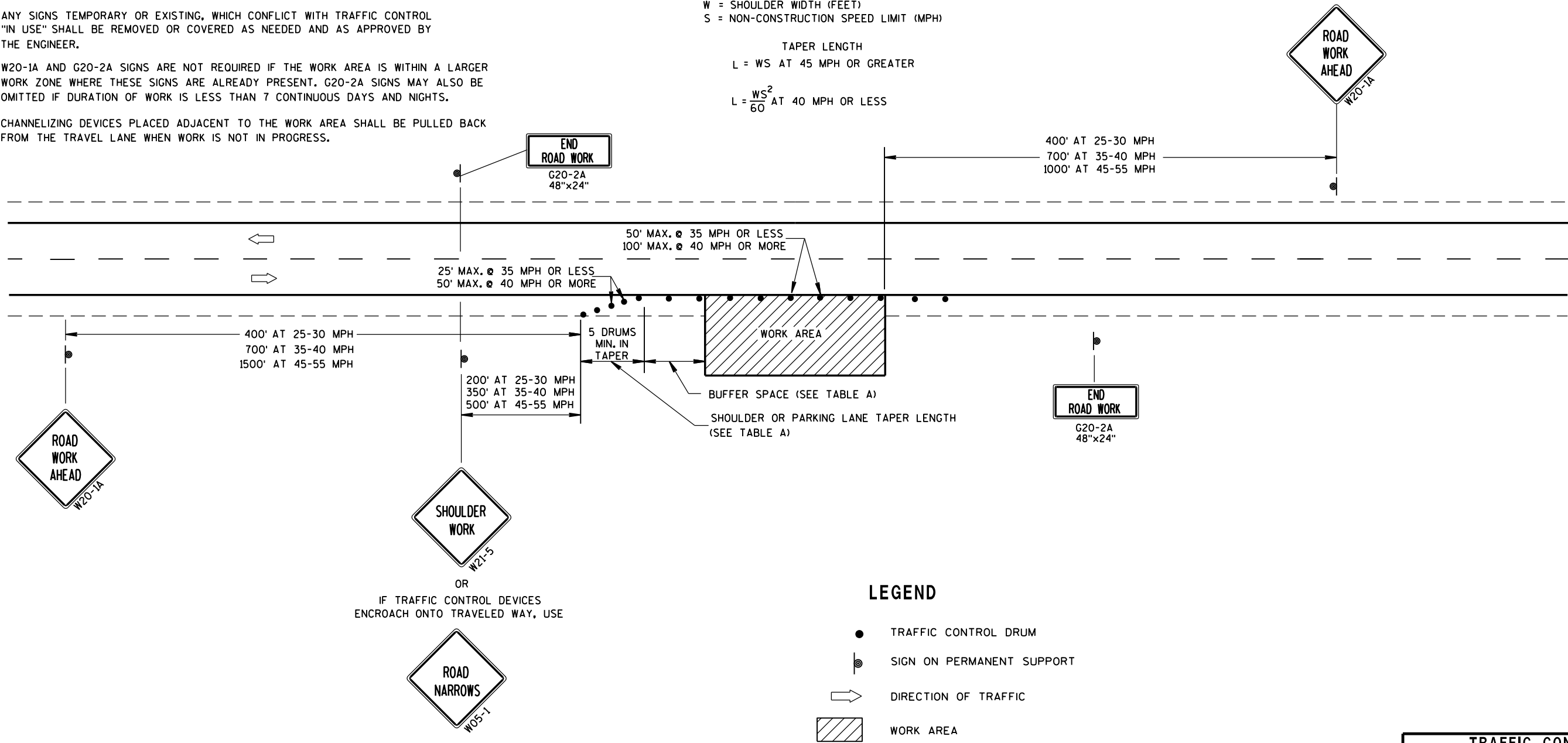
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

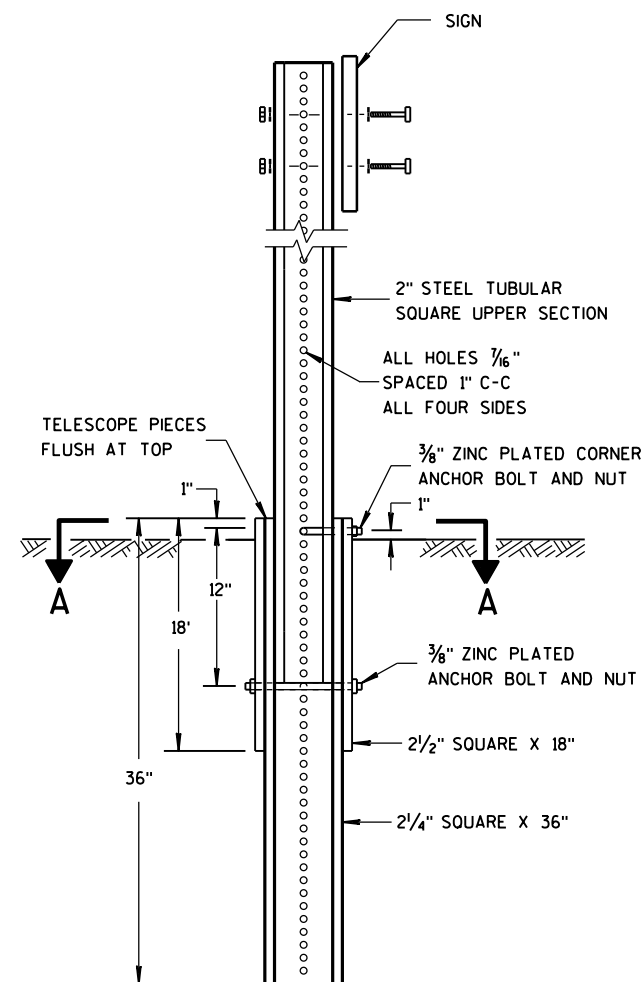
SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

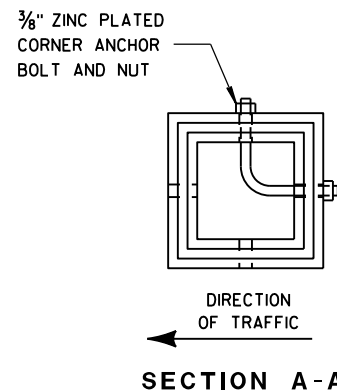


DETAIL OF TUBULAR STEEL SIGN POST

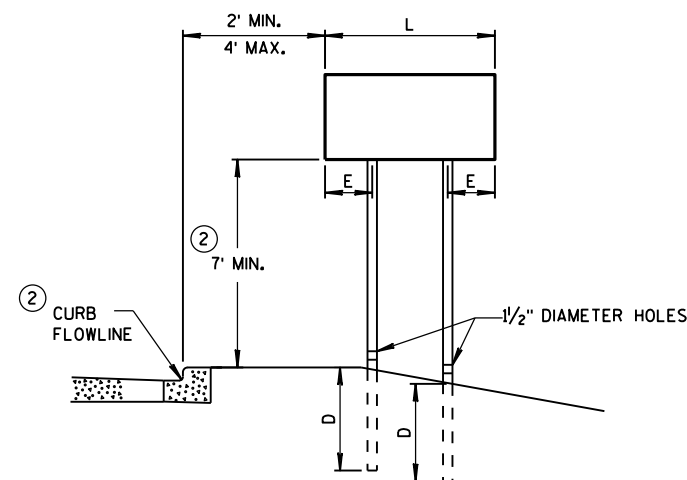
TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



SECTION A-A

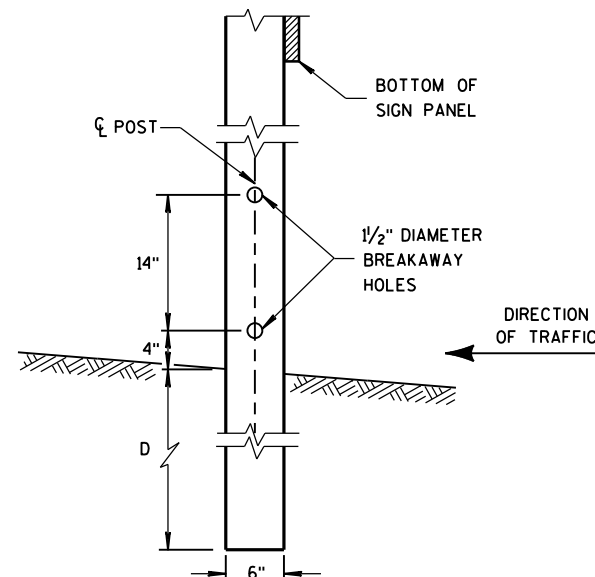


URBAN AREA

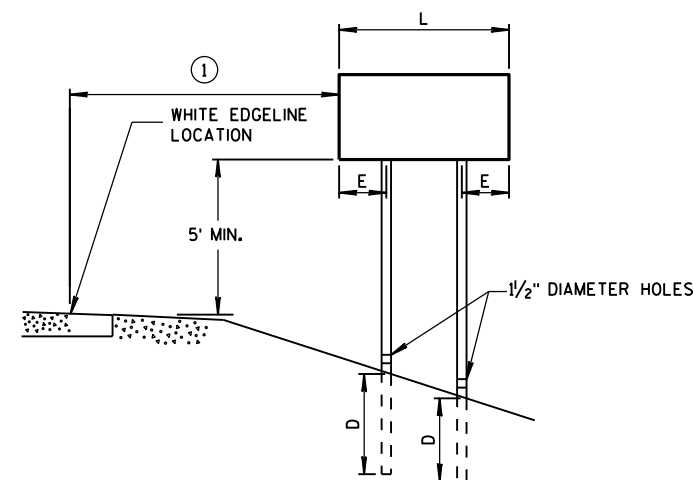
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

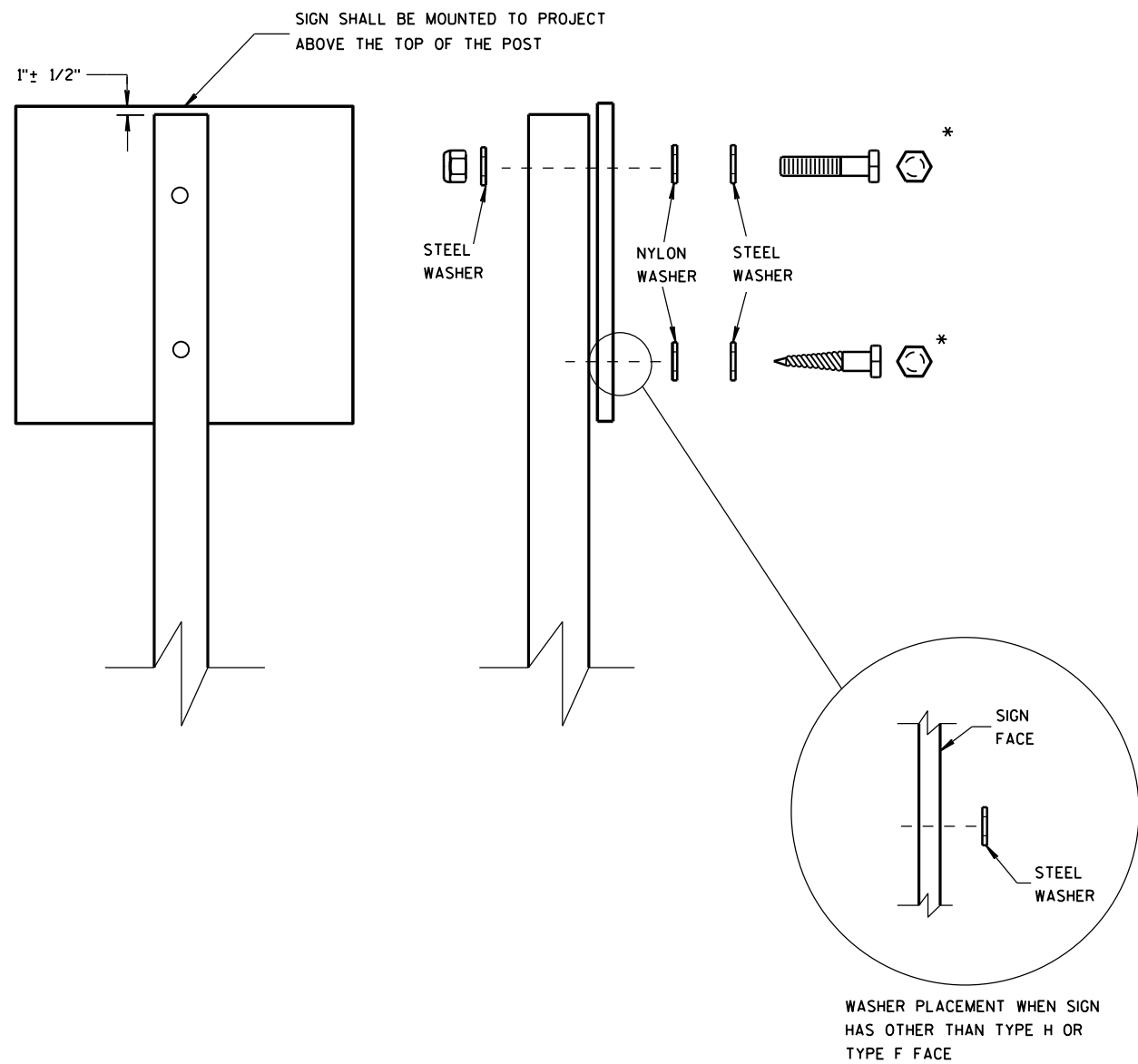
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

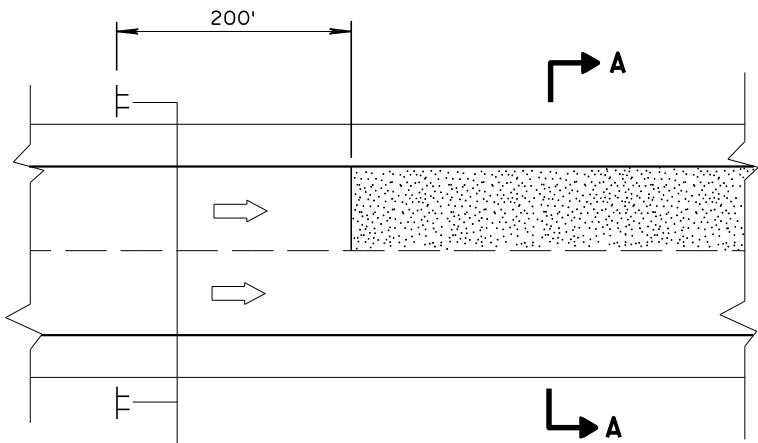
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 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 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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

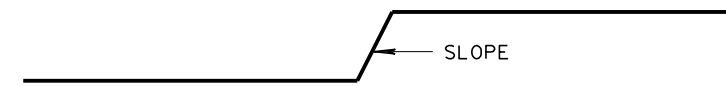


MULTI-LANE

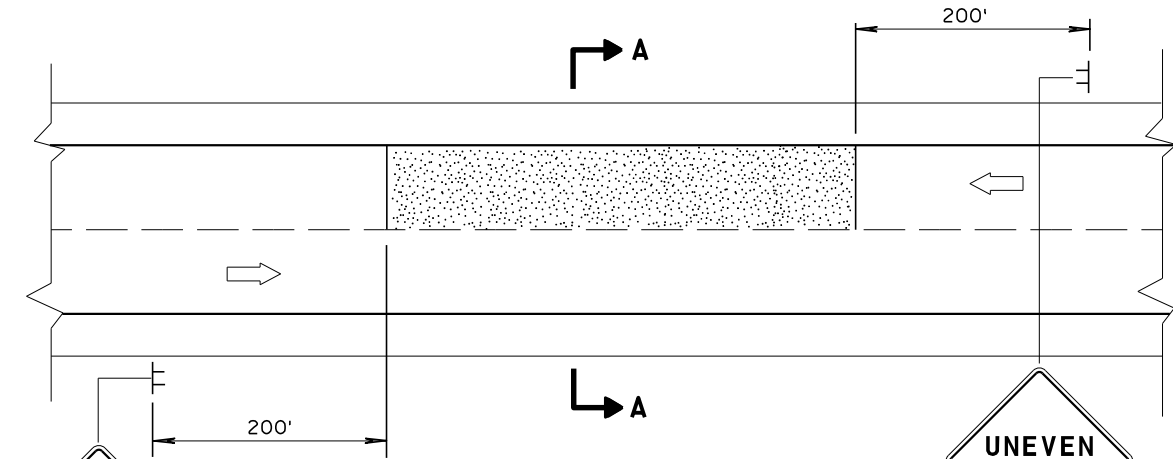


SECTION A-A

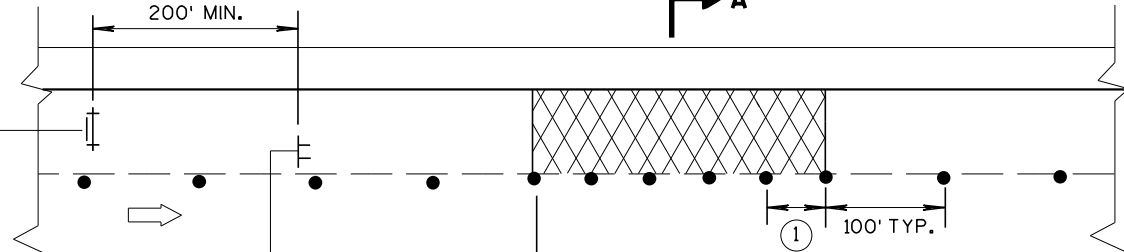
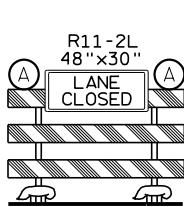
OR



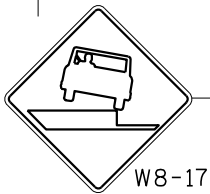
SECTION A-A



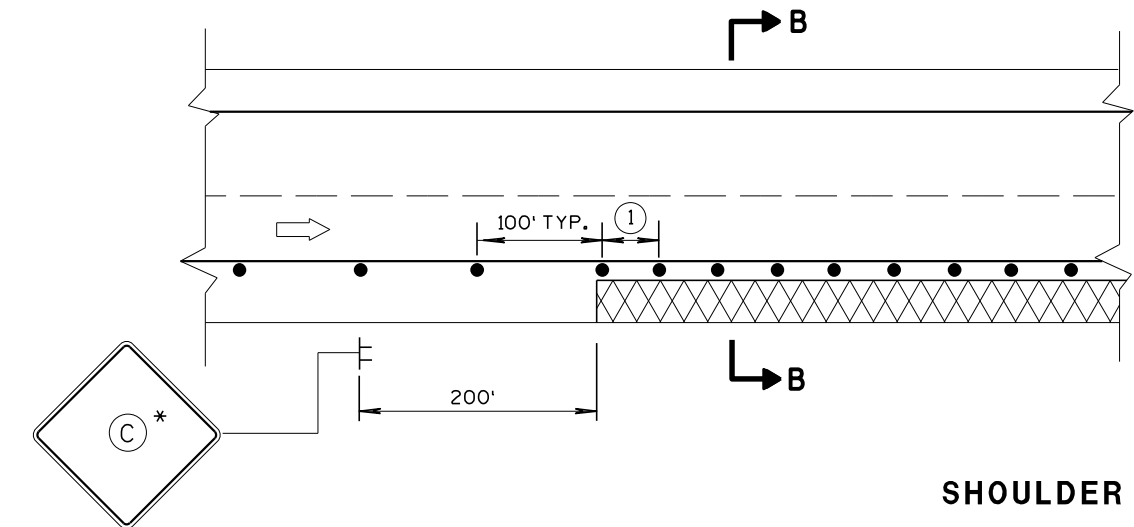
TWO-WAY TWO LANE



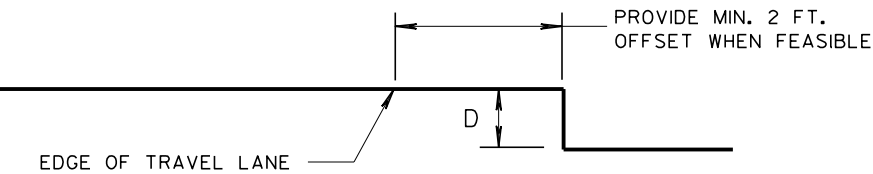
MULTI-LANE BASE PATCHING



ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B-B

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.



WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EACH ENTRANCE RAMP.

① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

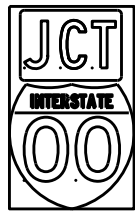
D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 W08-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL,
DROP-OFF SIGNING

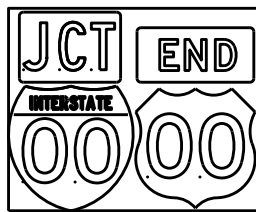
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

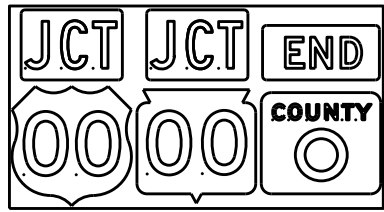
TYPICAL ASSEMBLIES



J1-1



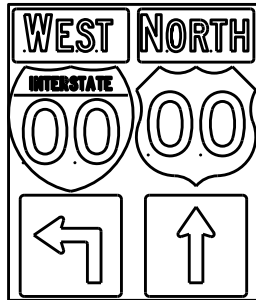
J1-2



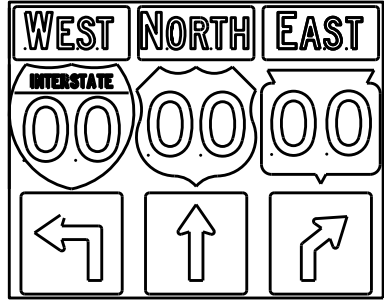
J1-3



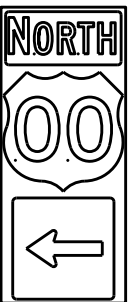
J2-1



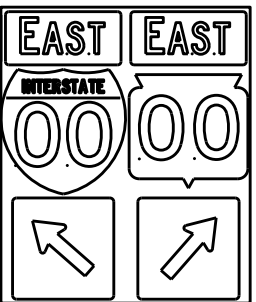
J2-2



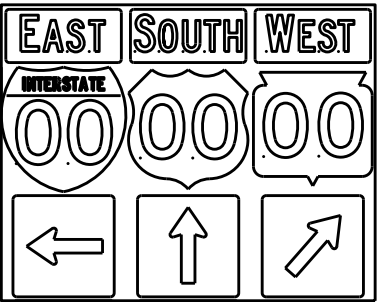
J2-3



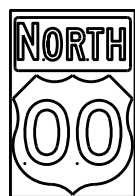
J3-1



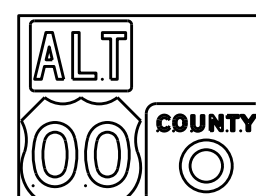
J3-2



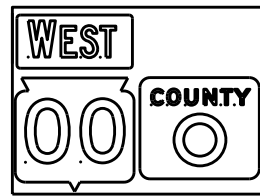
J3-3



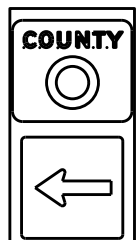
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

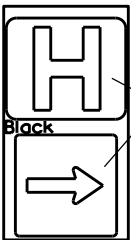


J22-1



JV

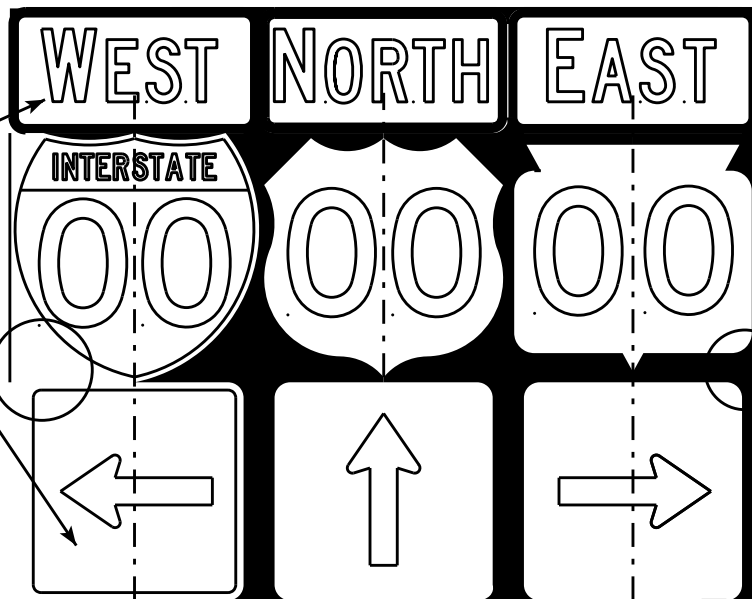
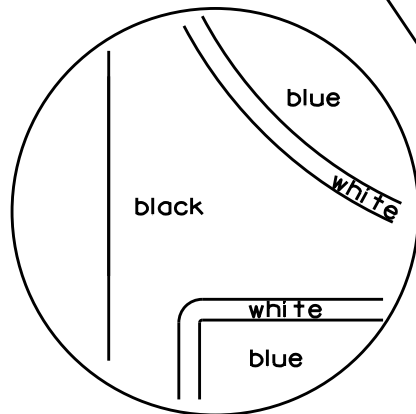
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. 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.
7. 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.
8. 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.
9. 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.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN

PLOT DATE : 06-FEB-2014 14:10

PLOT BY : mscs.ja

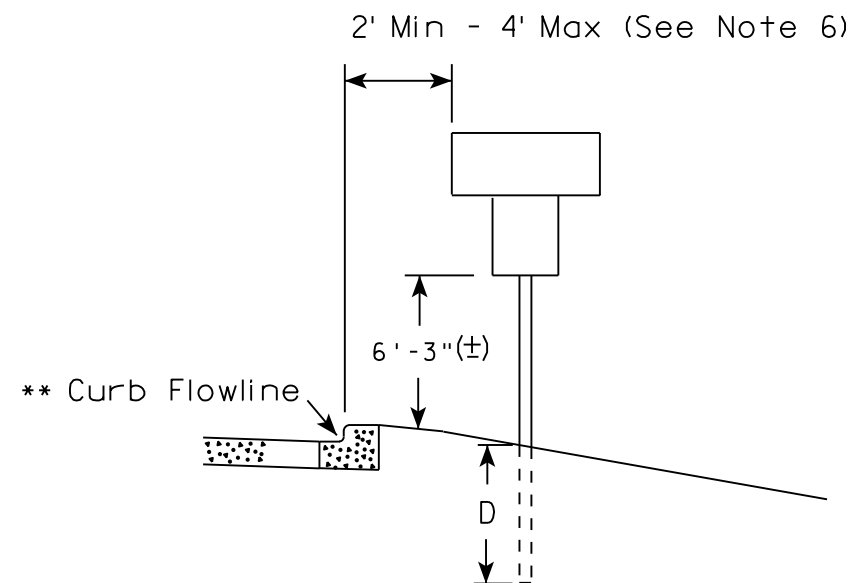
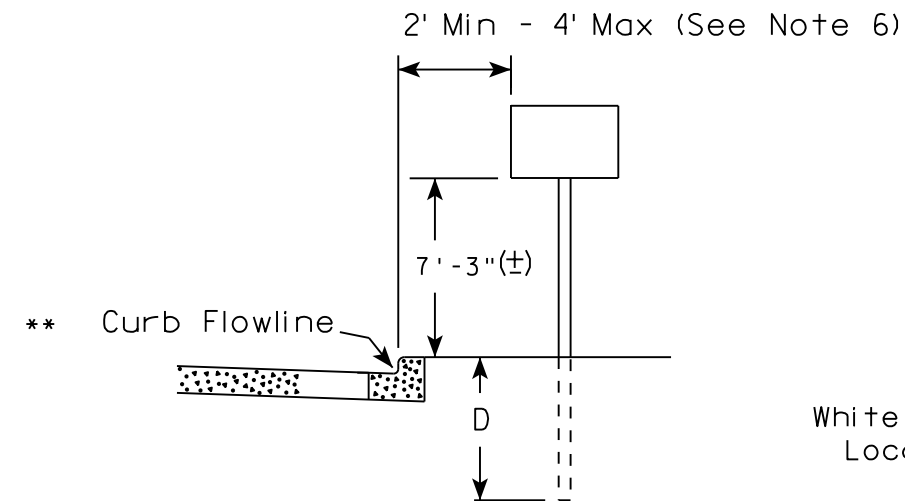
PLOT NAME :

SHEET NO:

E

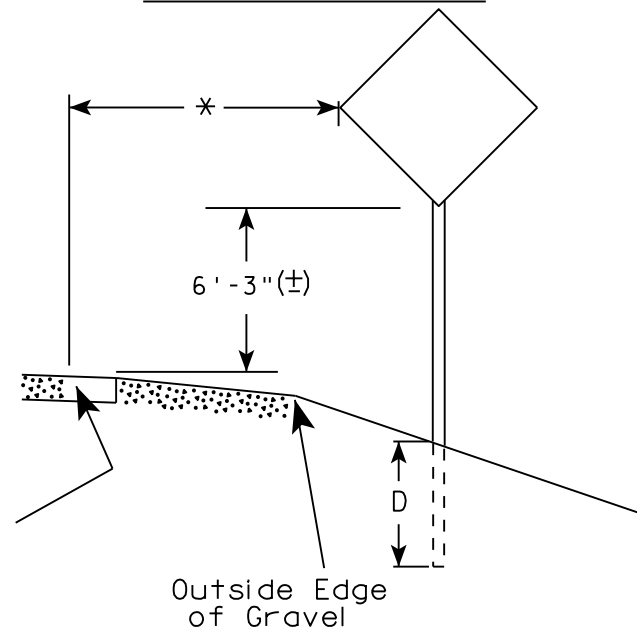
WISDOT/CADDs SHEET 42

URBAN AREA

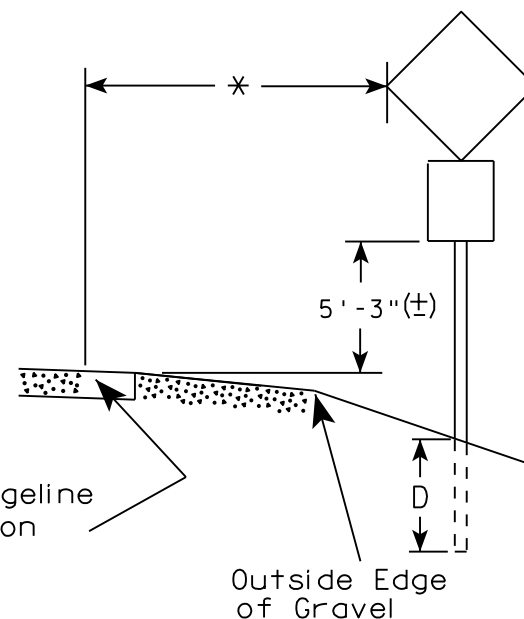


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

✱✱ 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.

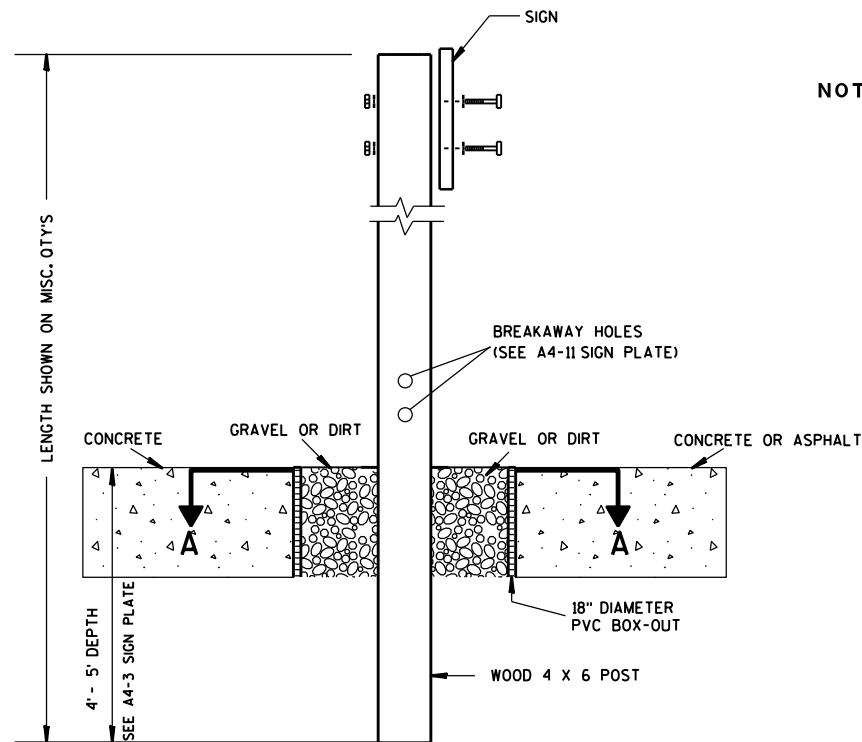
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

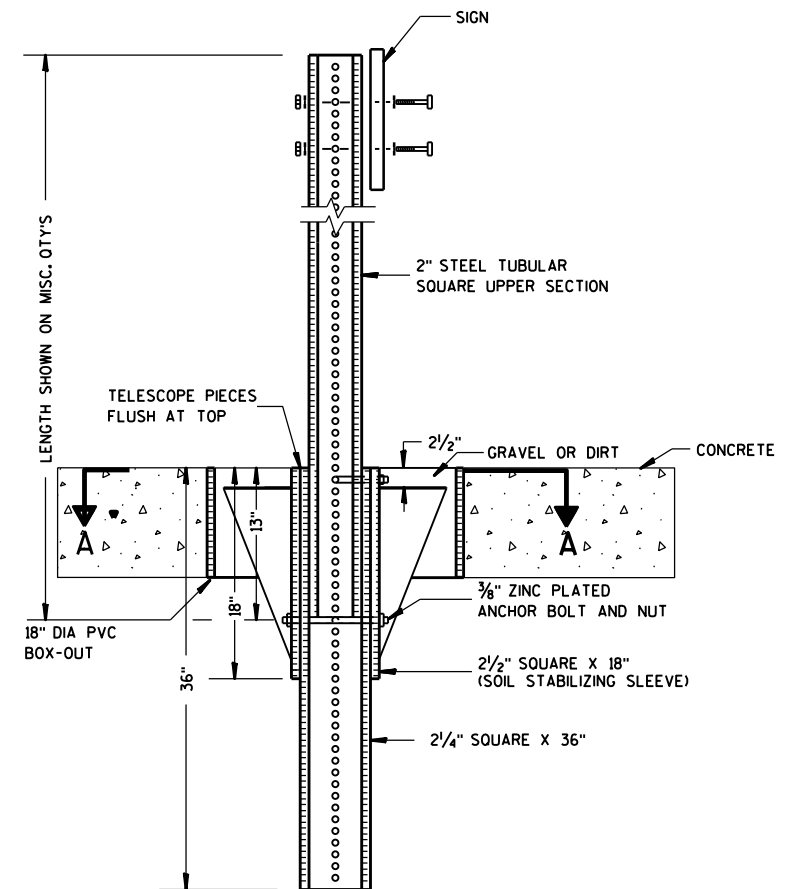
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

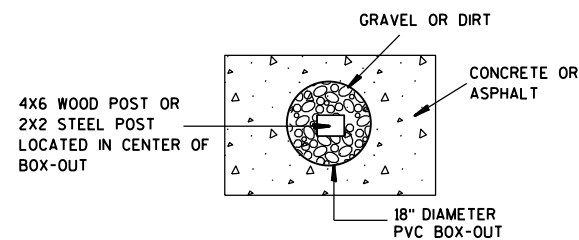
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

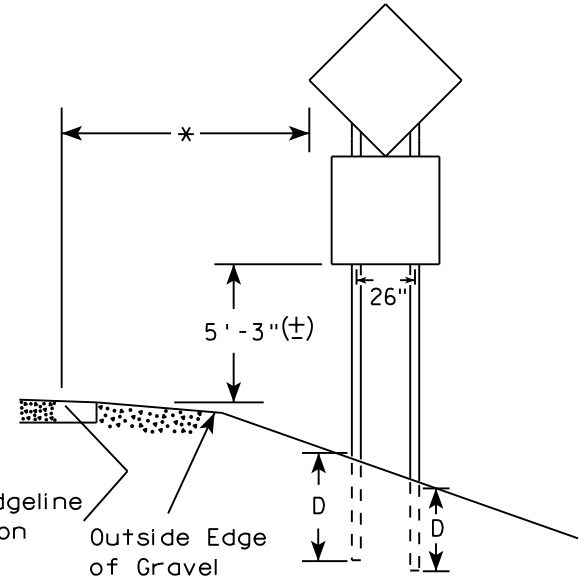
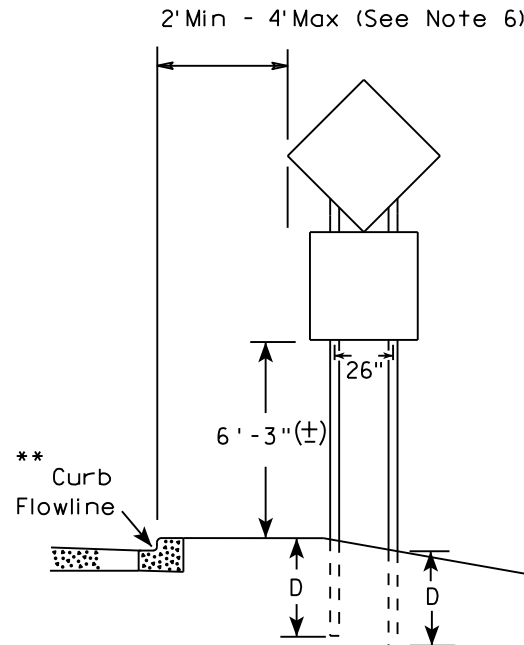
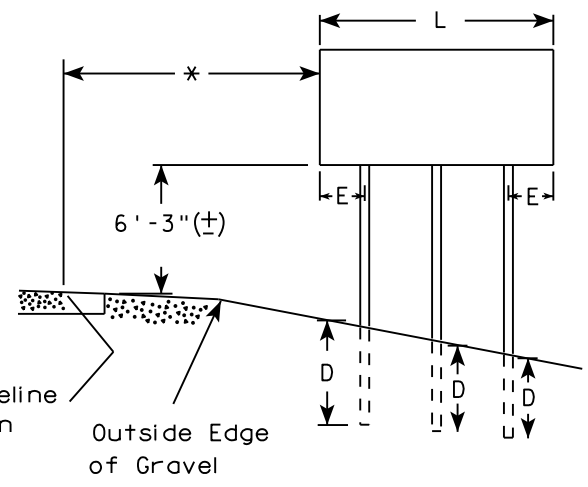
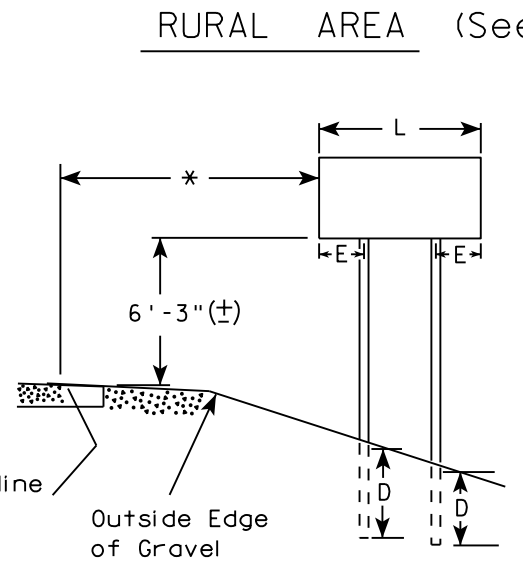
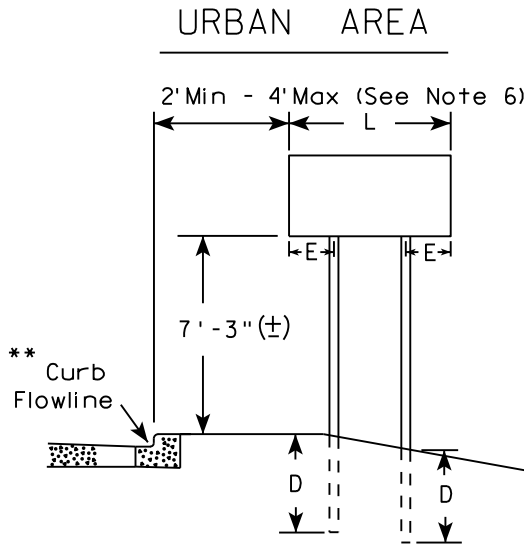
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

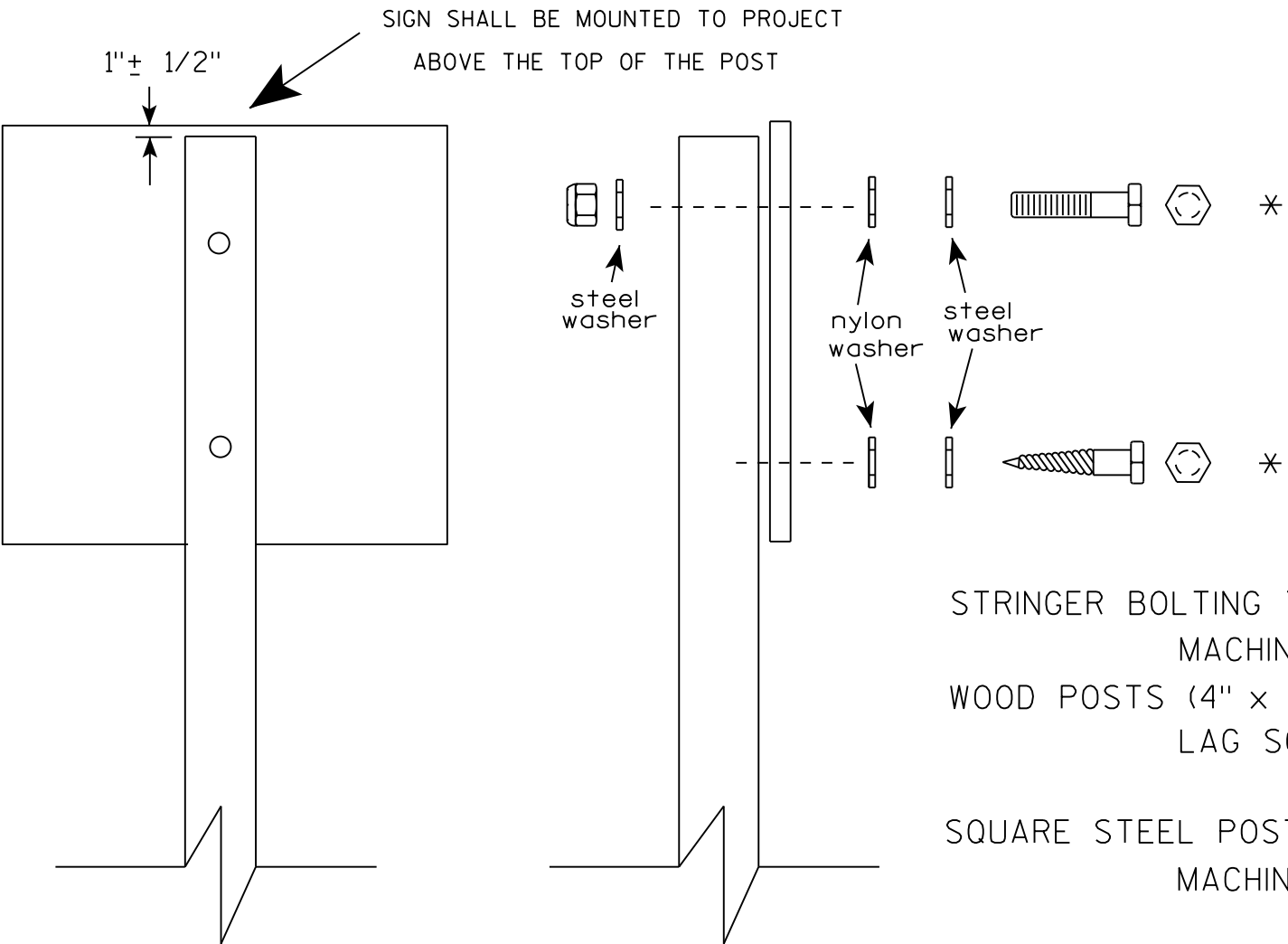
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. J-Assemblies are considered to be one sign for mounting height.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

- * 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 4" or 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

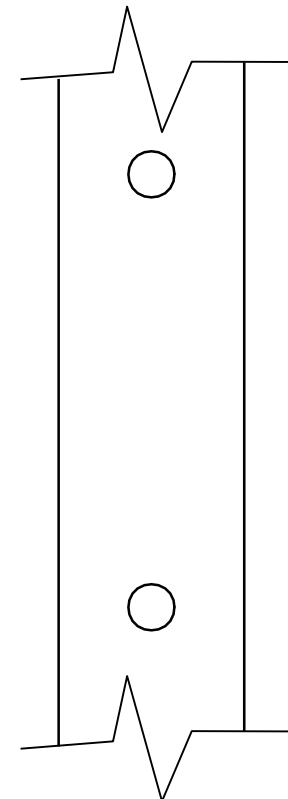
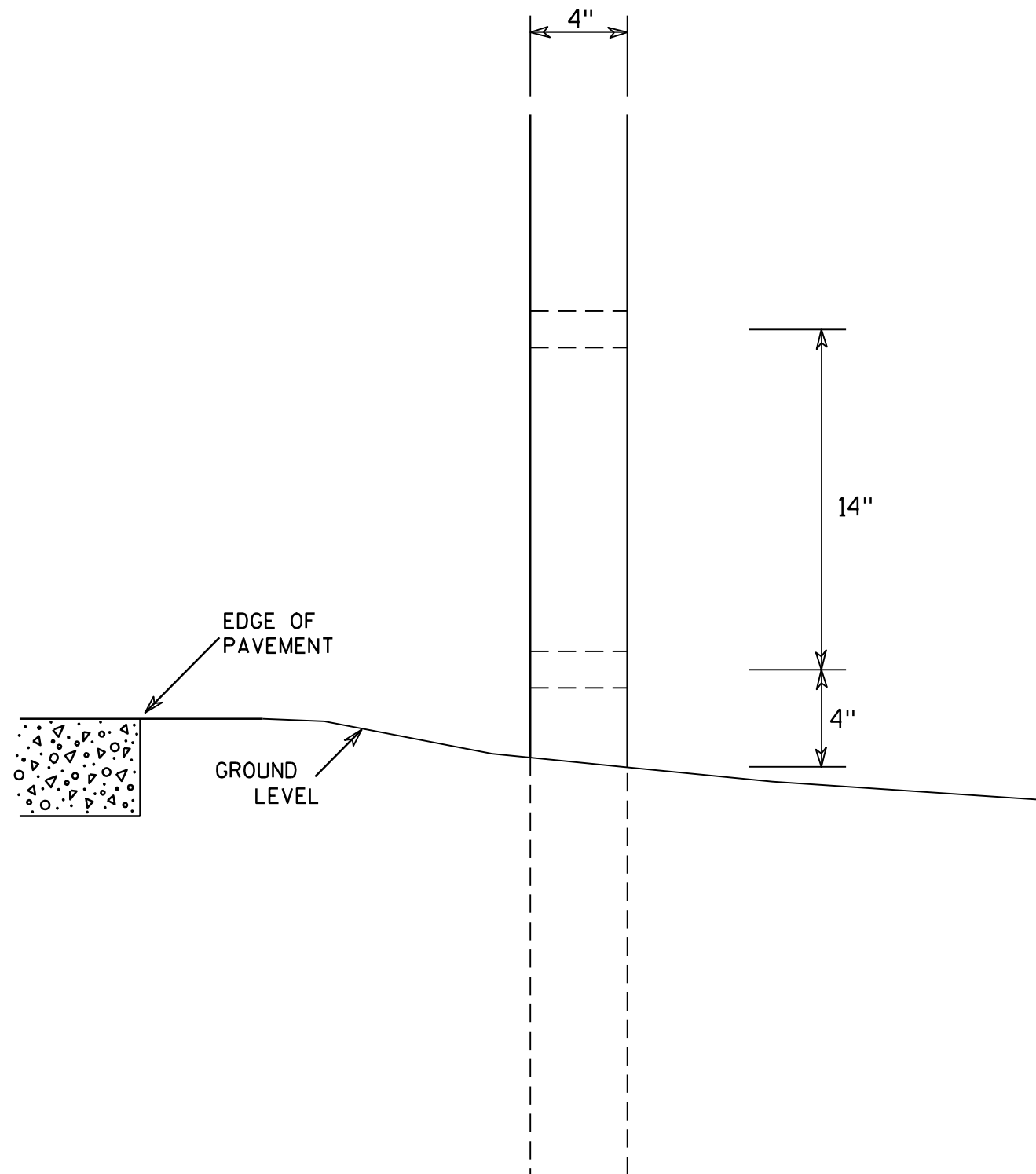
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" 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:

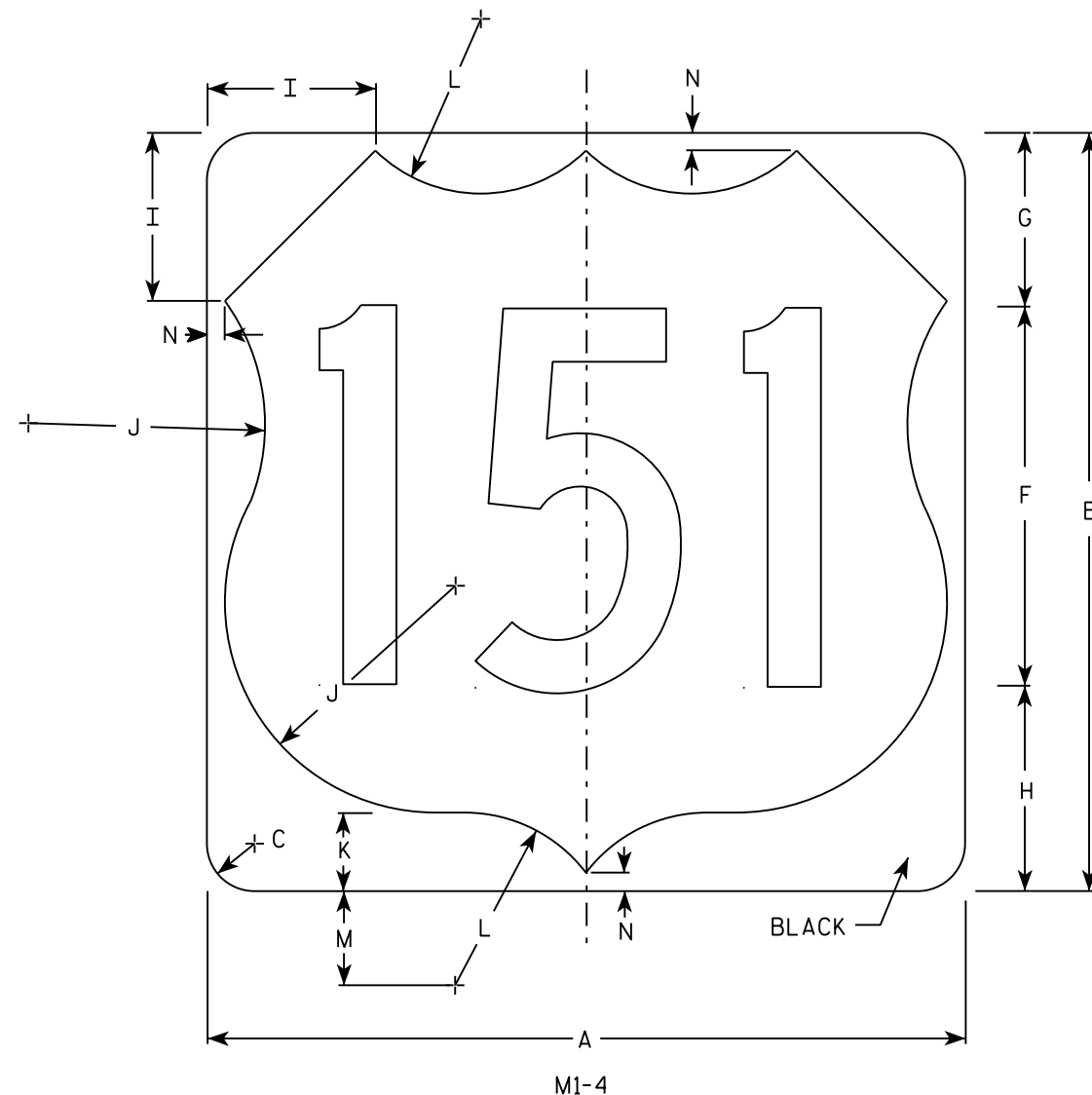
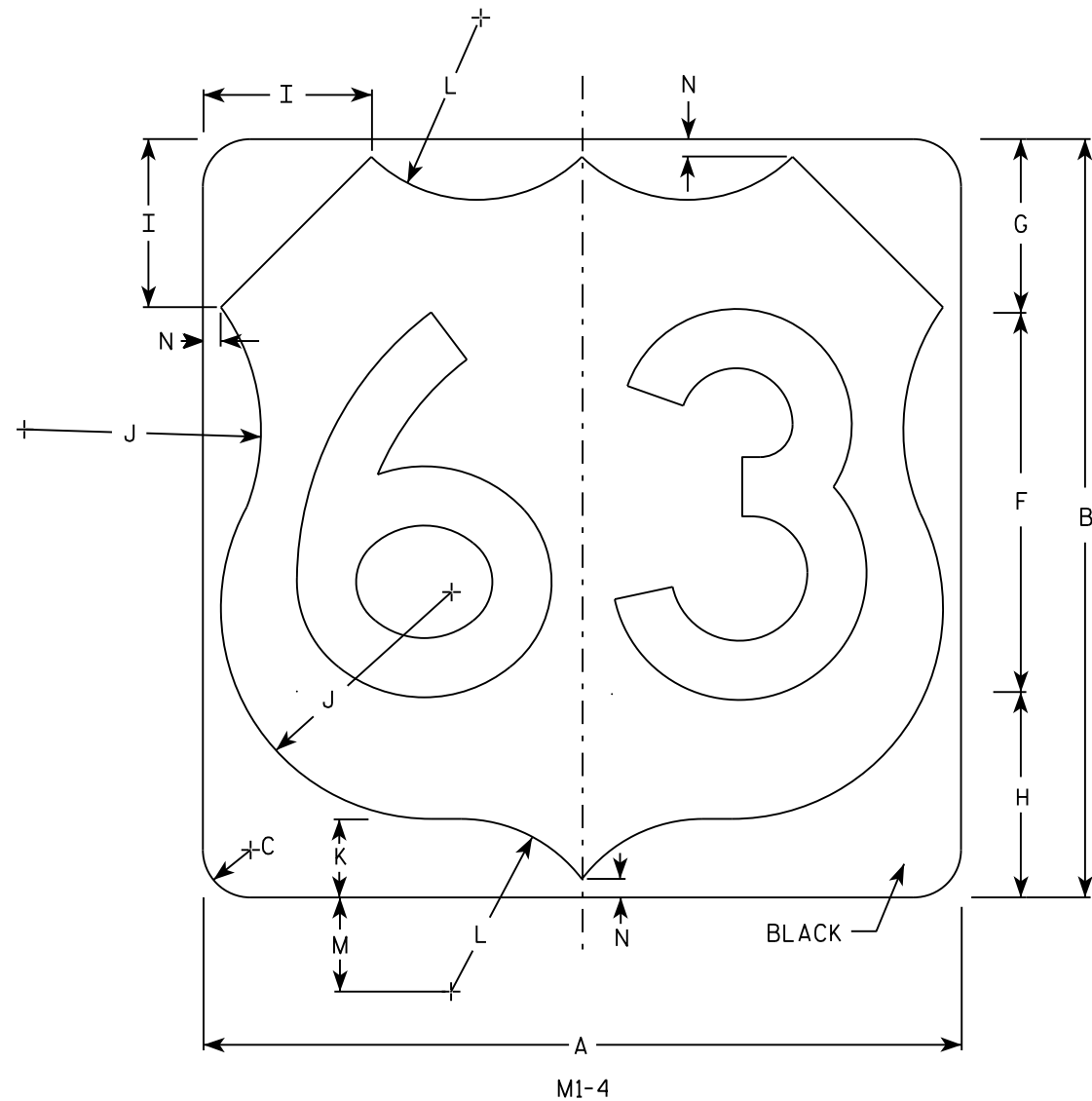
COUNTY:

SHEET NO:

E

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
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 sq. ft.
1																											
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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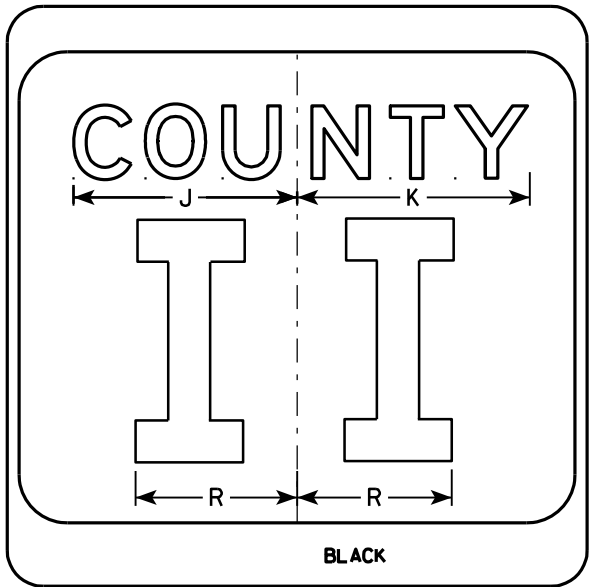
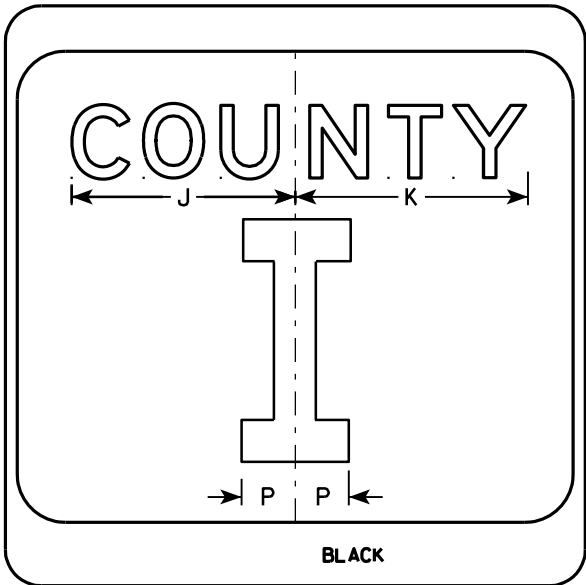
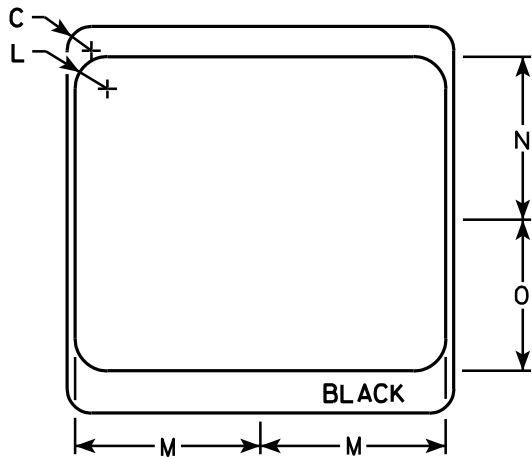
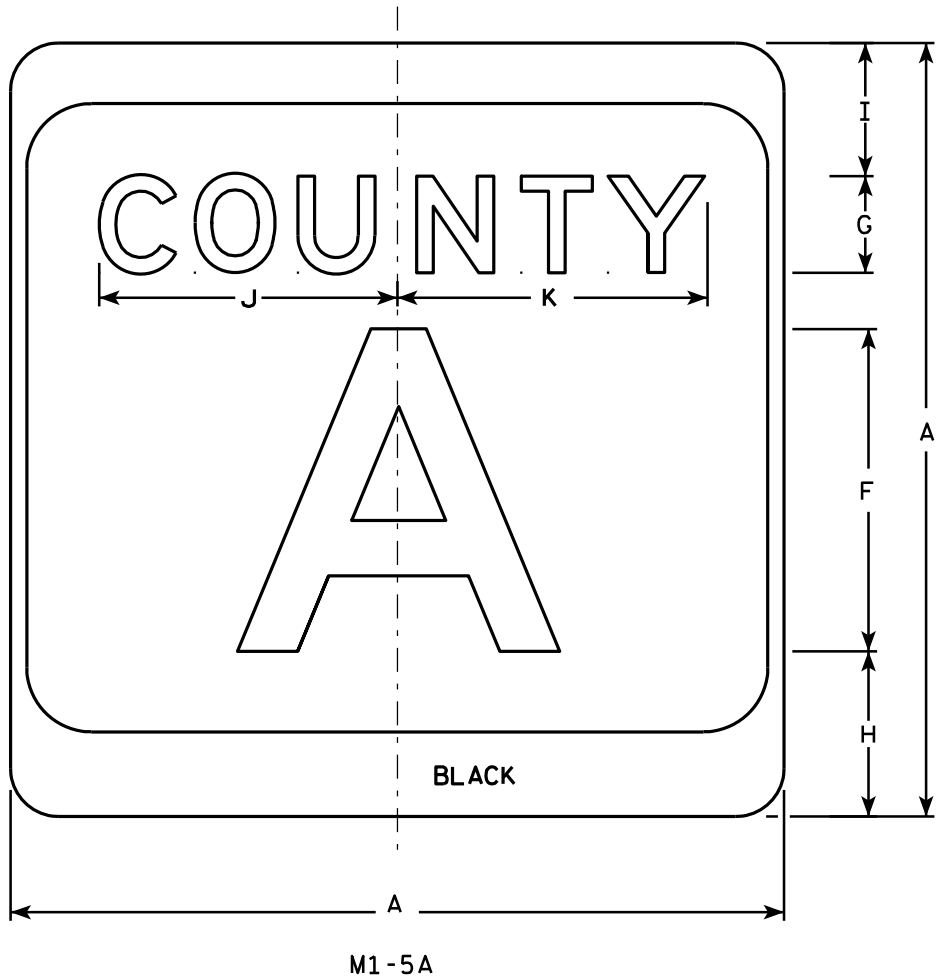
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

7



NOTES

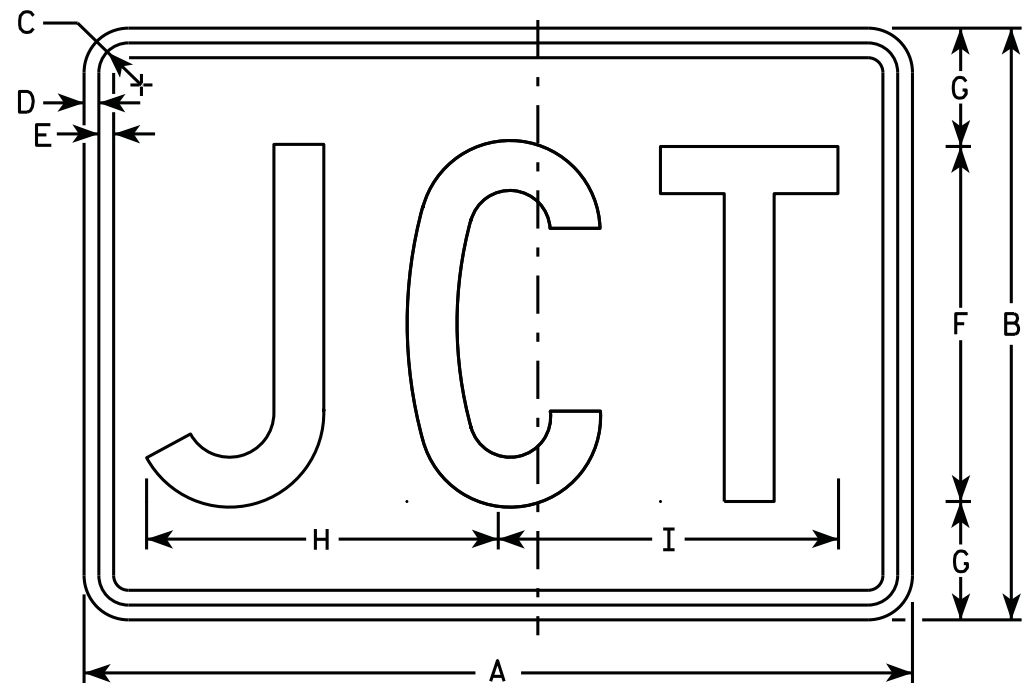
1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

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 sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

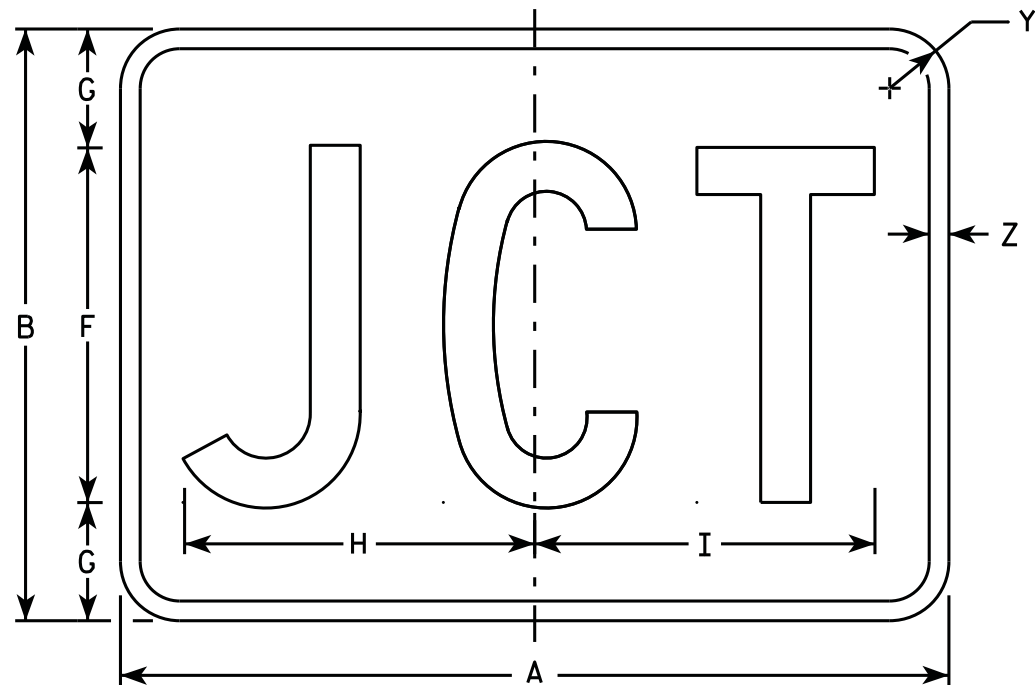
CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/27/11	PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
Background - See note 5
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. M2-1 Background - White
Message - Black
MB2-1 Background - Blue
Message - White
MK2-1 Background - Green
Message - White
MM2-1 Background - White
Message - Green
MN2-1 Background - Brown
Message - White
MP2-1 Background - White
Message - Blue
MR2-1 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M2-1.12

NOTES

1. All Signs Type II - Type H
2. Color:

Background - See note 5

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. 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

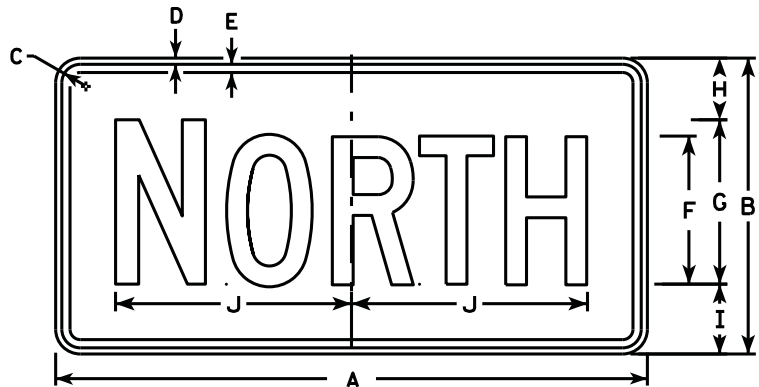
Background - Brown

Message - White

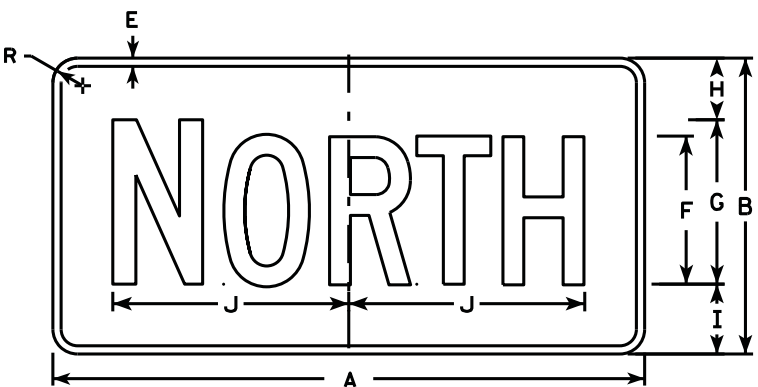
MP3-1 thru MP3-4

Background - White

Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.



M3-1
MM3-1
MP3-1



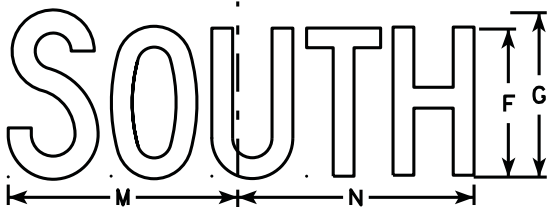
MB3-1
MK3-1
MN3-1



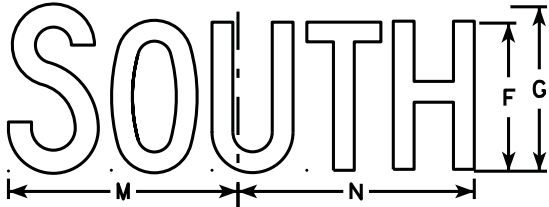
M3-2
MM3-2
MP3-2



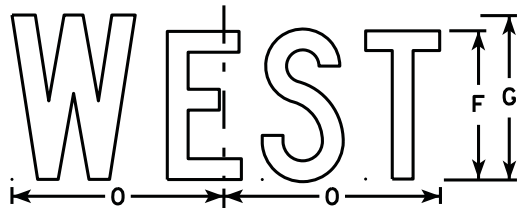
MB3-2
MK3-2
MN3-2



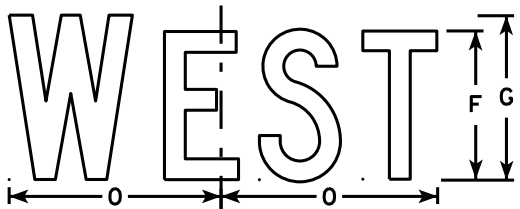
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

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 sq. ft.
1																											
2	24	12	1 1/8	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			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

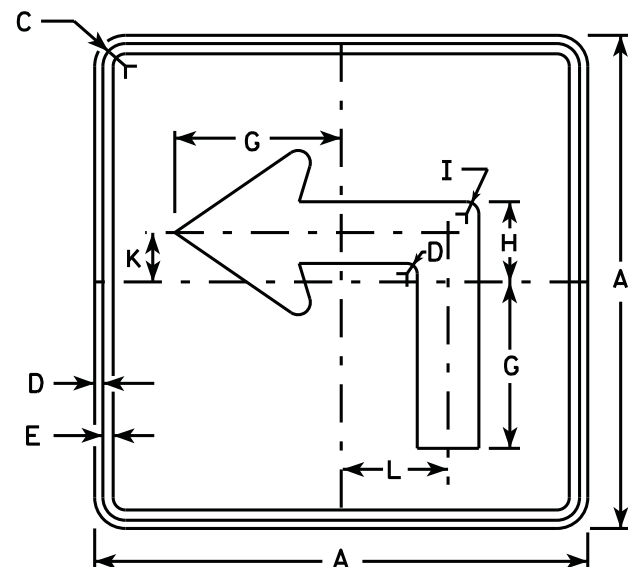
E

STANDARD SIGNS
M3-1 thru M3-4
SERIES

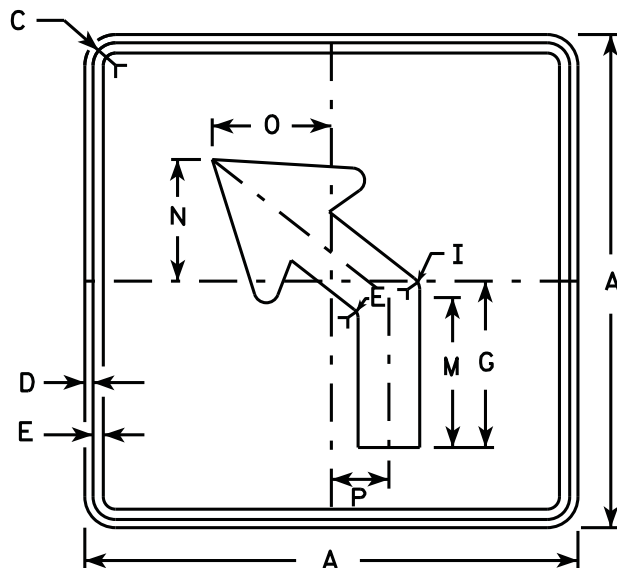
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

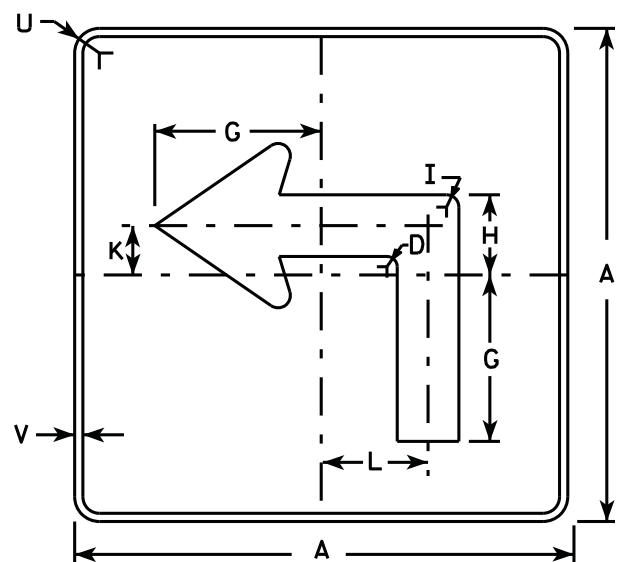
DATE 10/15/15 PLATE NO. M3-1.14



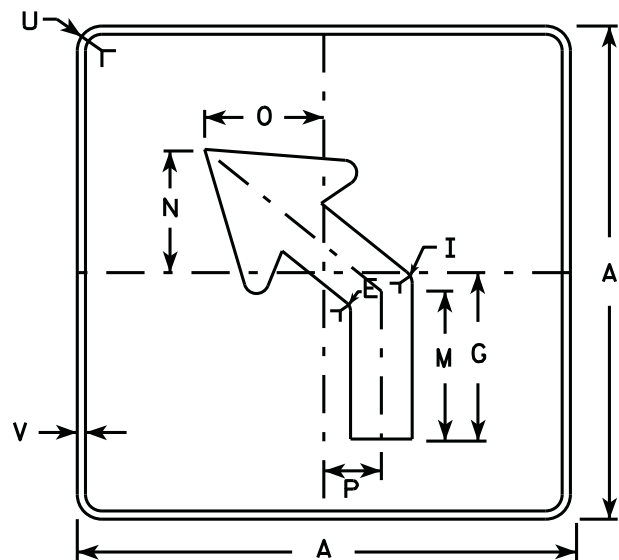
M5-1L
MM5-1L
M05-1L
MP5-1L



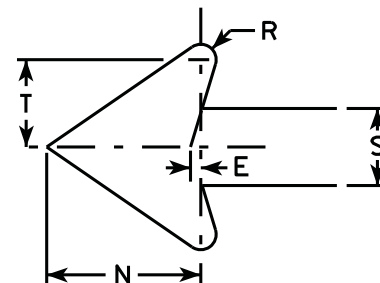
M5-2L
MM5-2L
M05-2L
MP5-2L



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 - Type H Reflective |
| | 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	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	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 1/2	1/2					3.06
3	30		1 3/8	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 7/8	1/2					6.25
4	30		1 3/8	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 7/8	1/2					6.25
5	30		1 3/8	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 7/8	1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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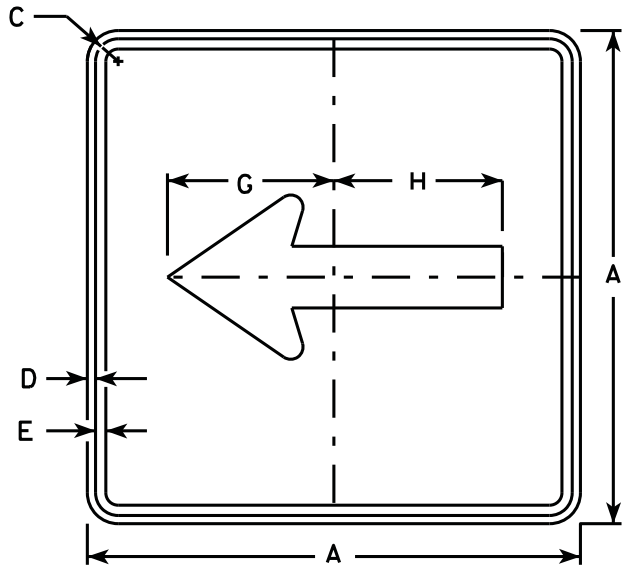
STANDARD SIGN

M5-1 & M5-2

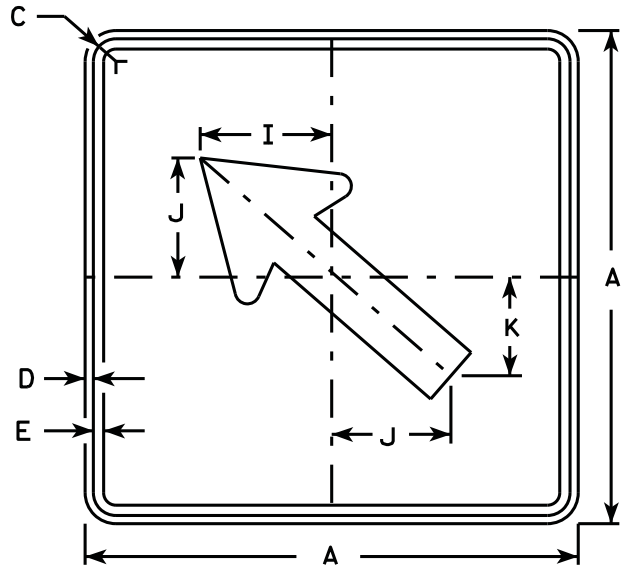
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

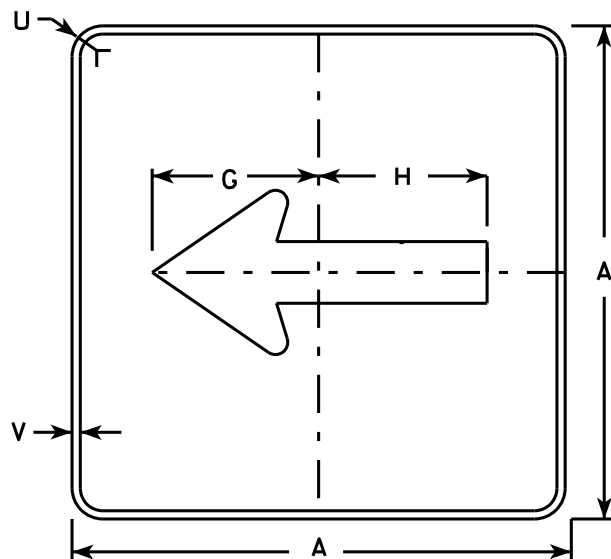
DATE 10/15/15 PLATE NO. M5-1.13



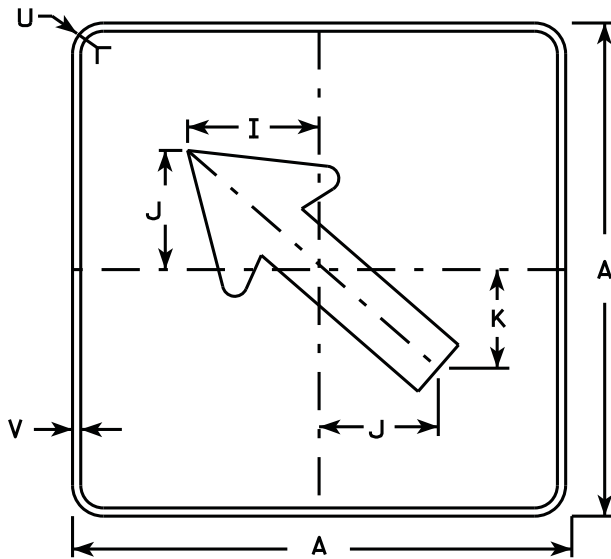
M6 - 1
MM6 - 1
MO6 - 1
MP6 - 1



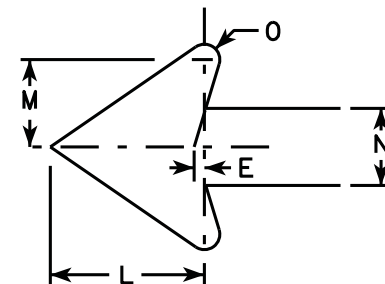
M6 - 2
MM6 - 2
MO6 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H 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
MO6-1 and MO6-2 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	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 1/2	1/2					3.06
3	30		1 3/8	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 7/8	1/2					6.25
4	30		1 3/8	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 7/8	1/2					6.25
5	30		1 3/8	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 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO: E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

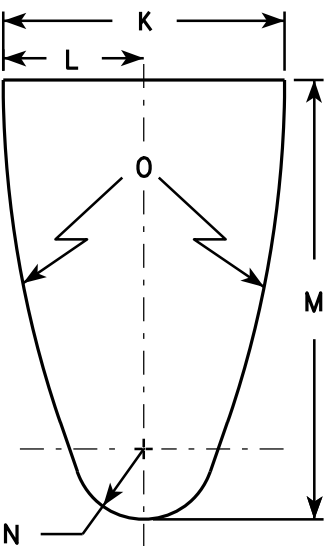
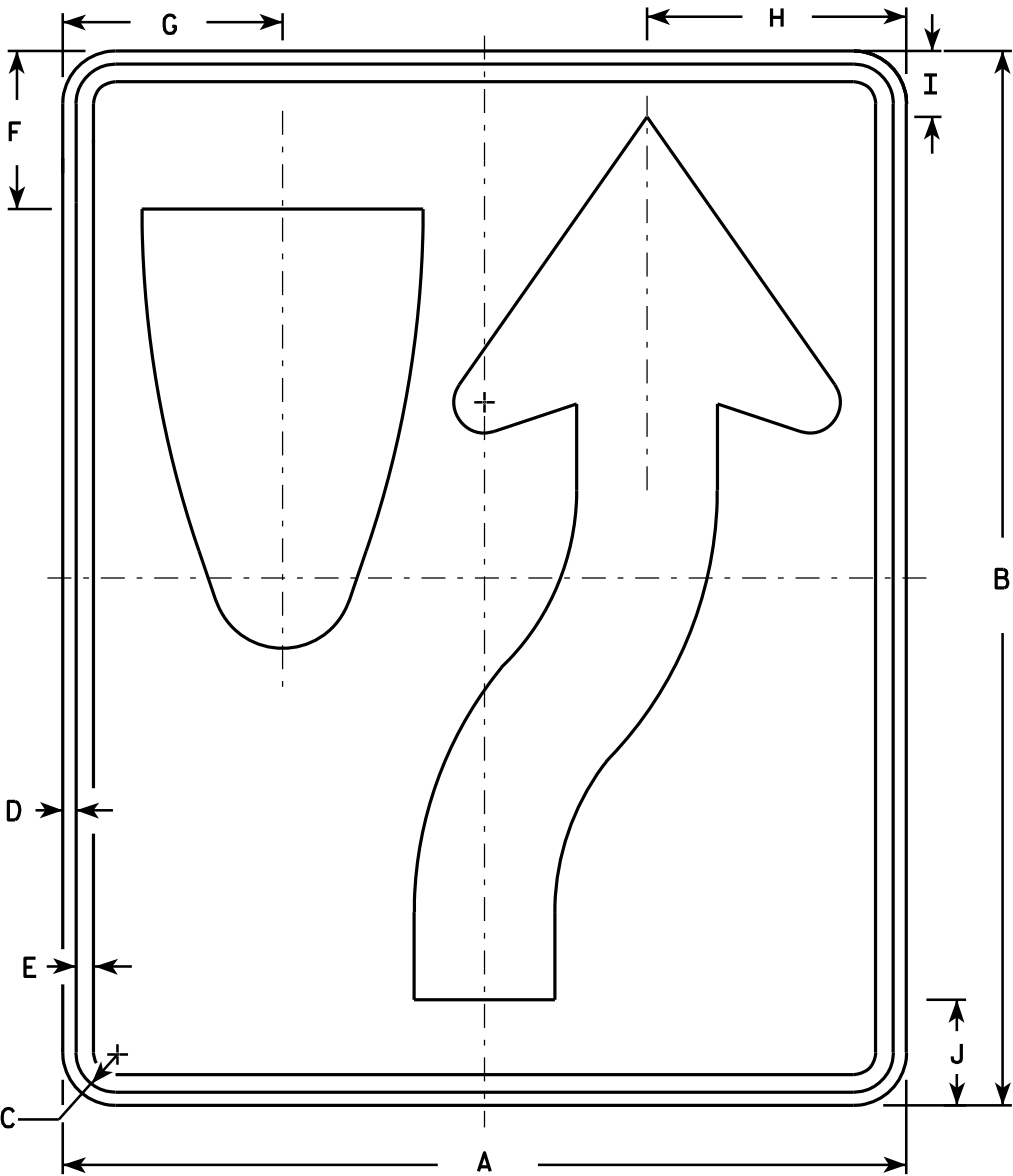
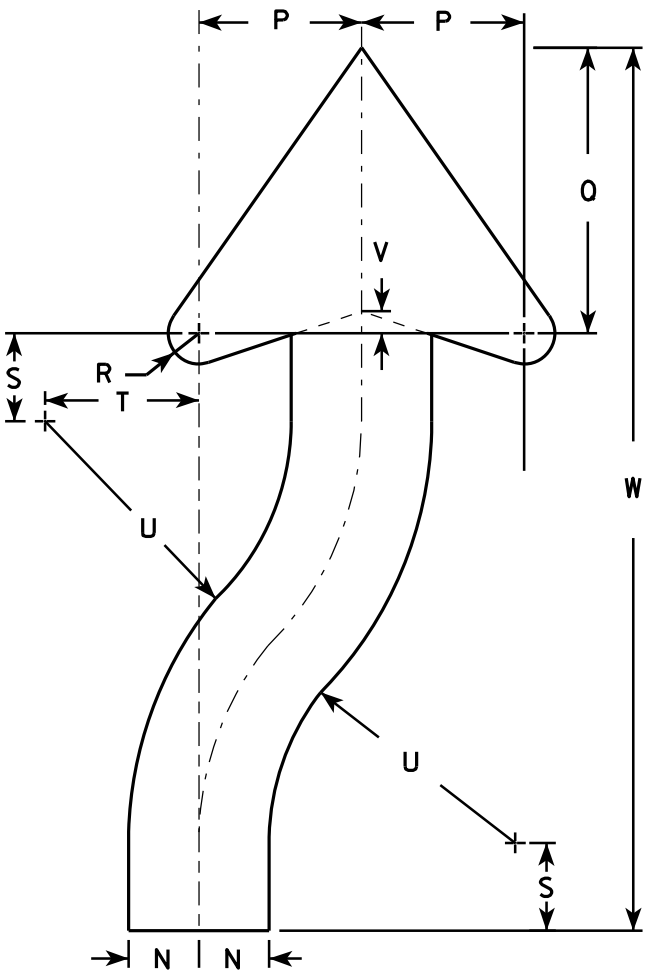
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



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 sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

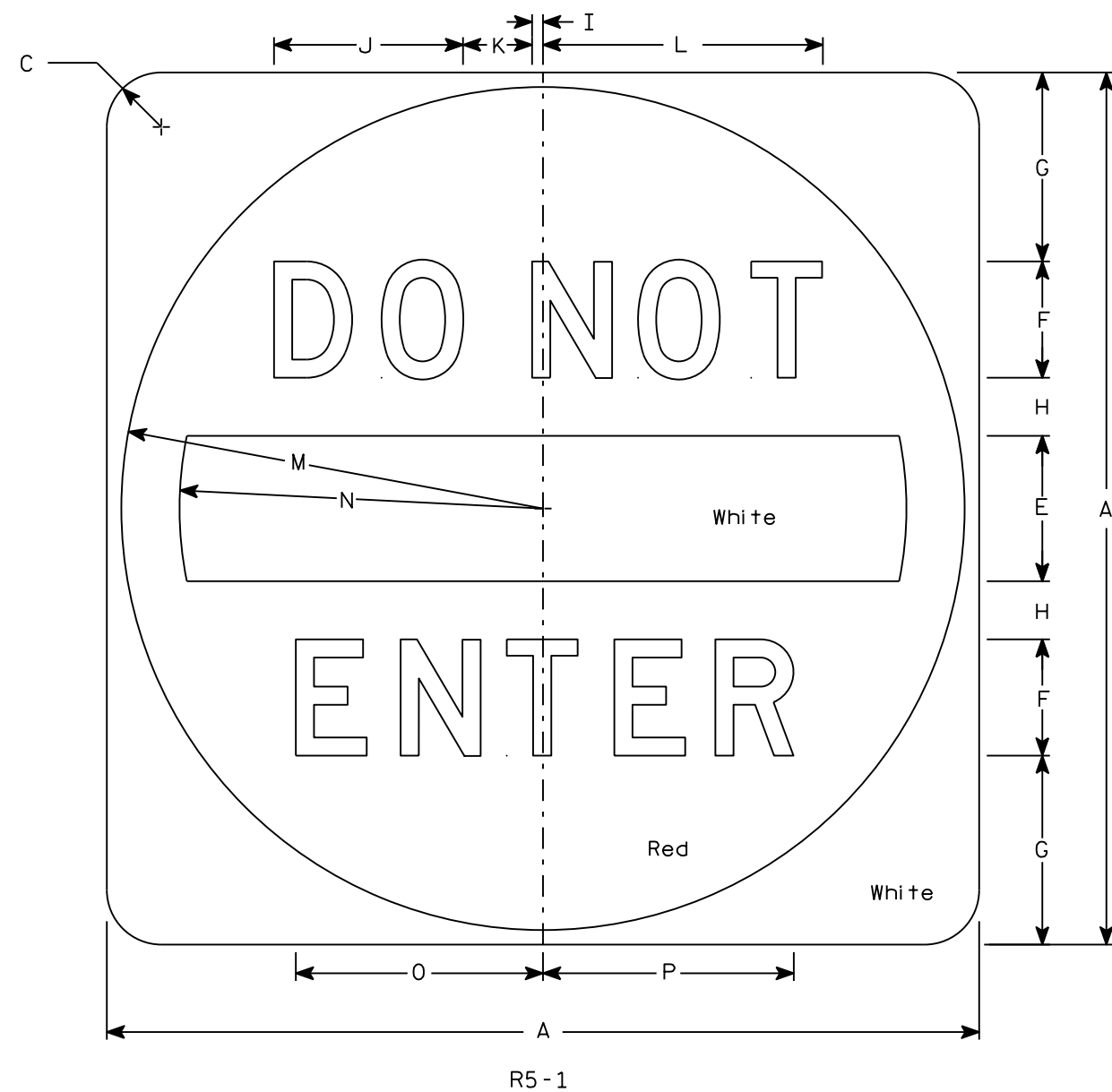
HWY:

COUNTY:

SHEET NO:

E

7



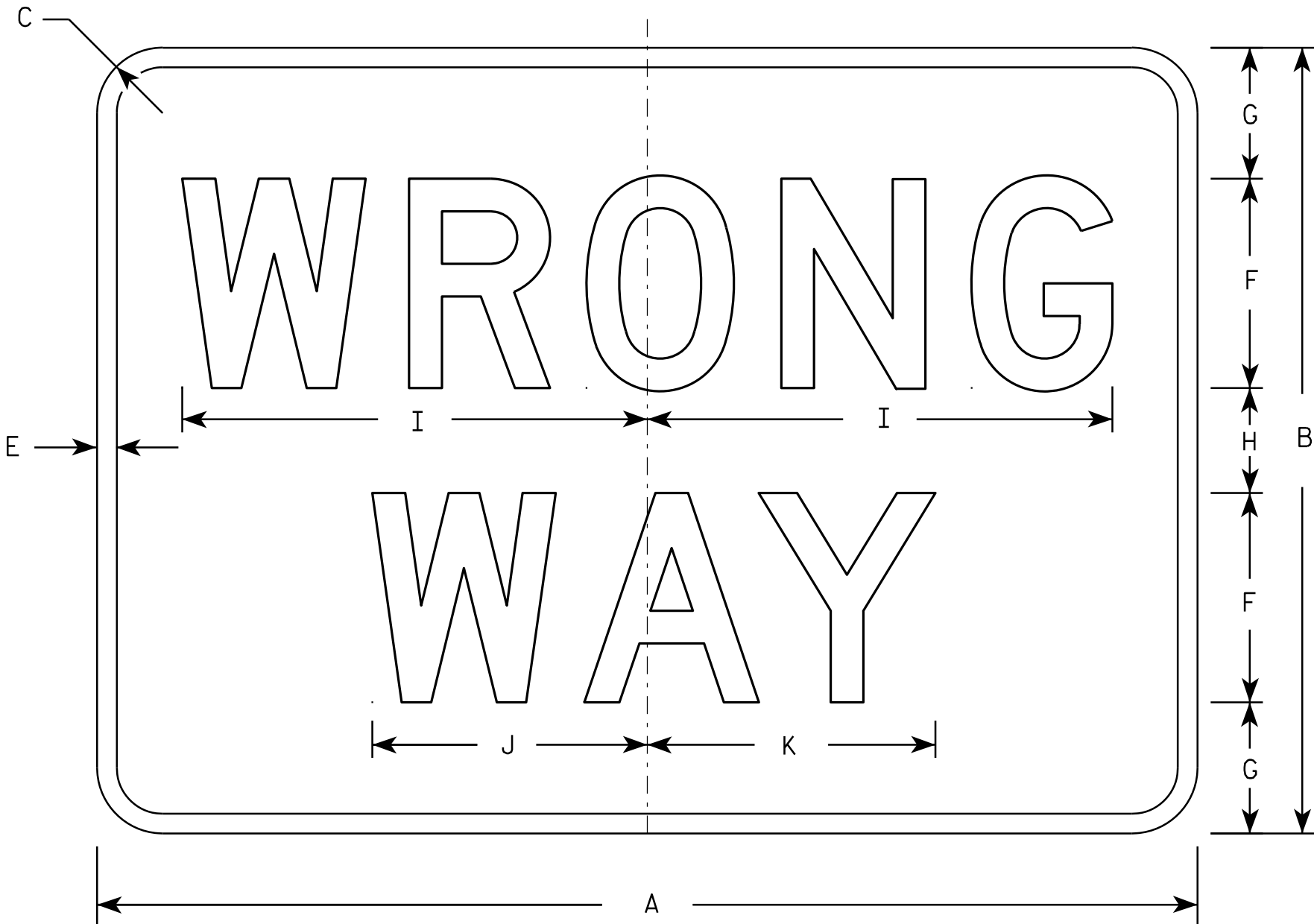
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See detail
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 sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.25
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN R5-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/15/18	PLATE NO. R5-1.16



R5-1A

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 - 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.

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 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	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

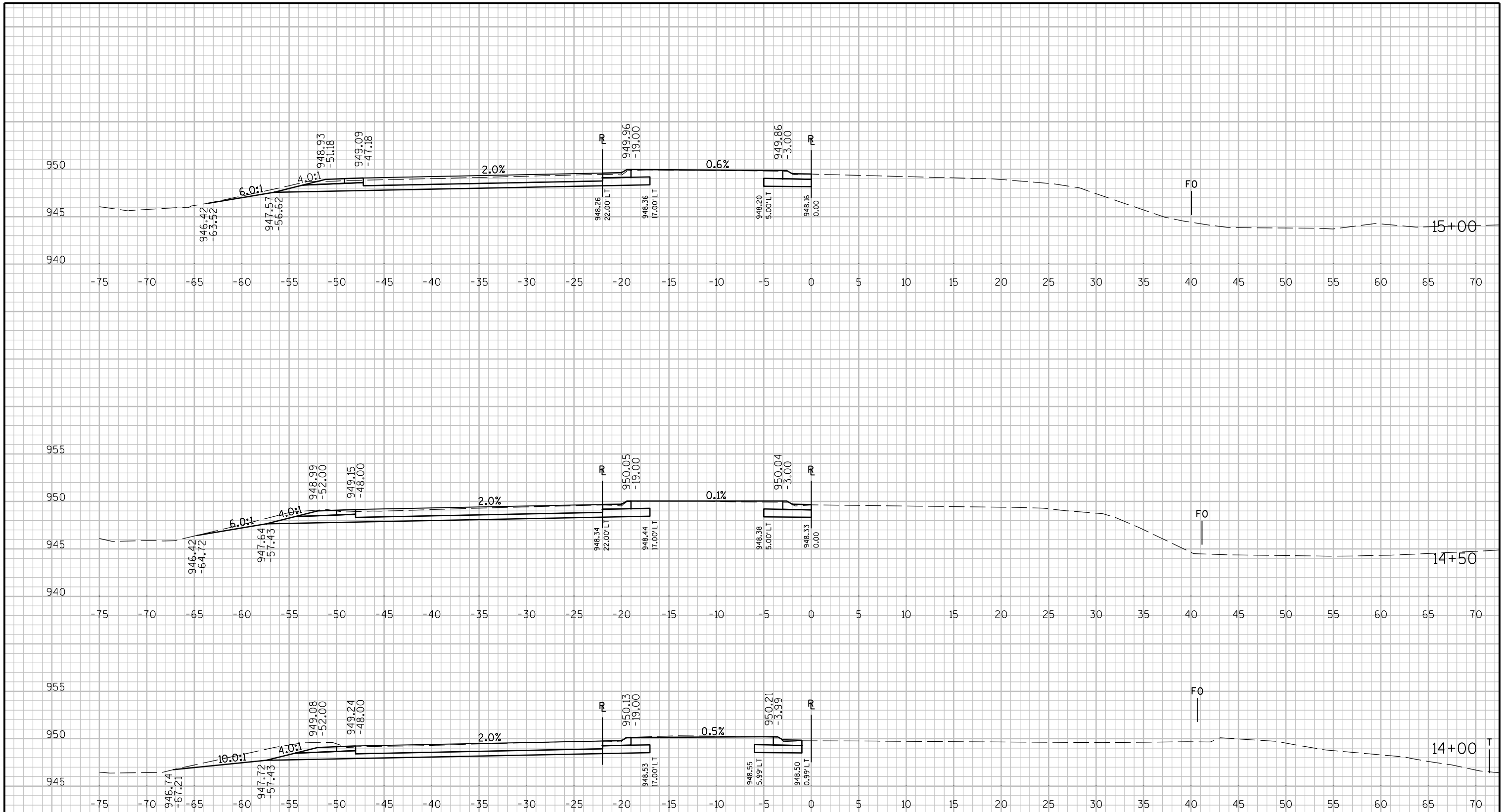
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

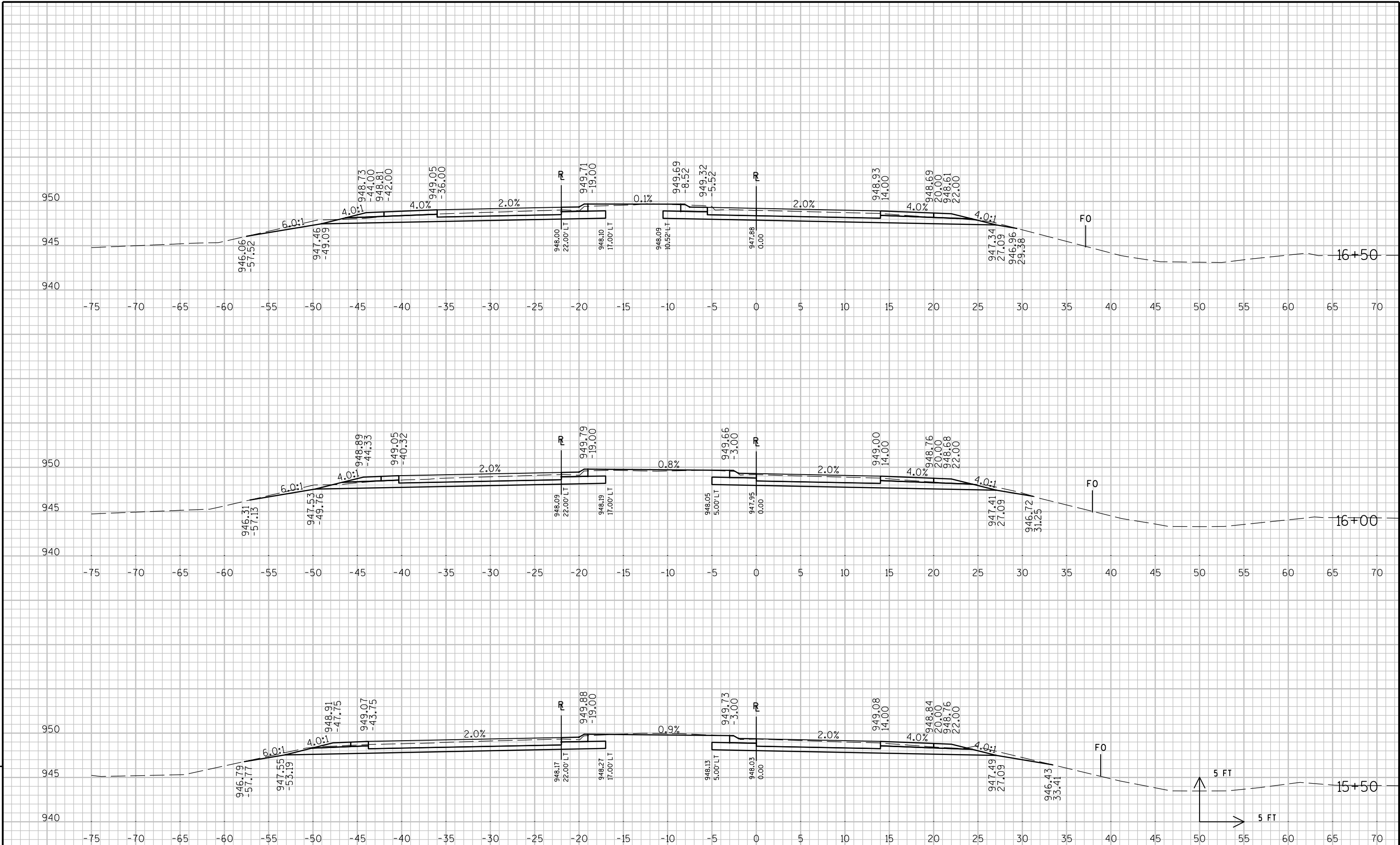
Baseline	----- Station Quantities -----							
Station	----- Cut -----				----- Fill -----			Mass
	Factor	Area	Volume	Adjusted	Area	Volume	Adjusted	Ordinate
13+00.00	1	0	0	0	0	0	0	0
13+50.00	1	0	0	0	0	0	0	0
14+00.00	1	79.29	73.42	73.42	0	0	0	73.42
14+50.00	1	67.83	136.22	136.22	0	0	0	209.64
15+00.00	1	62.14	120.34	120.34	0	0	0	329.98
15+50.00	1	85.36	136.57	136.57	0	0	0	466.55
16+00.00	1	73.82	147.39	147.39	0	0	0	613.94
16+50.00	1	72.62	135.59	135.59	0	0	0	749.53
17+00.00	1	66.61	128.92	128.92	0	0	0	878.45
17+50.00	1	62.55	119.6	119.6	8.72	8.07	8.07	989.98
18+00.00	1	57.35	111.02	111.02	2.87	10.73	10.73	1090.27
18+50.00	1	51.9	101.16	101.16	0	2.66	2.66	1188.77
19+00.00	1	53.92	97.98	97.98	0	0	0	1286.75
19+50.00	1	44.17	90.82	90.82	24.28	22.48	22.48	1355.09
20+00.00	1	44.52	82.12	82.12	4.78	26.91	26.91	1410.29
20+50.00	1	47.54	85.24	85.24	6.62	10.55	10.55	1484.98
21+00.00	1	45.08	85.76	85.76	3.03	8.93	8.93	1561.81
21+50.00	1	39.99	78.77	78.77	3.35	5.91	5.91	1634.68
22+00.00	1	35.86	70.23	70.23	3.13	6	6	1698.9
22+50.00	1	32.44	63.24	63.24	5.68	8.16	8.16	1753.99
23+00.00	1	28.35	56.29	56.29	7.7	12.39	12.39	1797.89
23+50.00	1	25.94	50.27	50.27	9.45	15.88	15.88	1832.27
24+00.00	1	25.57	47.7	47.7	9.86	17.87	17.87	1862.1
24+50.00	1	24.07	45.96	45.96	10.25	18.62	18.62	1889.45
25+00.00	1	25.07	45.49	45.49	9.92	18.68	18.68	1916.27
25+50.00	1	31.05	51.96	51.96	9.35	17.85	17.85	1950.38
26+00.00	1	39.56	65.38	65.38	3.96	12.33	12.33	2003.43
26+50.00	1	47.22	80.35	80.35	0.2	3.85	3.85	2079.93
27+00.00	1	60.71	99.93	99.93	2.59	2.58	2.58	2177.28
27+50.00	1	72.03	122.91	122.91	8.95	10.68	10.68	2289.5
28+00.00	1	72.28	133.62	133.62	0.01	8.29	8.29	2414.84
28+50.00	1	57.57	120.23	120.23	0.55	0.52	0.52	2534.55
29+00.00	1	57.31	106.37	106.37	0.88	1.32	1.32	2639.6
29+50.00	1	57.75	106.53	106.53	0	0.81	0.81	2745.32
30+00.00	1	8.62	61.45	61.45	0.5	0.47	0.47	2806.31
30+50.00	1	8.71	16.05	16.05	1.74	2.08	2.08	2820.28
31+00.00	1	8.44	15.88	15.88	4.29	5.59	5.59	2830.57
31+50.00	1	9.41	16.53	16.53	3.61	7.32	7.32	2839.78
32+00.00	1	11.97	19.8	19.8	0	3.34	3.34	2856.24

Baseline	----- Station Quantities -----						
Station	----- Cut -----			----- Fill -----			Mass
	Area	Volume	Adjusted	Area	Volume	Adjusted	Ordinate
13+00.00	0	0	0	0	0	0	0
13+50.00	0	0	0	0	0	0	0
14+00.00	0	0	0	0	0	0	0
14+50.00	0	0	0	0	0	0	0
15+00.00	0	0	0	0	0	0	0
15+50.00	0	0	0	0	0	0	0
16+00.00	16.01	14.82	14.82	0	0	0	14.82
16+50.00	19.56	32.94	32.94	0	0	0	47.76
17+00.00	18.13	34.9	34.9	0	0	0	82.67
17+50.00	15.72	31.35	31.35	0	0	0	114.01
18+00.00	16.08	29.45	29.45	0	0	0	143.46
18+50.00	18.29	31.83	31.83	0	0	0	175.28
19+00.00	37.47	51.63	51.63	0	0	0	226.92
19+50.00	14.17	47.81	47.81	0.03	0.02	0.02	274.71
20+00.00	15.4	27.38	27.38	0	0.02	0.02	302.06
20+50.00	14.38	27.58	27.58	0	0	0	329.64
21+00.00	19.71	31.57	31.57	0	0	0	361.21
21+50.00	22.31	38.91	38.91	0	0	0	400.12
22+00.00	24.47	43.31	43.31	0	0	0	443.44
22+50.00	24.96	45.77	45.77	0	0	0	489.2
23+00.00	23.27	44.66	44.66	0	0	0	533.86
23+50.00	19.92	39.99	39.99	0	0	0	573.85
24+00.00	17.94	35.05	35.05	0	0	0	608.9
24+50.00	15.94	31.37	31.37	0	0	0	640.27
25+00.00	14.41	28.1	28.1	0	0	0	668.36
25+50.00	14.03	26.33	26.33	0.16	0.14	0.14	694.55
26+00.00	15.57	27.41	27.41	0	0.14	0.14	721.82
26+50.00	16.1	29.32	29.32	0.09	0.09	0.09	751.05
27+00.00	28.38	41.19	41.19	0	0.09	0.09	792.16
27+50.00	30.56	54.57	54.57	0	0	0	846.73
28+00.00	24.9	51.35	51.35	0	0	0	898.08
28+50.00	17.19	38.97	38.97	4.01	3.71	3.71	933.34
29+00.00	15.59	30.35	30.35	11.6	14.45	14.45	949.24
29+50.00	16.15	29.39	29.39	12.35	22.18	22.18	956.46
30+00.00	15.2	29.03	29.03	12.64	23.14	23.14	962.35
30+50.00	13.83	26.88	26.88	14.7	25.31	25.31	963.92
31+00.00	14.28	26.03	26.03	15.8	28.24	28.24	961.71
31+50.00	15.13	27.24	27.24	4.08	18.41	18.41	970.53
32+00.00	14.23	27.19	27.19	0	3.78	3.78	993.95
32+50.00	0	13.18	13.18	0	0	0	1007.13
33+00.00	0	0	0	0	0	0	1007.13
33+50.00	0	0	0	0	0	0	1007.13
34+00.00	0	0	0	0	0	0	1007.13
34+50.00	0	0	0	0	0	0	1007.13
35+00.00	0	0	0	0	0	0	1007.13
35+47.50	0	0	0	0	0	0	1007.13
Grand Total:		1146.85	1146.85		139.72	139.72	



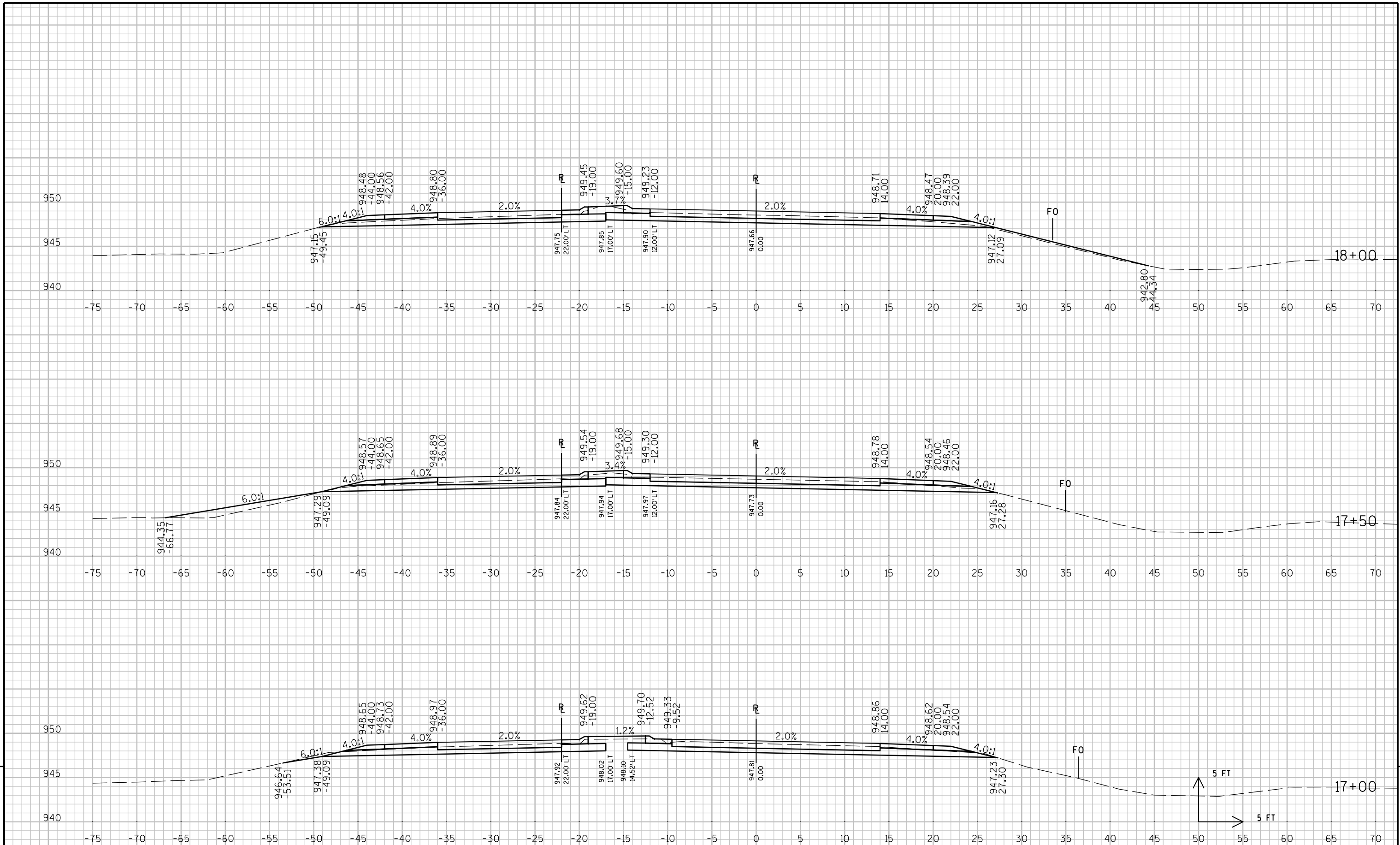
BEGIN PROJECT
13+54.00

5 FT
5 FT



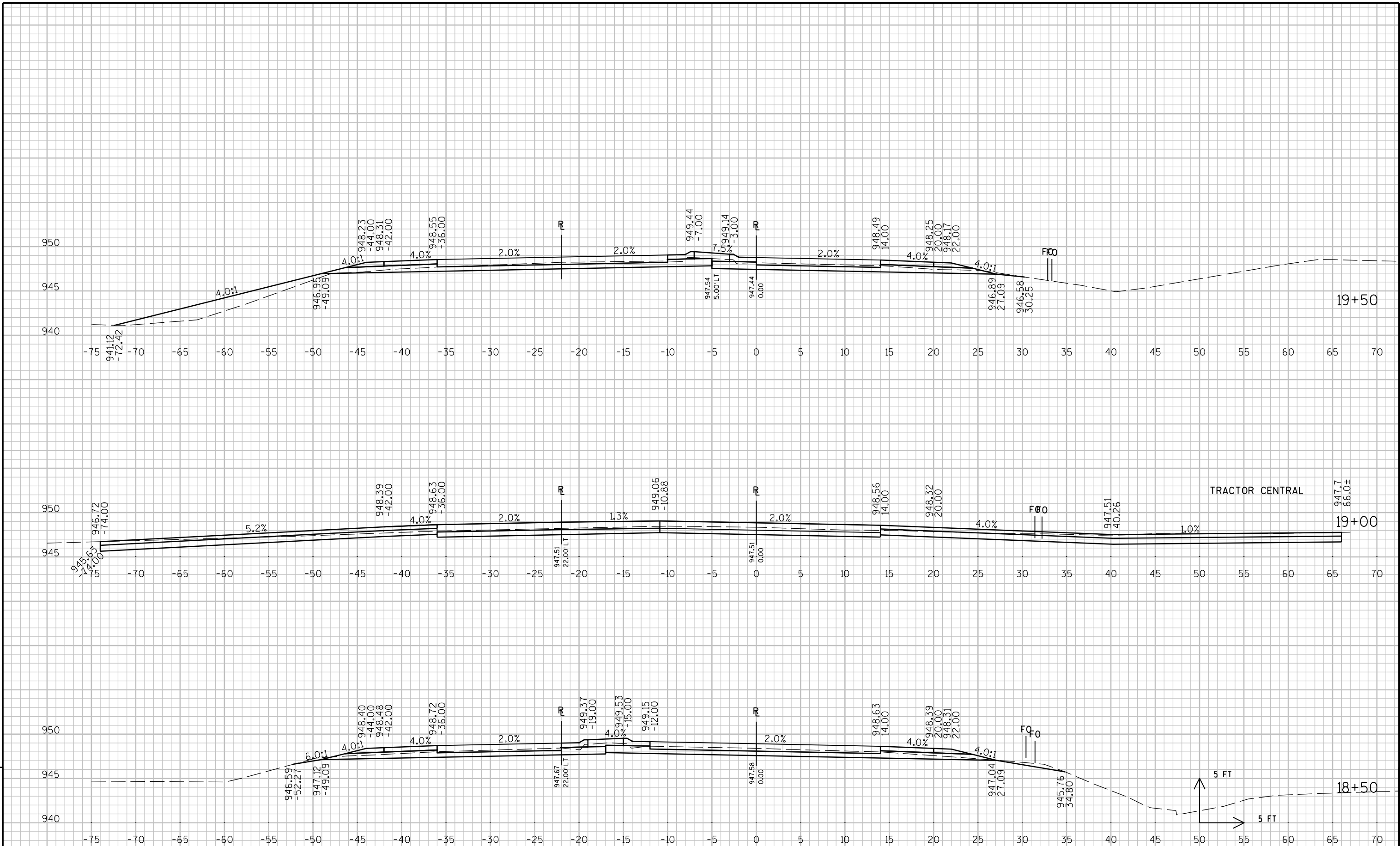
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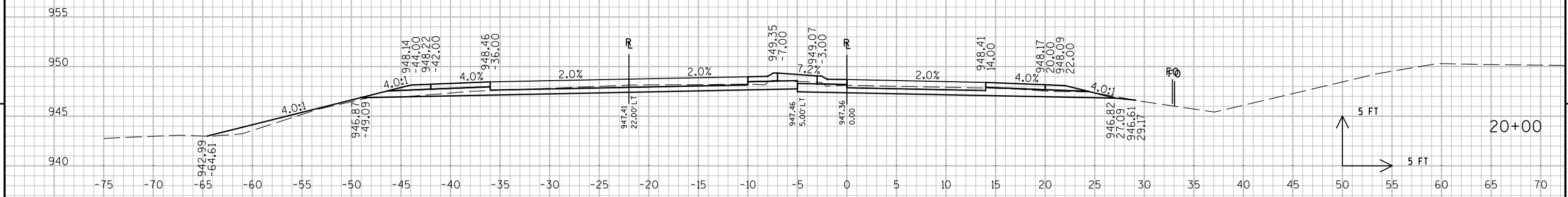
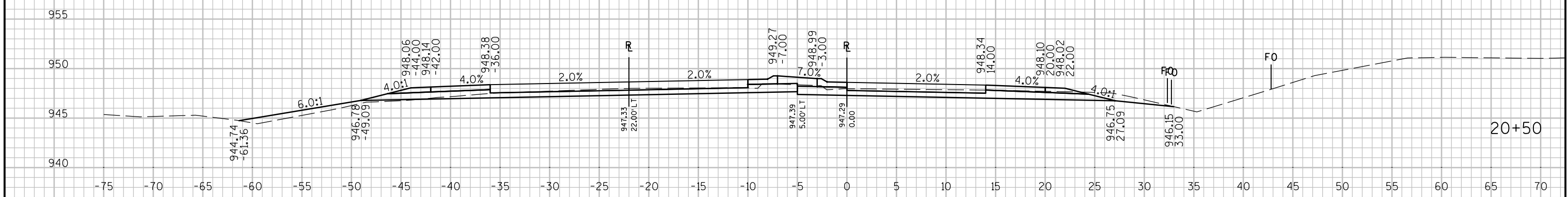
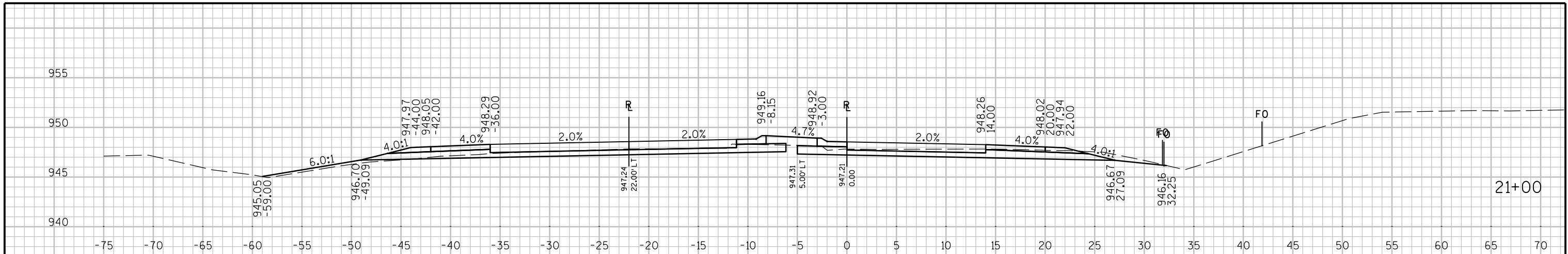
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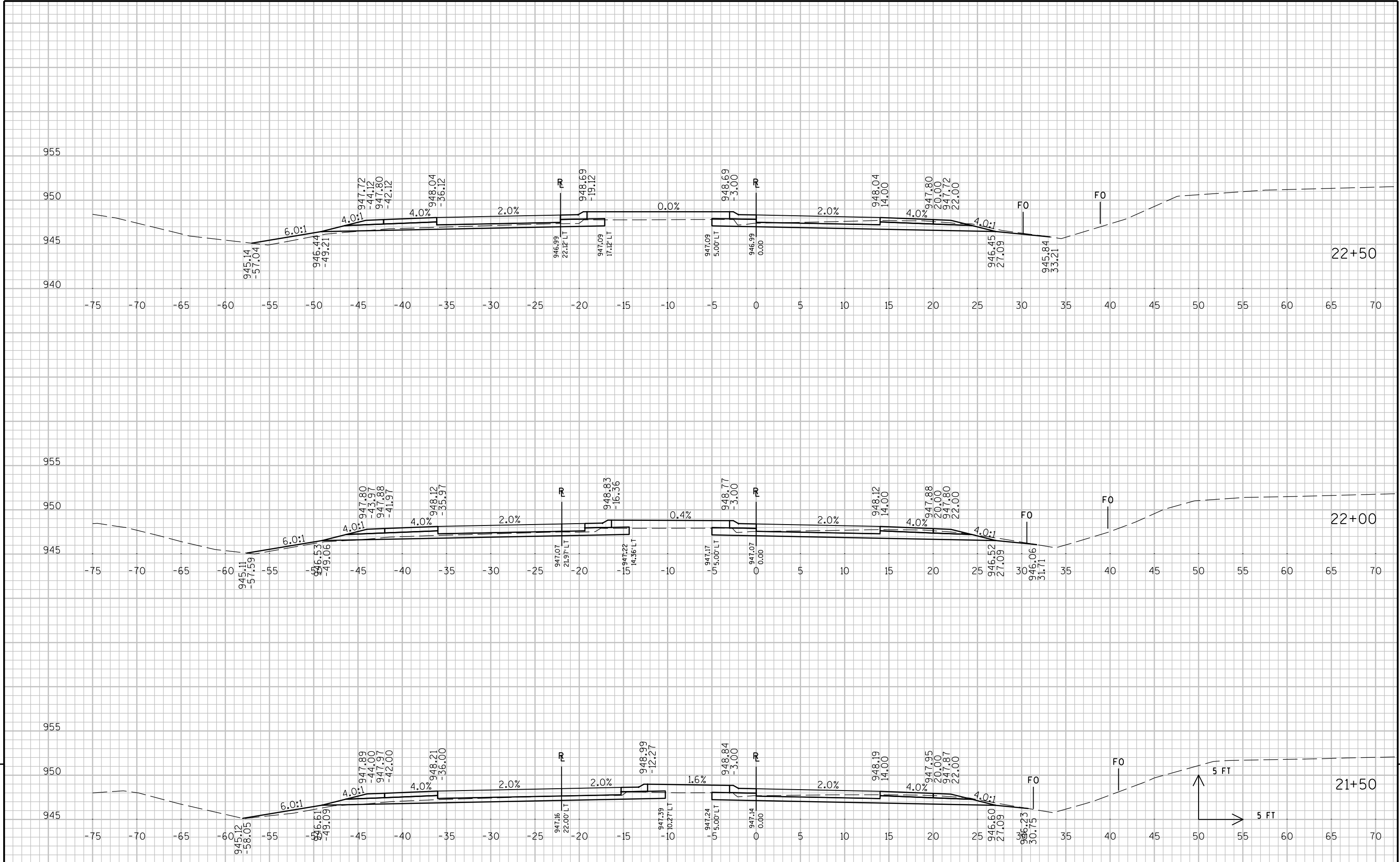
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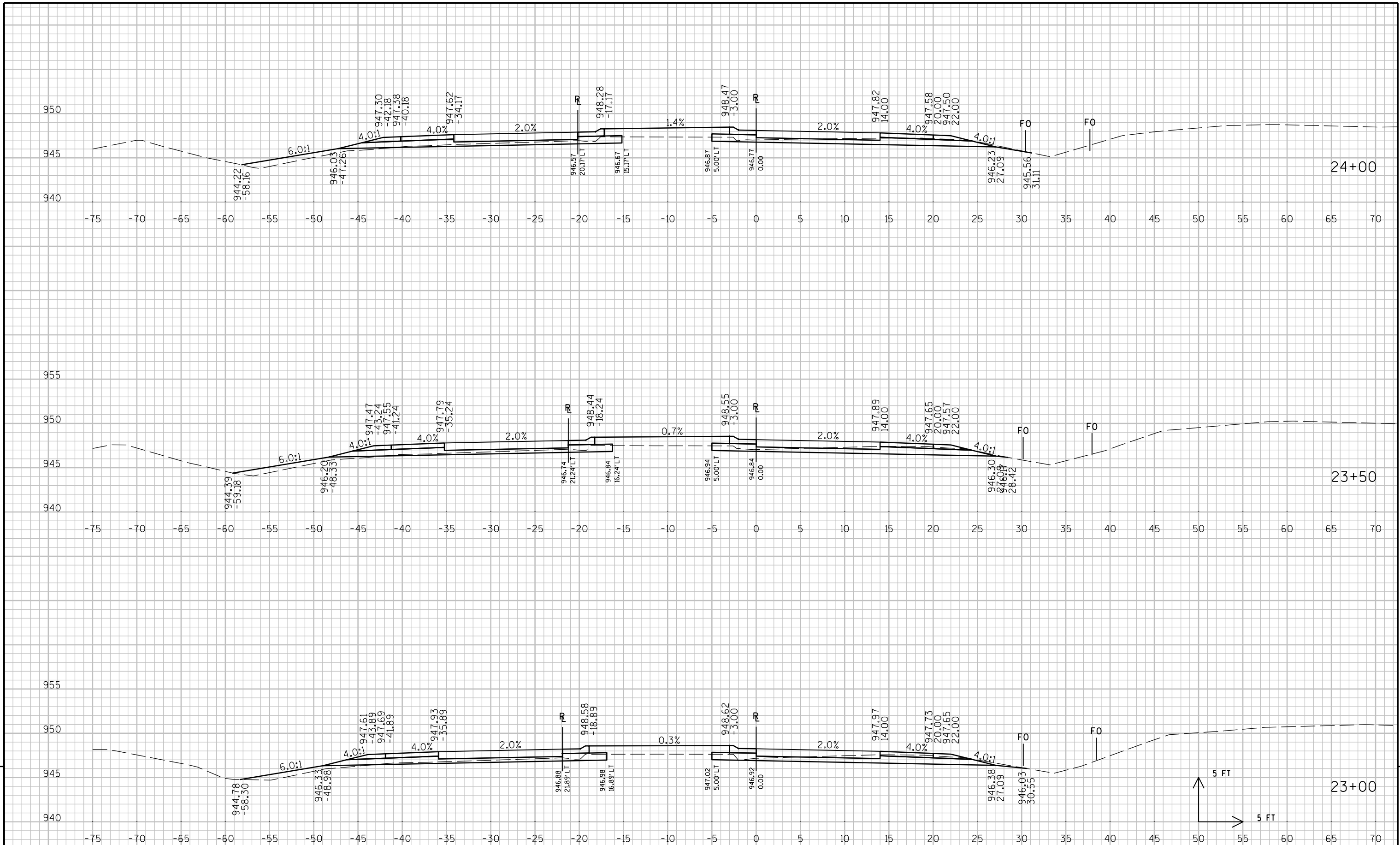
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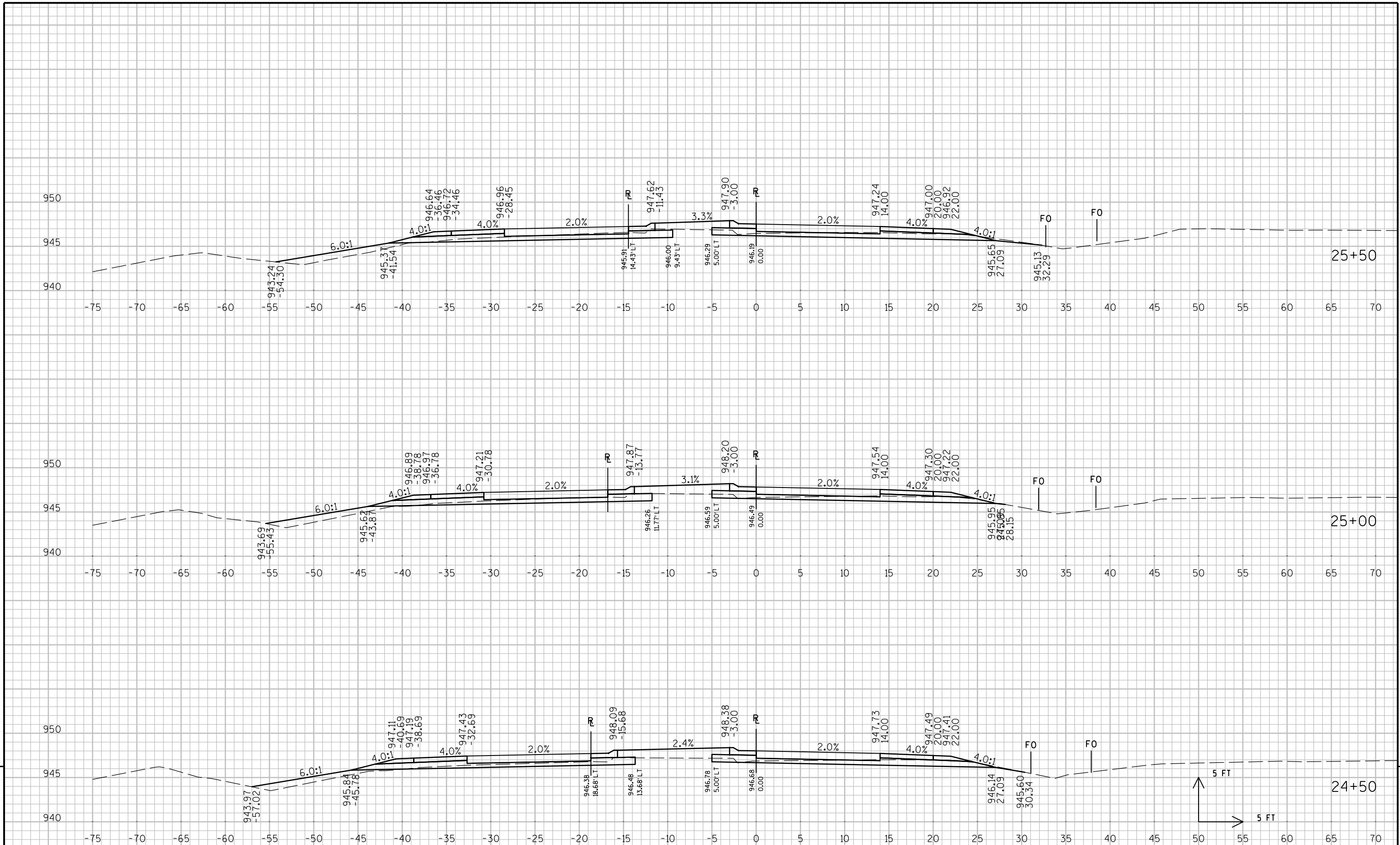
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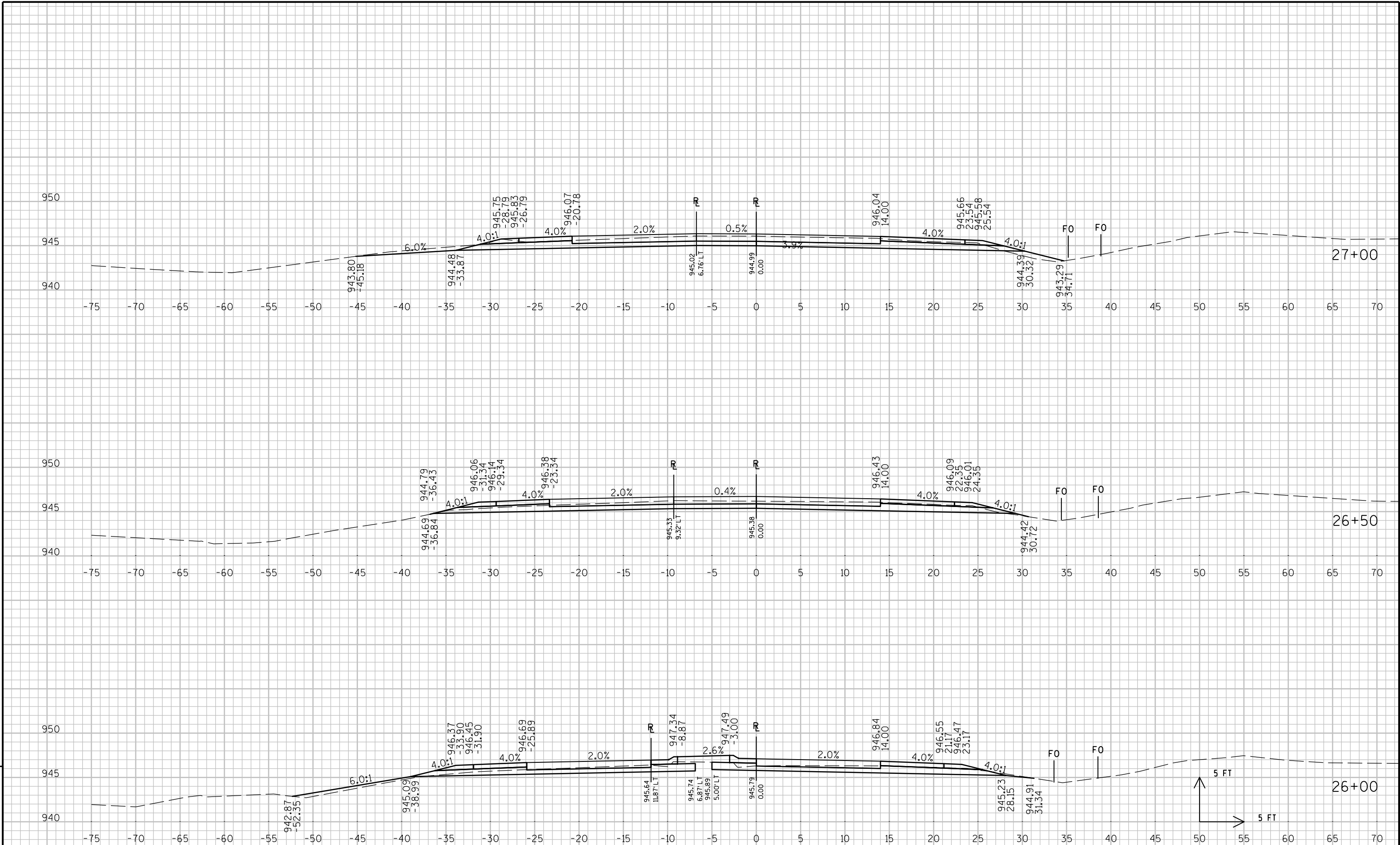


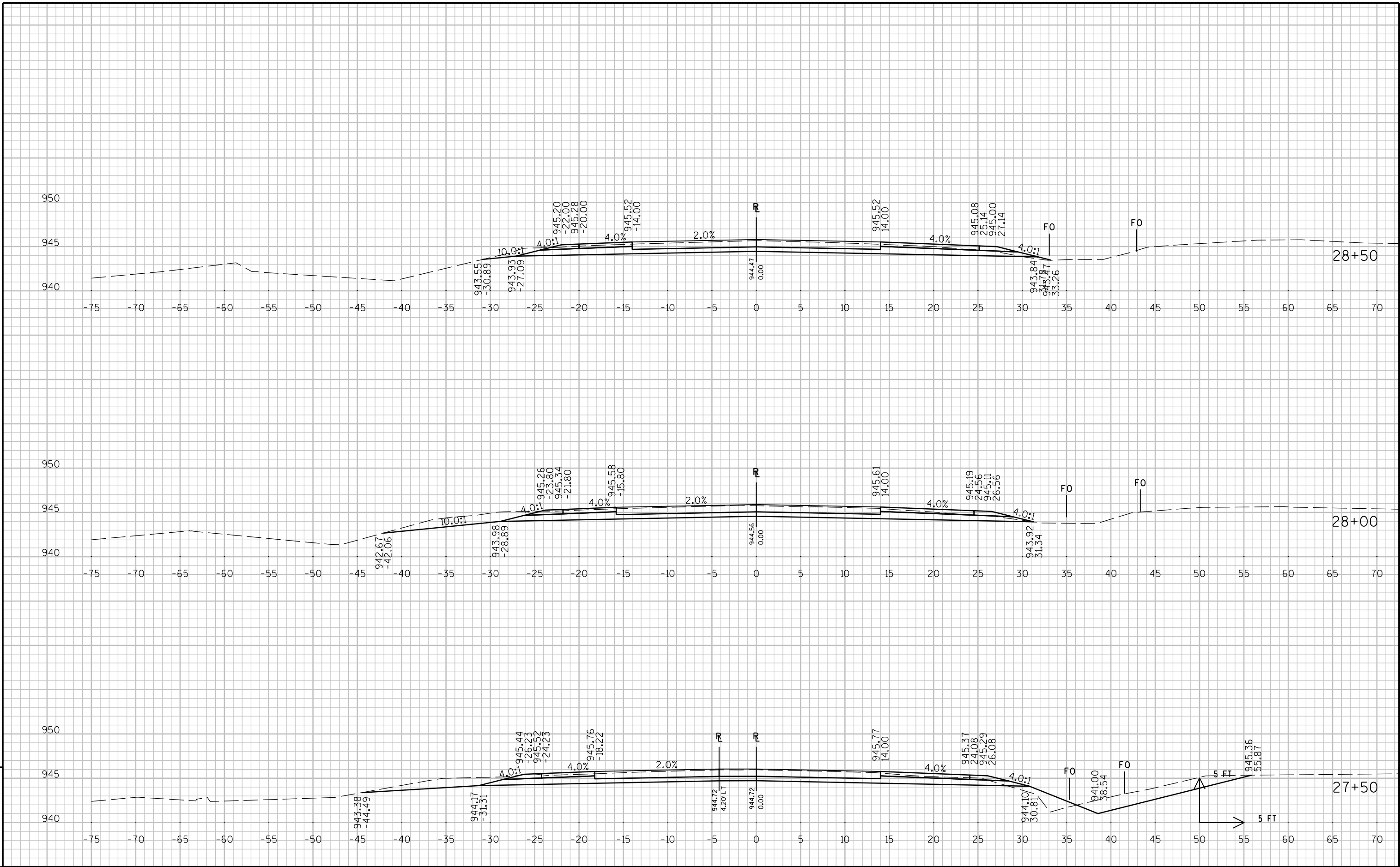
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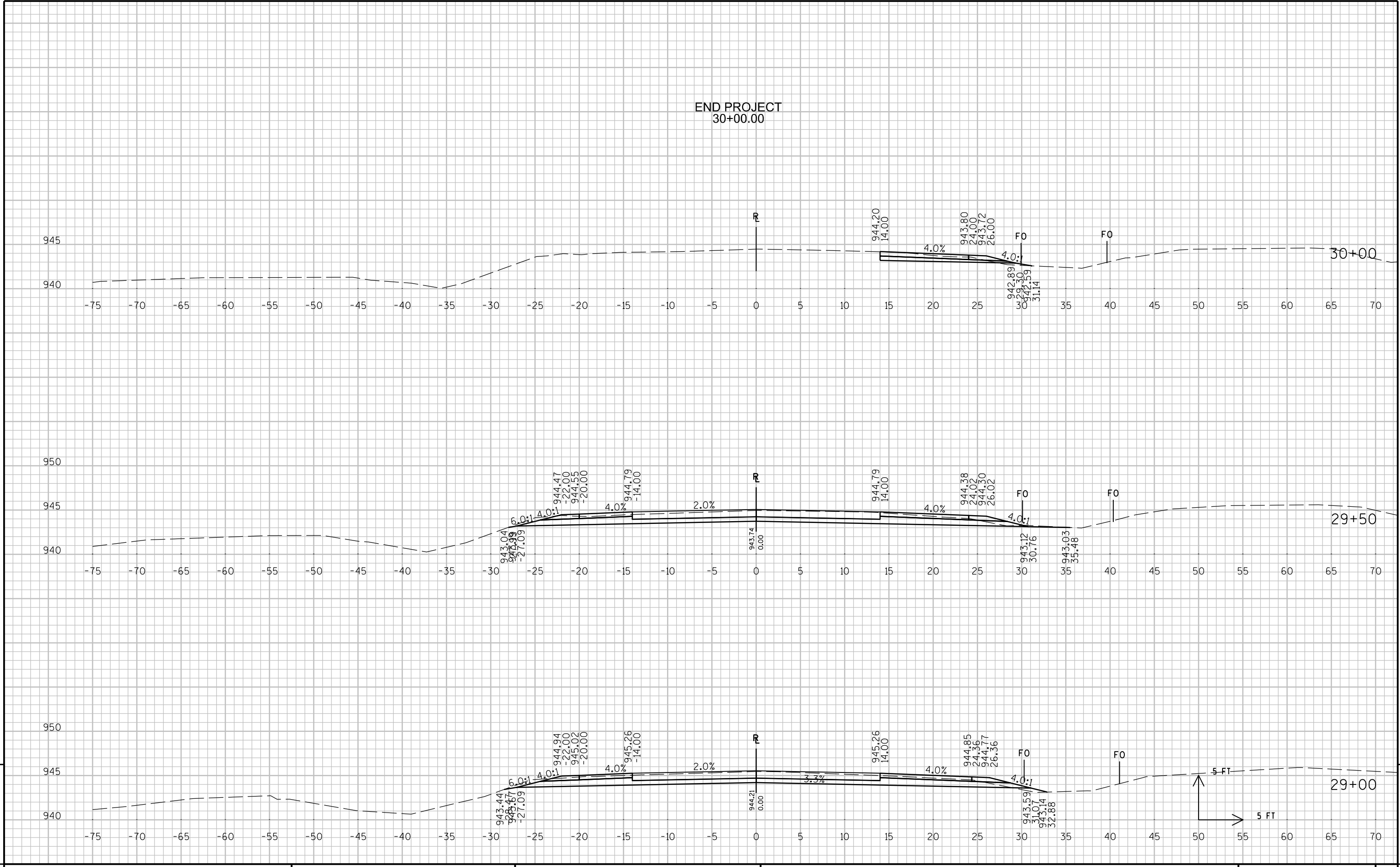
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PROJECT NO: 8896-01-03	HWY: CTH S	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET	E
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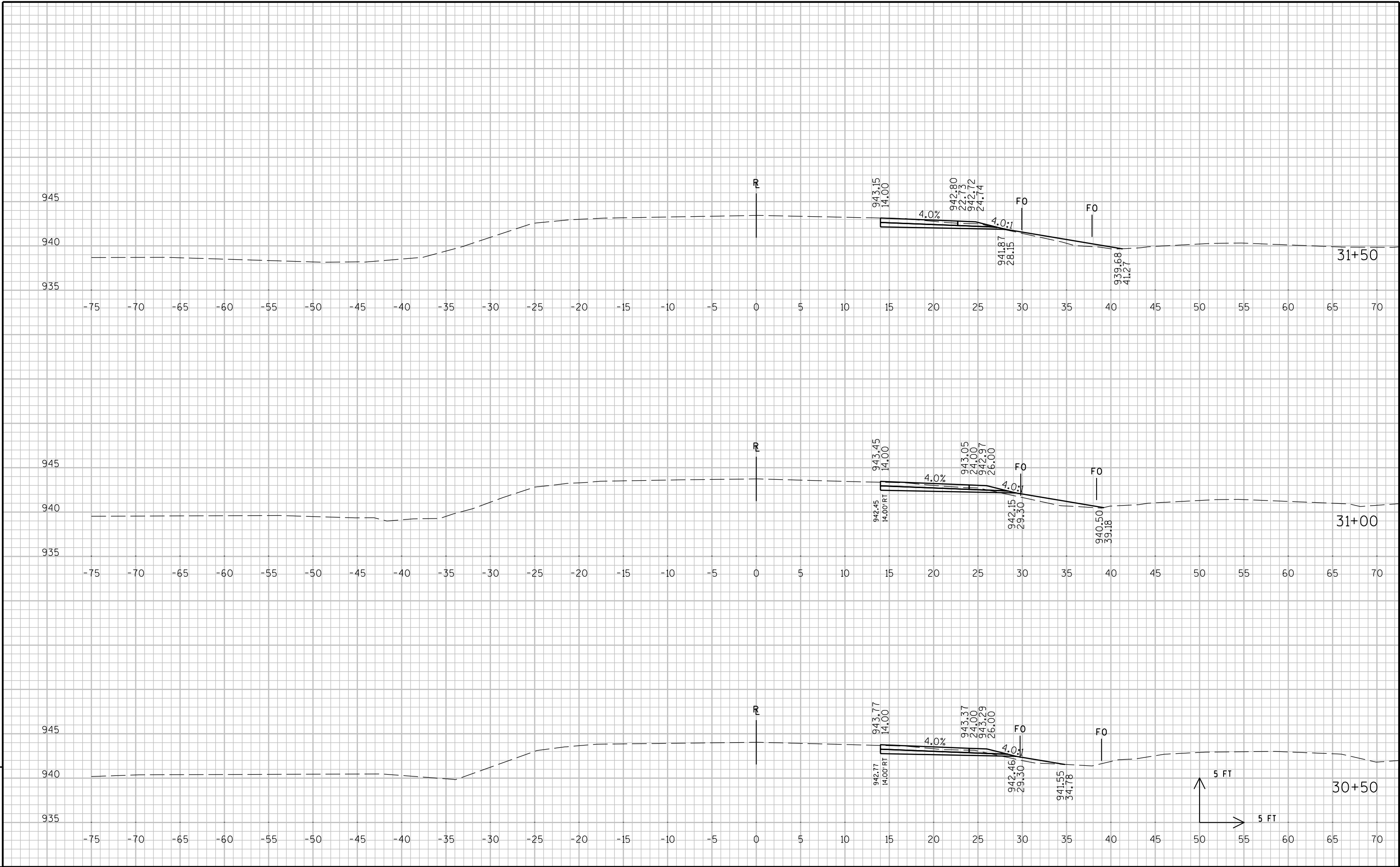




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