MAD NOVEMBER 2023

PROJECT ID: 1400-00-89
WITH: N/A

COUNTY: DODGE

ORDER OF SHEETS

TOTAL SHEETS = 94

03

N

DESIGN DESIGNATION

A.A.D.T.	2023	=	3800
A.A.D.T.	2043	=	4200
D.H.V.		=	500
D.D.		=	60/40
T.		=	19.9%
DESIGN SPEED		=	60 MPH
ESALS		=	1,900,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300 EB	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

COLUMBUS - WATERTOWN

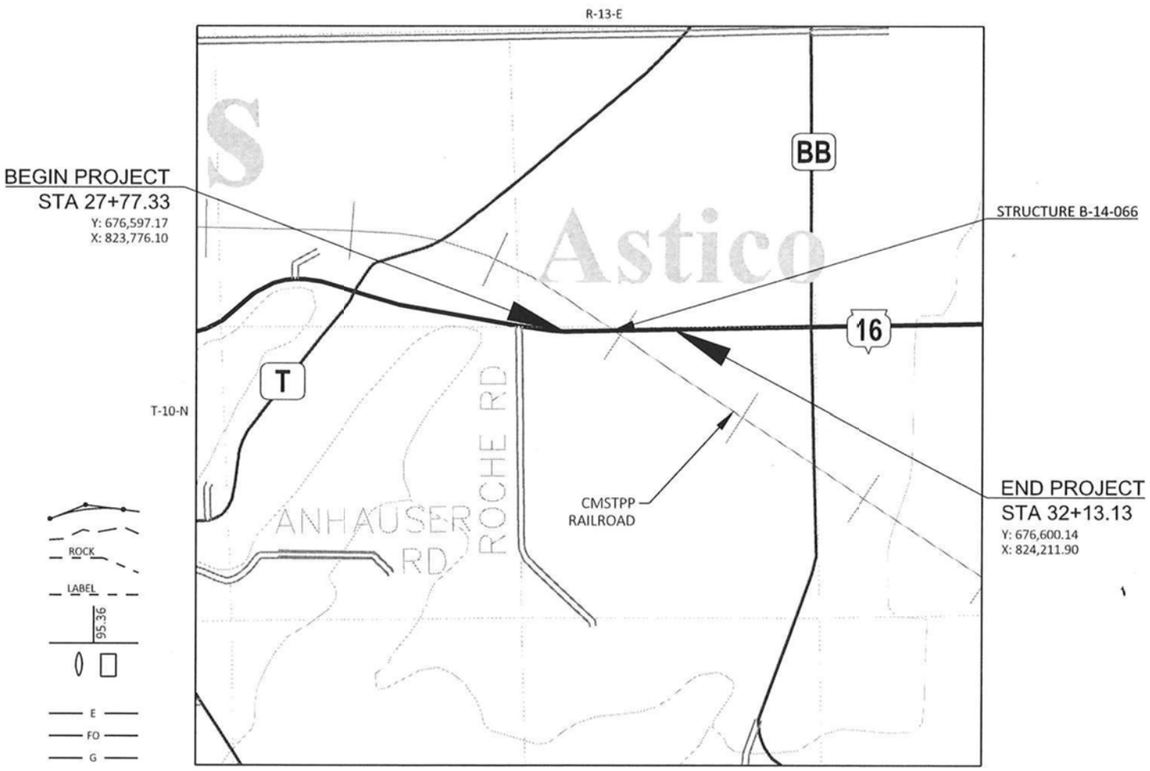
CMSTPP RR BRIDGE B-14-066

STH 16

DODGE COUNTY

STATE PROJECT NUMBER
1400-00-89

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1400-00-89	WISC 2024021	1



LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.083 mi

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCORS), DODGE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ORIGINAL PLANS PREPARED BY:

STRAND ASSOCIATES

WISCONSIN
SARA J. GRIMME
E-36643
VERONA WI
PROFESSIONAL ENGINEER
3-4-22

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	STRAND ASSOCIATES, INC.
Designer	STRAND ASSOCIATES, INC.
Project Manager	SHAUN ANDERSON
Regional Examiner	SW REGION
Regional Supervisor	JAMES OETTINGER

APPROVED FOR THE DEPARTMENT

DATE: 3/7/2021 Shaun Anderson (Signature)

E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\010101_TI.DWG PLOT DATE : 3/2/2022 2:24 PM PLOT BY : GRIMME, SARA PLOT NAME :

GENERAL NOTES:

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

MISCELLANEOUS REMOVAL ITEMS SHALL BE REMOVED TO AN EXISTING JOINT, SAWCUT WHERE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

A SAW JOINT SHALL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

STORM SEWER PIPE ELEVATIONS, LENGTH, AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS WITH APPROVAL BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION.

EXISTING SIGNS SHALL REMAIN IN PLACE UNLESS MOVED AS PART OF THE PLAN OR THE ENGINEER APPROVES THE REMOVAL.

PRIOR TO THE PLACEMENT OF MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

ORDER OF SECTION 2 SHEETS

UTILITY CONTACTS

*AT&T WISCONSIN
CHARLES BARTELT
70 E. DIVISION STREET
FOND DU LAC, WI 54935
PHONE: (920) 410-5104
EMAIL: CB1461@ATT.COM

*TDS TELECOM
MATTHEW SCHULTE
16924 WEST VICTOR ROAD
NEW BERLIN, WI 53151
PHONE: (262) 754-3063
EMAIL: MATT.SCHULTE@TDSTELECOM.COM

*DENOTES A MEMBER OF DIGGERS HOTLINE

*WE ENERGIES - ELECTRICITY
ERIC KICKHAVER
500 SOUTH 116TH STREET
WEST ALLIS, WI 53214
PHONE: 1 (414) 944-5917
EMAIL: ERIC.KICKHAVER@WE-ENERGIES.COM

*WE ENERGIES - GAS/PETROLEUM
SCOTT HOLSTEIN
700 SOUTH KANE STREET
BURLINGTON, WI 53105
PHONE: 1 (262) 763-1084
EMAIL: SCOTT.HOLSTEIN@WE-ENERGIES.COM

OTHER CONTACTS

DESIGN CONSULTANT

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STRAND ASSOCIATES, INC.
910 WEST WINGRA DR.
MADISON, WI 53715
1 (608) 251-4843
SARA.GRIMME@STRAND.COM

WISDOT CONTACT

JAMES OETTINGER
WISDOT SW REGION-MADISON OFFICE
2101 WRIGHT STREET
MADISON, WI 53704
1 (608) 246-3879
JAMES.OETTINGER@DOT.WI.GOV

DNR LIASON

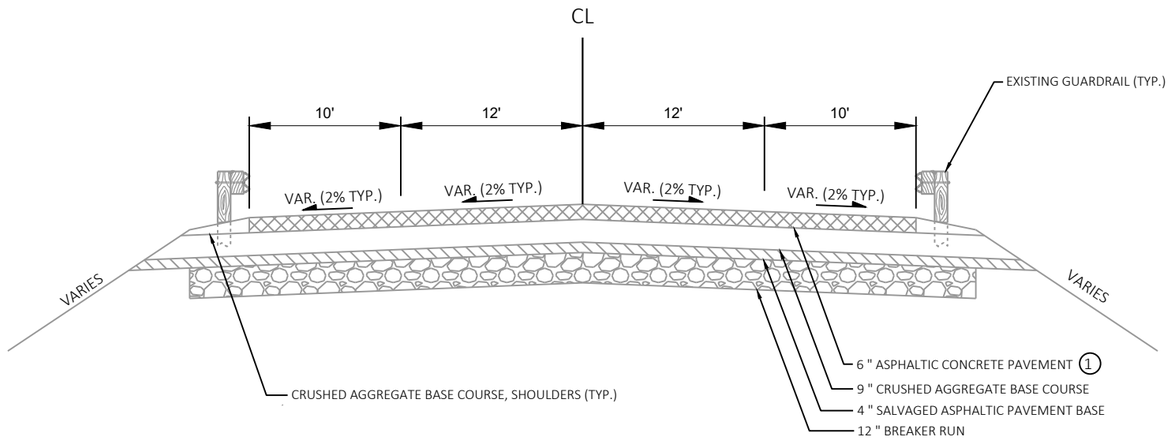
ERIC HEGGELUND
DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
1 (608) 228-7927
ERIC.HEGGELUND@WISCONSIN.GOV

RAILROAD CONTACT

BRIAN OSBORNE
SOO LINE RAILROAD
120 SOUTH 6TH STREET, SUITE 700
MINNEAPOLIS, MN 55402
1 (612) 330-4555
BRIAN_OSBORNE@CPR.CA

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

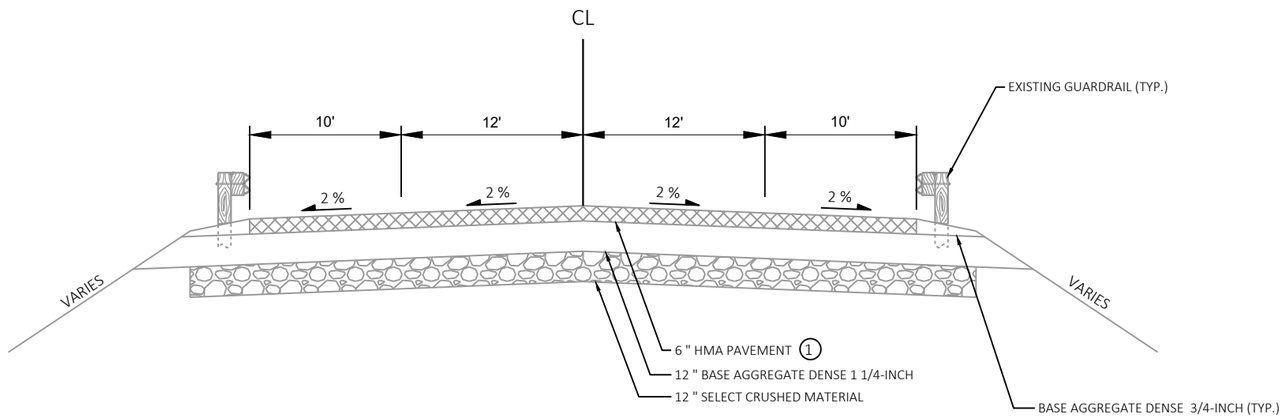
2



EXISTING TYPICAL SECTION

STA. 22+05.85 TO STA. 28+94.70
B-14-066 (STA. 28+94.70 - 31+46.20)

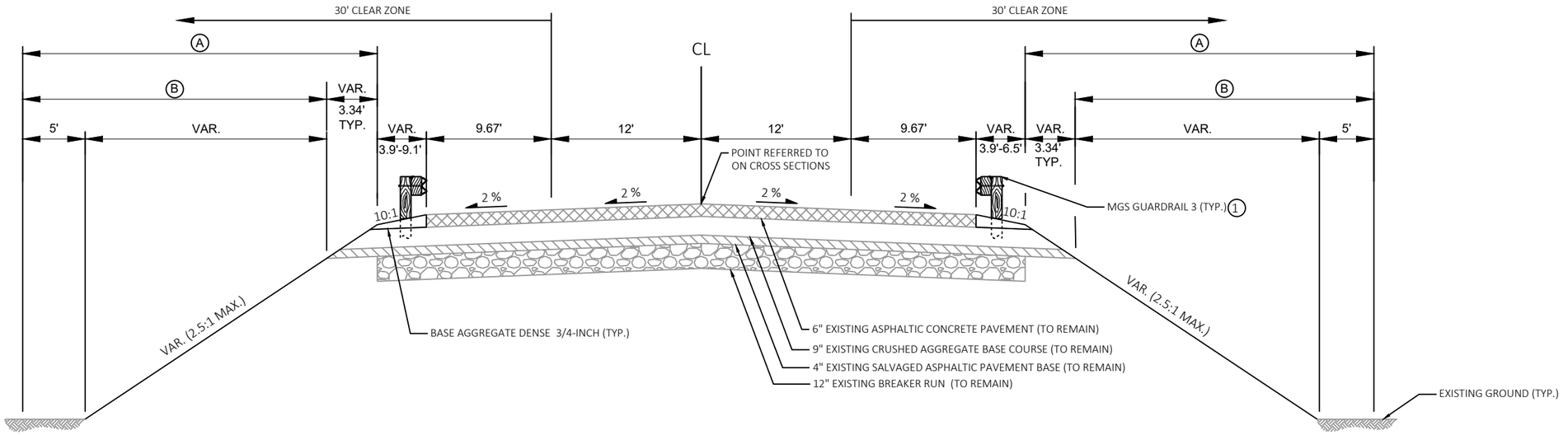
1 6" CONCRETE PAVEMENT TRAVEL LANES
STA. 27+77.6 - STA. 28+94.7
STA. 31+46.2 - STA. 32+03.1



EXISTING TYPICAL SECTION

STA. 31+46.20 TO STA. 35+70.70

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 3	E



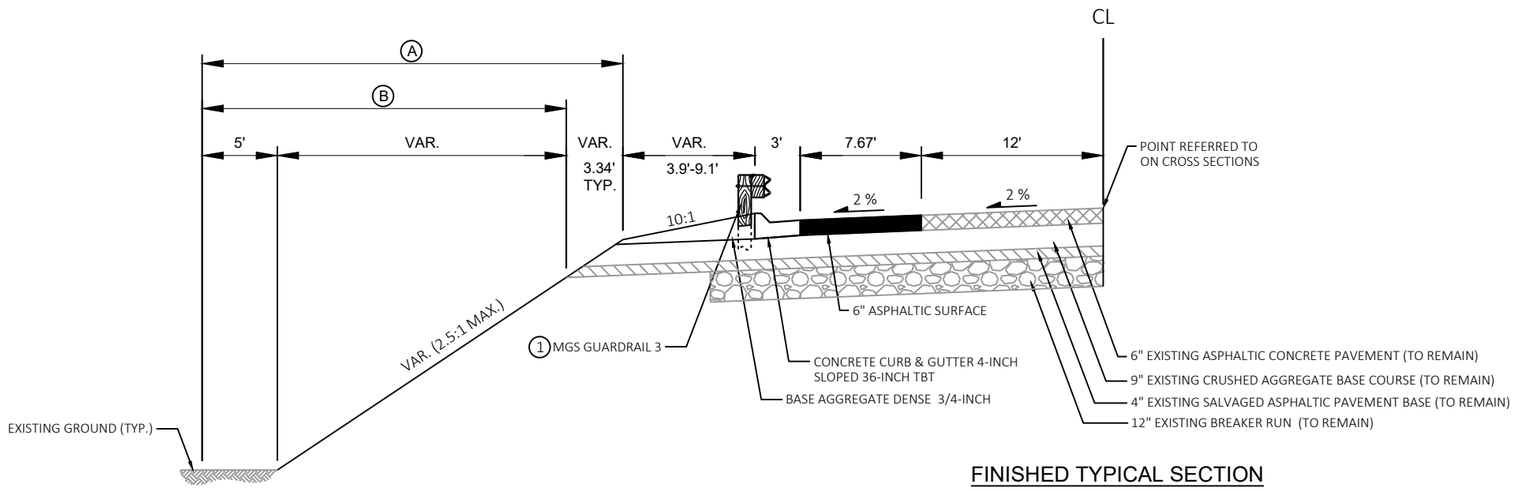
FINISHED TYPICAL SECTION

STA 22+05.85 LT TO STA. 27+52.09 LT

STA. 22+74.75 RT TO STA. 27+77.33 RT

LEGEND

- (A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B
- (B) SALVAGED TOPSOIL; AND EROSION MAT CLASS 1 TYPE B OR MULCHING
- (1) MGS GUARDRAIL 3
  STA. 23+41.36 LT - 28+46.38 LT

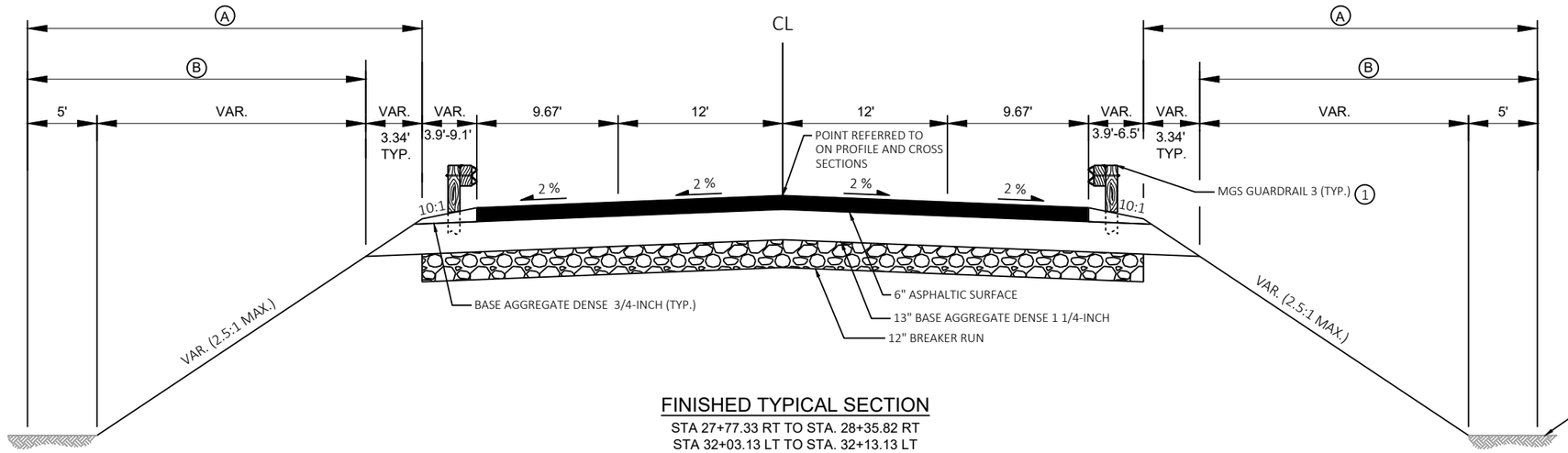


FINISHED TYPICAL SECTION

STA. 27+52.09 LT TO STA. 27+77.33 LT

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 4	E

2



FINISHED TYPICAL SECTION

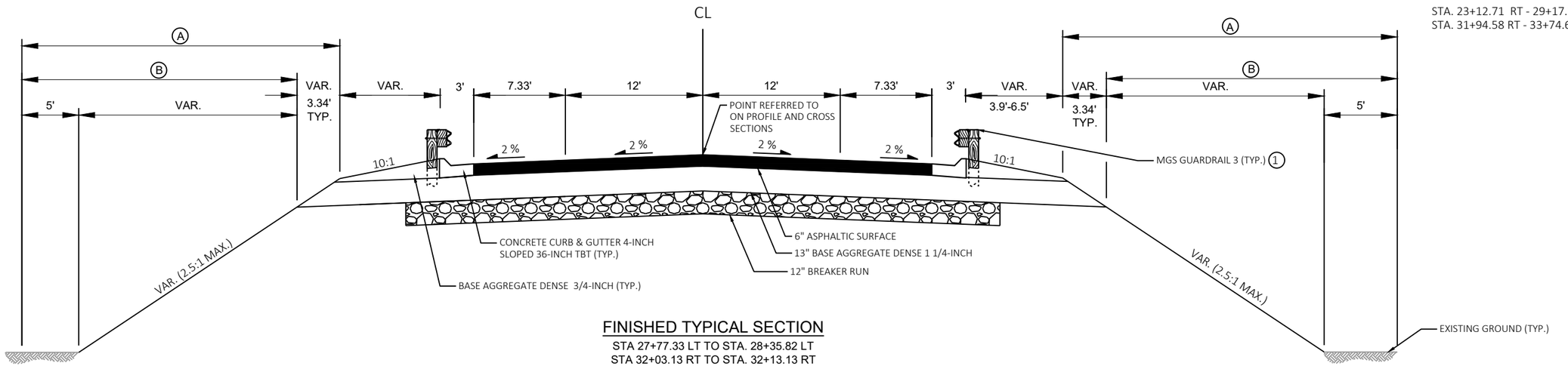
STA 27+77.33 RT TO STA. 28+35.82 RT
STA 32+03.13 LT TO STA. 32+13.13 LT

LEGEND

- (A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B
- (B) SALVAGED TOPSOIL; AND EROSION MAT CLASS 1 TYPE B OR MULCHING
- (1) MGS GUARDRAIL 3

STA. 23+41.36 LT - 28+46.38 LT
STA. 31+23.18 LT - 34+15.71 LT

STA. 23+12.71 RT - 29+17.73 RT
STA. 31+94.58 RT - 33+74.61 RT



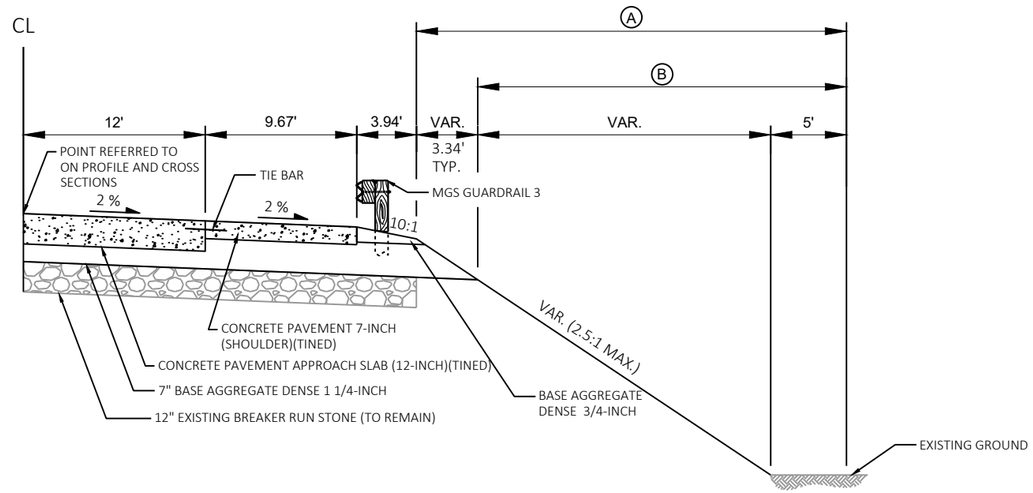
FINISHED TYPICAL SECTION

STA 27+77.33 LT TO STA. 28+35.82 LT
STA 32+03.13 RT TO STA. 32+13.13 RT

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 020303_ts
PLOT DATE : 3/7/2022 9:23 AM
PLOT BY : GRIMME, SARA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

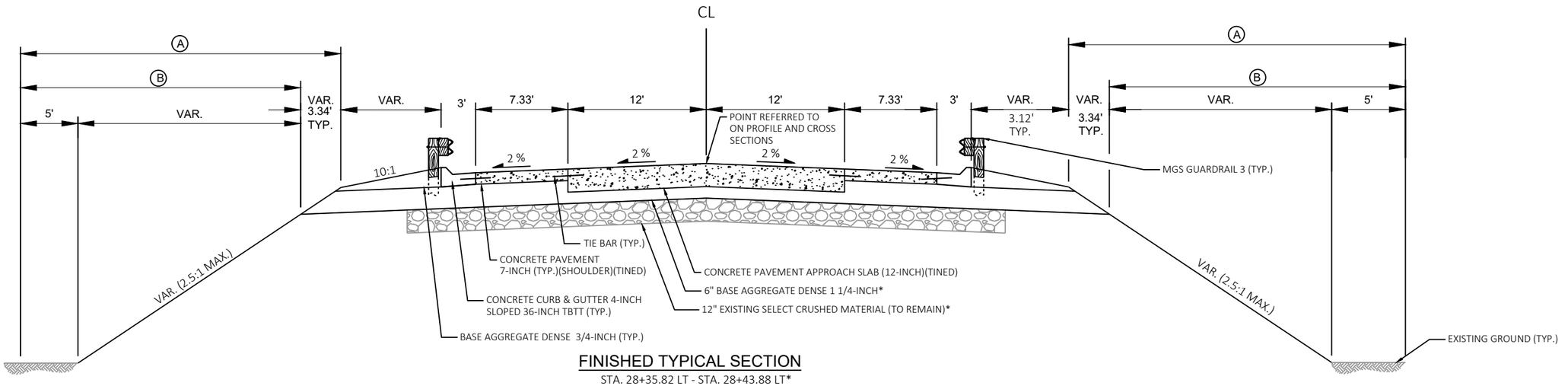


FINISHED TYPICAL SECTION

STA. 28+35.82 RT TO STA. 28+60.96 RT

LEGEND

- (A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B
- (B) SALVAGED TOPSOIL; AND EROSION MAT CLASS 1 TYPE B OR MULCHING



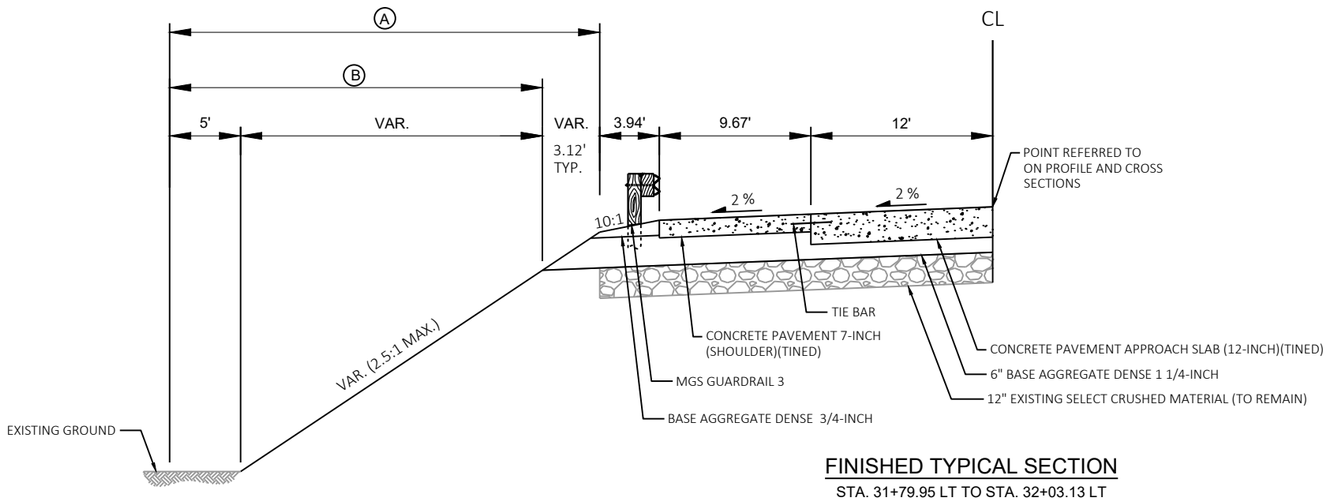
FINISHED TYPICAL SECTION

STA. 28+35.82 LT - STA. 28+43.88 LT*
STA. 28+60.96 RT - STA. 29+15.23 RT *
B-14-066 TO REMAIN (STA. 28+43.88 LT - 31+25.68 LT)
B-14-066 TO REMAIN (STA. 29+15.23 RT - 31+97.08 RT)
STA. 31+25.68 LT - STA. 31+79.95 LT
STA. 31+97.08 RT - STA. 32+03.13 RT

*7" BASE AGGREGATE DENSE 1 1/4-INCH
OVER
12" EXISTING BREAKER RUN STONE (TO REMAIN)

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 6	E

2

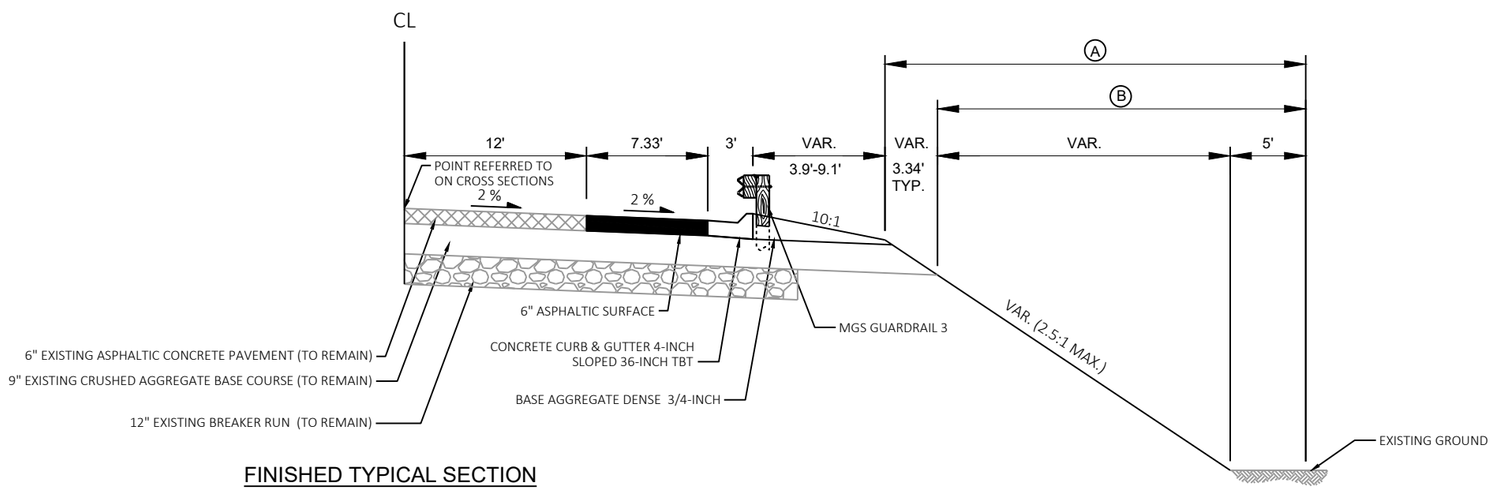


FINISHED TYPICAL SECTION

STA. 31+79.95 LT TO STA. 32+03.13 LT

LEGEND

- (A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B
- (B) SALVAGED TOPSOIL; AND EROSION MAT CLASS 1 TYPE B OR MULCHING



FINISHED TYPICAL SECTION

STA. 32+13.13 RT TO STA. 33+13.85 RT

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 7	E

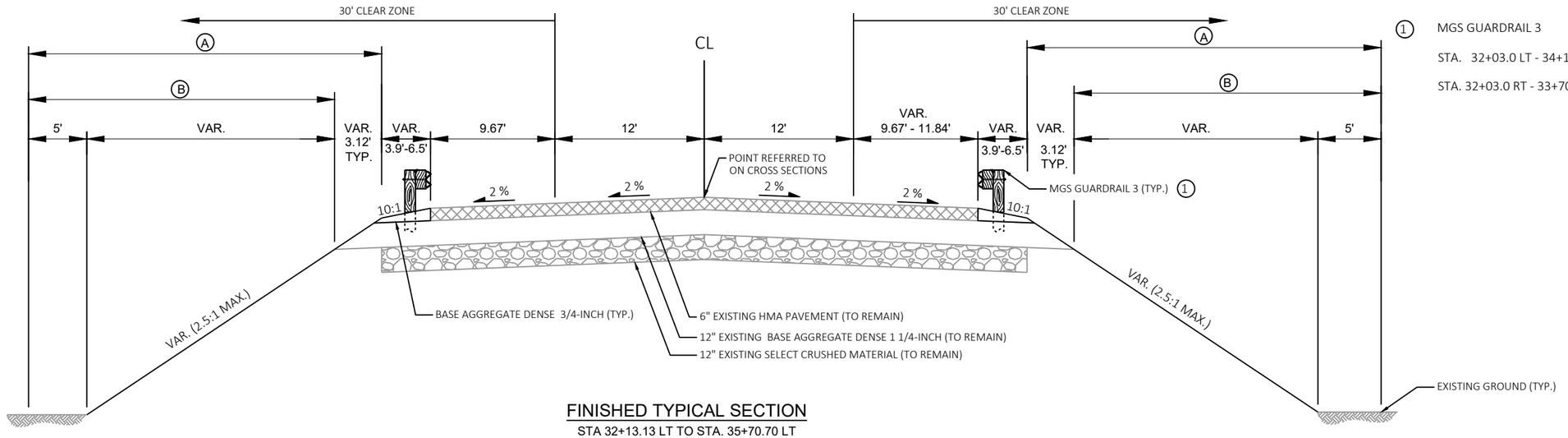
2

LEGEND

- (A) SEEDING MIXTURE NO. 20 AND FERTILIZER TYPE B
- (B) SALVAGED TOPSOIL; AND EROSION MAT CLASS 1 TYPE B OR MULCHING
- (1) MGS GUARDRAIL 3

  STA. 32+03.0 LT - 34+13.2 LT

  STA. 32+03.0 RT - 33+70.62 RT



FINISHED TYPICAL SECTION

STA 32+13.13 LT TO STA. 35+70.70 LT

STA. 33+13.85 RT TO STA. 35+67.76 RT

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 8	E

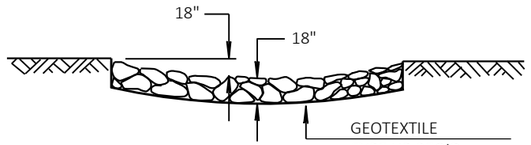
FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 020306_ts
PLOT DATE : 3/7/2022 9:31 AM
PLOT BY : GRIMME, SARA
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

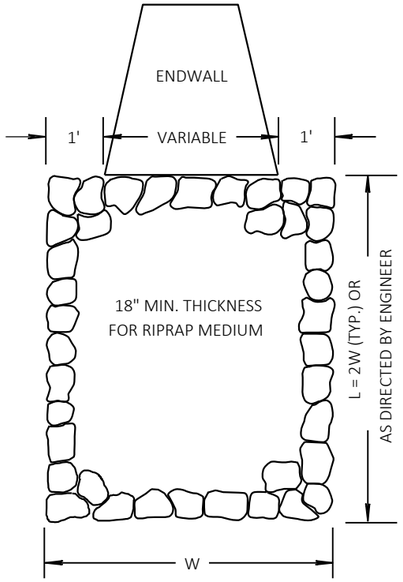
RUNOFF COEFFICIENT TABLE

	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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP - TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .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 = 2.82 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.95 ACRES



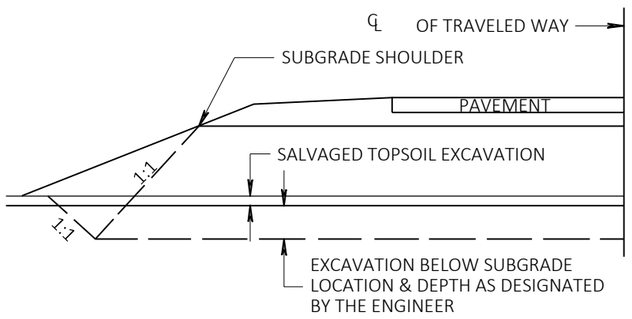
SECTION A-A



A A

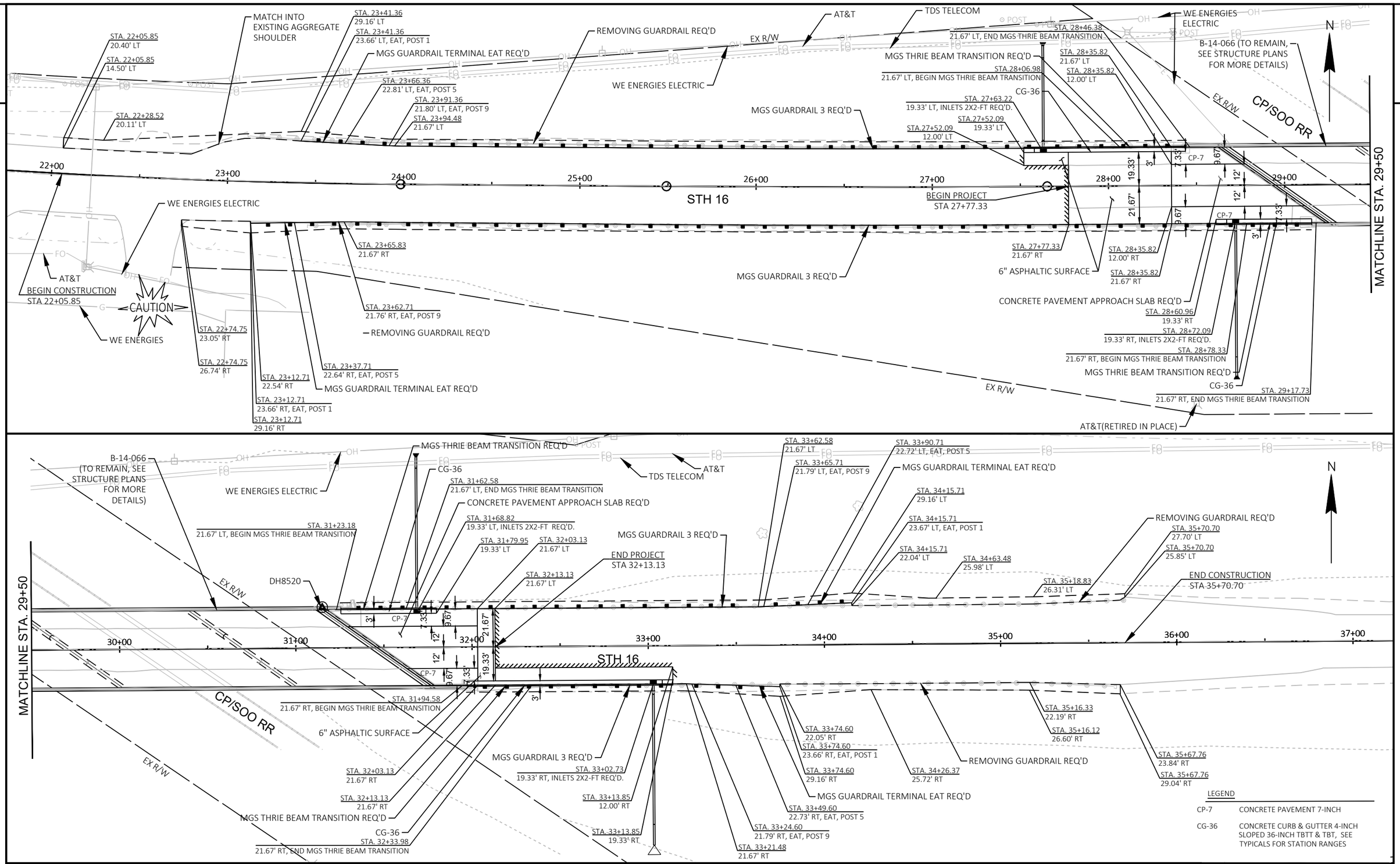
RIPRAP TREATMENT AT CULVERTS

STA. 27+63.22 LT
STA. 28+72.08 RT
STA. 31+68.82 LT
STA. 33+02.72 LT



DETAIL FOR EXCAVATION BELOW SUBGRADE

2



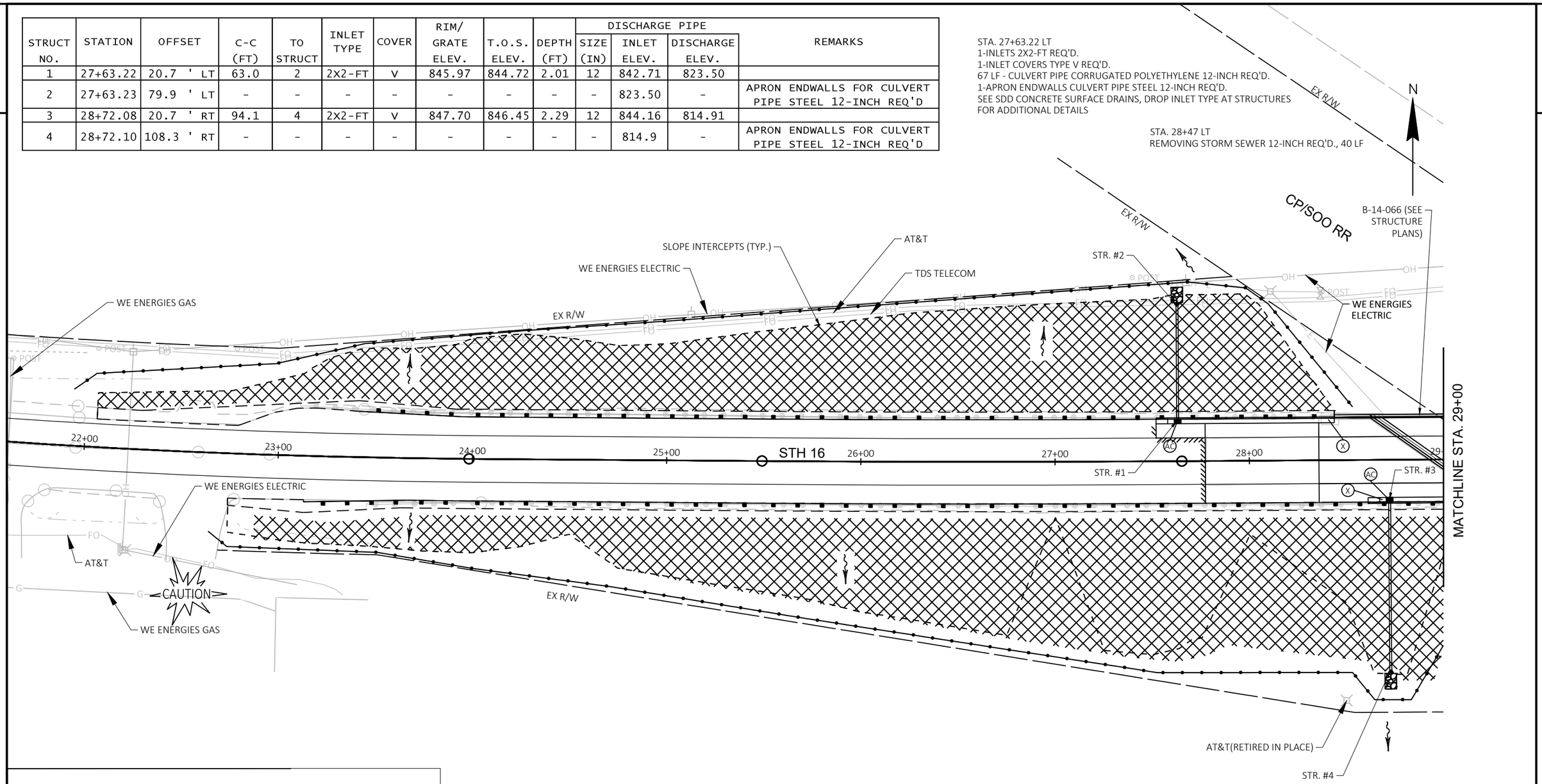
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	LAYOUT DETAILS	SHEET 10	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_pd
PLOT DATE : 3/11/2022 10:23 AM
PLOT BY : GRIMME, SARA
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	RIM/ GRATE ELEV.	T.O.S. ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	DISCHARGE PIPE INLET ELEV.	DISCHARGE PIPE DISCHARGE ELEV.	REMARKS
1	27+63.22	20.7 ' LT	63.0	2	2X2-FT	V	845.97	844.72	2.01	12	842.71	823.50	
2	27+63.23	79.9 ' LT	-	-	-	-	-	-	-	-	823.50	-	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH REQ'D
3	28+72.08	20.7 ' RT	94.1	4	2X2-FT	V	847.70	846.45	2.29	12	844.16	814.91	
4	28+72.10	108.3 ' RT	-	-	-	-	-	-	-	-	814.9	-	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH REQ'D

STA. 27+63.22 LT
1-INLETS 2X2-FT REQ'D.
1-INLET COVERS TYPE V REQ'D.
67 LF - CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.
SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE AT STRUCTURES FOR ADDITIONAL DETAILS

STA. 28+47 LT
REMOVING STORM SEWER 12-INCH REQ'D., 40 LF

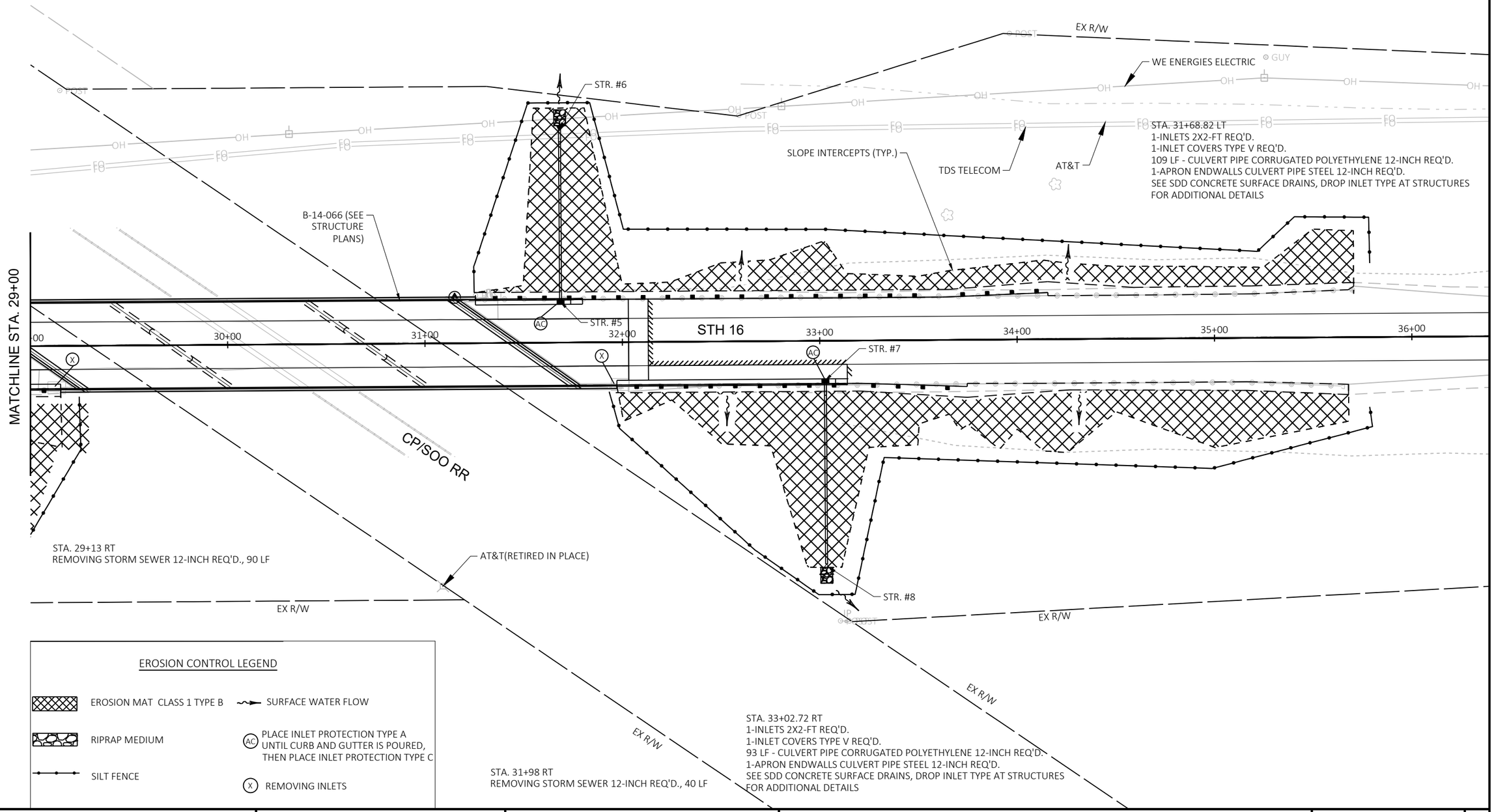


EROSION CONTROL LEGEND

- EROSION MAT CLASS 1 TYPE B
- SURFACE WATER FLOW
- RIPRAP MEDIUM
- (AC) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED, THEN PLACE INLET PROTECTION TYPE C
- SILT FENCE
- (X) REMOVING INLETS

STA. 28+72.08 RT
1-INLETS 2X2-FT REQ'D.
1-INLET COVERS TYPE V REQ'D.
108 LF - CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.
SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE AT STRUCTURES FOR ADDITIONAL DETAILS

STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	RIM/ GRATE ELEV.	T.O.S. ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	DISCHARGE PIPE INLET ELEV.	DISCHARGE PIPE DISCHARGE ELEV.	REMARKS
5	31+68.82	20.7 ' LT	93.1	6	2X2-FT	V	848.80	847.55	1.82	12	845.73	816.08	
6	31+68.84	108.2 ' LT	-	-	-	-	-	-	-	-	816.1	-	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH REQ'D
7	33+02.72	20.7 ' RT	96.7	8	2X2-FT	V	847.71	846.46	2.01	12	844.45	818.67	
8	33+02.72	113.0 ' RT	-	-	-	-	-	-	-	-	818.7	-	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH REQ'D



PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	EROSION CONTROL AND STORM SEWER	SHEET 12	E

2

2

N

EX R/W

SLOPE INTERCEPTS (TYP.)

EX R/W

CP/SOO RR

B-14-066 (SEE STRUCTURE PLANS)

EX R/W

22+00

23+00

24+00

25+00

26+00

STH 16

27+00

28+00

29+

MATCHLINE STA. 29+00

G

G

EX R/W

MARKING LINE EPOXY 6-INCH, DOUBLE YELLOW

MARKING LINE EPOXY 6-INCH, WHITE

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	PAVEMENT MARKING	SHEET 13	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_PM

PLOT DATE : 4/13/2023 1:06 PM PLOT BY : GRIMME, SARA PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

MARKING LINE EPOXY 6-INCH, WHITE

MARKING LINE EPOXY 6-INCH, DOUBLE YELLOW

SLOPE INTERCEPTS (TYP.)

EX R/W

GUY

B-14-066 (SEE STRUCTURE PLANS)

MATCHLINE STA. 29+00

30+00

31+00

32+00

STH 16

33+00

34+00

35+00

36+00

CP/SOO RR

EX R/W

EX R/W

EX R/W

EX R/W

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	PAVEMENT MARKING	SHEET 14	E

NOTE

SEE NEXT SHEET FOR DETOUR SIGN LEGEND.

DETOUR ROUTE MARKER SIGNING TO BE INSTALLED AND MAINTAINED BY CONTRACTOR.

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

REMOVE OR COVER ANY SIGN, TEMPORARY OR EXISTING, WHICH CONFLICTS WITH TRAFFIC CONTROL "IN USE", OR AS APPROVED BY THE ENGINEER.

"WO" AND "W" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.

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

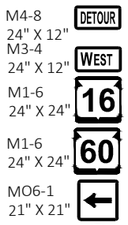
"MO" SIGNS ARE THE SAME AS "M"SIGNS EXCEPT THE BACKGROUND IS ORANGE.

TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE FOR PRE-WARNING TO BE INSTALLED ONE WEEK PRIOR TO IMPLEMENTATION OF DETOUR ROUTE.

TRAFFIC CONTROL SUMMARY (FOR INFORMATION ONLY)

CATEGORY	LOCATION	DESCRIPTION	SIGN CODE	SIZE INCH X INCH	EACH
0010	DETOUR ROUTE	COVERING SIGNS TYPE I	---	---	4
		COVERING SIGNS TYPE II	---	---	104
		TRAFFIC CONTROL BARRICADES TYPE III	---	---	5
		TRAFFIC CONTROL WARNING LIGHTS TYPE A	---	---	8
		DETOUR NEXT __ MILES	G20-51	60X24	1
		STH 16	M1-6	24X24	77
		STH 60	M1-6	24X24	77
		EAST	M3-2	24X12	51
		WEST	M3-4	24X12	82
		DETOUR	M4-8	24X12	108
		DETOUR SIGN WITH LEFT ARROW	M4-9L	30X24	1
		ADVANCE ARROW LEFT TURN	MO5-1L	21X21	8
		ADVANCE ARROW RIGHT TURN	MO5-1R	21X21	13
		ARROW - RIGHT, LEFT OR AHEAD	MO6-1	21X21	48
		BRIDGE OUT XX MILES AHEAD	R11-3C	60X24	4
		DETOUR AHEAD	W20-2	48x48	14
		DETOUR	M4-8	36X18	31
		EAST	M3-2	36X18	22
		WEST	M3-4	36X18	18
		STH 16	M1-6	36X36	19
		STH 60	M1-6	36X36	19
		END DETOUR	M4-8A	30X24	3
		ARROW - RIGHT, LEFT OR AHEAD	MO6-1	30X30	5
		ARROW - TILT RIGHT	MO6-2	30X30	2
		ADVANCE ARROW RIGHT BENT	MO5-2R	30X30	4
		SUBTOTAL SIGNS			607
	ROAD CLOSURE	TRAFFIC CONTROL BARRICADES TYPE III	---	---	18
		TRAFFIC CONTROL WARNING LIGHTS TYPE A	---	---	28
		TRAFFIC CONTROL SIGNS PCMS			2
		BRIDGE OUT	R11-2B	48X30	4
		BRIDGE OUT 1/2 MILE AHEAD	R11-3C	60X24	4
		ROAD CLOSED AHEAD	W20-3A	48X48	2
		ROAD CLOSED 1000 FT	W20-3C	48X48	2
		ROAD CLOSED 500 FT	W20-3D	48X48	2
		SUBTOTAL SIGNS			14

A



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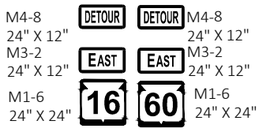

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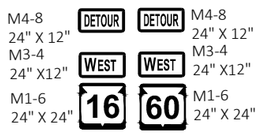
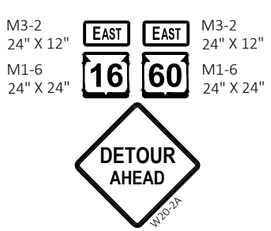


D

R11-3C
60" X 24"

E



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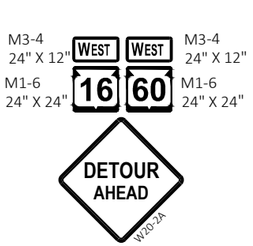
G

H



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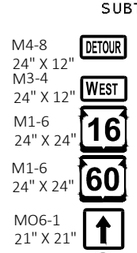

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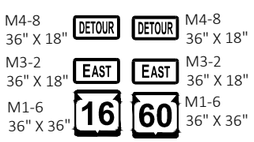
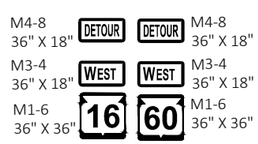
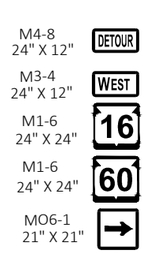


L



M

P



Q

R

S

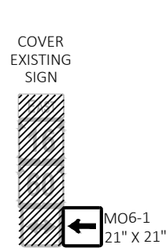
T

U

V

W

X



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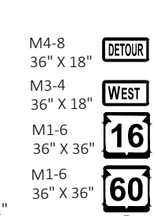

M

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	DETOUR GENERAL NOTES	SHEET 15	E

NOTE

SEE DETOUR GENERAL NOTES FOR SIGN LEGEND

DETOUR ROUTE MARKER SIGNING TO BE INSTALLED AND MAINTAINED BY CONTRACTOR.

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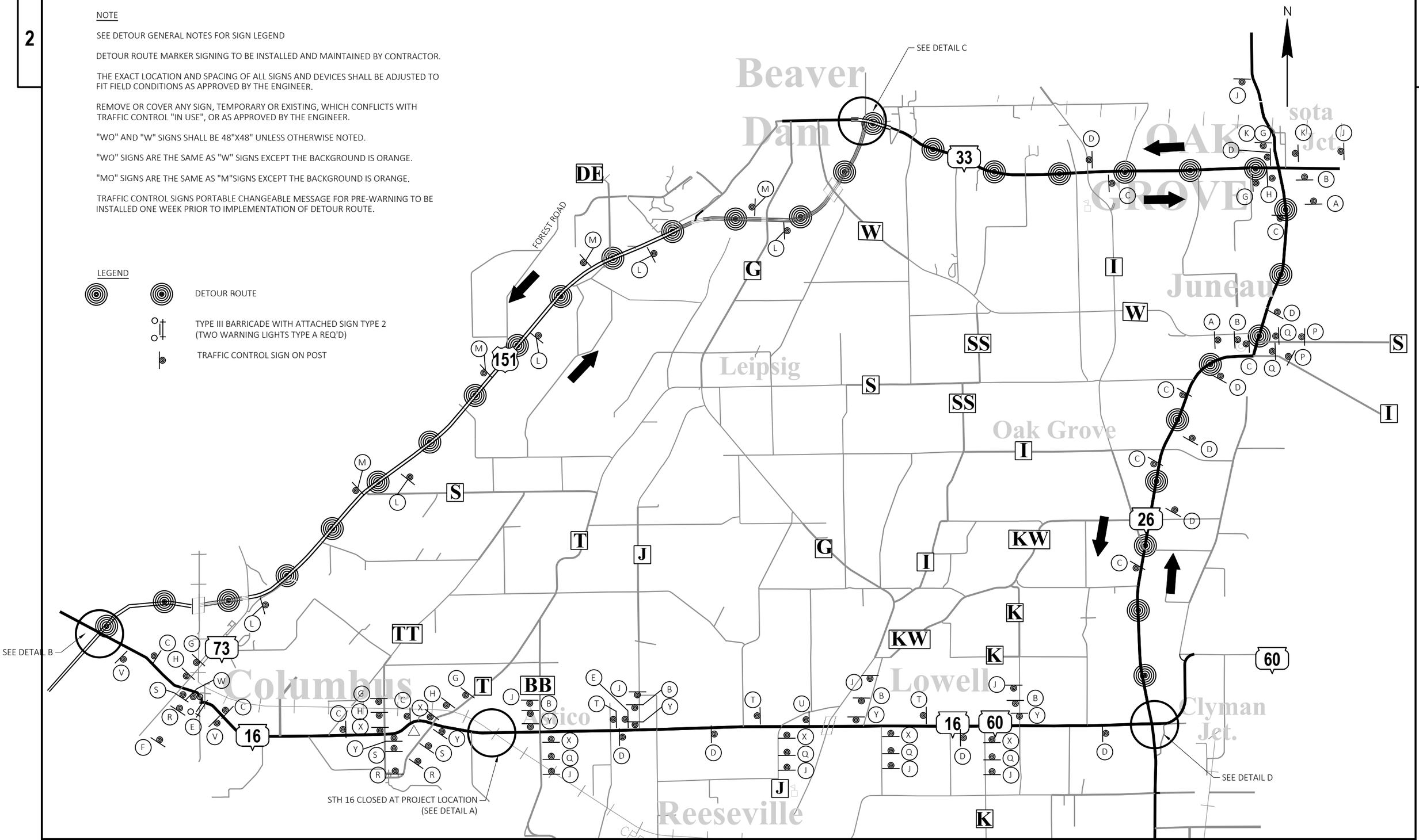
TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE FOR PRE-WARNING TO BE INSTALLED ONE WEEK PRIOR TO IMPLEMENTATION OF DETOUR ROUTE.

LEGEND

DETOUR ROUTE

TYPE III BARRICADE WITH ATTACHED SIGN TYPE 2
(TWO WARNING LIGHTS TYPE A REQ'D)

TRAFFIC CONTROL SIGN ON POST



PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	DETOUR	SHEET 16	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027002_dt

PLOT DATE : 3/28/2022 10:57 AM PLOT BY : GRIMME, SARA PLOT NAME :

WISDOT/CADDS SHEET 42

NOTE

DETOUR ROUTE MARKER SIGNING TO BE INSTALLED AND MAINTAINED BY CONTRACTOR.

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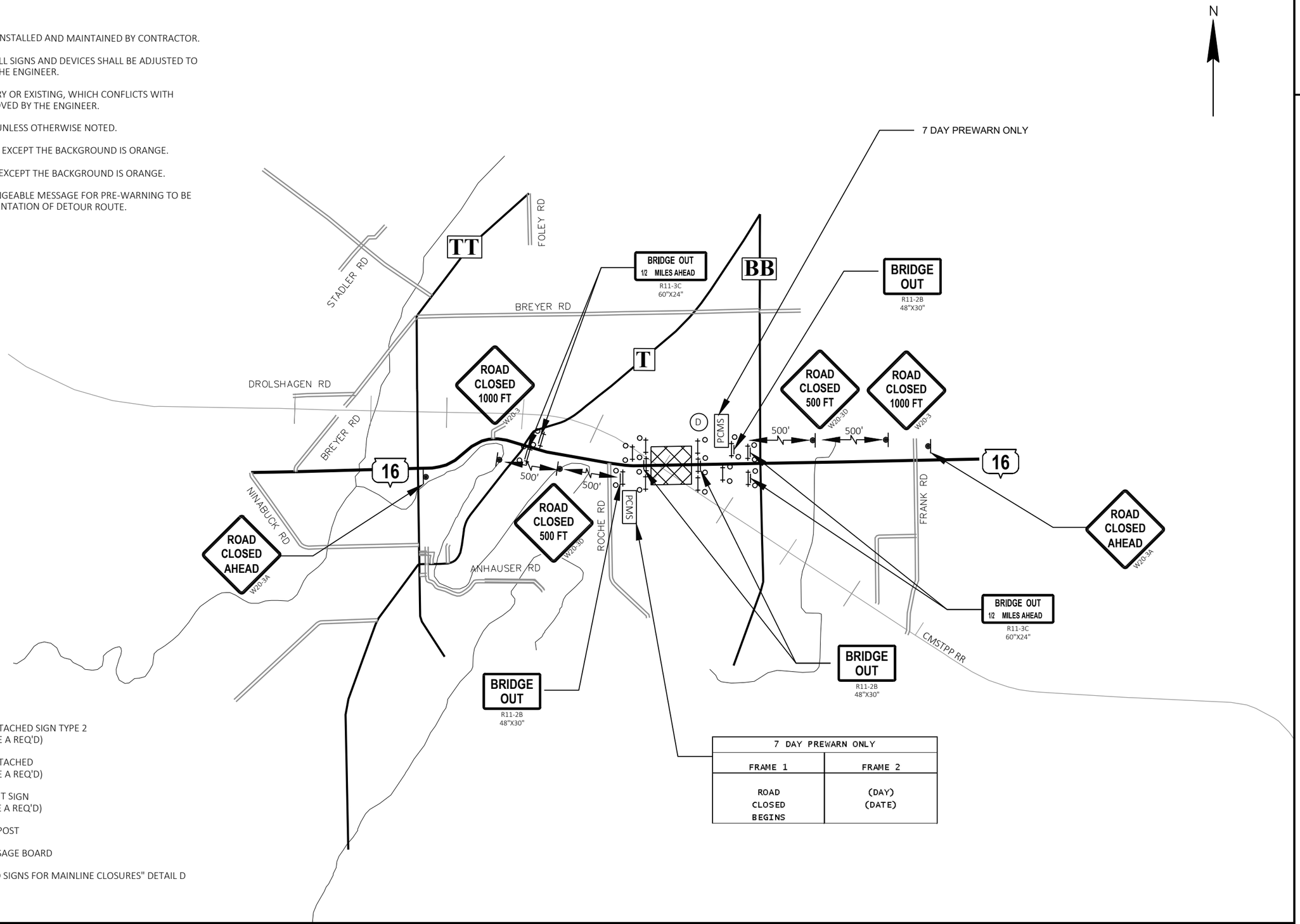

7 DAY PREWARN ONLY	
FRAME 1	FRAME 2
ROAD CLOSED BEGINS	(DAY) (DATE)

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D)
- TYPE III BARRICADE WITH ATTACHED (TWO WARNING LIGHTS TYPE A REQ'D)
- TYPE III BARRICADE WITH OUT SIGN (ONE WARNING LIGHT THYPE A REQ'D)
- TRAFFIC CONTROL SIGN ON POST
- PCMS — PORTABLE CHANGABLE MESSAGE BOARD
- (D) — SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D)
- TRAFFIC CONTROL SIGN ON POST
- EXISTING SIGN MOUNTED ON POST(S)
- COVER EXISTING SIGN
- DETOUR ROUTE

N

M3-2 24" X 12" — EAST EAST — M3-2 24" X 12"
M1-6 24" X 24" — 16 60 — M1-6 24" X 24"
DETOUR AHEAD W20-2A

EXISTING SIGN TO REMAIN — WEST WEST — 16 60

EXISTING SIGN TO REMAIN — WEST WEST — 16 60

M4-8 24" X 12" — DETOUR DETOUR — M4-8 24" X 12"
M3-2 24" X 12" — EAST EAST — M3-2 24" X 12"
M1-6 24" X 24" — 16 60 — M1-6 24" X 24"
MO5-1L 21" X 21" — MO5-1L 21" X 21"

M4-8 24" X 12" — DETOUR DETOUR — M4-8 24" X 12"
M3-2 24" X 12" — EAST EAST — M3-2 24" X 12"
M1-6 24" X 24" — 16 60 — M1-6 24" X 24"
MO6-1 21" X 21" — MO6-1 21" X 21"

M4-8 36" X 18" — DETOUR DETOUR — M4-8 36" X 18"
M3-2 36" X 18" — EAST EAST — M3-2 36" X 18"
M1-6 36" X 36" — 16 60 — M1-6 36" X 36"
MO6-1 30" X 30" — MO6-1 30" X 30"

500'

M3-2 36" X 18" — EAST EAST — M3-2 36" X 18"
M1-6 36" X 36" — 16 60 — M1-6 36" X 36"
DETOUR AHEAD W20-2A

151

EXIT 118
16 60
COLUMBUS PORTAGE
EXISTING SIGN TO REMAIN

WEST WEST — 16 60
EXISTING SIGN TO REMAIN

M4-8 36" X 18" — DETOUR DETOUR — M4-8 36" X 18"
M3-2 36" X 18" — EAST EAST — M3-2 36" X 18"
M1-6 36" X 36" — 16 60 — M1-6 36" X 36"

BRIDGE OUT
4 1/2 MILES AHEAD
R11-3C 60"X24"

DETOUR
M4-9L 30"X24"

M4-8 24" X 12" — DETOUR DETOUR — M4-8 24" X 12"
M3-2 24" X 12" — EAST EAST — M3-2 24" X 12"
M1-6 24" X 24" — 16 60 — M1-6 24" X 24"
MO6-1 21" X 21" — MO6-1 21" X 21"

16 60

EXIT 118
16 60
COLUMBUS PORTAGE
EXISTING SIGN TO REMAIN

151

DETOUR NEXT 30 MILES
G20-51 60" X 24"

M4-8A 30" X 24" — END DETOUR END DETOUR — M4-8A 30" X 24"
M3-4 36" X 18" — WEST WEST — M3-4 36" X 18"
M1-6 36" X 36" — 16 60 — M1-6 36" X 36"

M4-8 24" X 12" — DETOUR DETOUR — M4-8 24" X 12"
M3-2 24" X 12" — EAST EAST — M3-2 24" X 12"
M1-6 24" X 24" — 16 60 — M1-6 24" X 24"
MO5-1R 21" X 21" — MO5-1R 21" X 21"

CMSTPP RR

NOTE

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TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE FOR PRE-WARNING TO BE INSTALLED ONE WEEK PRIOR TO IMPLEMENTATION OF DETOUR ROUTE.

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	DETOUR - DETAIL B	SHEET 18	E

NOTE

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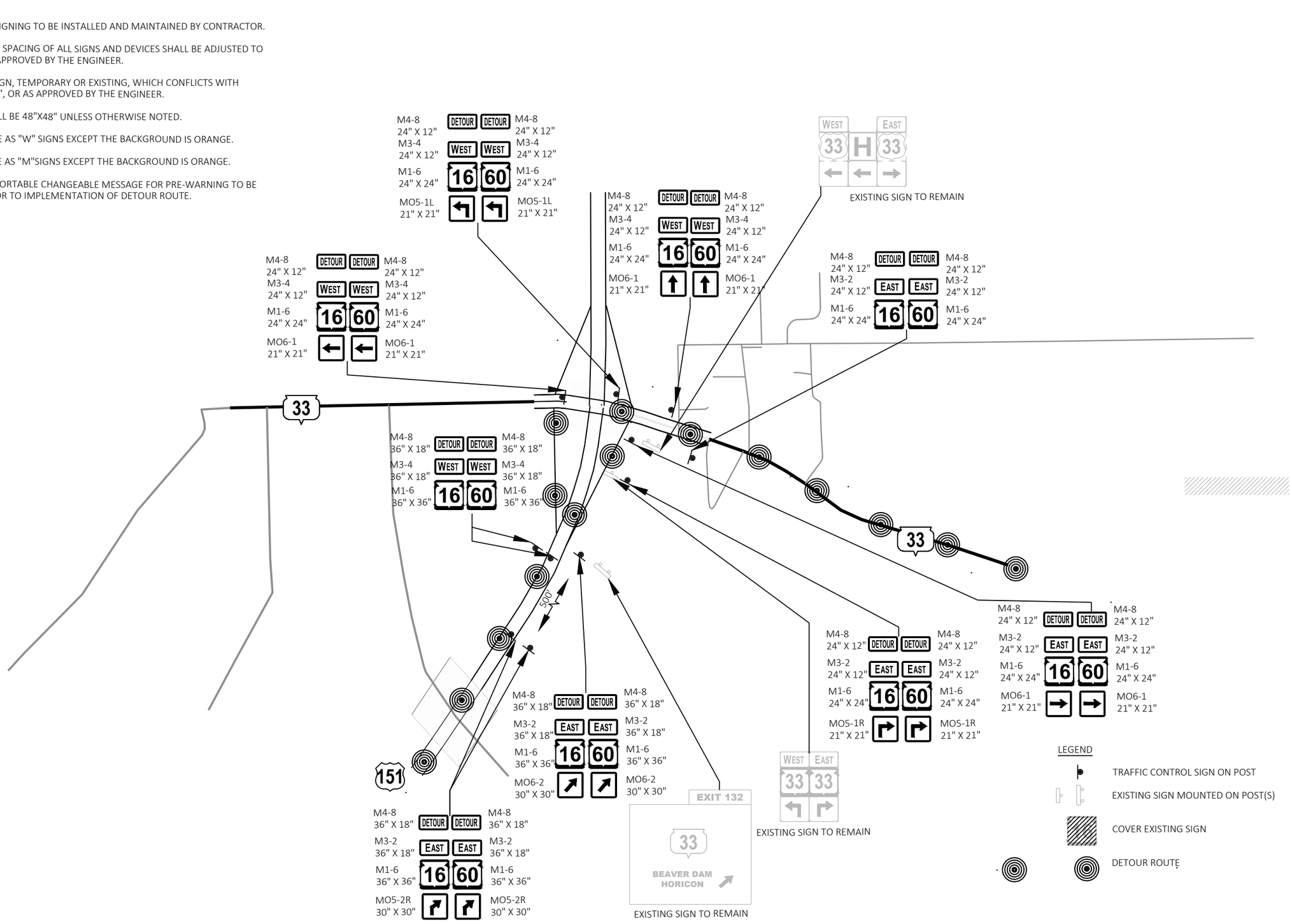

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	DETOUR - DETAIL C	SHEET 19	E

2

EXIT 52
60
HUSTISFORD 1/2 MILE
EXISTING SIGN TO REMAIN

M4-8 36" X 18" DETOUR END DETOUR M4-8A 30" X 24"
M3-3 36" X 18" EAST EAST M3-2 36" X 18"
M1-6 36" X 36" 16 60 M1-6 36" X 36"
MO6-1 30" X 30"

M4-8 24" X 12" DETOUR DETOUR M4-8 24" X 12"
M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"

M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"

DETOUR AHEAD
W20-2A

M4-8 24" X 12" DETOUR DETOUR M4-8 24" X 12"
M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"
MO5-1R 21" X 21" MO5-1R 21" X 21"

EXIT 52
60
HUSTISFORD
EXISTING SIGN TO REMAIN

26
EXISTING SIGN TO REMAIN

M4-8 24" X 12" DETOUR DETOUR M4-8 24" X 12"
M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"
MO6-1 21" X 21" MO6-1 21" X 21"

60

EAST 60
EXISTING SIGN TO REMAIN

NORTH 26
EXISTING SIGN TO REMAIN

SOUTH 26 NORTH 26
EXISTING SIGN TO REMAIN

EAST 60
EXISTING SIGN TO REMAIN

HUSTISFORD
EXISTING SIGN TO REMAIN

EAST 16
EXISTING SIGN TO REMAIN

M4-8 36" X 18" DETOUR DETOUR M4-8 36" X 18"
M3-3 36" X 18" WEST WEST M3-3 36" X 18"
M1-6 36" X 36" 16 60 M1-6 36" X 36"
MO6-1 30" X 30" MO6-1 30" X 30"

16 60
WATERTOWN
EXISTING SIGN TO REMAIN

HUSTISFORD
EXISTING SIGN TO REMAIN

EAST SOUTH 16 26
EXISTING SIGN TO REMAIN

BRIDGE OUT
9 1/2 MILES AHEAD
R11-3C 60"X24"

M4-8 24" X 12" DETOUR DETOUR M4-8 24" X 12"
M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"
MO5-1L 21" X 21" MO5-1L 21" X 21"

16
26

M4-8 30" X 24" END DETOUR
EAST SOUTH 16 26

EAST 16
EXISTING SIGN TO REMAIN

M4-8 36" X 18" DETOUR DETOUR M4-8 36" X 18"
M3-3 36" X 18" WEST WEST M3-3 36" X 18"
M1-6 36" X 36" 16 60 M1-6 36" X 36"
MO6-1 30" X 30" MO6-1 30" X 30"

M4-8 24" X 12" DETOUR DETOUR M4-8 24" X 12"
M3-3 24" X 12" WEST WEST M3-3 24" X 12"
M1-6 24" X 24" 16 60 M1-6 24" X 24"
MO6-1 21" X 21" MO6-1 21" X 21"

EXIT 52
60
HUSTISFORD 1/2 MILE
EXISTING SIGN TO REMAIN

M3-3 36" X 18" WEST WEST M3-3 36" X 18"
M1-6 36" X 36" 16 60 M1-6 36" X 36"

DETOUR AHEAD
W20-2A

EXIT 52
60
HUSTISFORD
EXISTING SIGN TO REMAIN

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN TYPE 2 (TWO WARNING LIGHTS TYPE A REQ'D)
- TRAFFIC CONTROL SIGN ON POST
- EXISTING SIGN MOUNTED ON POST(S)
- COVER EXISTING SIGN
- DETOUR ROUTE

N

NOTE

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PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	DETOUR - DETAIL D	SHEET 20	E

1400-00-89

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0211.S	Abatement of Asbestos Containing Material (structure) 01. B-14-066	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 01. B-14-066	EACH	1.000	1.000
0010	204.0100	Removing Concrete Pavement	SY	124.000	124.000
0012	204.0165	Removing Guardrail	LF	1,935.000	1,935.000
0014	204.0220	Removing Inlets	EACH	3.000	3.000
0016	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	170.000	170.000
0018	205.0100	Excavation Common	CY	562.000	562.000
0020	206.1001	Excavation for Structures Bridges (structure) 01. B-14-066	EACH	1.000	1.000
0022	208.0100	Borrow	CY	2,083.000	2,083.000
0024	210.1500	Backfill Structure Type A	TON	45.000	45.000
0026	213.0100	Finishing Roadway (project) 01. 1400-00-89	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	142.000	142.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	566.000	566.000
0032	311.0110	Breaker Run	TON	287.000	287.000
0034	415.0070	Concrete Pavement 7-Inch	SY	220.000	220.000
0036	415.0410	Concrete Pavement Approach Slab	SY	310.000	310.000
0038	455.0605	Tack Coat	GAL	20.000	20.000
0040	465.0105	Asphaltic Surface	TON	140.000	140.000
0042	502.0100	Concrete Masonry Bridges	CY	70.000	70.000
0044	502.3101	Expansion Device	LF	150.000	150.000
0046	502.3200	Protective Surface Treatment	SY	1,238.000	1,238.000
0048	502.3210	Pigmented Surface Sealer	SY	298.000	298.000
0050	502.4205	Adhesive Anchors No. 5 Bar	EACH	1,756.000	1,756.000
0052	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,510.000	15,510.000
0054	509.0301	Preparation Decks Type 1	SY	582.000	582.000
0056	509.0302	Preparation Decks Type 2	SY	399.000	399.000
0058	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	1,184.000	1,184.000
0060	509.1000	Joint Repair	SY	69.000	69.000
0062	509.1500	Concrete Surface Repair	SF	50.000	50.000
0064	509.2000	Full-Depth Deck Repair	SY	24.000	24.000
0066	509.2500	Concrete Masonry Overlay Decks	CY	184.000	184.000
0068	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-14-066	SY	1,227.000	1,227.000
0070	509.9050.S	Cleaning Parapets	LF	514.000	514.000
0072	516.0500	Rubberized Membrane Waterproofing	SY	7.000	7.000
0074	517.0901.S	Preparation and Coating of Top Flanges (structure) 01. B-14-066	EACH	1.000	1.000
0076	517.3001.S	Structure Overcoating Cleaning and Priming (structure) 01. B-14-066	EACH	1.000	1.000
0078	517.4001.S	Containment and Collection of Waste Materials (structure) 01. B-14-066	EACH	1.000	1.000
0080	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0082	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0084	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	377.000	377.000
0086	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	195.000	195.000
0088	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	124.000	124.000
0090	604.0500	Slope Paving Crushed Aggregate	SY	407.000	407.000
0092	606.0200	Riprap Medium	CY	12.000	12.000
0094	611.0654	Inlet Covers Type V	EACH	4.000	4.000
0096	611.3220	Inlets 2x2-FT	EACH	4.000	4.000
0098	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000

1400-00-89

Line	Item	Item Description	Unit	Total	Qty
0100	614.2300	MGS Guardrail 3	LF	1,212.500	1,212.500
0102	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0104	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0106	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1400-00-89	EACH	1.000	1.000
0108	619.1000	Mobilization	EACH	1.000	1.000
0110	624.0100	Water	MGAL	3.400	3.400
0112	625.0500	Salvaged Topsoil	SY	6,320.000	6,320.000
0114	627.0200	Mulching	SY	7,900.000	7,900.000
0116	628.1504	Silt Fence	LF	3,190.000	3,190.000
0118	628.1520	Silt Fence Maintenance	LF	6,375.000	6,375.000
0120	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0122	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0124	628.2004	Erosion Mat Class I Type B	SY	9,710.000	9,710.000
0126	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0128	628.7015	Inlet Protection Type C	EACH	4.000	4.000
0130	629.0210	Fertilizer Type B	CWT	8.000	8.000
0132	630.0120	Seeding Mixture No. 20	LB	252.000	252.000
0134	630.0300	Seeding Borrow Pit	LB	56.000	56.000
0136	630.0500	Seed Water	MGAL	215.000	215.000
0138	633.5200	Markers Culvert End	EACH	4.000	4.000
0140	642.5201	Field Office Type C	EACH	1.000	1.000
0142	643.0420	Traffic Control Barricades Type III	DAY	1,380.000	1,380.000
0144	643.0705	Traffic Control Warning Lights Type A	DAY	2,160.000	2,160.000
0146	643.0900	Traffic Control Signs	DAY	37,260.000	37,260.000
0148	643.0910	Traffic Control Covering Signs Type I	EACH	4.000	4.000
0150	643.0920	Traffic Control Covering Signs Type II	EACH	104.000	104.000
0152	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0154	643.5000	Traffic Control	EACH	1.000	1.000
0156	645.0120	Geotextile Type HR	SY	44.000	44.000
0158	646.2020	Marking Line Epoxy 6-Inch	LF	5,290.000	5,290.000
0160	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0162	650.4500	Construction Staking Subgrade	LF	355.000	355.000
0164	650.5000	Construction Staking Base	LF	165.000	165.000
0166	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	319.000	319.000
0168	650.7000	Construction Staking Concrete Pavement	LF	160.000	160.000
0170	650.9911	Construction Staking Supplemental Control (project) 01. 1400-00-89	EACH	1.000	1.000
0172	650.9920	Construction Staking Slope Stakes	LF	2,304.000	2,304.000
0174	690.0150	Sawing Asphalt	LF	211.000	211.000
0176	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0178	801.0117	Railroad Flagging Reimbursement	DOL	8,250.000	8,250.000
0180	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 30+00	EACH	1.000	1.000
0182	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0184	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	900.000	900.000

3

CLEARING AND GRUBBING SUMMARY

CATEGORY	STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	UNDISTRIBUTED	LT & RT	2	2

REMOVING CONCRETE PAVEMENT

CATEGORY	STATION - STATION	LOCATION	204.0100 SY
0010	27+77 - 28+95	LT & RT	60
	31+46 - 32.03	LT & RT	64
		TOTAL	124

REMOVING GUARDRAIL

CATEGORY	STATION - STATION	LOCATION	204.0165 LF
0010	23+13- 28+47	LT	535
	23+46 - 29+17	RT	575
	31+22 - 35+70	LT	450
	31+94 - 35+66	RT	375
		TOTAL	1,935

FINISHING ROADWAY

CATEGORY	PROJECT I.D.	213.0100 EACH
0010	1400-00-89	1

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH
0010	28+42	LT	1
	29+13	RT	1
	31+99	RT	1
		TOTAL	3

REMOVING STORM SEWER 12-INCH

CATEGORY	STATION	LOCATION	204.0245 LF
0010	28+42	LT	40
	29+13	RT	90
	31+99	RT	40
		TOTAL	170

BASE AGGREGATE SUMMARY

CATEGORY	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON*	624.0100 WATER MGAL*
0010	22+06 - 29+25	LT & RT	95	384	194	0.9
	31+16 - 34+82	LT & RT	47	182	33	0.5
		TOTALS	142	566	227	1.4

*ADDITIONAL QUANTITY LISTED ELSEWHERE

CONCRETE PAVEMENT SUMMARY

CATEGORY	STATION - STATION	LOCATION	415.0070 7-INCH SY	415.0410 APPROACH SLAB SY
0010	28+35.82 - 29+15.23	LT & RT	110	160
	31+25.68 - 32+03.13	LT & RT	110	150
		TOTALS	220	310

3

3

EARTHWORK

				205.0100								208.0100	*311.0110	*624.0100
				EXCAVATION COMMON (1)		UNUSEABLE PAVEMENT	AVAILABLE	EXPANDED EBS	UNEXPANDED	EXPANDED	MASS ORDINATE	BORROW	BREAKER	WATER (FOR DUST
				CUT (2)	EBS EXCAVATION (3)	MATERIAL	MATERIAL (4)	BACKFILL (5)	FILL	FILL (6)	+/- (7)	(8)	RUN (9)	CONTROL)
					5% OF CUT			FACTOR 1.25		FACTOR 1.25			FACTOR 1.80	
CATEGORY	STATION	- STATION (10)	LOCATION	CY	CY	CY	CY	CY	CY	CY		CY	TON	MGAL
0010	22+05.80	- 28+94.70	LT & RT	283	14	0	297	18	1,548	1,935	-1,652	1,652	30	1
	31+46.20	- 35+70.70	LT & RT	252	13	0	265	16	546	683	-431	431	30	1
ITEM TOTALS					562							2,083	60	2

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100.
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN. ASSUMED CONVERSION FACTOR OF 1.9 TON/CY
4) AVAILABLE MATERIAL = CUT - UNUSEABLE PAVEMENT MATERIAL.
5) EXPANDED EBS BACKFILL: THIS IS TO BE FILLED WITH BREAKER RUN. EBS BACKFILL EXPANSION FACTOR = 1.25.
6) EXPANDED FILL = (UNEXPANDED FILL)* EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.25.
7) MASS ORDINATE: MASS ORDINATE = CUT - UNUSEABLE PAVEMENT MATERIAL - EXPANDED FILL
   PLUS MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. NEGATIVE MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
8) WASTE = POSITIVE MASS ORDINATE, BORROW = NEGATIVE MASS ORDINATE
9) BREAKER RUN IS USED FOR BACKFILL OF EBS.
10) STRUCTURE B-14-066 TO REMAIN, LOCATED STA 28+94.70 - STA 31+46.20

3

ASPHALTIC ITEMS

CATEGORY		LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
0010	27+52.09 - 27+77.33	LT	1	7
	27+77.33 - 28+35.82	LT & RT	13	90
	32+03.13 - 32+13.13	LT & RT	2	15
	32+13.13 - 33+13.85	RT	4	28
		TOTALS	20	140

CONCRETE CURB & GUTTER

CATEGORY	STATION - STATION	LOCATION	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF
0010	27+52.09 - 28+35.82	LT	84	---
	28+35.82 - 28+43.88	LT	---	8
	28+60.96 - 29+15.23	RT	---	55
	31+25.68 - 31+79.95	LT	---	55
	31+97.08 - 32+03.13	RT	---	6
	32+03.13 - 33+13.85	RT	111	---
		TOTALS	195	124

CONCRETE SURFACE DRAIN AND DROP INLET STRUCTURE ITEMS

CATEGORY	STATION	LOCATION	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	606.0200 RIPRAP MEDIUM CY	611.3220 INLETS 2X2-FT EACH	611.0654 INLET COVERS TYPE V EACH	645.0120 GEOTEXTILE TYPE HR SY	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	633.5200 MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
0010	27+63.22	LT	1	67	3	1	1	11	1	1	1	1
	28+72.08	RT	1	108	3	1	1	11	1	1	1	1
	31+68.82	LT	1	109	3	1	1	11	1	1	1	1
	33+02.72	RT	1	93	3	1	1	11	1	1	1	1
		TOTALS	4	377	12	4	4	44	4	4	4	4

MGS GUARDRAIL 3

CATEGORY	STATION - STATION	LOCATION	614.2300 LF
0010	23+94.48 - 28+06.98	LT	412.5
	23+65.83 - 28+78.33	RT	512.5
	31+62.58 - 33+62.58	LT	200.0
	32+33.98 - 33+21.48	RT	87.5
		TOTAL	1,212.5

MGS THRIE BEAM TRANSITION

CATEGORY	STATION - STATION	LOCATION	614.2500 LF
0010	28+06.98 - 28+46.38	LT	39.4
	28+78.33 - 29+17.73	RT	39.4
	31+23.18 - 31+62.58	LT	39.4
	31+94.58 - 32+33.98	RT	39.4
		TOTAL	157.6

MGS GUARDRAIL TERMINAL EAT

CATEGORY	STATION - STATION	LOCATION	614.2610 EACH
0010	23+41.36 - 23+94.48	LT	1
	23+12.71 - 23+65.83	RT	1
	33+62.58 - 34+15.71	LT	1
	33+21.48 - 33+74.61	RT	1
		TOTAL	4

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	PROJECT I.D.	618.0100 EACH
0010	1400-00-89	1

MOBILIZATION

CATEGORY	PROJECT I.D.	619.1000 EACH
0010	1400-00-89	1

FINISHING ITEMS

CATEGORY	STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	603.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL
0010	22+06 - 28+46	LT	2,335	2,335	2	71	---	59
	22+75 - 29+18	RT	2,505	2,505	2	75	---	62
	31+23 - 35+70	LT	640	640	1	25	---	21
	31+95 - 35+68	RT	840	840	1	31	---	26
	UNDISTRIBUTED		---	1,580	2	50	---	---
	BORROW SITE		---	---	---	---	56	47
		TOTALS	6,320	7,900	8	252	56	215

SILT FENCE SUMMARY

CATEGORY	STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
0010	21+92 - 28+70	LT	695	1,390
	22+71 - 29+34	RT	745	1,490
	31+24 - 35+79	LT	610	1,220
	31+90 - 35+78	RT	500	1,000
	UNDISTRIBUTED		640	1,275
		TOTALS	3,190	6,375

3

MOBILIZATIONS EROSION CONTROL

CATEGORY	628.1905 EACH
0010	2

MOBILIZATIONS EMERGENCY EROSION CONTROL

CATEGORY	628.1910 EACH
0010	2

EROSION MAT CLASS 1 TYPE B

CATEGORY	STATION - STATION	LOCATION	628.2004 EROSION MAT CLASS 1 TYPE B SY
0010	22+06 - 28+46	LT	2,600
	22+75 - 29+18	RT	3,190
	31+23 - 35+70	LT	885
	31+95 - 35+68	RT	1,090
	UNDISTRIBUTED	---	1,945
		TOTAL	9,710

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	643.0910 TYPE I EACH	643.0920 TYPE II EACH	NUMBER OF CYCLES	NUMBER OF SIGNS
0010	4	104	1	108

TRAFFIC CONTROL

CATEGORY	PROJECT I.D.	643.5000 EACH
0010	1400-00-89	1

FIELD OFFICE TYPE C

CATEGORY	PROJECT I.D.	642.5201 EACH
0010	1400-00-89	1

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	STATION	DURATION CALENDAR DAYS	643.1050 EACH	643.1050 DAY
0010	WEST OF PROJECT LIMIT	7	1	7
	EAST OF PROJECT LIMIT	7	1	7
		TOTAL		14

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION	DURATION CALENDAR DAYS	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY
0010	ROAD CLOSURE	60	18	1,080	14	840	28	1,680
	DETOUR ROUTE	60	5	300	607	36,420	8	480
		TOTALS		1,380		37,260		2,160

MARKING

CATEGORY	STATION	LOCATION	646.2020 LINE EPOXY 6-INCH (WHITE) LF	646.2020 LINE EPOXY 6-INCH (YELLOW) LF	REMARKS
0010	22+06 - 35+71	LT	1,365	---	EDGELINE
	22+06 - 35+71	RT	1,365	---	EDGELINE
	22+06 - 33+40	CL	---	2,270	CENTERLINE, DOUBLE YELLOW
	33+40 - 35+71	CL	---	290	CENTERLINE, YELLOW SOILD/SKIP DA
		TOTALS	2,730	2,560	
		TOTALS	5,290		

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.7000 CONCRETE PAVEMENT LF	650.9920 SLOPE STAKES LF
0010	22+05 - 29+15	LT & RT	165	85	147	80	1,420
	31+25 - 35+67	LT & RT	190	80	172	80	884
		TOTALS	355	165	319	160	2,304

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

CATEGORY	PROJECT	650.9911 EACH
0010	1400-00-89	1

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150 LF
0010	27+52 - 27+77	LT & RT	69
	32+13 - 33+14	LT & RT	142
		TOTAL	211

CURVE 1
PI STA = 20+54.78
Y = 676600.95
X = 823051.86
DELTA = 9°51'50"
D = 1°25'57"
T = 345.17'
L = 688.63'
R = 4000.00'
PC STA = 17+09.61
PT STA = 23+98.24

CURVE 2
PI STA = 26+57.14
Y = 676596.36
X = 823655.92
DELTA = 0°49'32"
D = 0°22'55"
T = 108.05'
L = 216.10'
R = 15000.00'
PC STA = 25+49.09
PT STA = 27+65.19
SE = NC

BEGIN CONSTRUCTION
STA 22+05.85

END CONSTRUCTION
STA 35+70.70

AT&T
WE ENERGIES ELECTRIC
TDS TELECOM
EX R/W
CURVE 1
CURVE 2
PT: 23+98.24
PC: 25+49.09
PT: 27+65.19
CP10
BM1
DH8520 GPS
BM2
B-14-066
TO REMAIN
CP5
CP15
CAUTION
WE ENERGIES GAS
SLOPE INTERCEPTS (TYP.)
CP/SOO RR
AT&T(RETIRED IN PLACE)
S89° 33' 52.81"E
N89° 36' 35.57"E
STH 16
25
30
35

BEGIN PROJECT
STA 27+77.33
MATCH EXISTING
SAW CUT REQ'D
Y: 676,597.17
X: 823,776.10

END PROJECT
STA 32+13.13
MATCH EXISTING
SAW CUT REQ'D
Y: 676,600.14
X: 824,211.90

PI
STA =40+00.00
Y = 676605.50
X = 824998.74

CONTROL POINTS

NO.	STATION	NORTHING	EASTING	DESC.
CP5	STA. 22+43.10 OFFSET 40.59' RT	676,562.1330	823,240.0640	¾" REBAR
CP10	STA. 27+71.69 OFFSET 30.03' RT	676,627.1650	823,770.2530	¾" REBAR
CP15	STA. 35+35.82 OFFSET 49.05' RT	676,553.2900	824,534.9050	¾" REBAR

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM1	STA. 31+14.91 OFFSET 23.81' LT	MONUMENT, TOP OF PARAPET	851.38
BM2	STA. 29+17.06 OFFSET 23.49' RT	CHISELED X, TOP OF PARAPET	850.10

PROPOSED PROFILE MATCH EXISTING
PROPOSED PROFILE MATCH EXISTING
EXISTING GROUND

STATION 30+20
EXISTING STRUCTURE B-14-066
3 SPAN STEEL PLATE GIRDER
43.33' CLEAR WIDTH

855 850 845 840 835 830 825 820

827.44 829.08 830.90 832.87 834.84 836.77 838.62 840.38 842.04 843.49 844.86 846.09 847.04 847.04 847.71 847.71 848.31 848.90 849.33 849.57 849.73 849.58 849.32 849.32 848.86 848.33 847.72 846.91 845.93 844.76 843.43 841.92 840.26 838.44

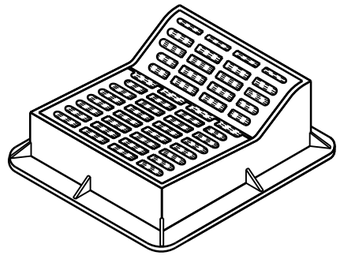
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

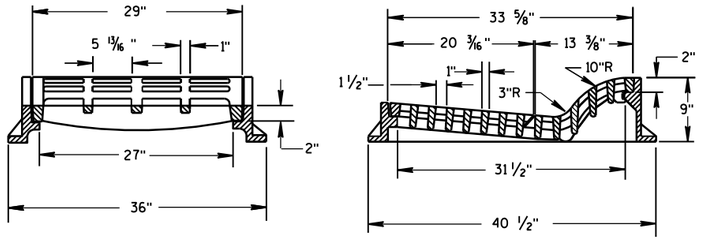
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	PLAN AND PROFILE: PLAN & PROFILE	SHEET 29	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp
PLOT DATE : 3/11/2022 10:44 AM PLOT BY : GRIMME, SARA PLOT NAME : PLOT SCALE : ##########

Standard Detail Drawing List

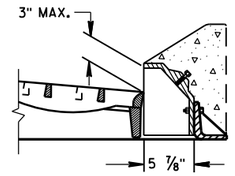
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

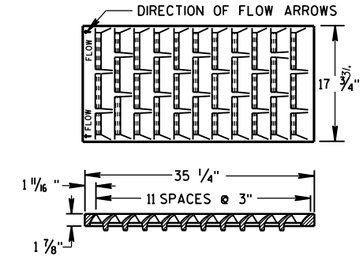
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

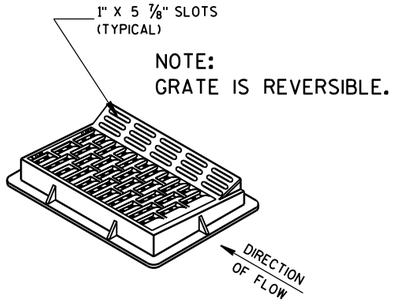
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

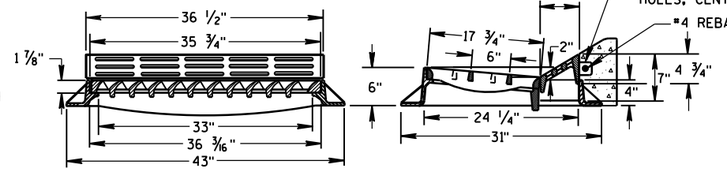
GENERAL NOTES

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.



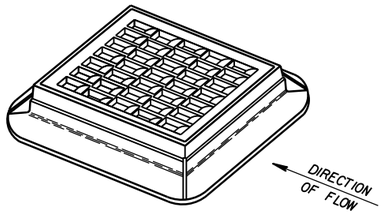


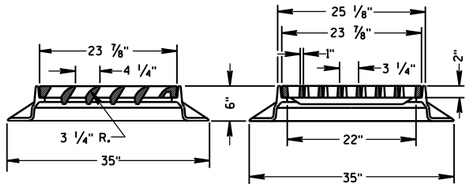


TYPE "HM"

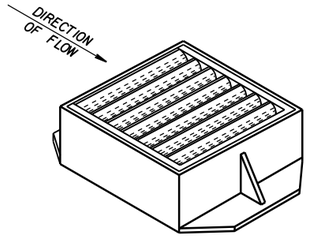
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

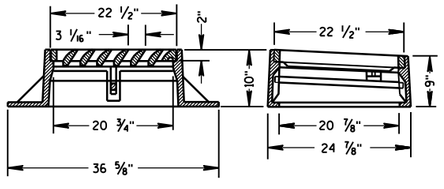
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE





TYPE "S"





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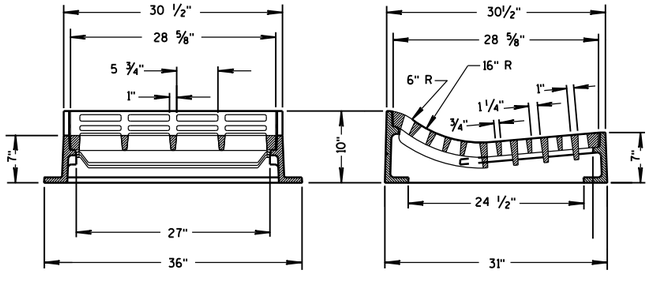
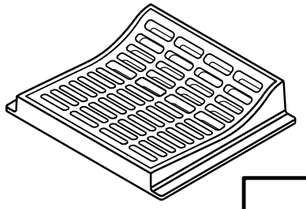




TYPE "T"

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

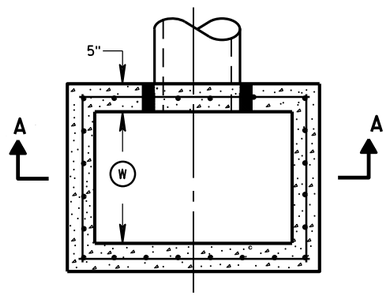
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

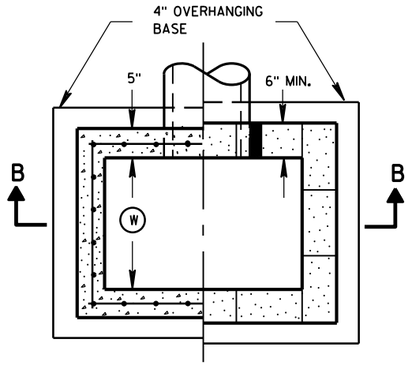
FHWA

6

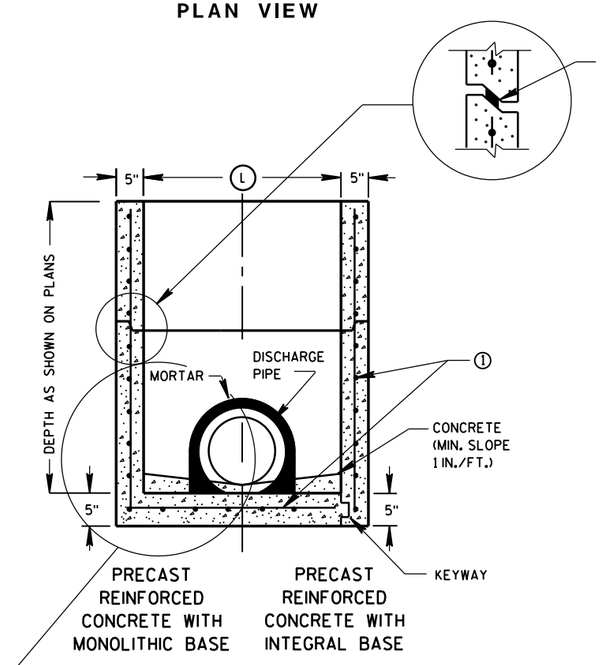
S.D.D. 8 A 5-19c



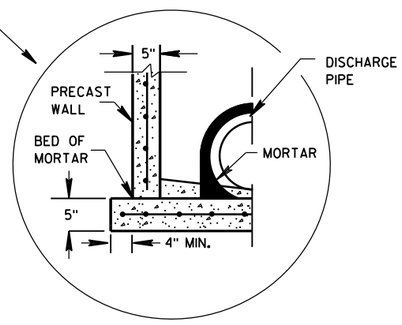
PLAN VIEW



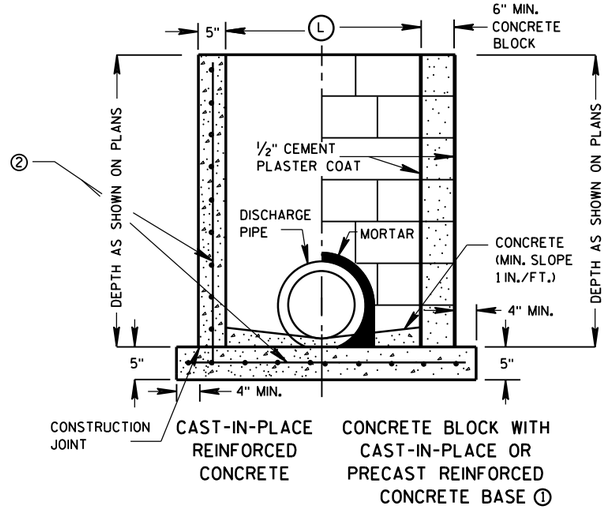
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

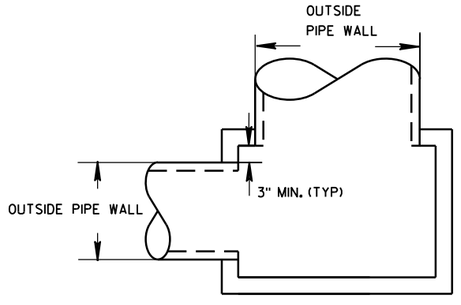
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



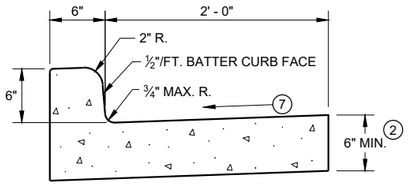
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

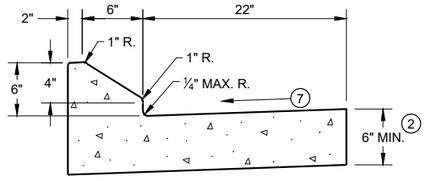
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

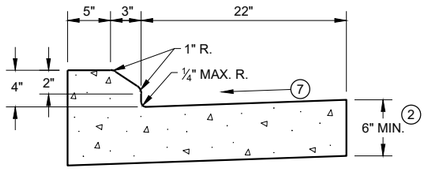
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



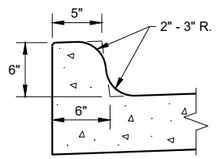
TYPES A (1) & D



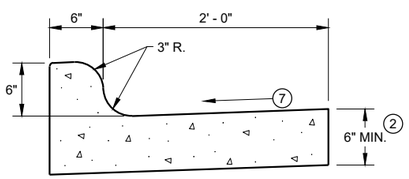
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

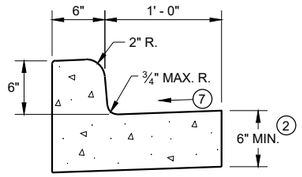


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



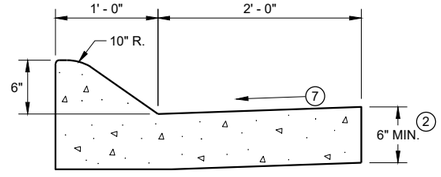
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

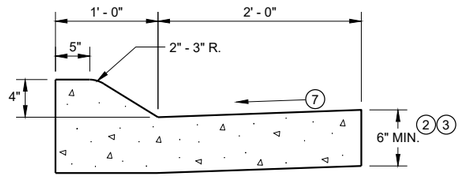


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

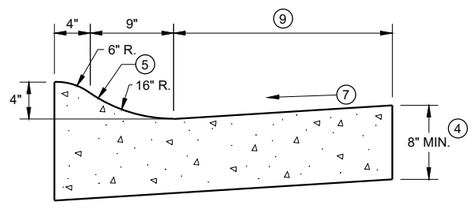


6" SLOPED CURB TYPES A (1) & D



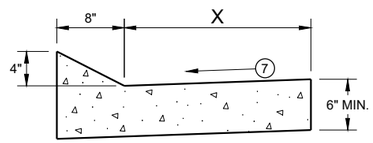
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

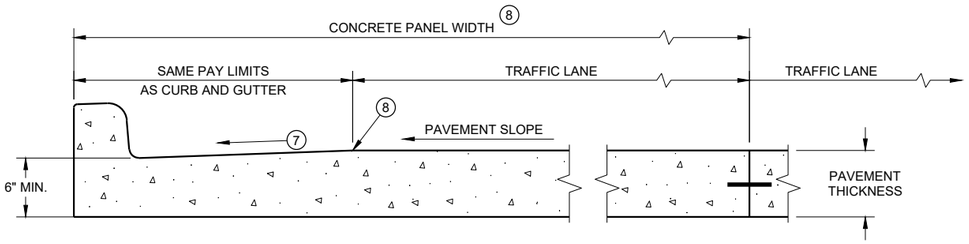


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

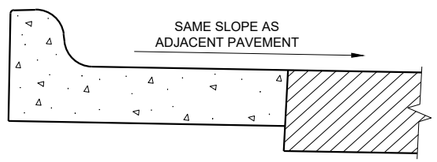
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

DETAILS OF CONSTRUCTION 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 AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 GUTTERS 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) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.

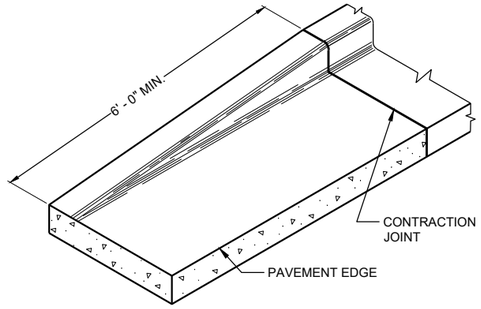
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

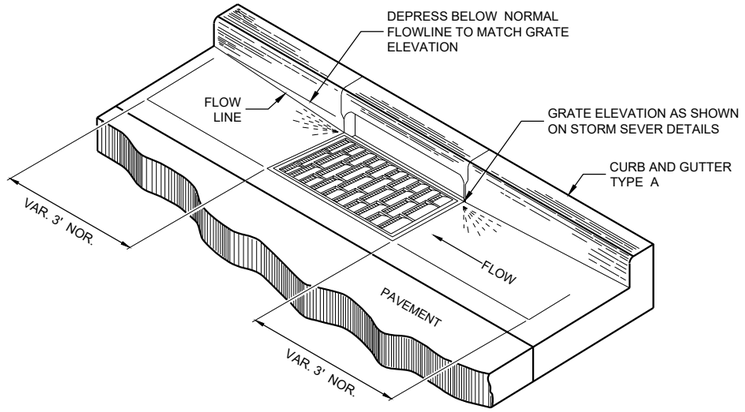
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION 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.

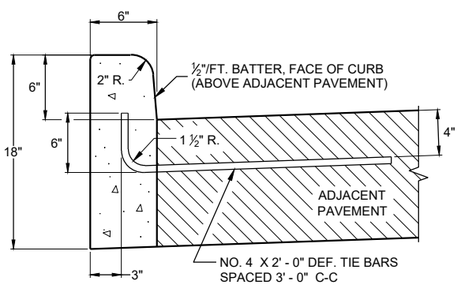
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

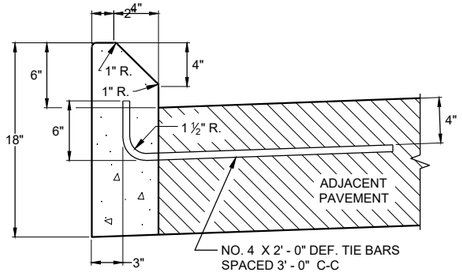
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

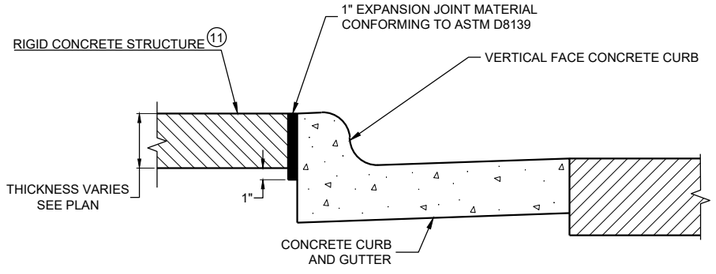


TYPES A (1) & D

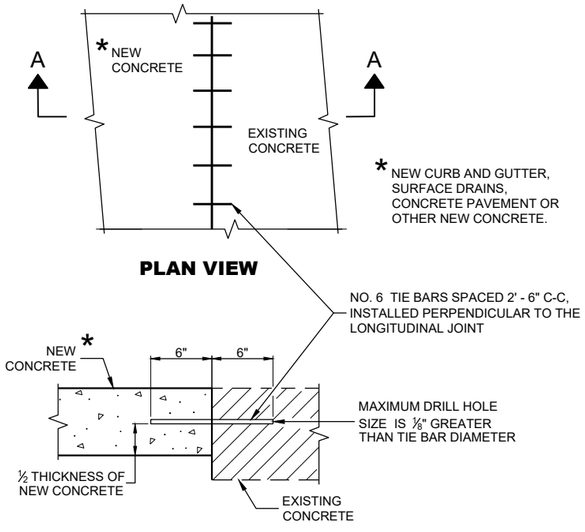


TYPES G (1) & J

CONCRETE CURB



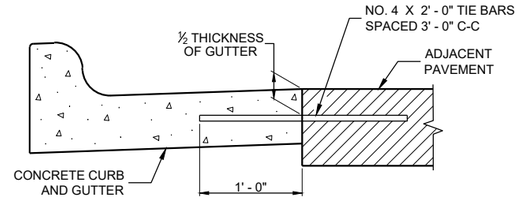
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



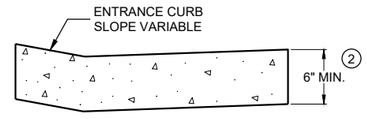
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

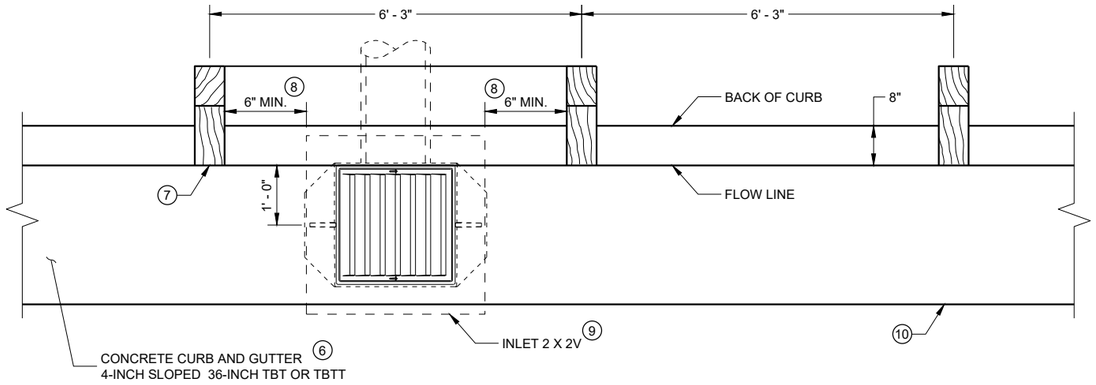
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

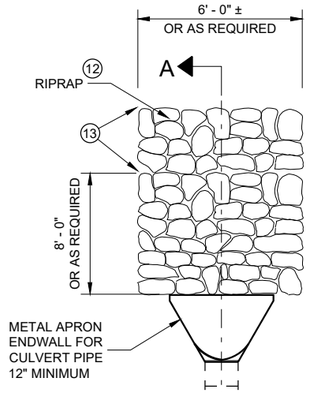
6

SDD08D01 - 23b



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



12" MINIMUM CULVERT PIPE
CORRUGATED POLYETHYLENE
OR POLYPROPYLENE AS SPECIFIED

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

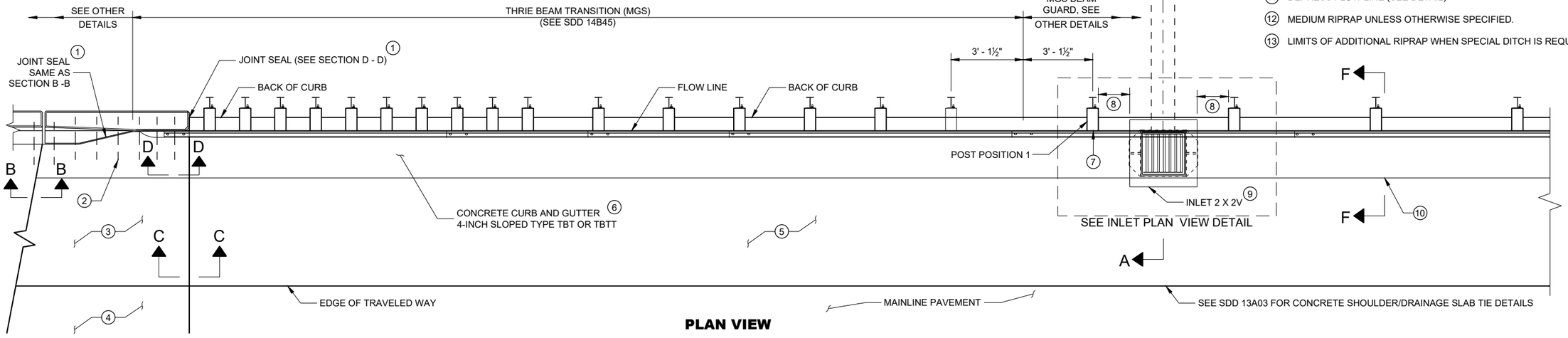
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

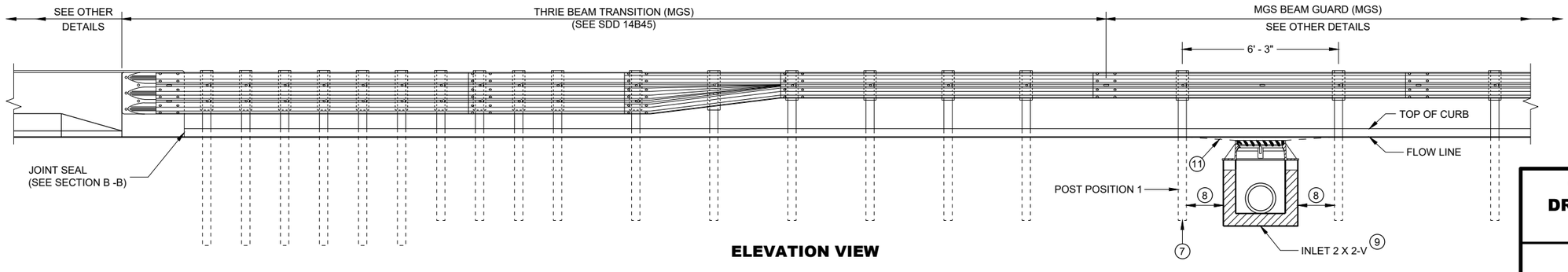
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

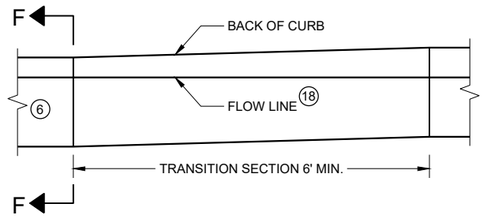
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

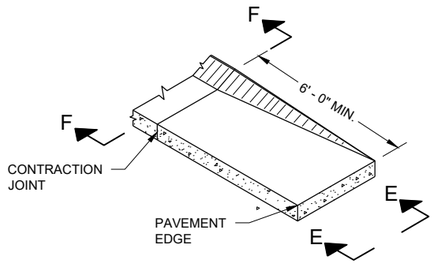
SDD 08D03 - 09a

6

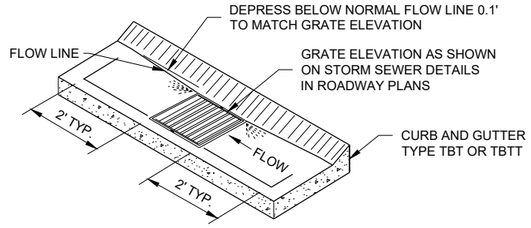
SDD 08D03 - 09a



CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(14) GEOTEXTILE TYPE HR.

(15) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(16) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

(17) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

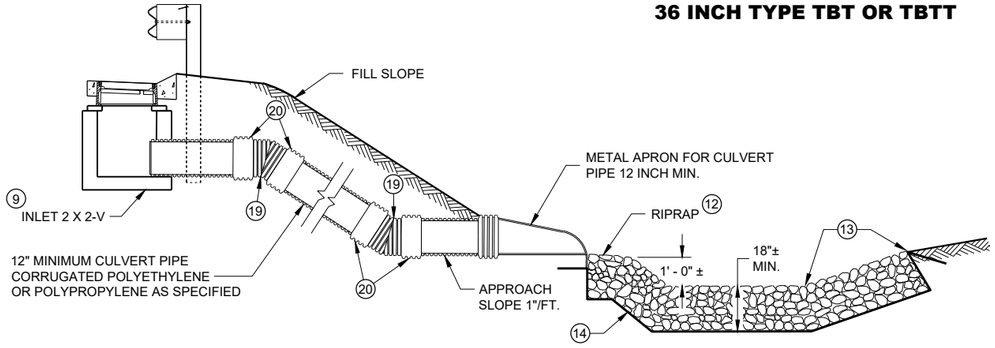
(18) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

(19) MANUFACTURER SUPPLIED BEND.

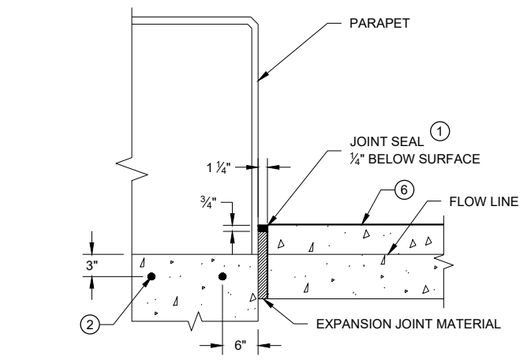
(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

(21) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

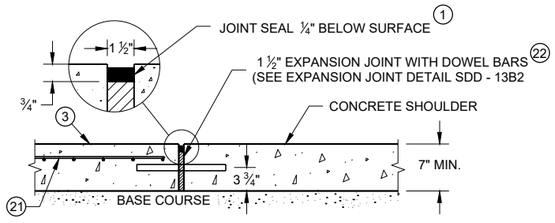
(22) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



SECTION A - A

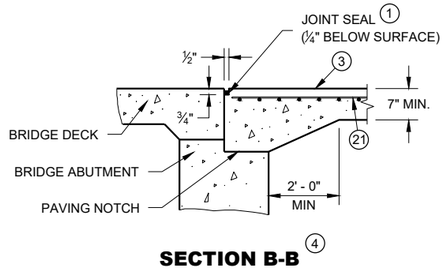


SECTION D - D

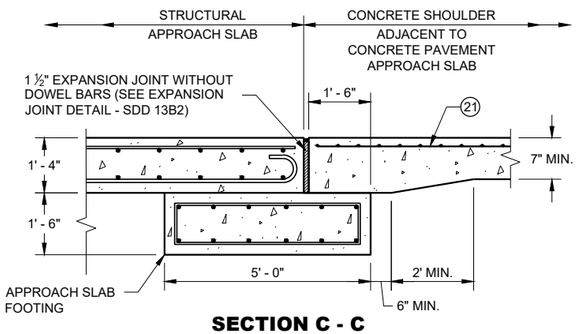


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

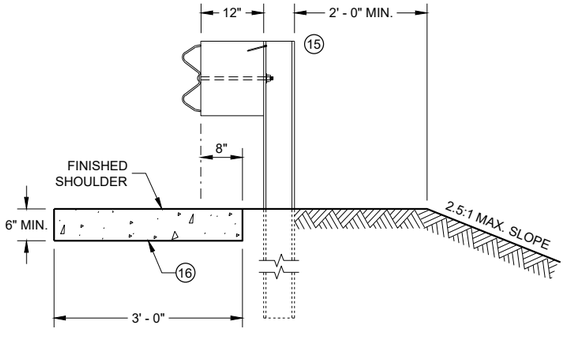


SECTION B-B (4)

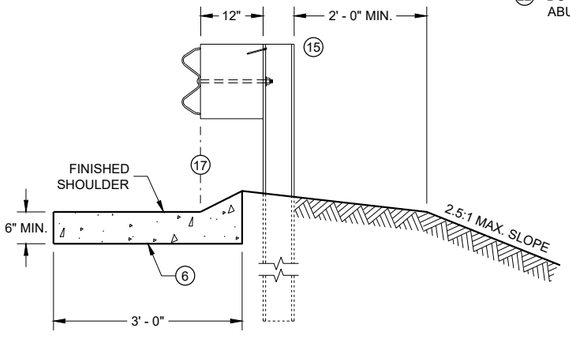


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

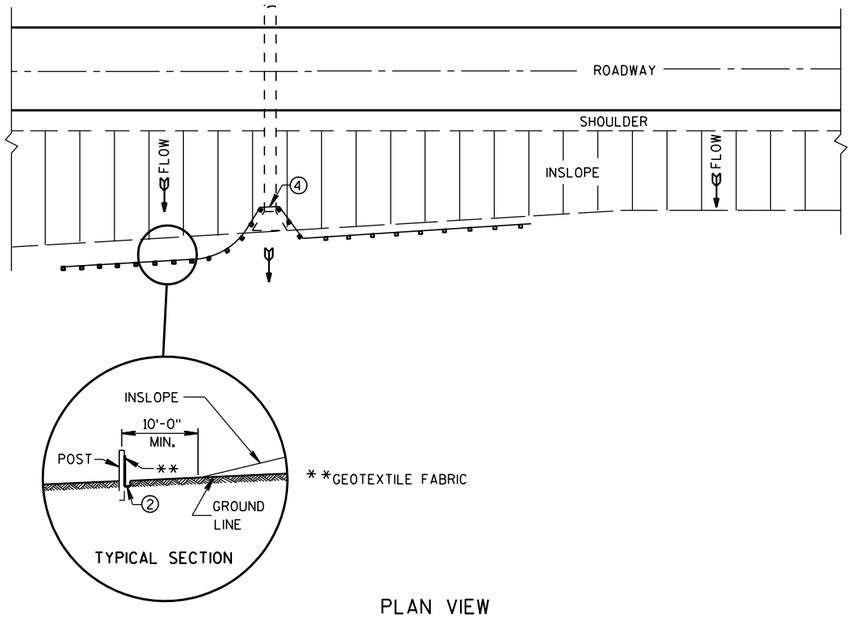
FHWA

6

SDD 08D03 - 09b

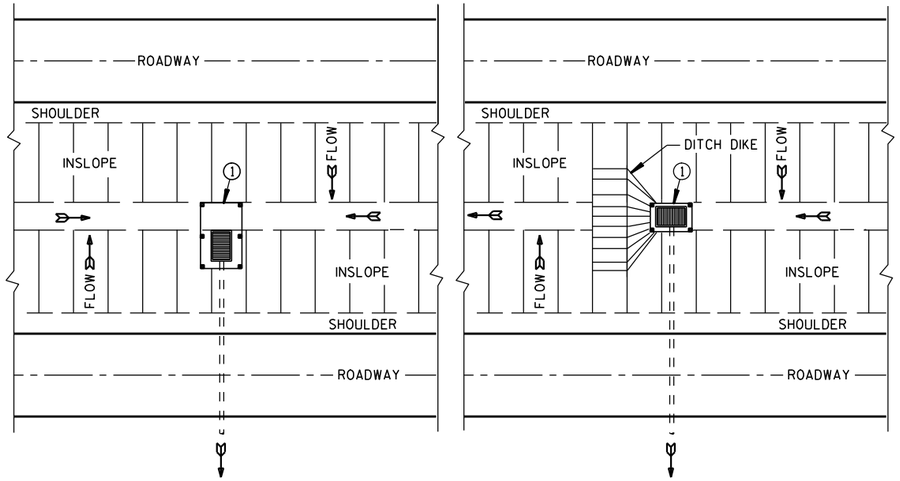
6

SDD 08D03 - 09b



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



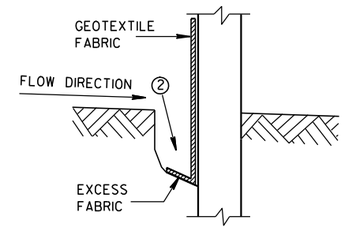
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

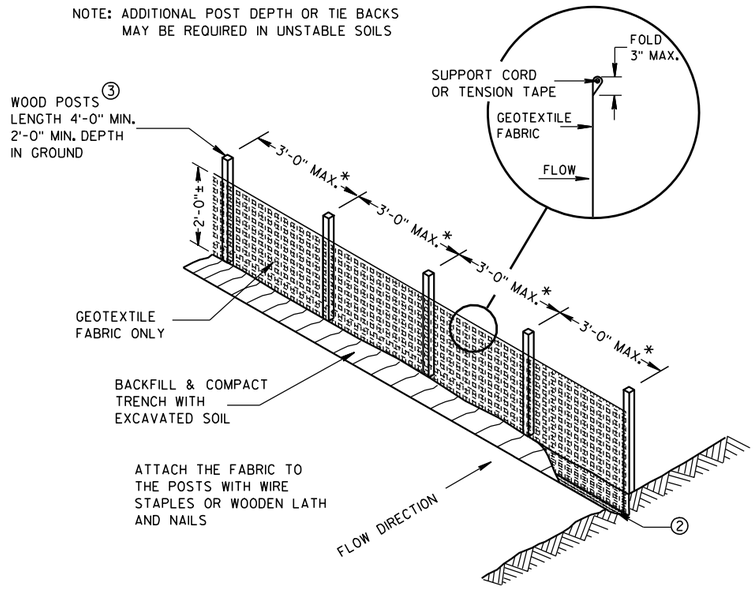
GENERAL NOTES

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

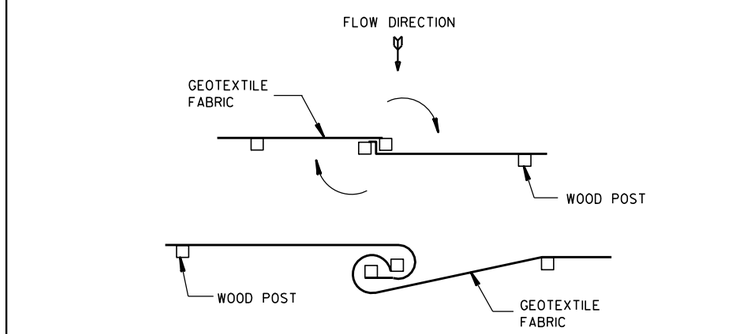
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" 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.



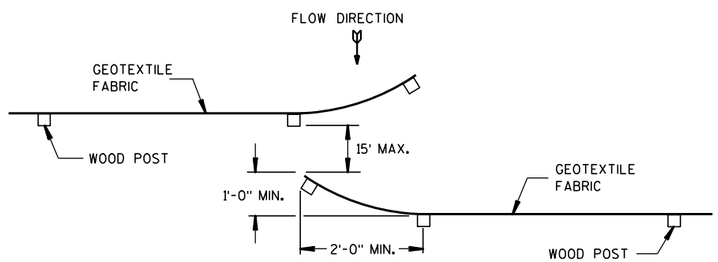
TRENCH DETAIL



SILT FENCE

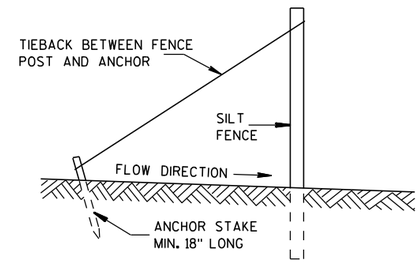


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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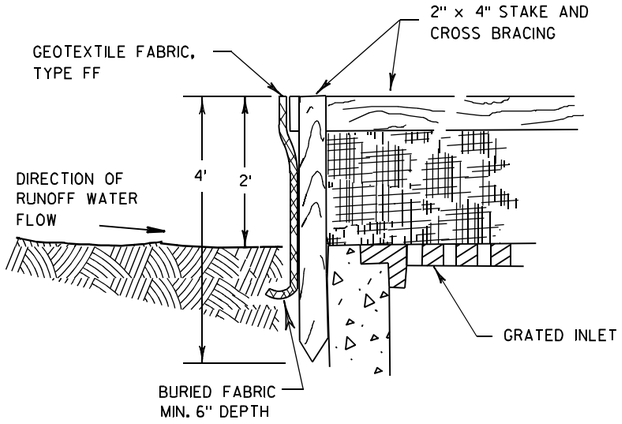
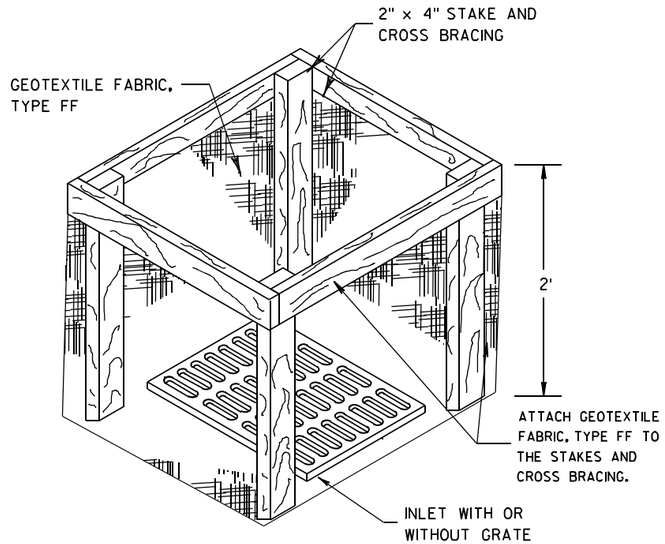
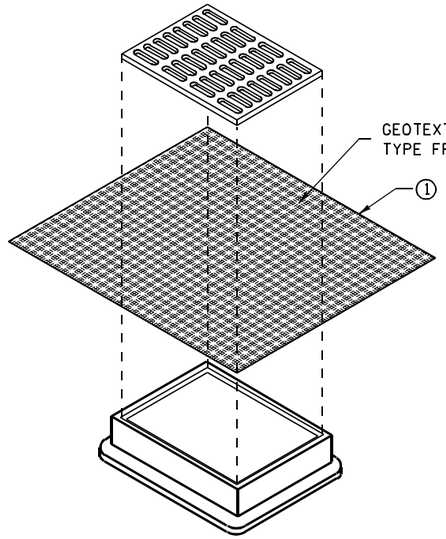
S.D.D. 8 E 9-6



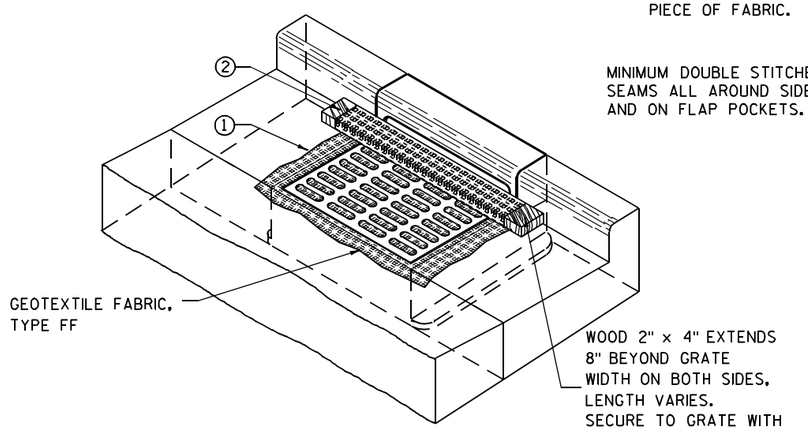


INLET PROTECTION, TYPE A

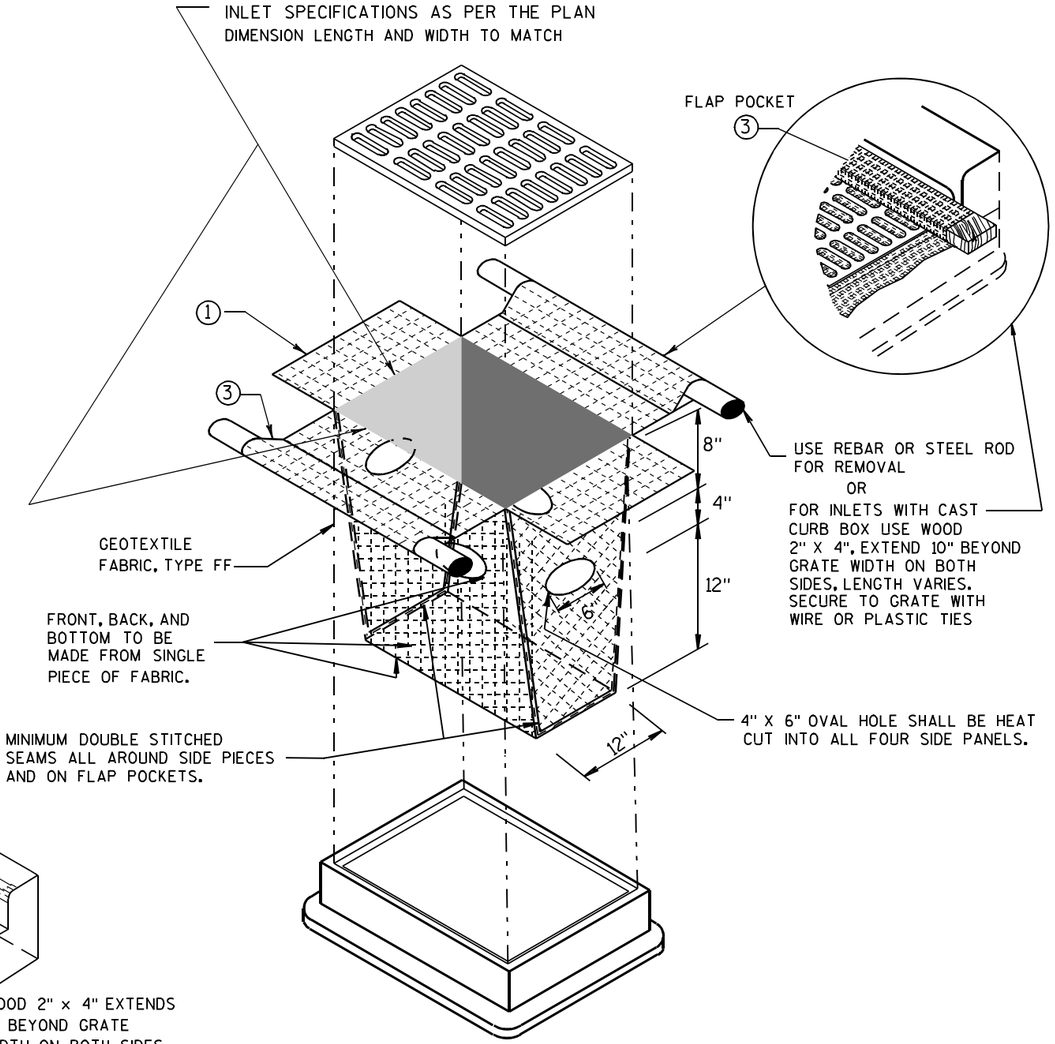


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

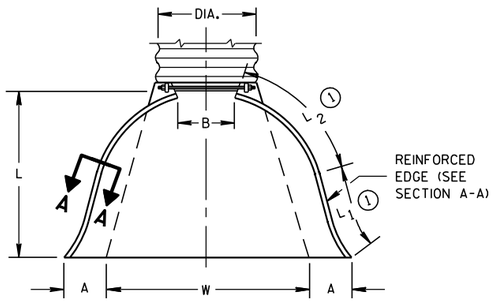
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

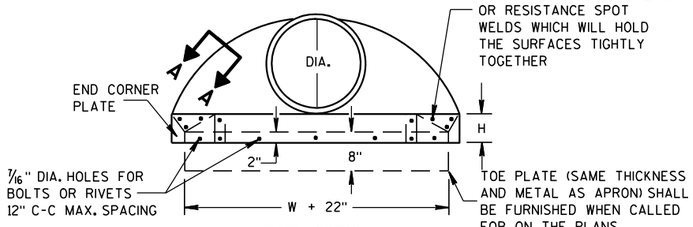
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	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 2/5 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

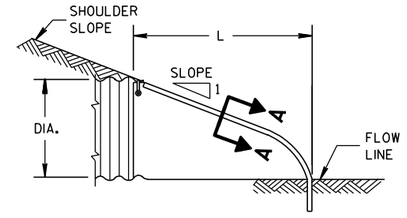
*MINIMUM
**MAXIMUM



PLAN VIEW

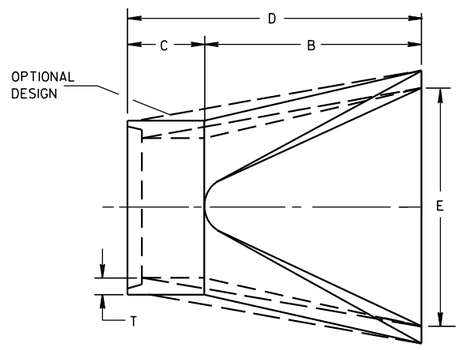


END VIEW

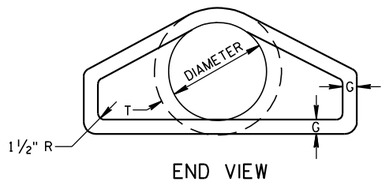


SIDE ELEVATION

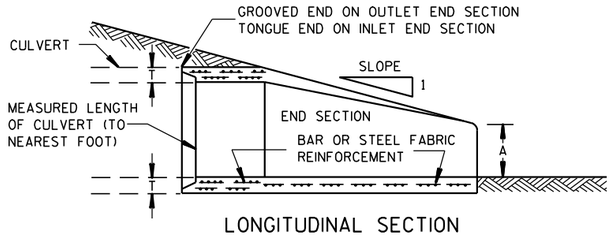
METAL ENDWALLS



PLAN

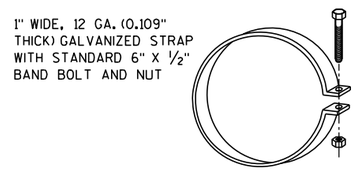


END VIEW



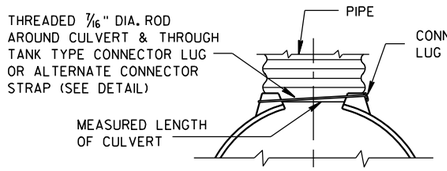
LONGITUDINAL SECTION

CONCRETE ENDWALLS

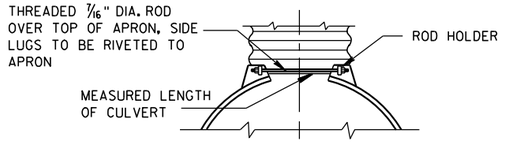


ALTERNATE FOR TYPE 1 CONNECTION

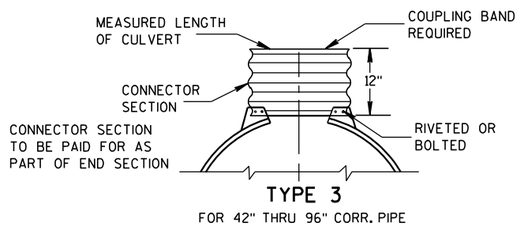
END SECTION CONNECTOR STRAP



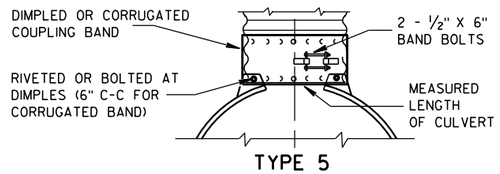
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

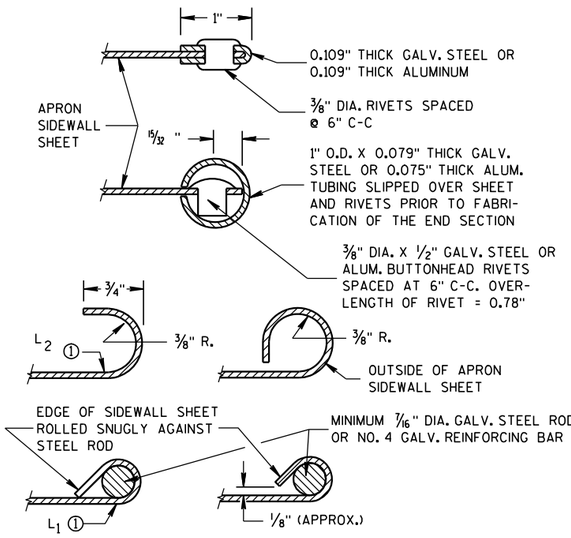
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

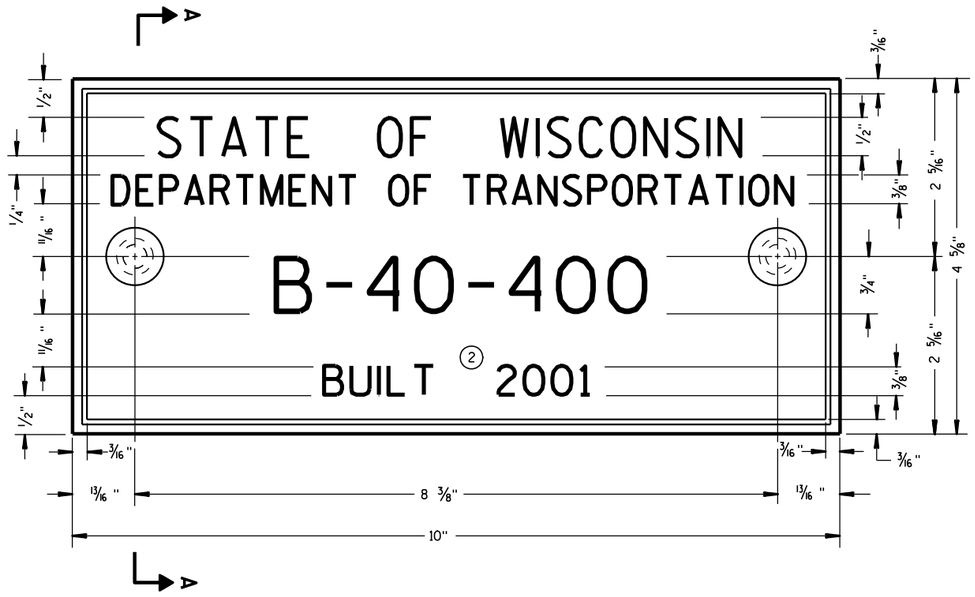
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 F 1-11



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

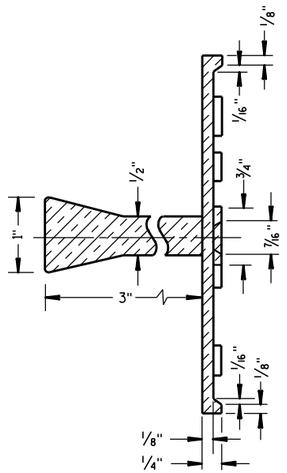
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

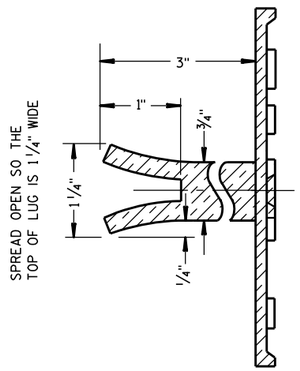
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

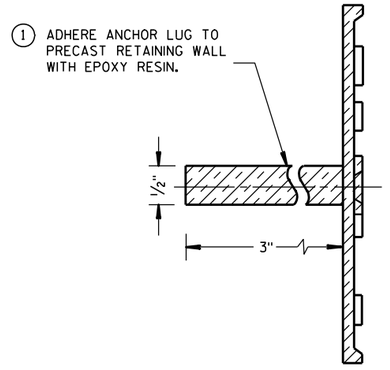
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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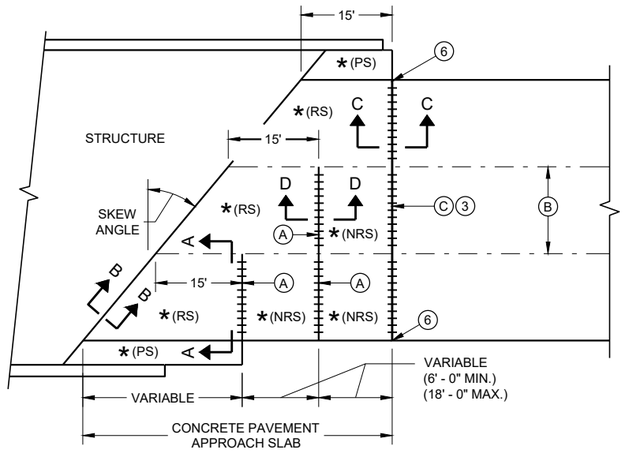
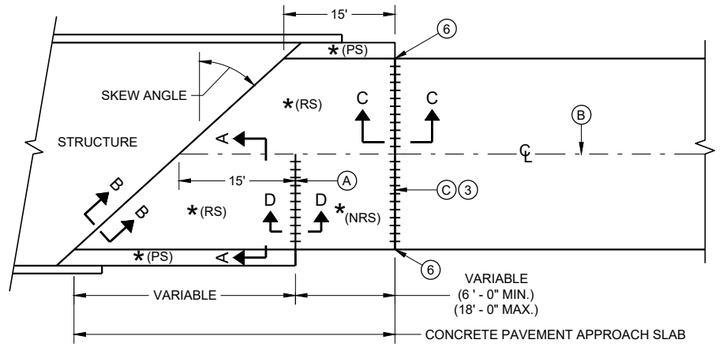
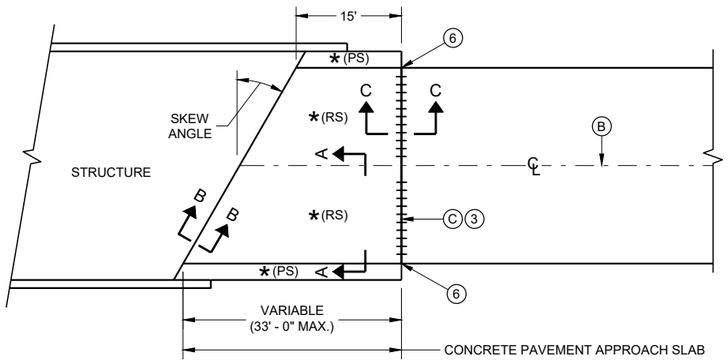
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

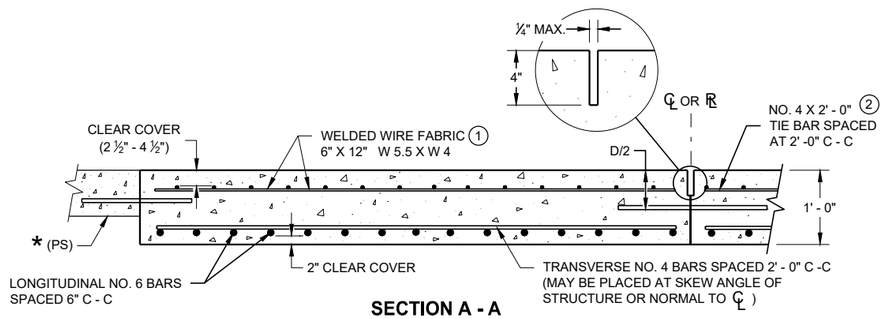
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

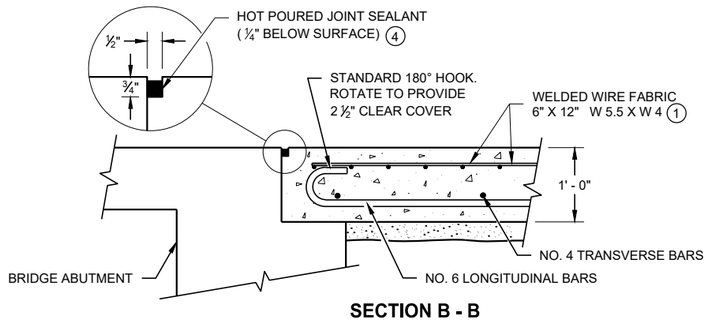
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

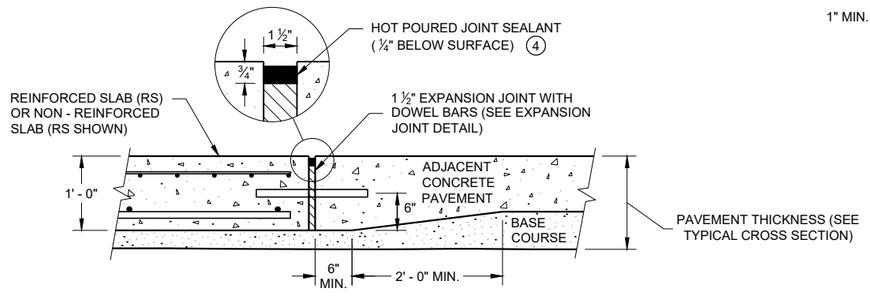
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

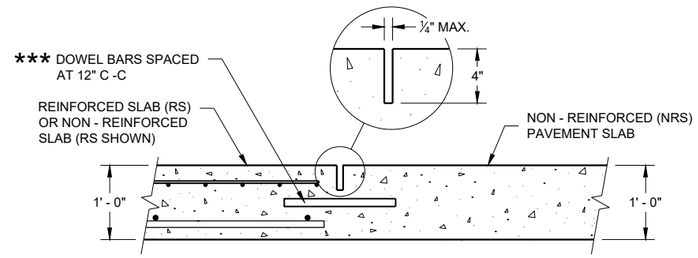
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

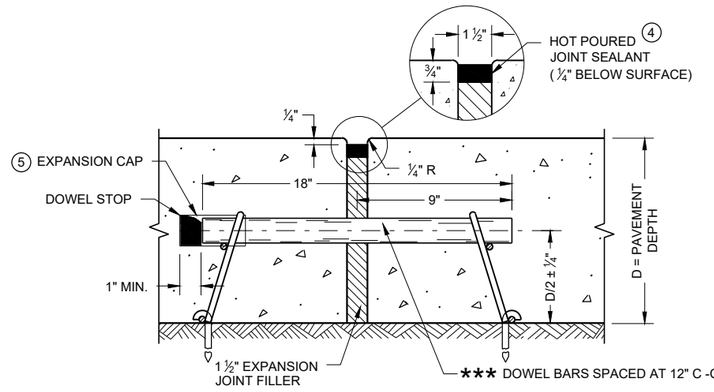
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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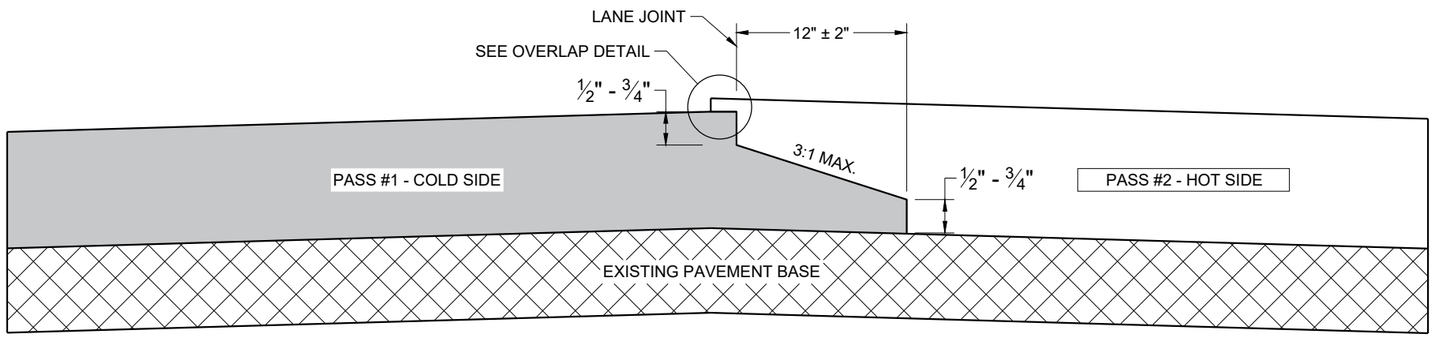
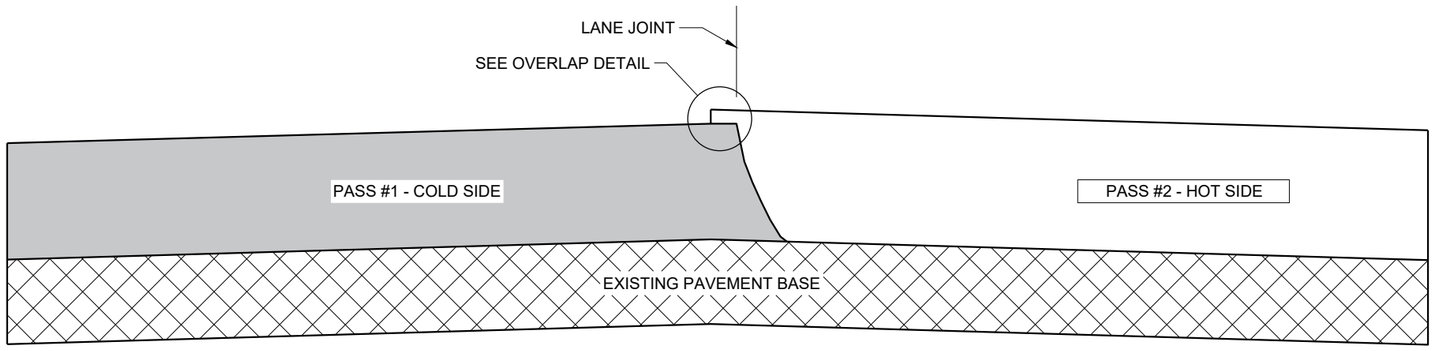
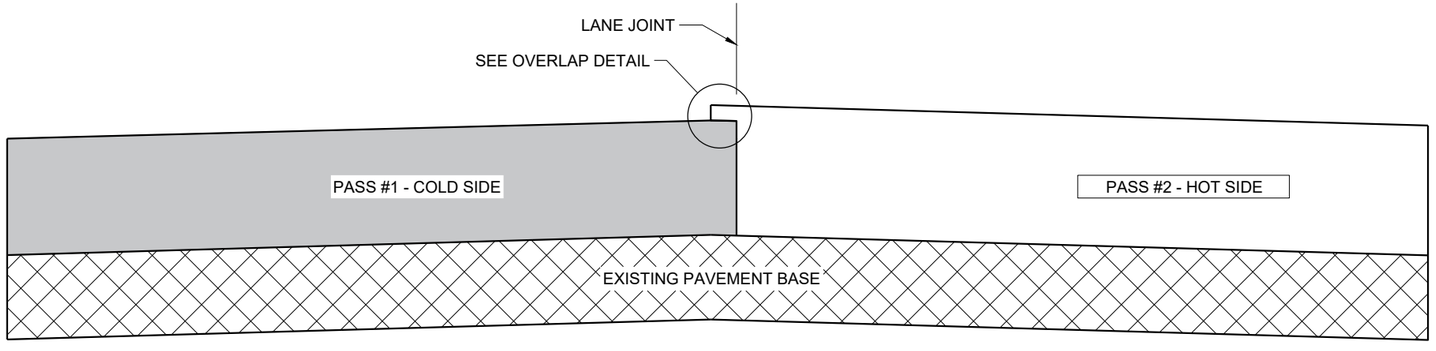
SDD 13B02 - 09a



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

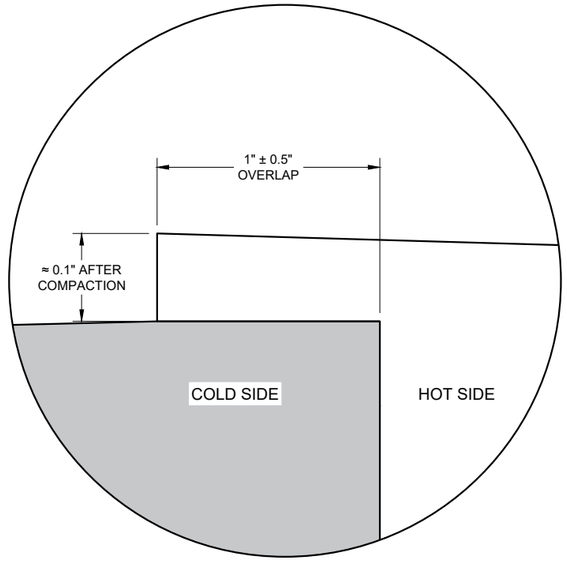
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

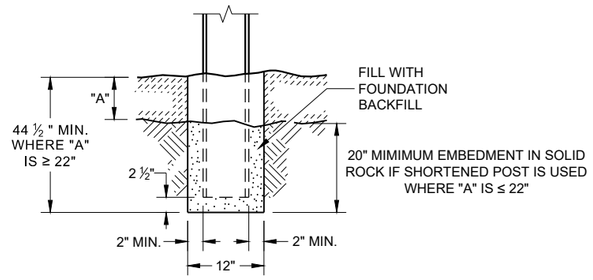
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

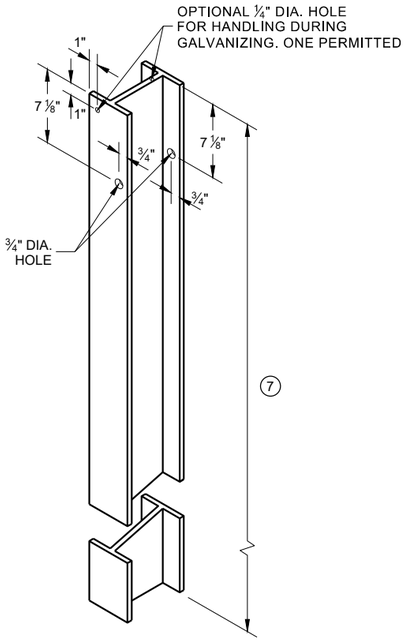
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

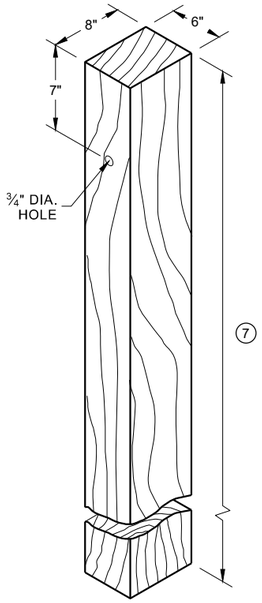
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



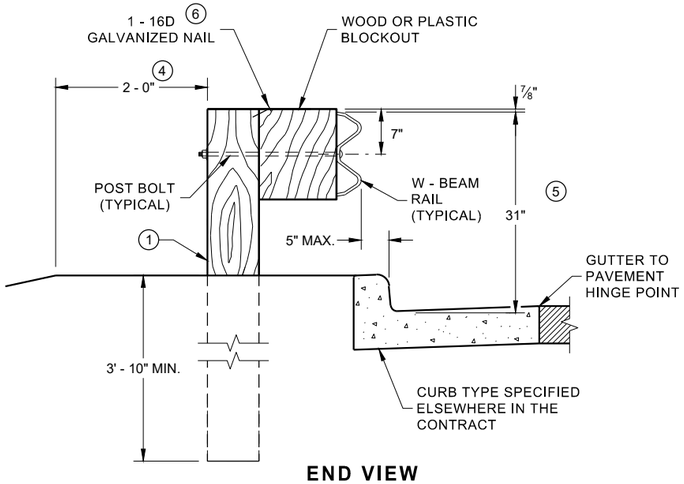
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



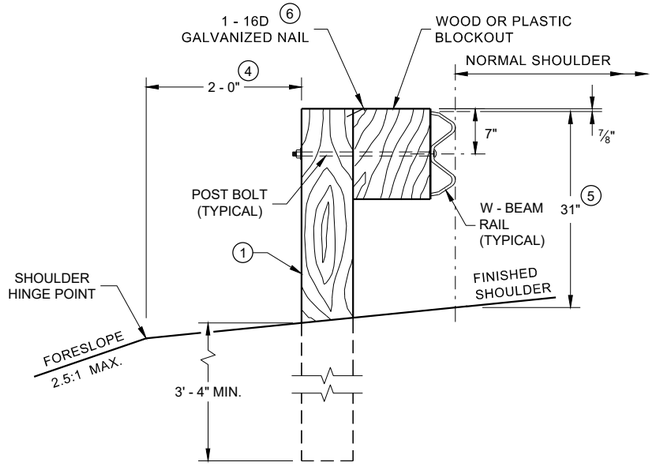
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



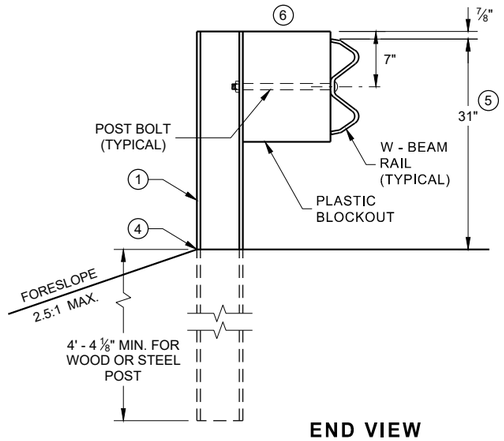
WOOD POST (6" X 8") NOMINAL (1)



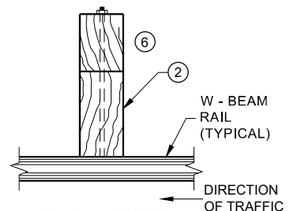
END VIEW
LOCATED ALONG A CURBED ROADWAY



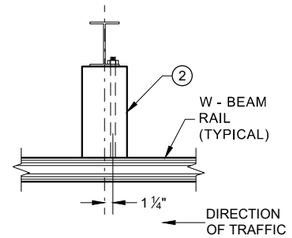
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



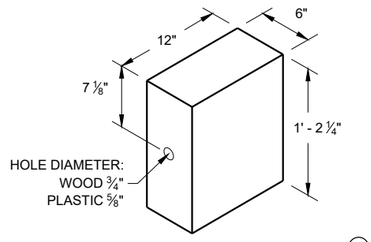
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

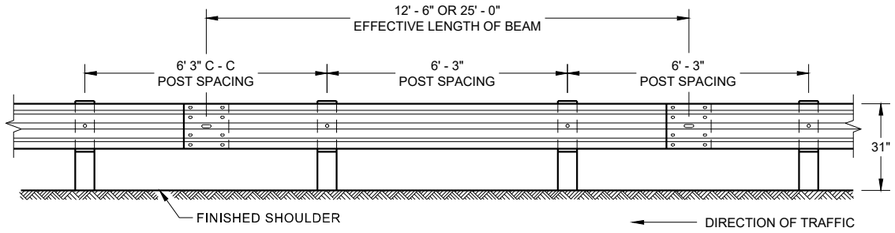
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

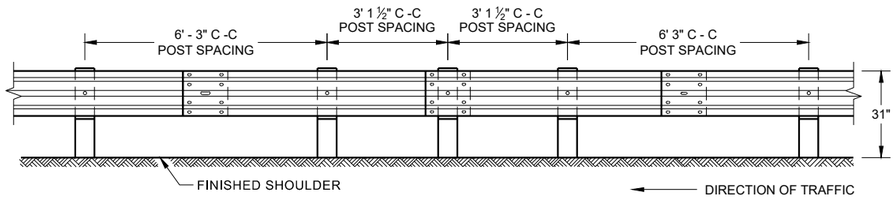
SDD 14B42 - 07a

6

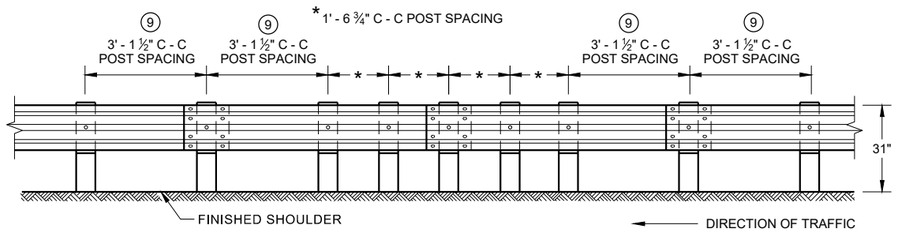
SDD 14B42 - 07a



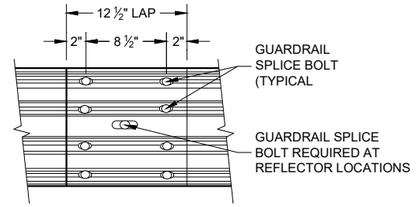
FRONT VIEW
POST SPACING STANDARD INSTALLATION



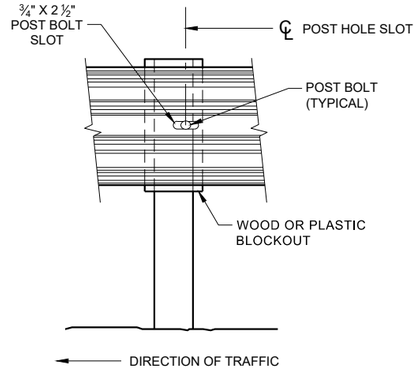
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



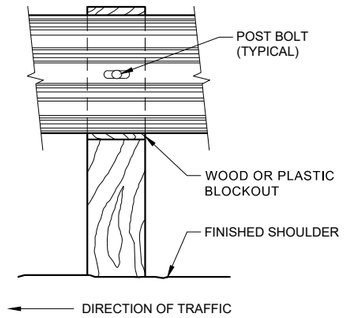
FRONT VIEW
QUARTER POST SPACING (QS)



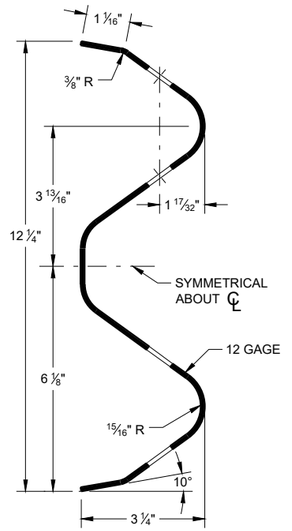
FRONT VIEW
MID-SPAN BEAM SPLICE



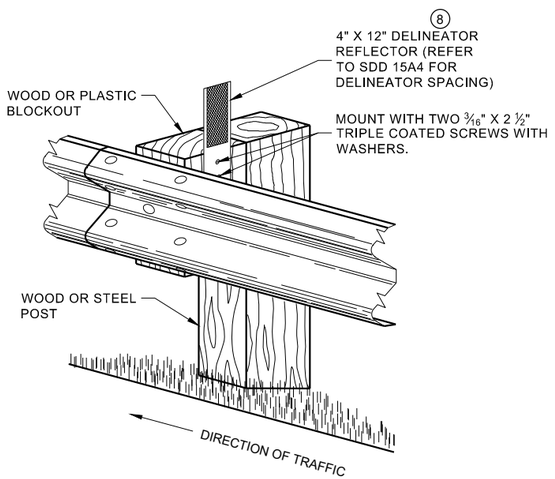
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

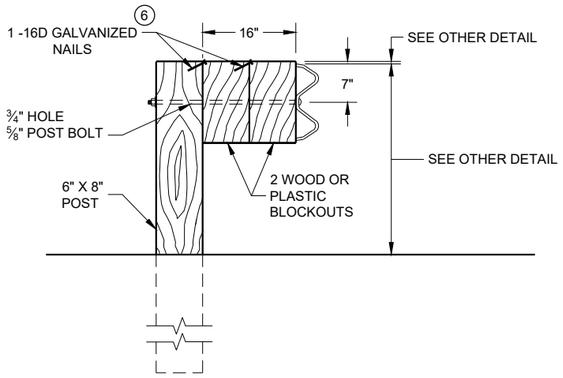
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

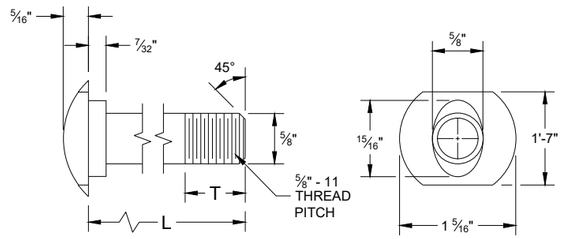


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

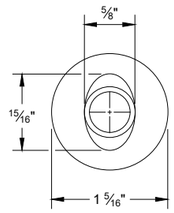
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

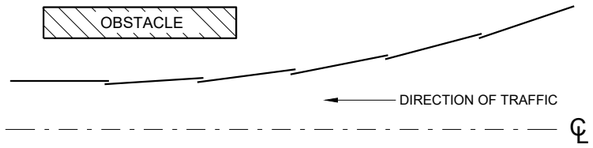


POST BOLT TABLE

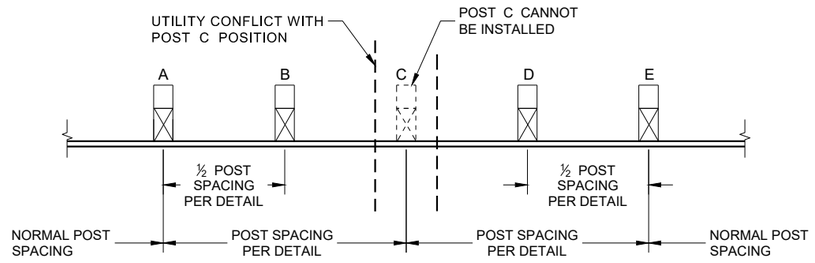
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



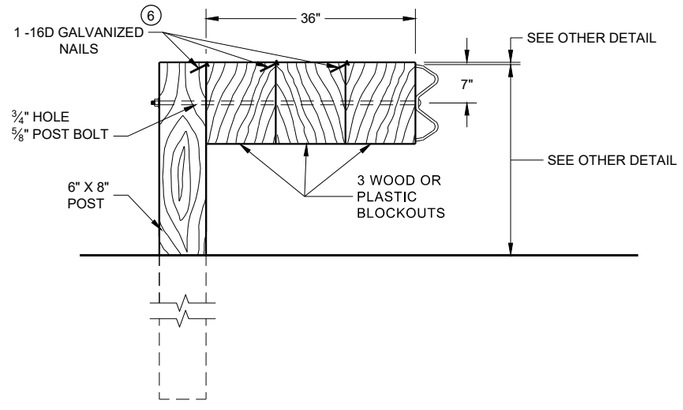
ALTERNATE BOLT HEAD



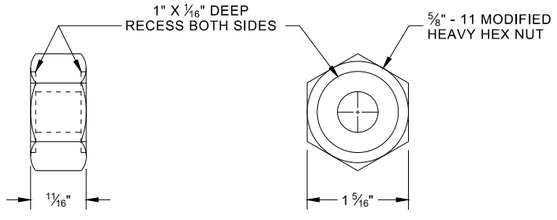
PLAN VIEW
BEAM LAPPING DETAIL



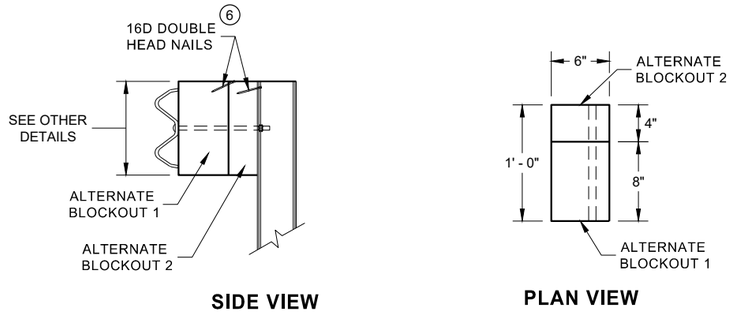
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

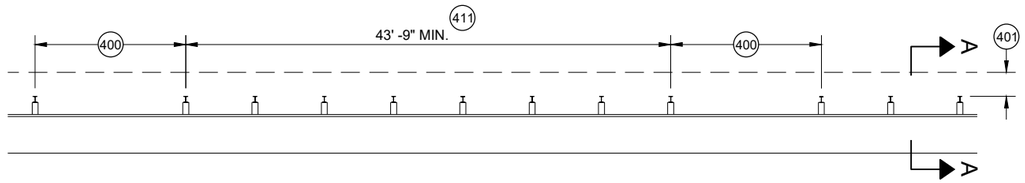
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

6

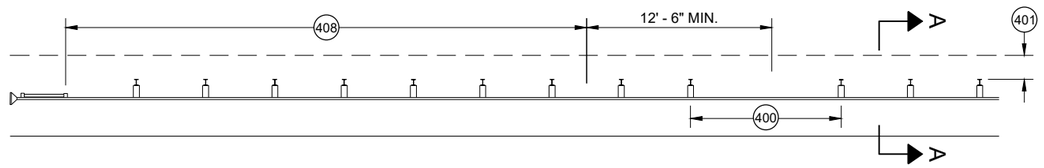
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

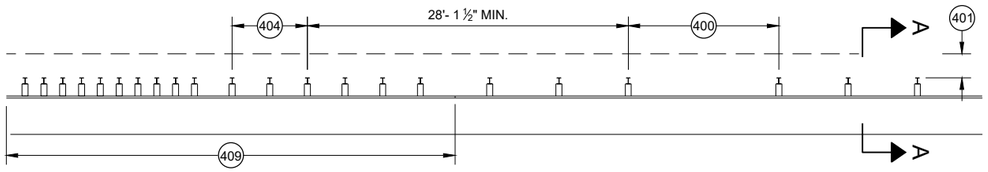
SDD 14B42 - 07c



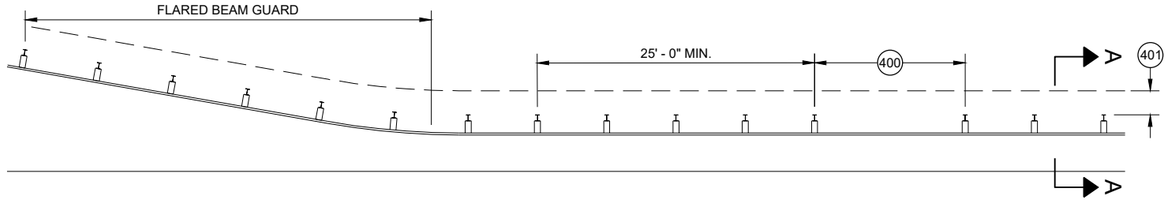
MISSING POST IN MGS GUARDRAIL



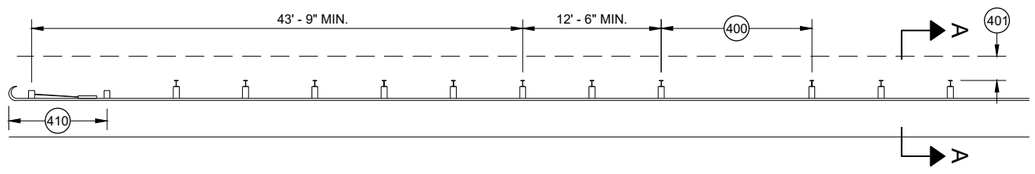
MISSING POST IN MGS GUARDRAIL NEAR EAT



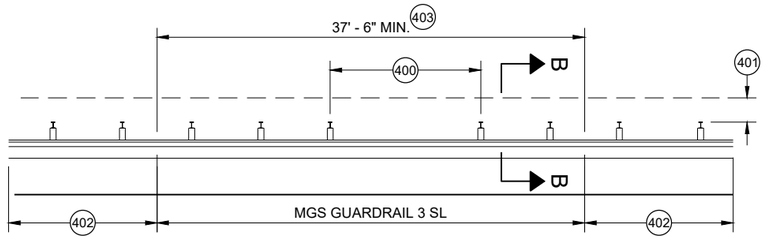
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

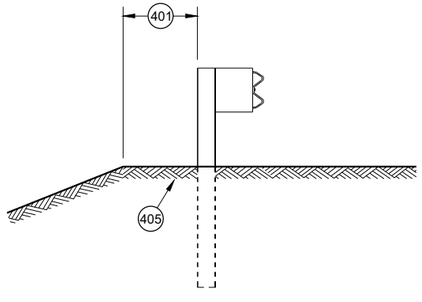


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

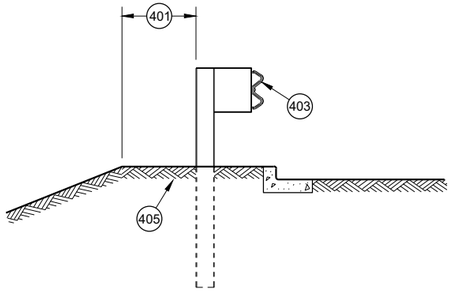


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

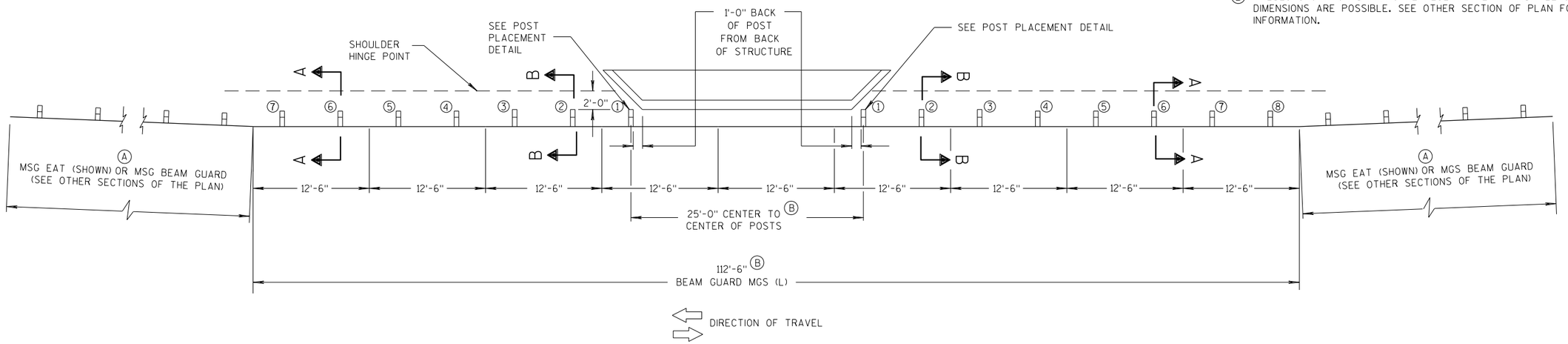
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

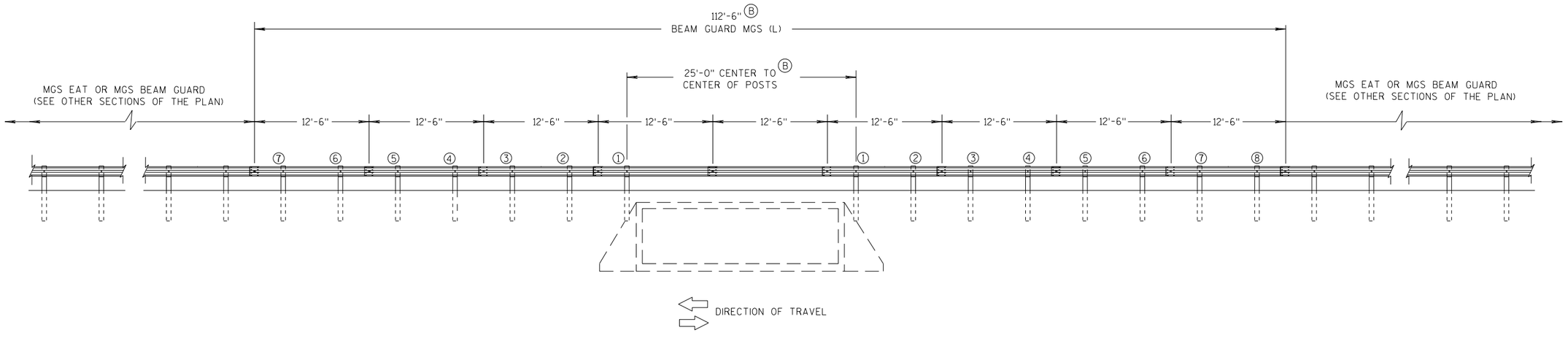
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 43-4a

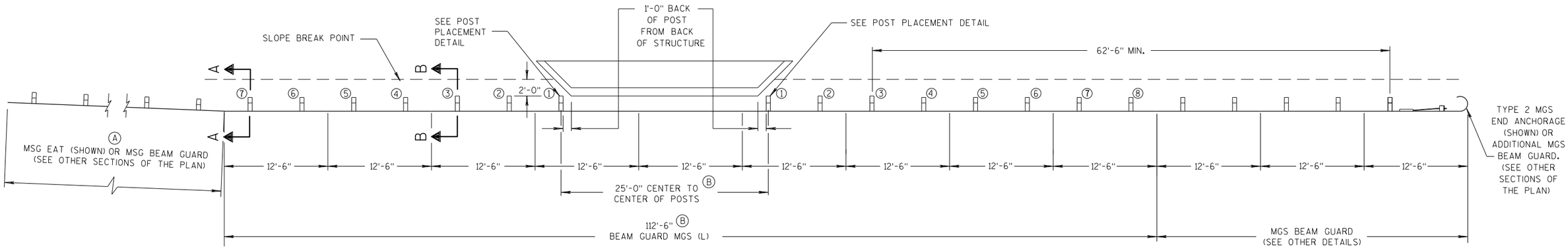
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

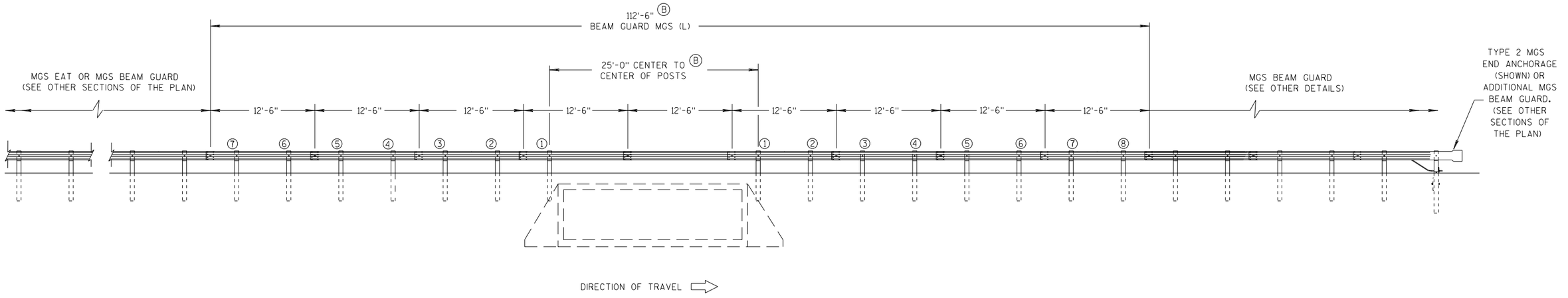
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	48

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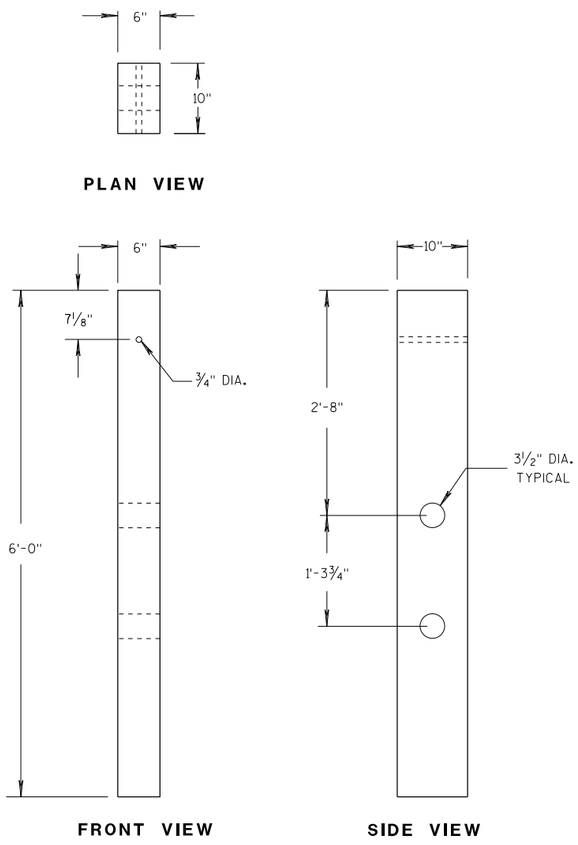
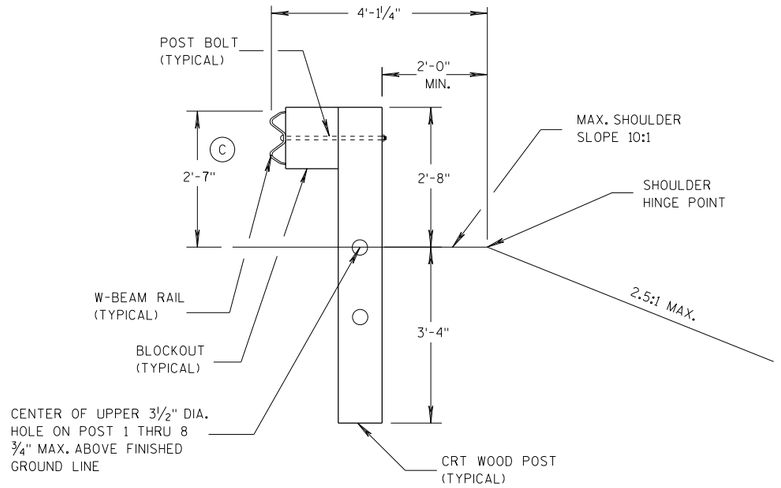
S.D.D. 14 B 43-4b



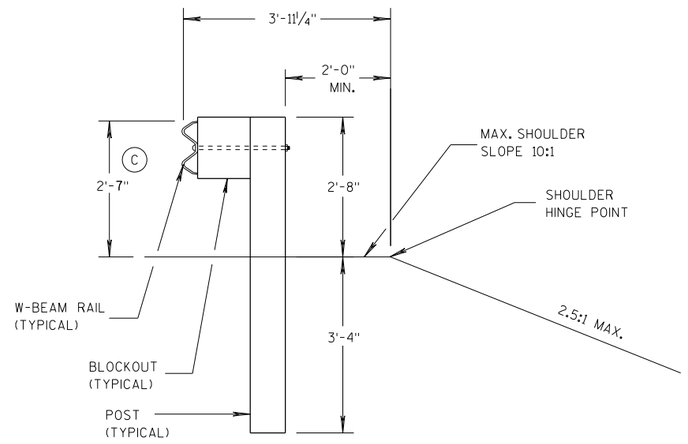
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



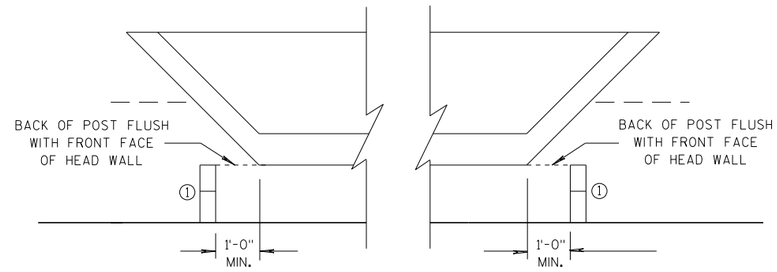
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

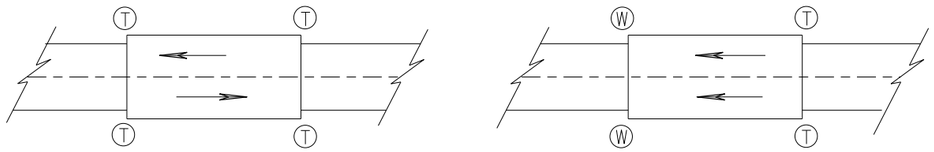
/S/ Rodney Taylor
ROADWAY STANDARDS D49 NT
ENGINEER

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

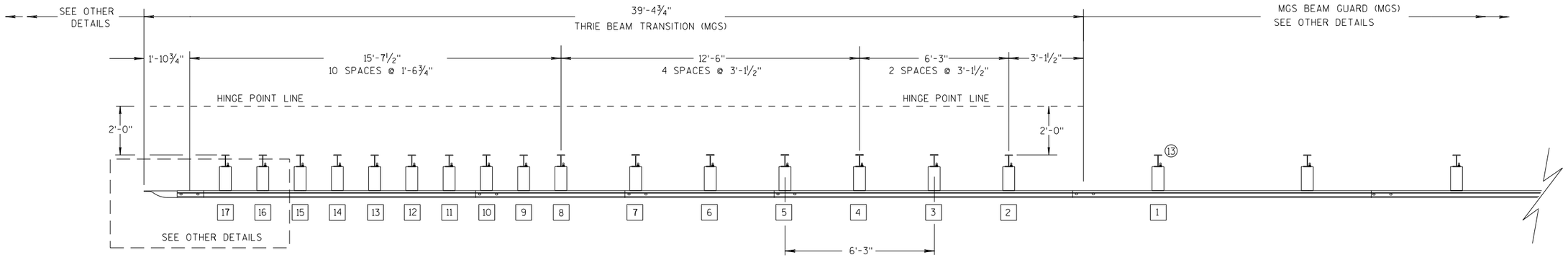
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

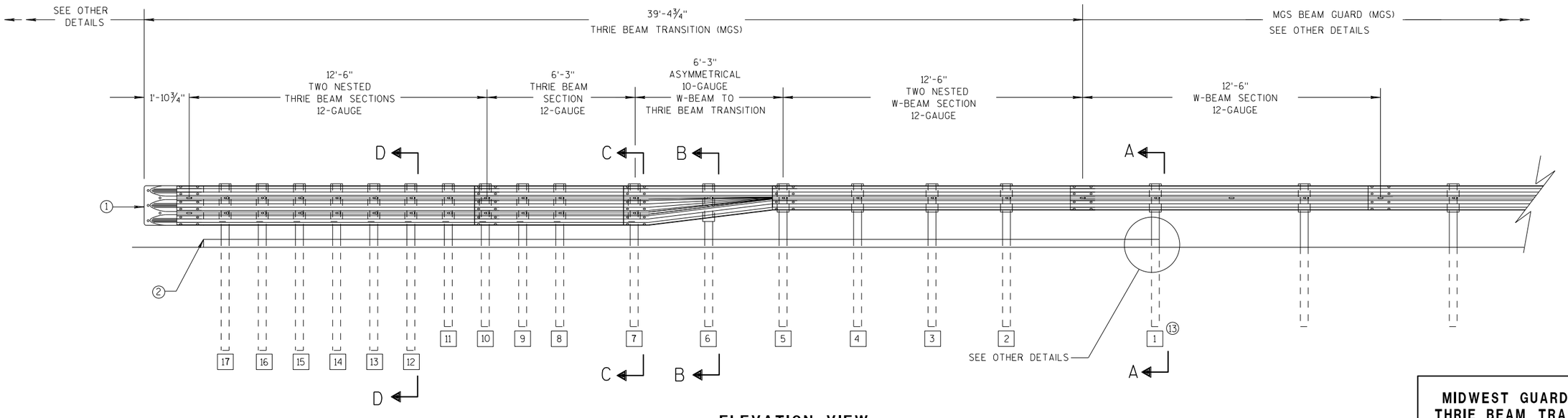
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

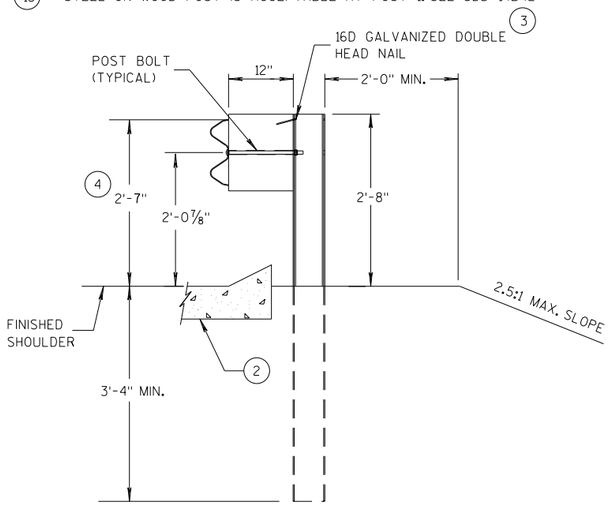
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

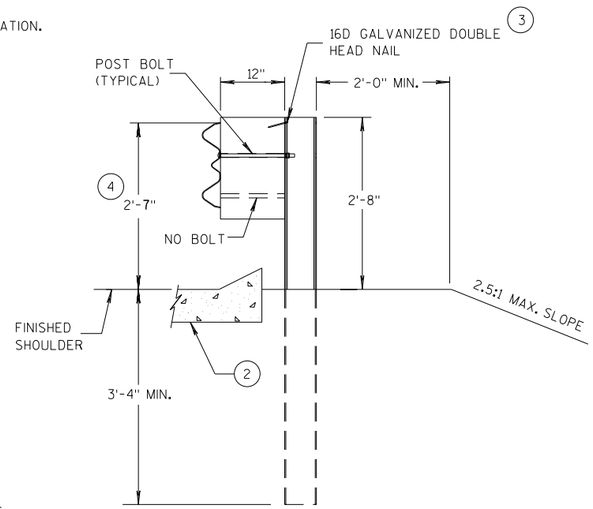
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



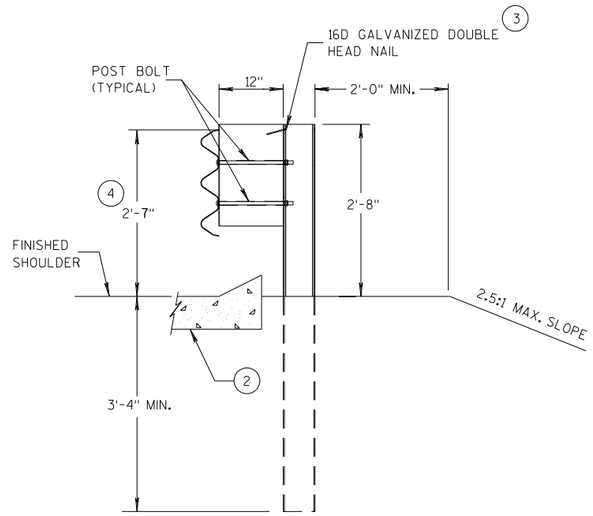
SECTION A-A (13)

POSTS 1-5



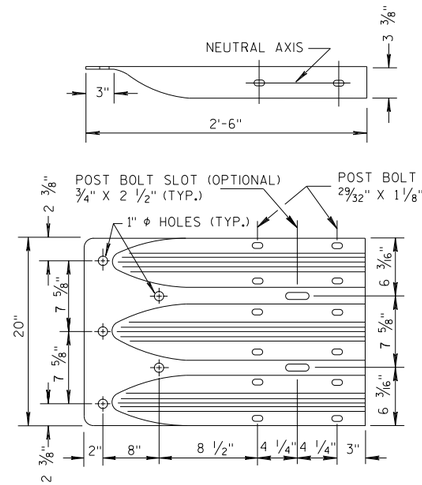
SECTION B-B

POST 6

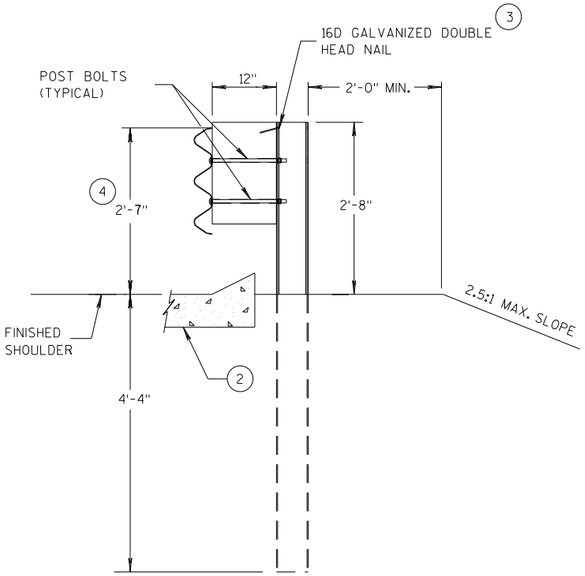


SECTION C-C

POSTS 7-11

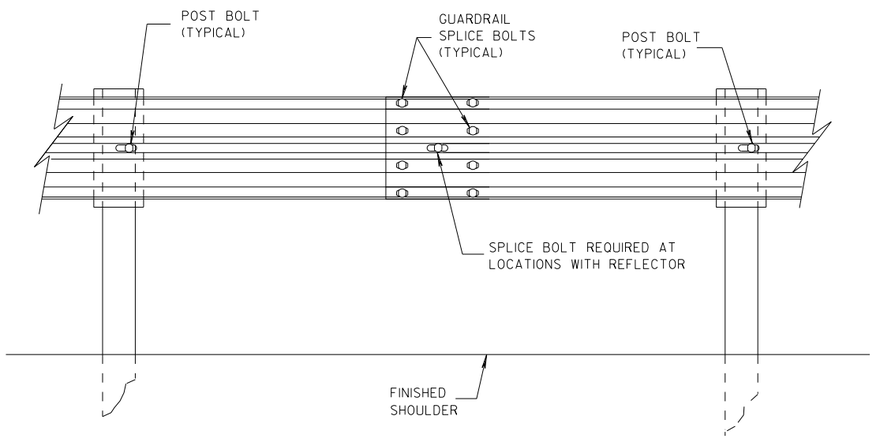


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

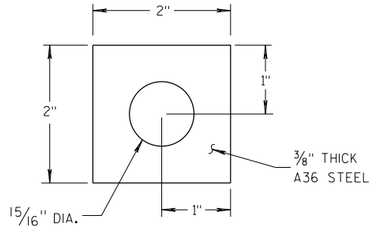
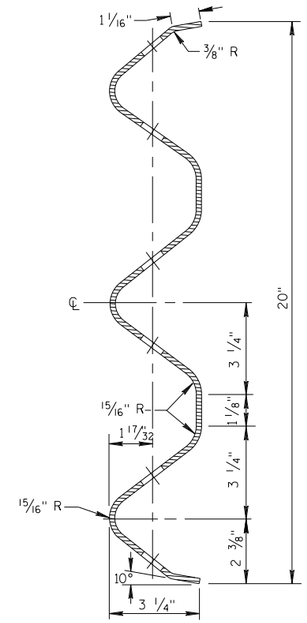


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

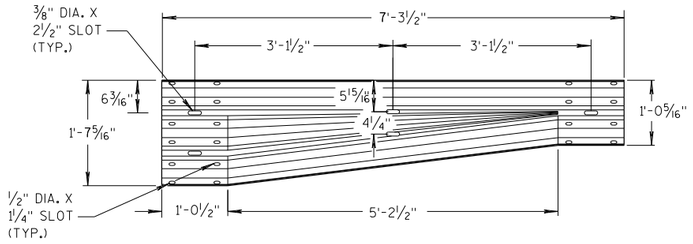
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

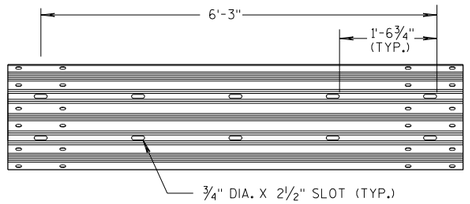
S.D.D. 14 B 45-5b

6

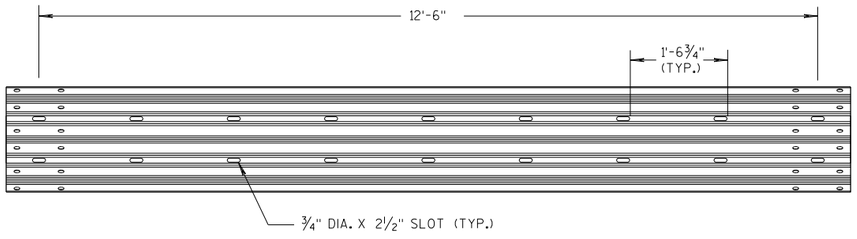
S.D.D. 14 B 45-5b



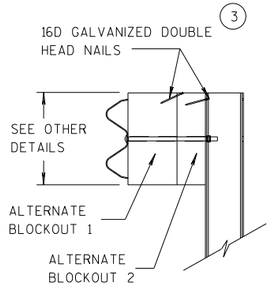
W-BEAM TO THRIE BEAM TRANSITION SECTION



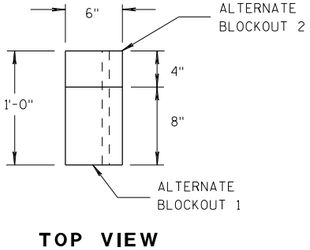
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

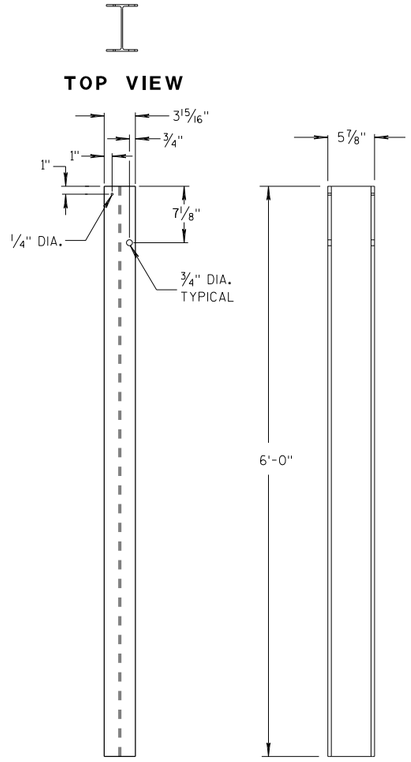


SIDE VIEW



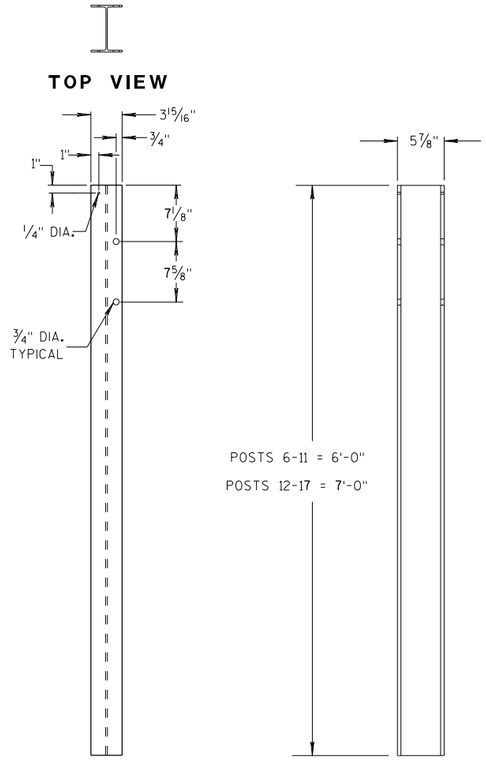
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



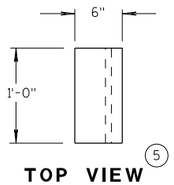
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

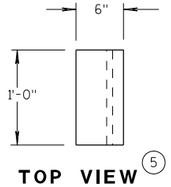


FRONT VIEW SIDE VIEW

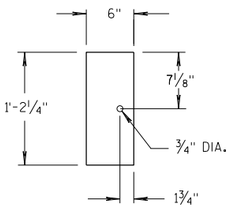
STEEL POSTS 6-17



TOP VIEW (5)

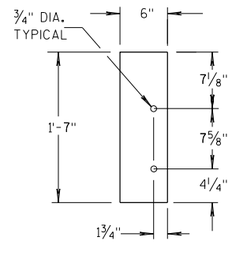


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

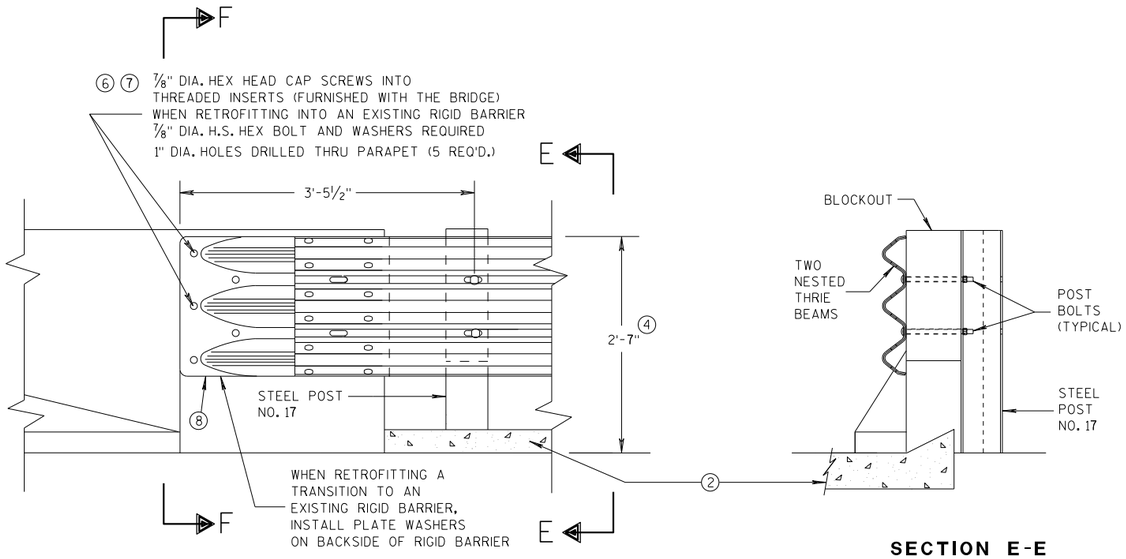
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

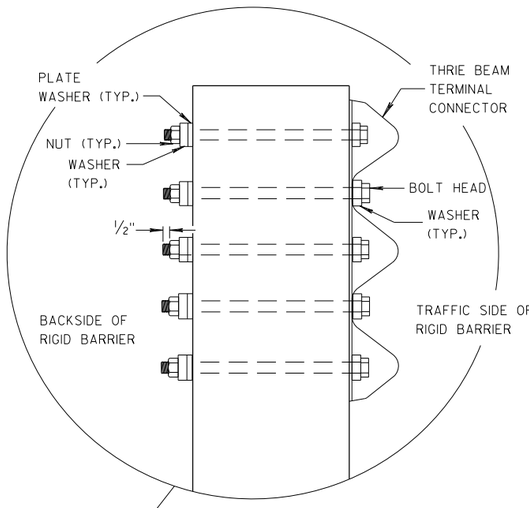
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

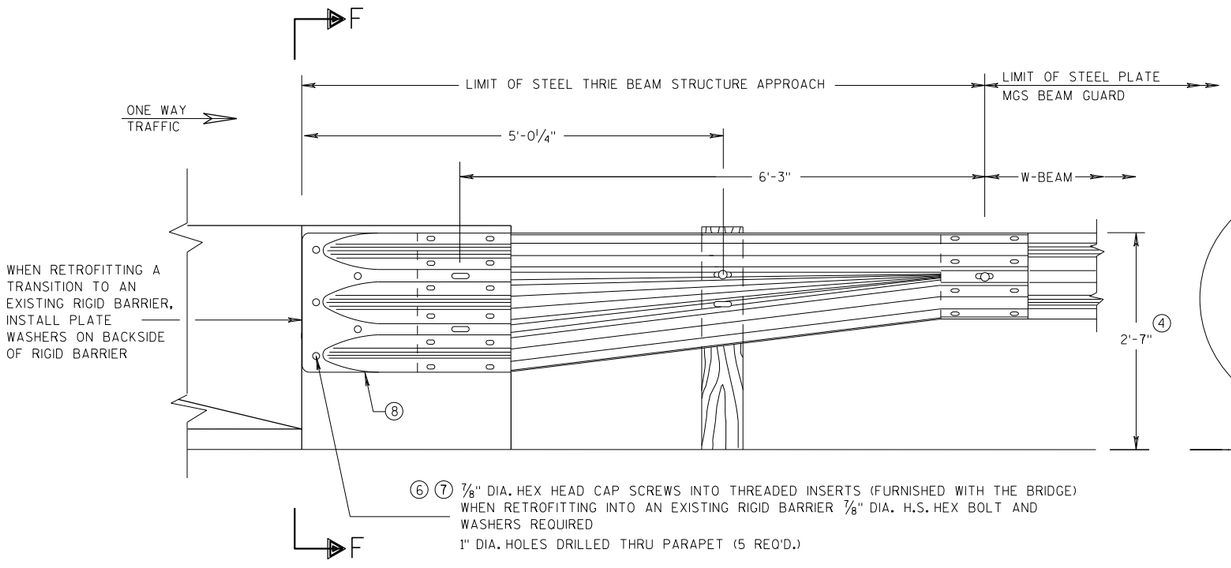
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

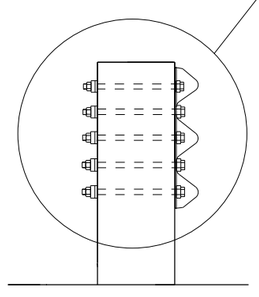
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

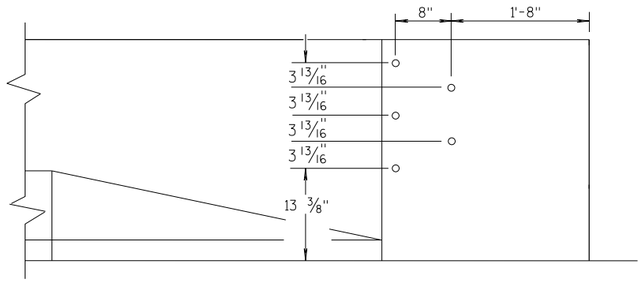




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

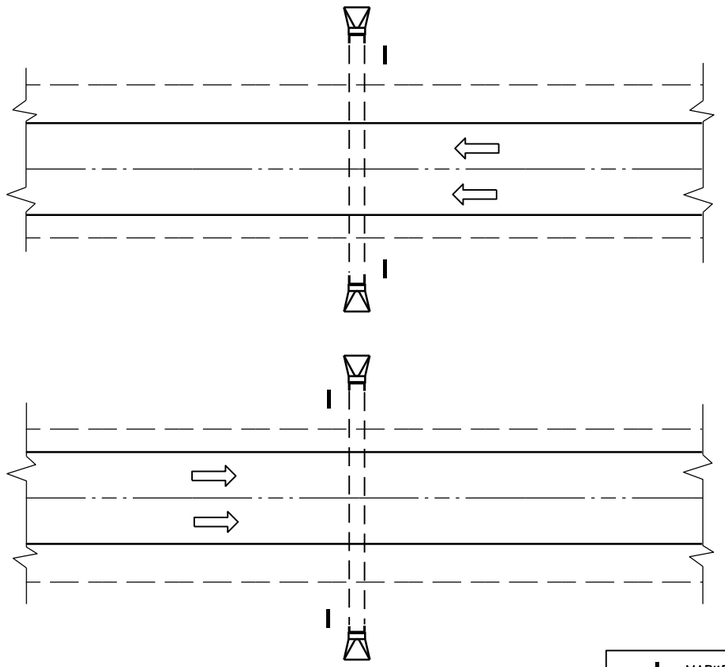
APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

S.D.D. 14 B 45-5d

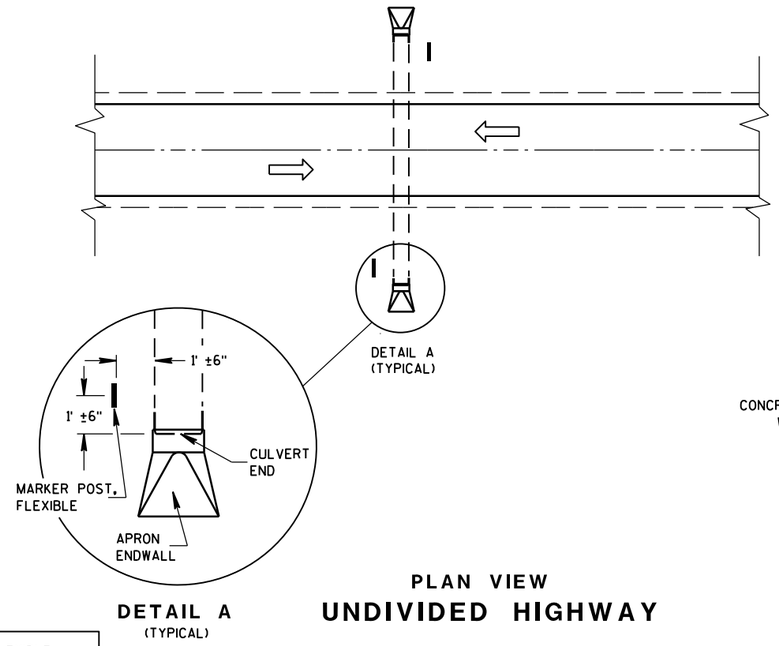
6

S.D.D. 14 B 45-5d



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

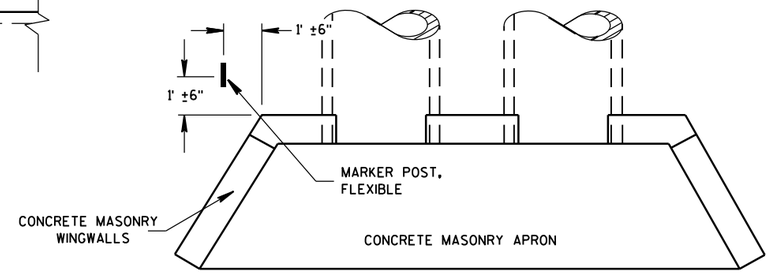
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

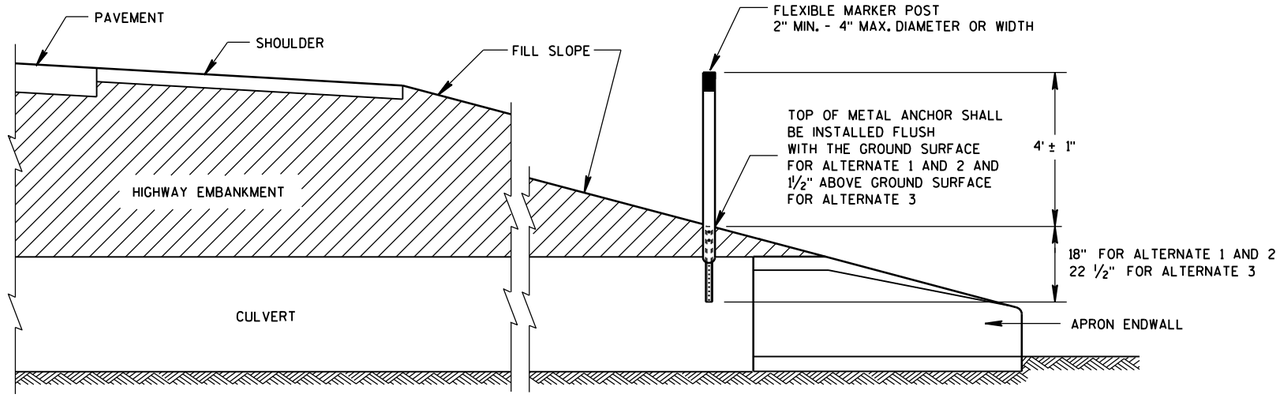
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

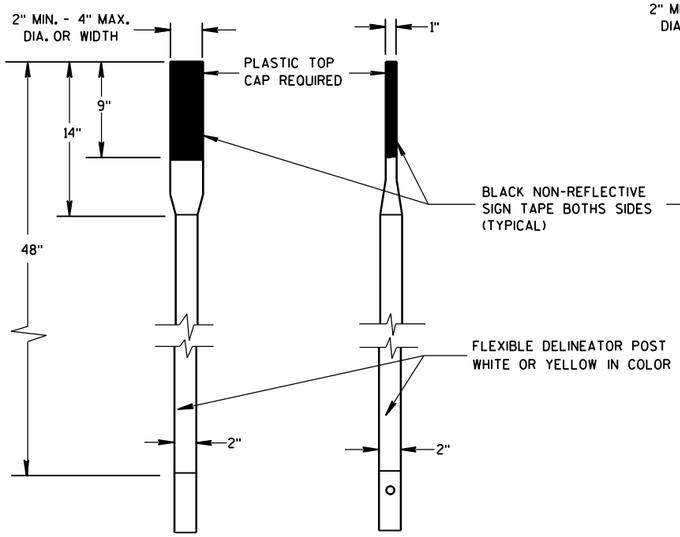
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

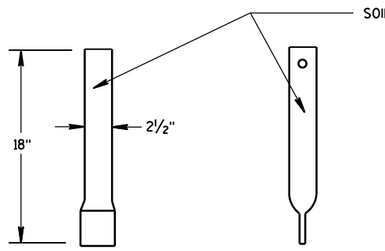
6

S.D.D. 15 A 3-2a

6

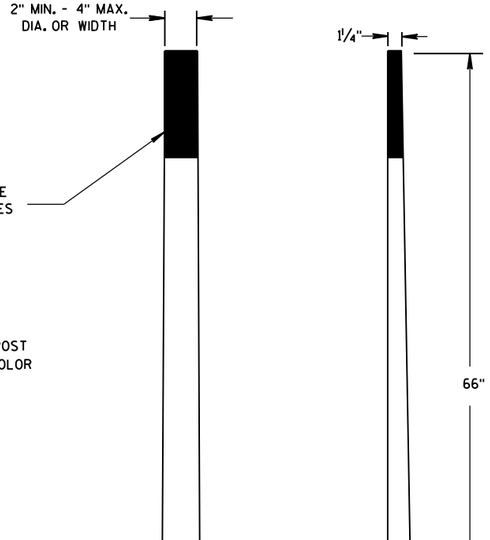
S.D.D. 15 A 3-2a





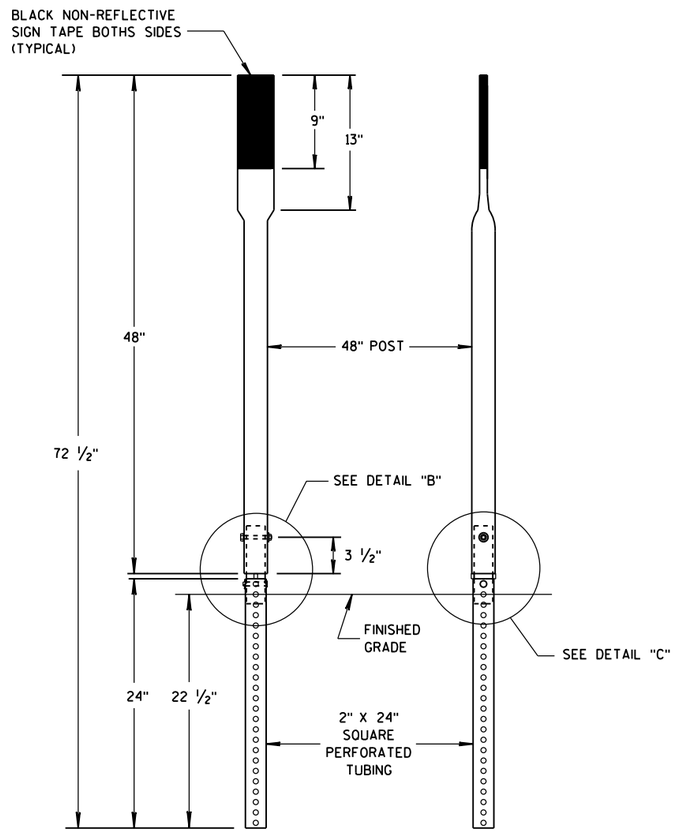
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

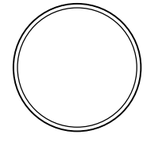
ALTERNATE 2



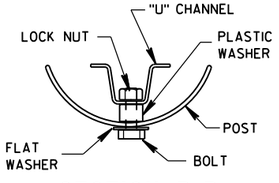
FRONT VIEW SIDE VIEW

ALTERNATE 3

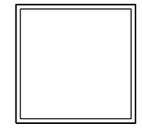
FLEXIBLE MARKER POSTS



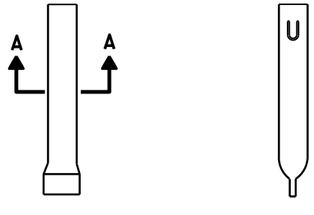
SECTION A-A



SECTION B-B

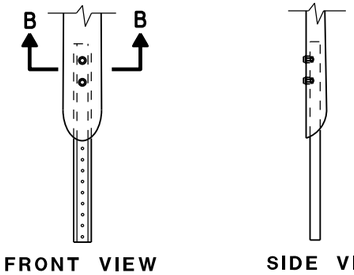


SECTION C-C



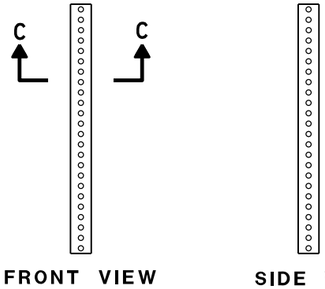
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

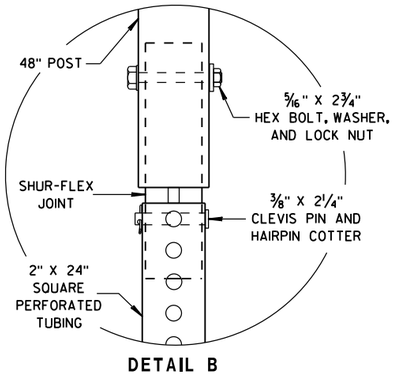
ALTERNATE 2



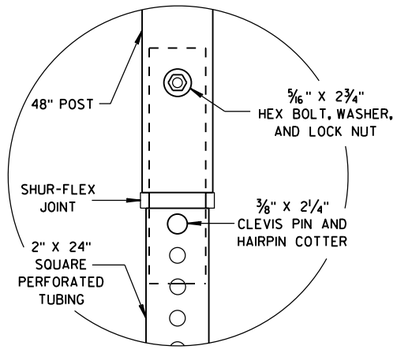
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

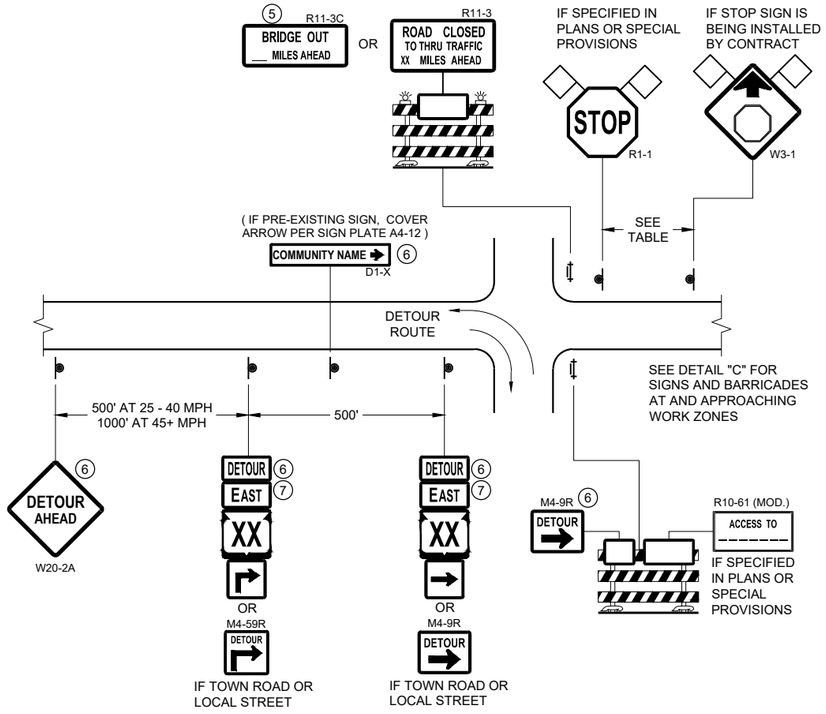
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

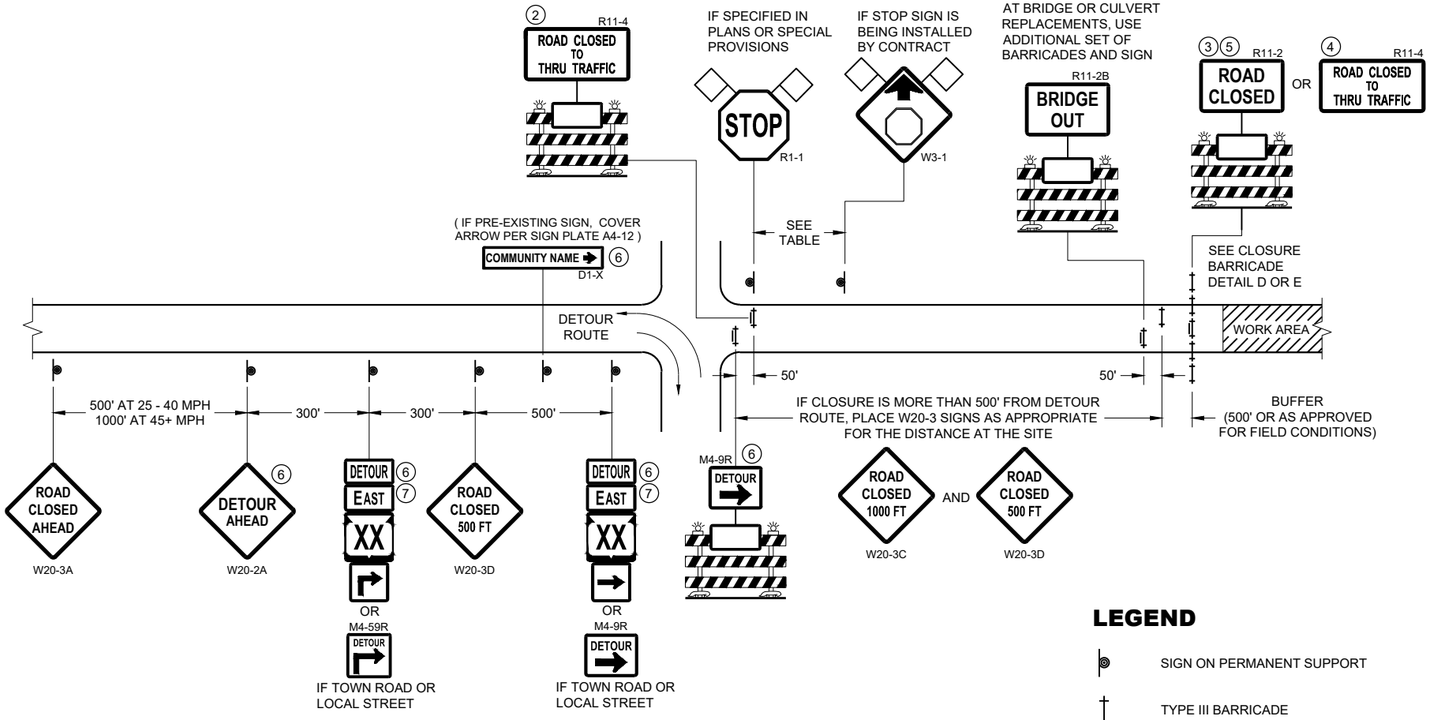
6

S.D.D. 15 A 3-2b



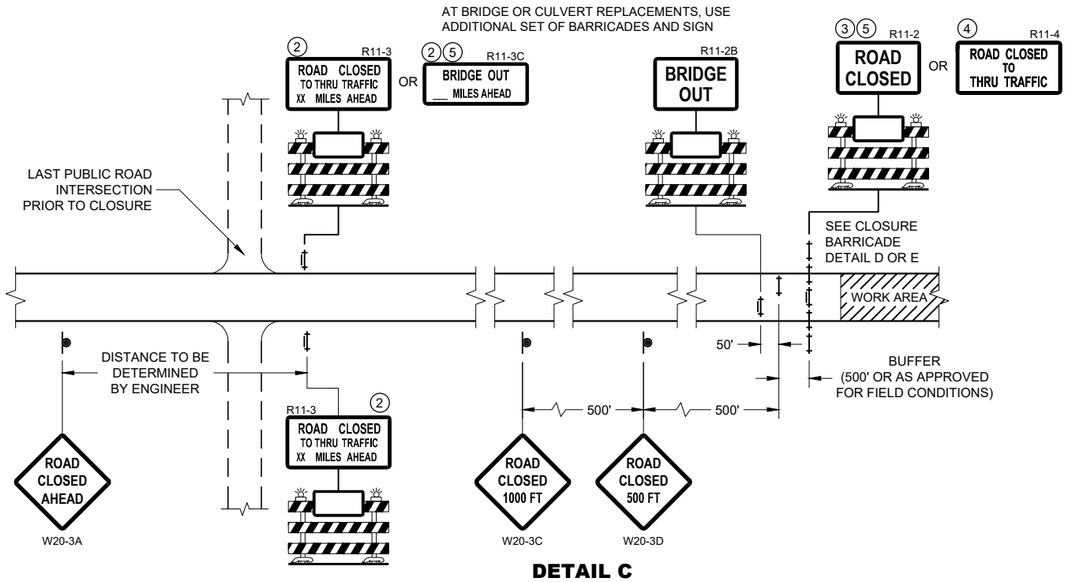
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

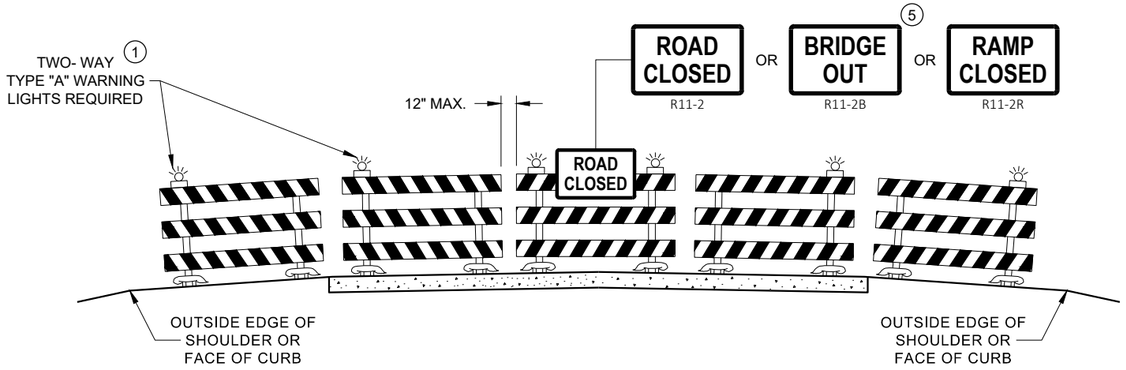
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

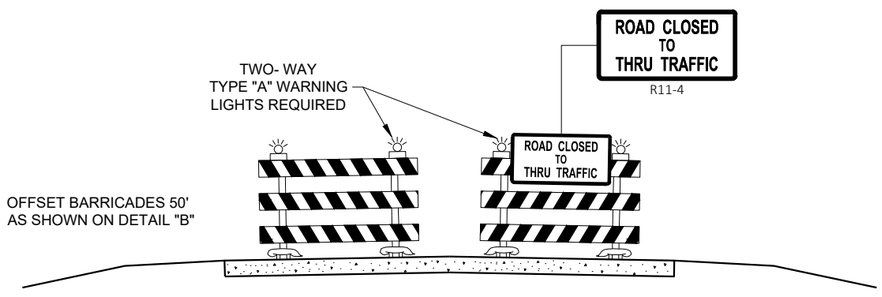
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 09b

6

SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

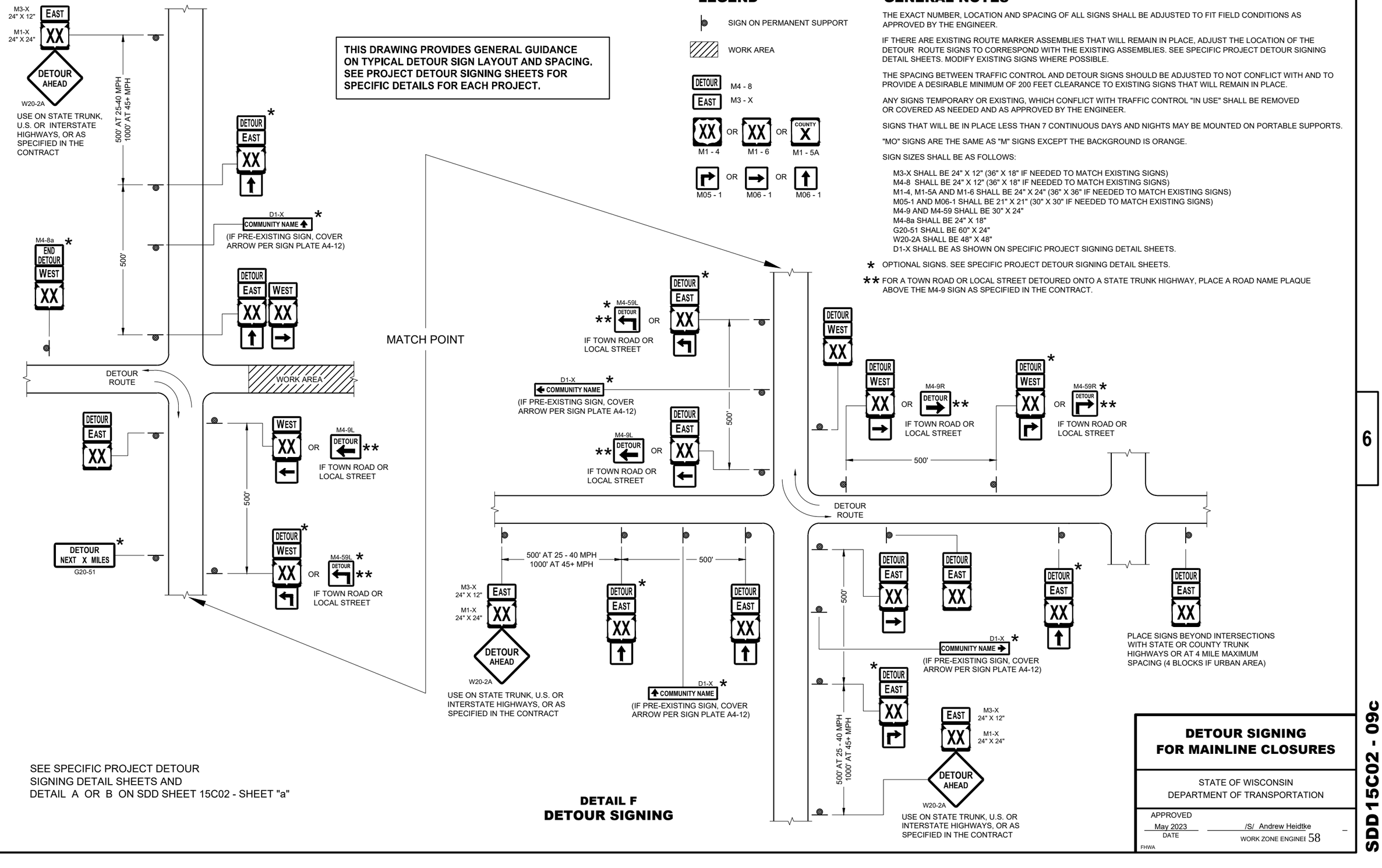
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15C02 - 09c

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

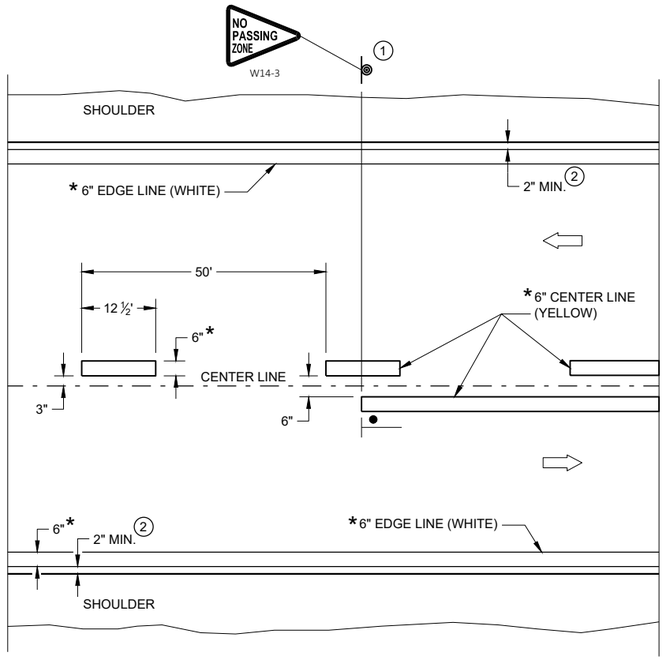
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

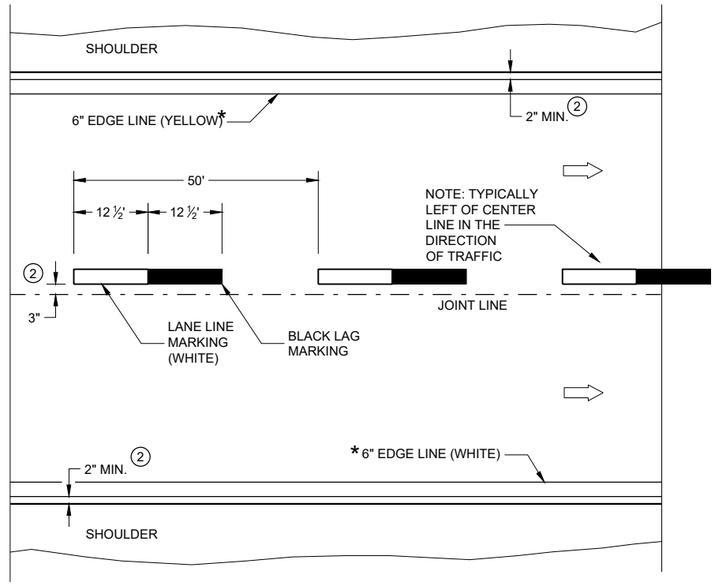
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

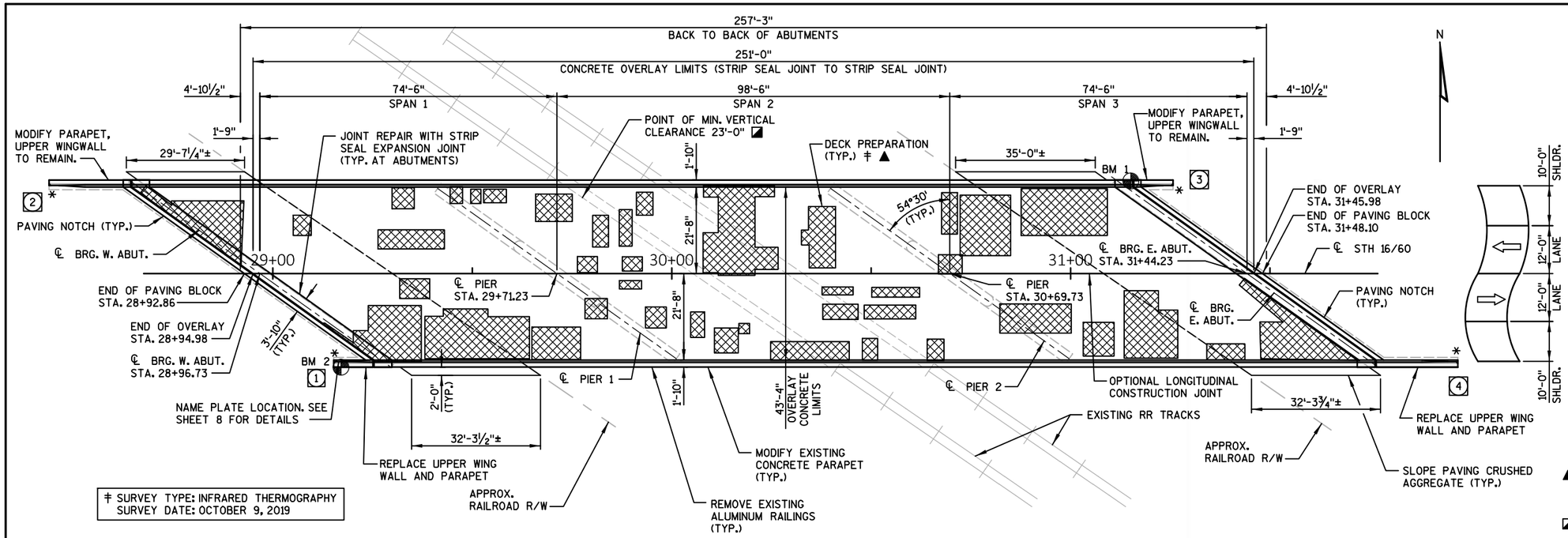
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER
FHWA

6

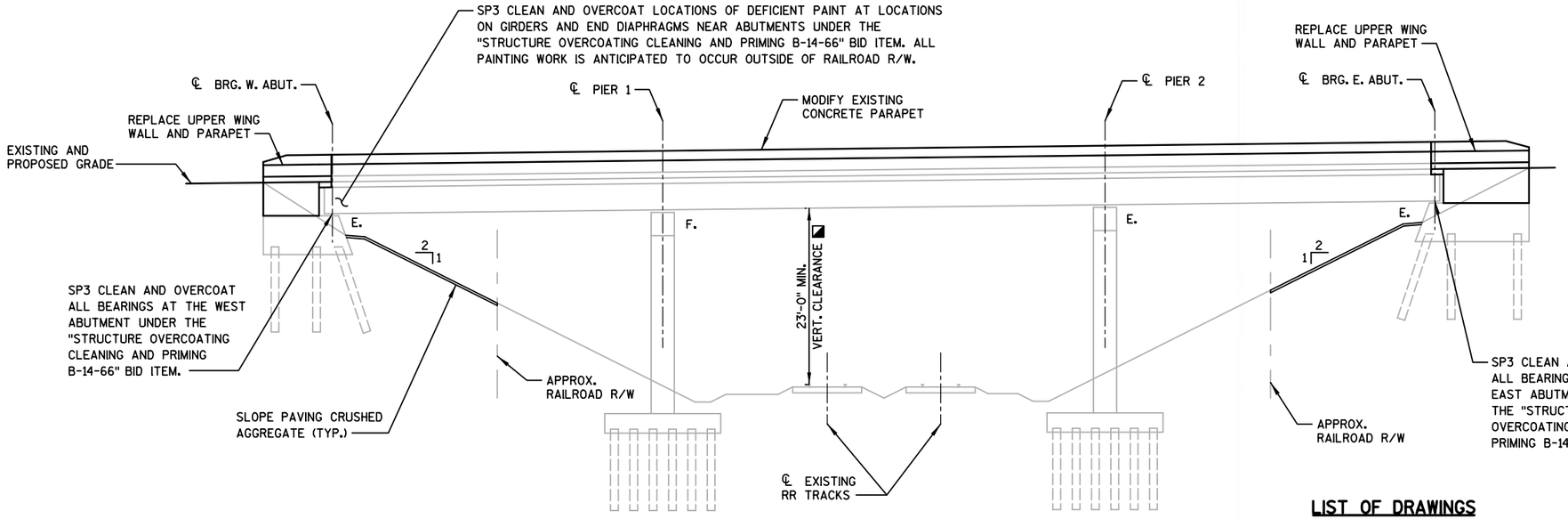
SDD 15C08-23a



‡ SURVEY TYPE: INFRARED THERMOGRAPHY
SURVEY DATE: OCTOBER 9, 2019

PLAN

(CONCRETE OVERLAY EXISTING 3-SPAN STEEL PLATE GIRDERS)



ELEVATION

(LOOKING NW, NORMAL TO BRIDGE SUBSTRUCTURE)

BENCHMARKS

BM NO.	COORDINATES	DESCRIPTION	ELEV.
BM 1	Y: 676,622.67 X: 824,113.70	MONUMENT, TOP OF PARAPET, NE CORNER OF STH 16 BRIDGE	851.42
BM 2	Y: 676,574.63 X: 823,915.99	CHISELED X, TOP OF PARAPET, SW CORNER OF STH 16 BRIDGE	850.12

STATE PROJECT NUMBER

1400-00-89

DESIGN DATA

LIVE LOAD:

DESIGN LOAD	HS-20
INVENTORY RATING	HS-17
OPERATING RATING	HS-29
MAXIMUM STD. PERMIT VEHICLE LOAD	220 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY	
OVERLAY DECKS	f'c = 4,000 PSI
CONCRETE SUPERSTRUCTURE	f'c = 4,000 PSI
CONCRETE SUBSTRUCTURE	f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	fy = 60,000 PSI

TRAFFIC DATA

A.D.T. (2023) = 3,800
A.D.T. (2043) = 4,200
DESIGN SPEED: 60 MPH

STRUCTURE DESIGN CONTACTS

BRIDGE OFFICE CONTACT:
AARON BONK (608) 261-0261

DESIGN CONSULTANT CONTACT:
EVAN CONSTANT (608) 251-4843

LEGEND

▲ THE TYPE AND EXTENT OF DECK PREPARATION/REPAIR IS AS DETERMINED BY FIELD ENGINEER.

◪ MIN. VERTICAL CLEARANCE BASED ON INFORMATION OBTAINED FROM WISDOT HIGHWAY STRUCTURE INFORMATION SYSTEM. EXISTING CLEARANCE TO BE MAINTAINED DURING CONSTRUCTION.

* LOCATION OF NEW ANCHOR ASSEMBLIES FOR THRIE BEAM ATTACHMENT.

(#) DENOTES WINGWALL NUMBER.

LIST OF DRAWINGS

WISCONSIN
EVAN J. CONSTANT
E-48226
MADISON
WI
PROFESSIONAL ENGINEER
5-30-2023

NO.	DATE	REVISION	BY

STRAND ASSOCIATES®
910 WEST WINGRA DRIVE
MADISON, WISCONSIN 53715
(608)-251-4843
(608) 251-8655 FAX
WWW.STRAND.COM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED SDR 05/30/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-14-66

STH 16/60 OVER CMSPP RR

COUNTY	TOWN/~~CITY/VILLAGE~~
DODGE	ELBA

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EJC	KRB	DTH	KRB

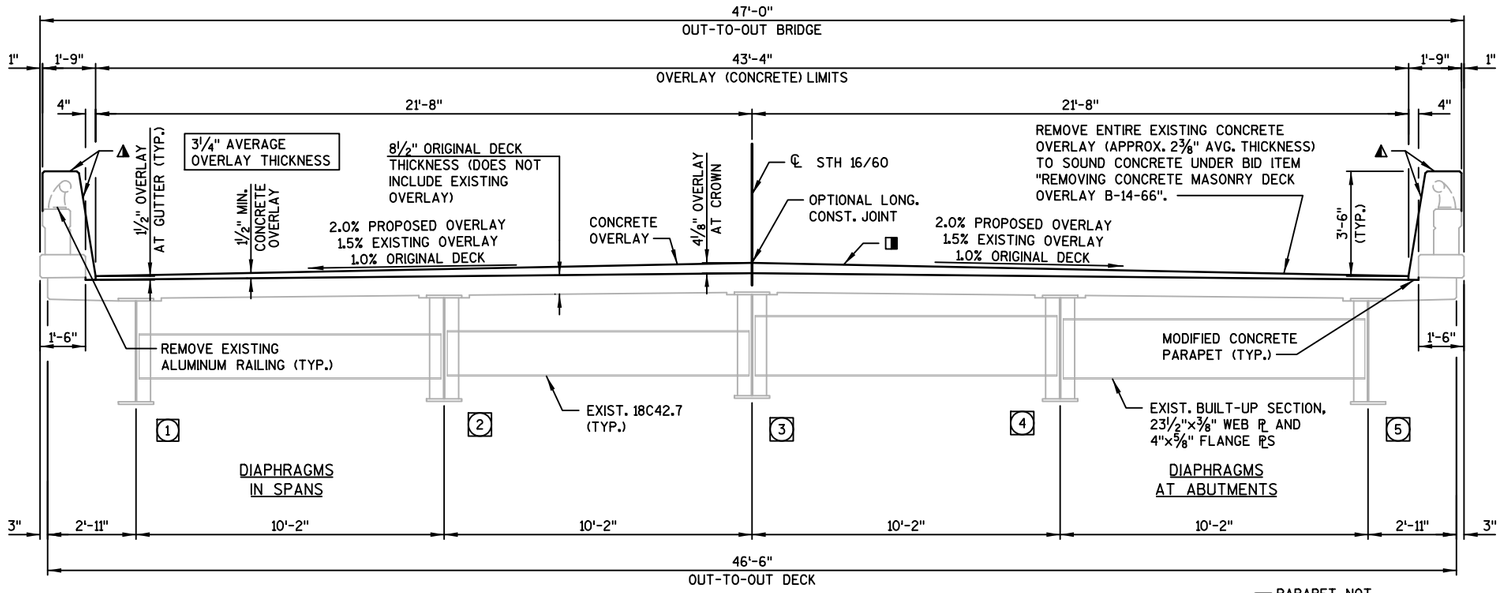
GENERAL PLAN

SHEET 1 OF 12
60

8

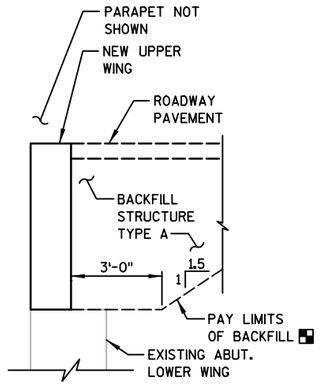
8

FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080101_gp.dgn



CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING EAST)



STRUCTURE BACKFILL LIMITS

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	W. ABUT	PIER 1	PIER 2	E. ABUT.	SUPER.	TOTAL	UNIT
203.0211.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-14-066	---	---	---	---	---	1	EACH
203.0220	REMOVING STRUCTURE B-14-066	---	---	---	---	---	1	EACH
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-14-066	---	---	---	---	---	1	EACH
210.1500	BACKFILL STRUCTURE TYPE A	15	---	---	30	---	45	TON
502.0100	CONCRETE MASONRY BRIDGES	6.7	---	---	10.9	52.0	70	CY
502.3101	EXPANSION DEVICE	---	---	---	---	150	150	LF
502.3200	PROTECTIVE SURFACE TREATMENT	---	---	---	---	1,238	1,238	SY
502.3210	PIGMENTED SURFACE SEALER	17	---	---	17	264	298	SY
502.4205	ADHESIVE ANCHORS NO. 5 BAR	160	---	---	140	1,456	1,756	EACH
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	1,670	---	---	2,050	11,790	15,510	LB
509.0301	PREPARATION DECKS TYPE 1	---	---	---	---	582	582	SY
509.0302	PREPARATION DECKS TYPE 2	---	---	---	---	399	399	SY
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	---	---	---	---	1,184	1,184	SY
509.1000	JOINT REPAIR	---	---	---	---	69	69	SY
509.1500	CONCRETE SURFACE REPAIR	15	---	---	10	25	50	SF
509.2000	FULL-DEPTH DECK REPAIR	---	---	---	---	24	24	SY
509.2500	CONCRETE MASONRY OVERLAY DECKS	---	---	---	---	184	184	CY
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-14-066	---	---	---	---	1,227	1,227	SY
509.9050.S	CLEANING PARAPETS	20	---	---	10	484	514	LF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	3	---	---	4	---	7	SY
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-14-066	---	---	---	---	---	1	EACH
517.3001.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-14-066	---	---	---	---	---	1	EACH
517.4001.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-14-066	---	---	---	---	---	1	EACH
517.6001.S	PORTABLE DECONTAMINATION FACILITY	---	---	---	---	---	1	EACH
604.0500	SLOPE PAVING CRUSHED AGGREGATE	195	---	---	212	---	407	SY
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	2	---	---	2	---	4	EACH
	NON-BID ITEMS							
	NAME PLATE	---	---	---	---	---	1	EACH
	FILLER	---	---	---	---	---	1/2", 3/4"	SIZE

LEGEND

(*) INDICATES GIRDER NUMBER.

◨ PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY AND PAVING BLOCKS.

◭ PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ENDS, INSIDE, AND TOP FACES OF PARAPETS, INCLUDING PARAPETS ON WINGS.

◩ BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

GENERAL NOTES

THE PROPOSED WORK INCLUDES REMOVING EXISTING CONCRETE OVERLAY, PLACING A NEW CONCRETE OVERLAY, EXPANSION JOINT REPLACEMENT AT BOTH ABUTMENTS, CONCRETE SURFACE REPAIR AT ABUTMENTS AND SUPERSTRUCTURE, REPLACING WING 1 AND WING 4 UPPER WINGWALLS AND PARAPETS, CLEANING AND REPAINTING TOP FLANGES OF GIRDERS AT JOINT REPAIR LOCATIONS, SPOT CLEANING AND PAINTING GIRDERS AND ALL ABUTMENT BEARINGS, AND MODIFYING CONCRETE PARAPETS.

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND SUBSEQUENT REHABILITATION PLANS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY AND PAVING BLOCKS.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS."

THE AVERAGE OVERLAY THICKNESS SHOWN IS BASED ON THE AVERAGE OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS."

SLOPE PAVING REPAIR AREAS ARE TO BE DETERMINED BY THE FIELD ENGINEER.

REPAINT GIRDER ENDS AND DIAPHRAGMS AT ABUTMENTS WHERE EXISTING PAINT HAS FAILED AS NOTED ON THE DRAWINGS UNDER BID ITEM "STRUCTURE OVERCOATING CLEANING AND PRIMING B-14-66".

STRUCTURAL STEEL AND BEARINGS SHALL BE PAINTED TO MATCH EXISTING, LIGHT GRAY (AMS STANDARD COLOR 26293).

CONCRETE SURFACE REPAIR AS DIRECTED BY THE FIELD ENGINEER. QUANTITIES SHOWN ON THE PLANS ARE APPROXIMATE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

CLEAN AND REPAINT EXISTING BEARINGS AT ABUTMENTS AS NOTED ON DRAWINGS UNDERT THE "STRUCTURE OVERCOATING CLEANING AND PRIMING B-14-66" BID ITEM.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR STEEL SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

BAR DIMENSIONS FOR BENDING ARE OUT-TO-OUT OF BARS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

SUPERSTRUCTURE AND ABUTMENT PARAPETS NOT BEING REMOVED SHALL BE CLEANED PER "CLEANING PARAPETS" BID ITEM.

THE ORIGINAL CONCRETE OVERLAY SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY B-14-66".

AFTER REMOVAL OF THE EXISTING CONCRETE OVERLAY AND PRIOR TO NEW CONCRETE WORK, THE ENTIRE BRIDGE DECK SHALL BE CLEANED PER BID ITEM, "CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" AT GUTTER LINES AND 4⅛" AT LONG CONSTR. JOINT PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 3¼". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE TOP, ENDS, AND ROADWAY FACES OF NEW CONCRETE PARAPET AFTER ALL WORK IS COMPLETED FOR "CLEANING PARAPETS" AND "CONCRETE SURFACE REPAIR" BID ITEMS AND THE MODIFIED PARAPET IS POURED.

THE CONTRACTOR SHALL SUPPLY A NEW PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWING. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1970.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

STATE PROJECT NUMBER

1400-00-89

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

CROSS SECTION, QUANTITIES, NOTES & DETAILS

SHEET 2
61

8

8

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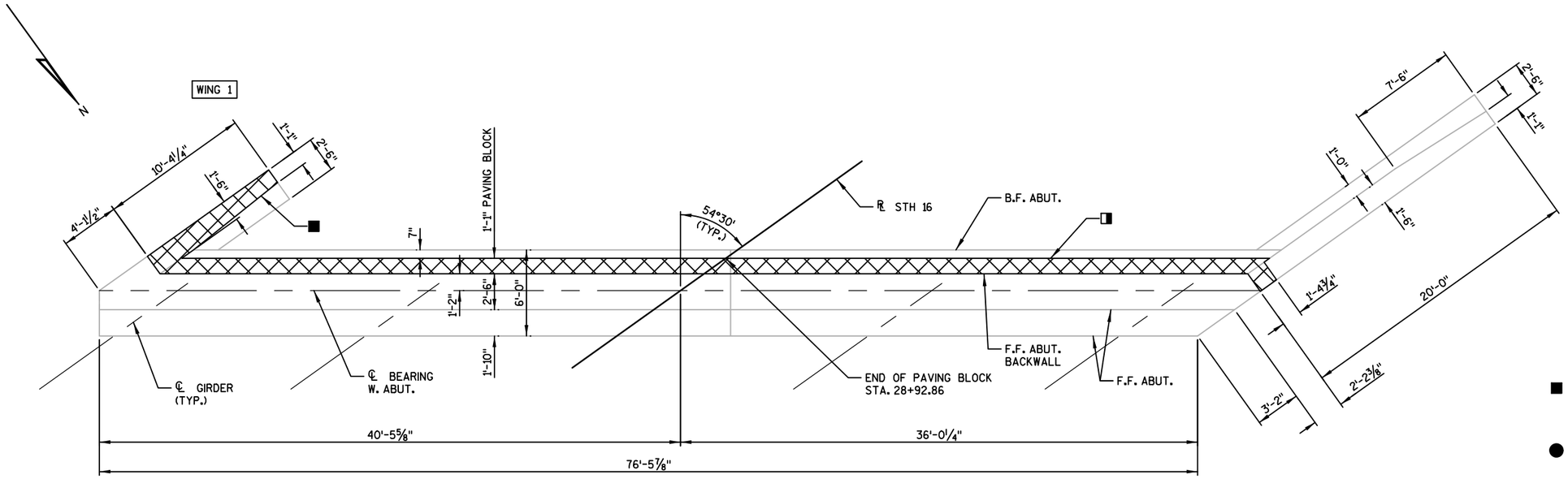
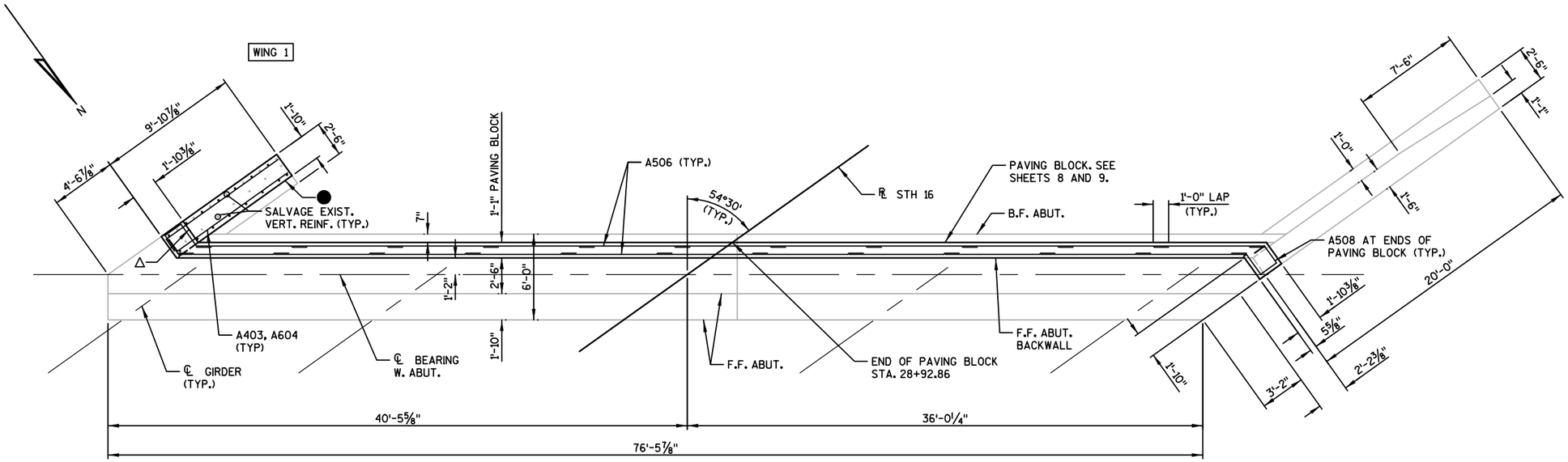
STATE PROJECT NUMBER

1400-00-89



PLAN
(SHOWING REMOVALS)



PLAN
(SHOWING PROPOSED STRUCTURE WORK)

NOTES

SEE SHEET 4 FOR SECTION VIEWS AND BAR DETAILS.

LEGEND

- ■ REMOVE EXISTING UPPER WING AND PARAPET DOWN TO EXISTING ABUTMENT LOWER WINGWALL. SALVAGE AND INCORPORATE EXISTING VERTICAL BAR STEEL INTO NEW WORK.
- ● 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ◨ REMOVE EXISTING PAVING BLOCK. SEE SHEET 8 FOR DETAILS.
- △ VERTICAL CONSTRUCTION JOINT BETWEEN PAVING BLOCK CONCRETE (TO BE POURED WITH SUPERSTRUCTURE CONCRETE) AND UPPER WING CONCRETE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

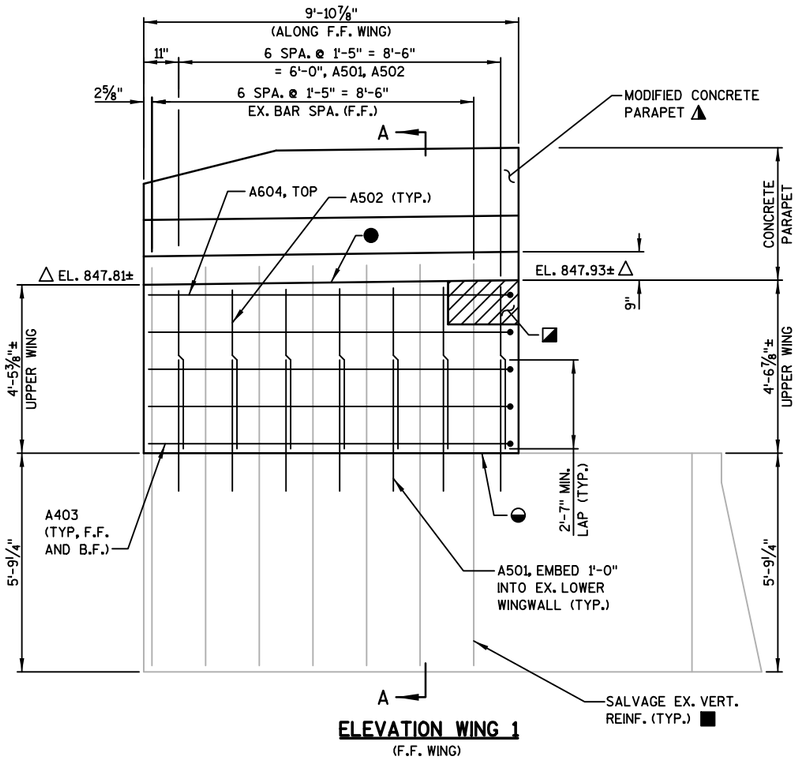
STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

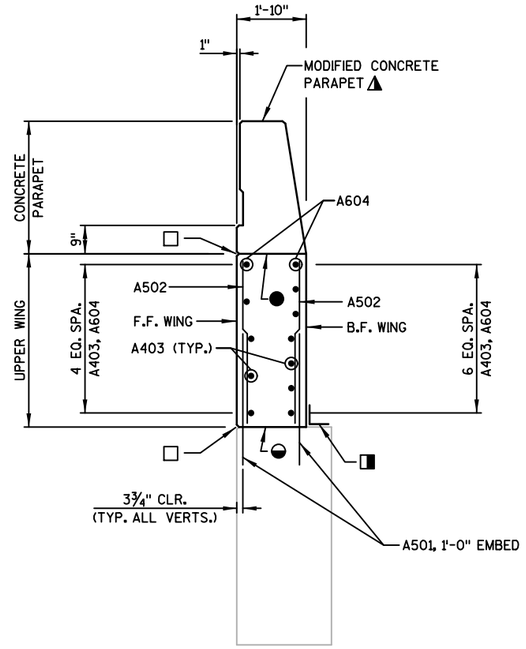
WEST ABUTMENT

SHEET 3
62

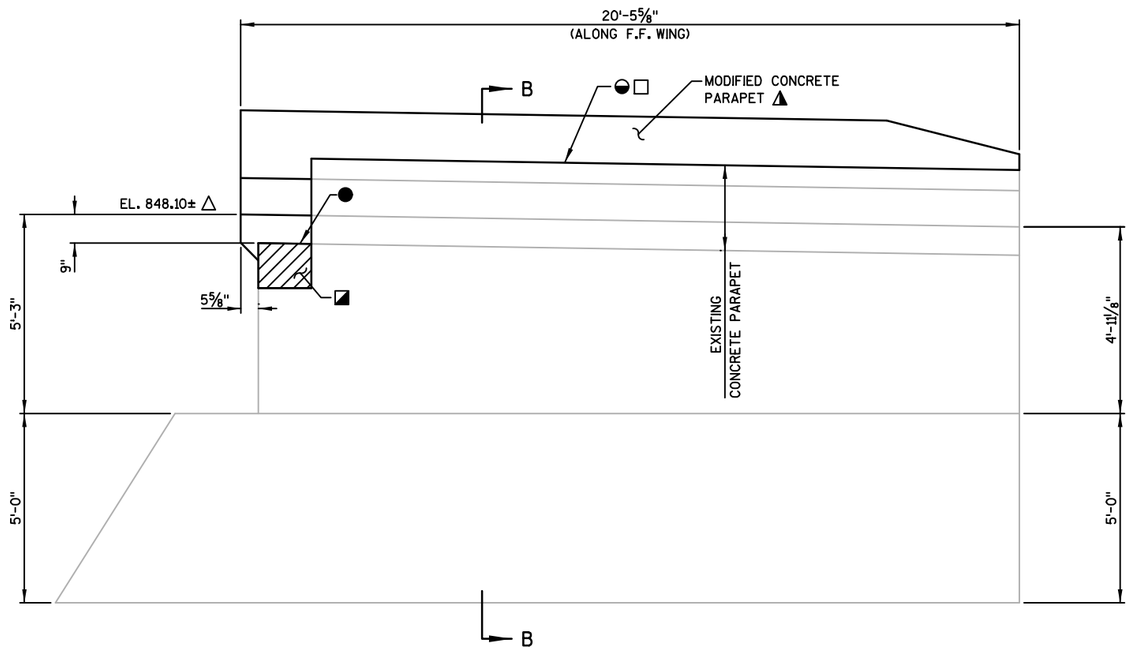
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080103_wa.dgn



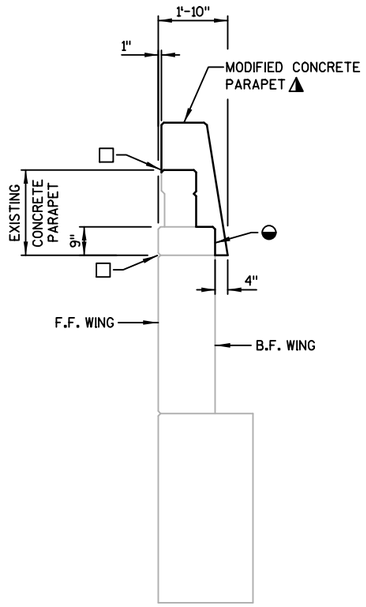
ELEVATION WING 1
(F.F. WING)



SECTION A-A



ELEVATION WING 2
(F.F. WING)



SECTION B-B

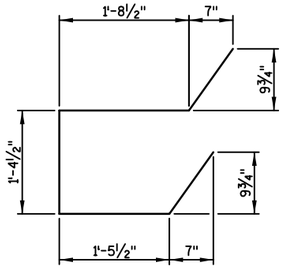
STATE PROJECT NUMBER

1400-00-89

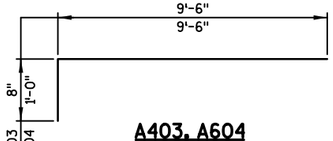
WEST ABUTMENT BILL OF BARS

COATED: 930 LBS

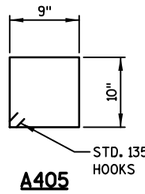
	BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
☆	A501	15	3'-10"		X	F.F. & B.F. - VERT. - DOWELS - WING 1
	A502	15	4'-3"		X	F.F. & B.F. - VERT. - WING 1
	A403	10	10'-1"	X	X	F.F. & B.F. - HORIZ. - WING 1
	A604	2	10'-4"	X	X	TOP - HORIZ. - WING 1
	A405	79	3'-8"	X	X	PAVING BLOCK - VERT.
	A506	33	7'-9"		X	PAVING BLOCK - HORIZ.
☆	A507	79	2'-8"	X	X	PAVING BLOCK - VERT. - DOWELS
	A508	4	6'-4"	X	X	PAVING BLOCK - HORIZ. -ENDS



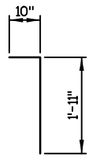
A508



A403, A604



A405



A507

LEGEND

- ◒ ROUGHEN SURFACE OF EXISTING CONCRETE TO ¼"± AMPLITUDE (ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.)
- □ ¾" V-GROOVE.
- △ ELEVATIONS PROVIDED ARE TAKEN FROM SURVEY. MATCH EXISTING TOP OF WING ELEVATIONS.
- ▲ SEE SHEETS 11 AND 12 FOR REINFORCING DETAILS.
- ■ REMOVE EXISTING UPPER WING AND PARAPET DOWN TO EXISTING ABUTMENT LOWER WINGWALL. SALVAGE AND INCORPORATE EXISTING VERTICAL BAR STEEL INTO NEW WORK.
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ◪ POUR CONCRETE IN HATCHED REGION AFTER SUPERSTRUCTURE IS IN PLACE. SEE SUPERSTRUCTURE SHEET FOR EXTENTS.
- ☆ ADHESIVE ANCHOR NO. 5 BAR, EMBED 1'-0" IN EXIST. CONC.
- ● CONSTRUCTION JOINT.

NOTES

SEE SHEETS 3, 8, AND 9 FOR PAVING BLOCK LAYOUT AND DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

WEST ABUTMENT DETAILS

SHEET 4
63

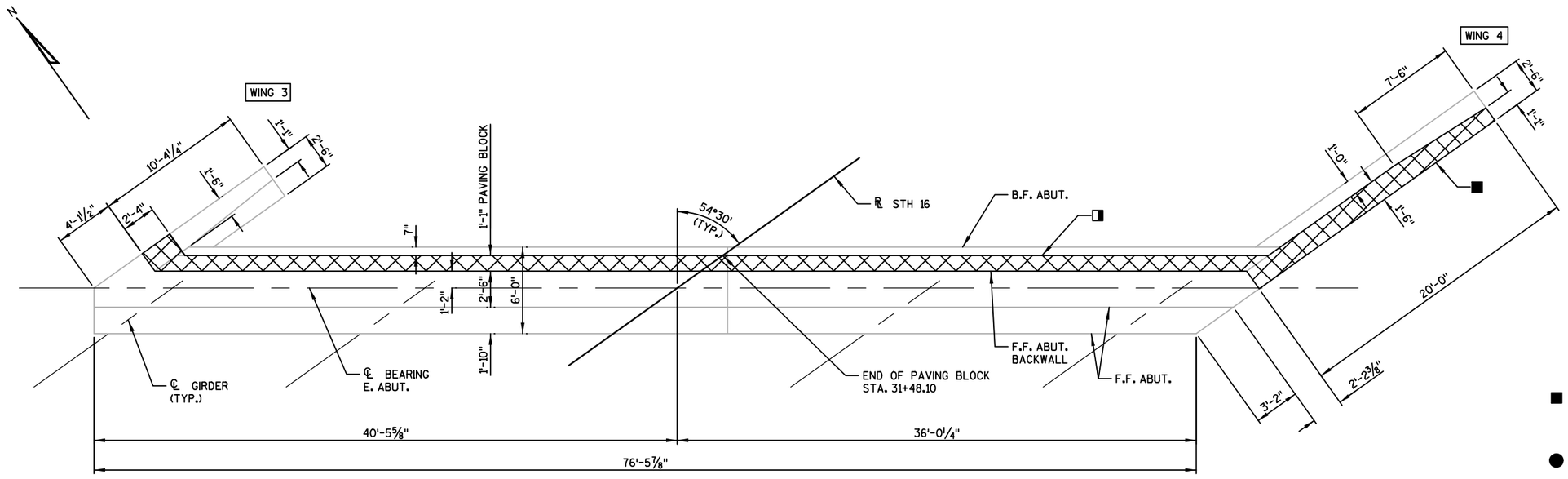
8

8

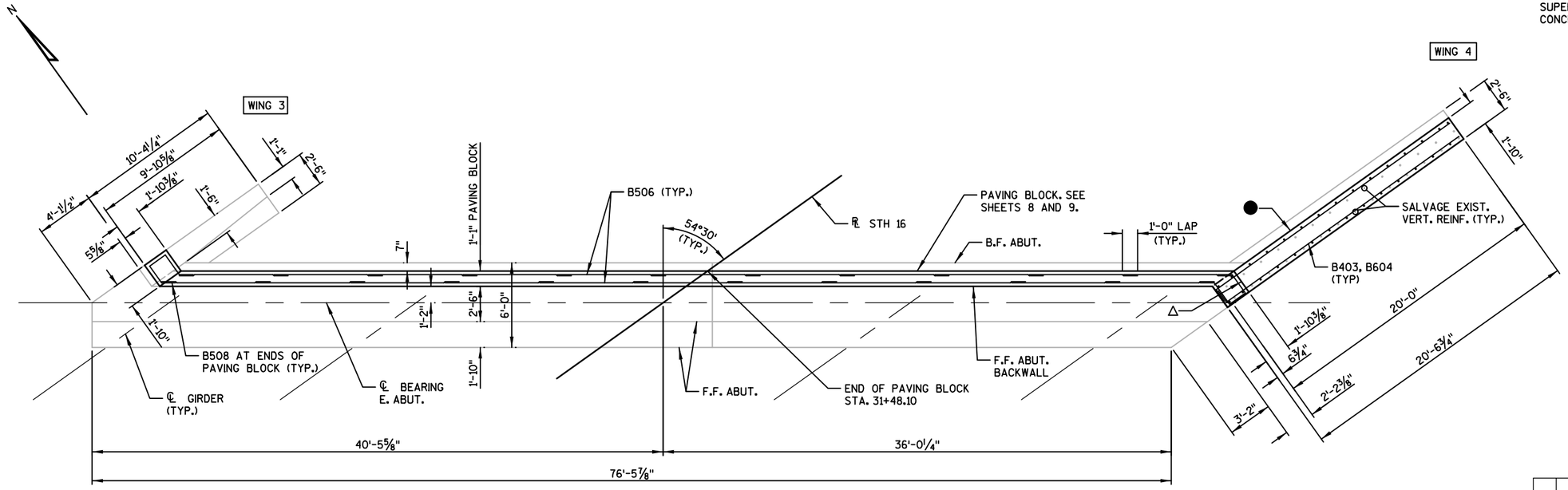
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080104_wa.dgn

STATE PROJECT NUMBER

1400-00-89



PLAN
(SHOWING REMOVALS)



PLAN
(SHOWING PROPOSED STRUCTURE WORK)

NOTES

SEE SHEET 6 FOR SECTION VIEWS AND BAR DETAILS.

LEGEND

■ REMOVE EXISTING UPPER WING AND PARAPET DOWN TO EXISTING ABUTMENT LOWER WINGWALL. SALVAGE AND INCORPORATE EXISTING VERTICAL BAR STEEL INTO NEW WORK.

● 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

◨ REMOVE EXISTING PAVING BLOCK. SEE SHEET 8 FOR DETAILS.

△ VERTICAL CONSTRUCTION JOINT BETWEEN PAVING BLOCK CONCRETE (TO BE POURED WITH SUPERSTRUCTURE CONCRETE) AND UPPER WING CONCRETE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

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EAST ABUTMENT

SHEET 5
64

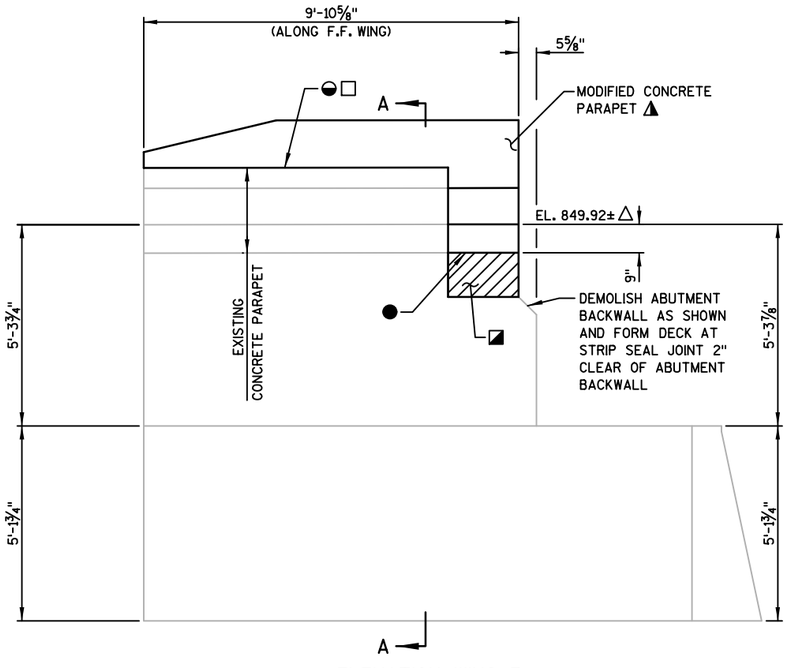
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080105_ea.dgn

STATE PROJECT NUMBER
1400-00-89

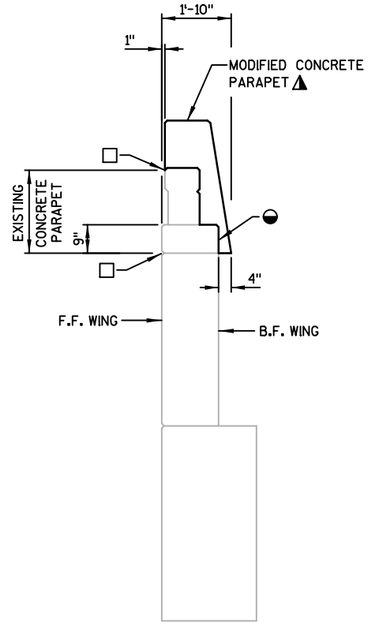
EAST ABUTMENT
BILL OF BARS

COATED: 1,150 LBS

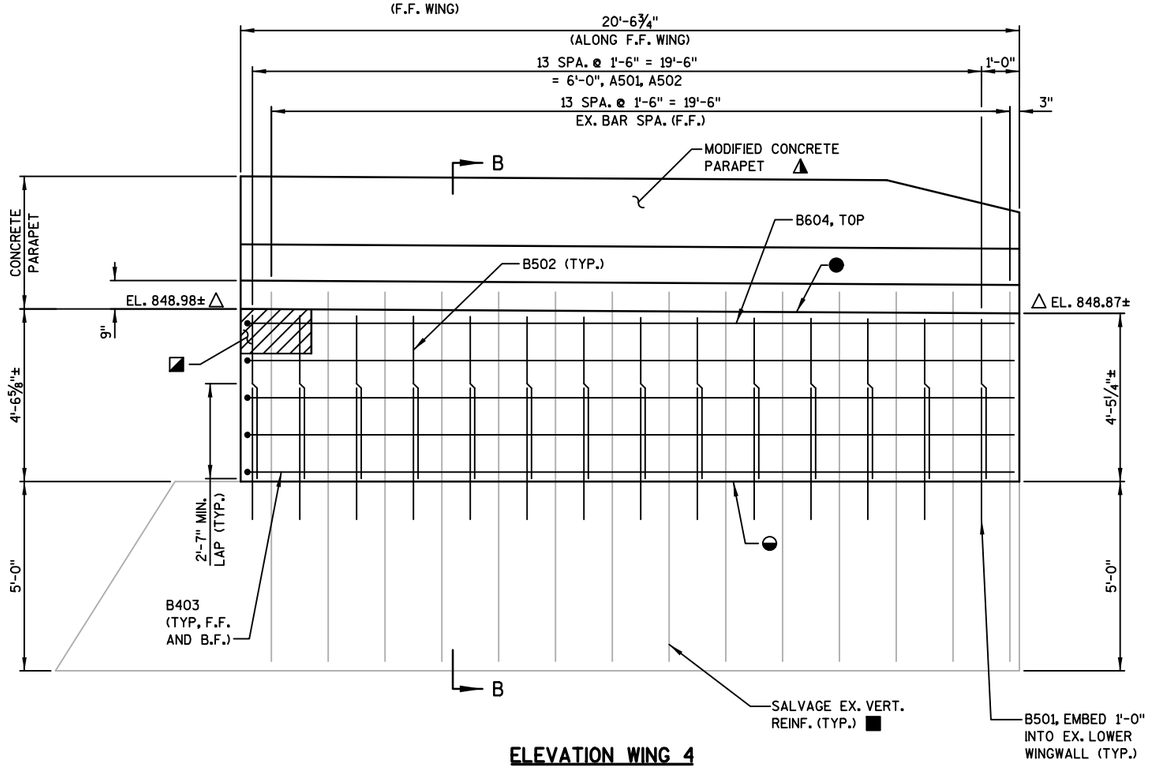
	BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
☆	B501	29	3'-10"		X	F.F. & B.F. - VERT. - DOWELS - WING 4
	B502	29	4'-3"		X	F.F. & B.F. - VERT. - WING 4
	B403	10	20'-8"	X	X	F.F. & B.F. - HORIZ. - WING 4
	B604	2	20'-11"	X	X	TOP - HORIZ. - WING 4
	B405	79	3'-8"	X	X	PAVING BLOCK - VERT.
	B506	33	7'-9"		X	PAVING BLOCK - HORIZ.
☆	B507	79	2'-8"	X	X	PAVING BLOCK - VERT. - DOWELS
	B508	4	6'-4"	X	X	PAVING BLOCK - HORIZ. -ENDS



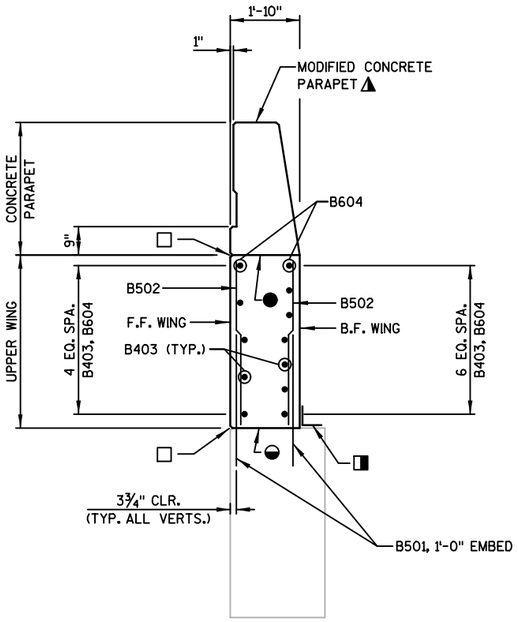
ELEVATION WING 3
(F.F. WING)



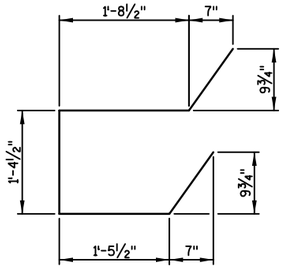
SECTION A-A



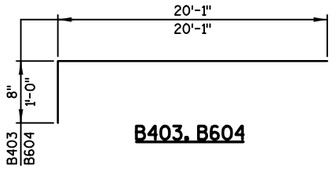
ELEVATION WING 4
(F.F. WING)



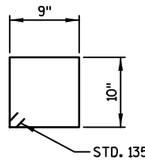
SECTION B-B



B508



B403, B604



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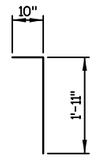

B507

LEGEND

- ◒ ROUGHEN SURFACE OF EXISTING CONCRETE TO ¼"± AMPLITUDE (ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.)
- □ ¾" V-GROOVE.
- △ ELEVATIONS PROVIDED ARE TAKEN FROM SURVEY. MATCH EXISTING TOP OF WING ELEVATIONS.
- ◭ SEE SHEETS 11 AND 12 FOR REINFORCING DETAILS.
- ■ REMOVE EXISTING UPPER WING AND PARAPET DOWN TO EXISTING ABUTMENT LOWER WINGWALL. SALVAGE AND INCORPORATE EXISTING VERTICAL BAR STEEL INTO NEW WORK.
- ◨ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ◪ POUR CONCRETE IN HATCHED REGION AFTER SUPERSTRUCTURE IS IN PLACE. SEE SUPERSTRUCTURE SHEET FOR EXTENTS.
- ☆ ADHESIVE ANCHOR NO. 5 BAR, EMBED 1'-0" IN EXIST. CONC.
- ● CONSTRUCTION JOINT.

NOTES

SEE SHEETS 5, 8, AND 9 FOR PAVING BLOCK LAYOUT AND DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

EAST ABUTMENT DETAILS

SHEET 6
65

8

8

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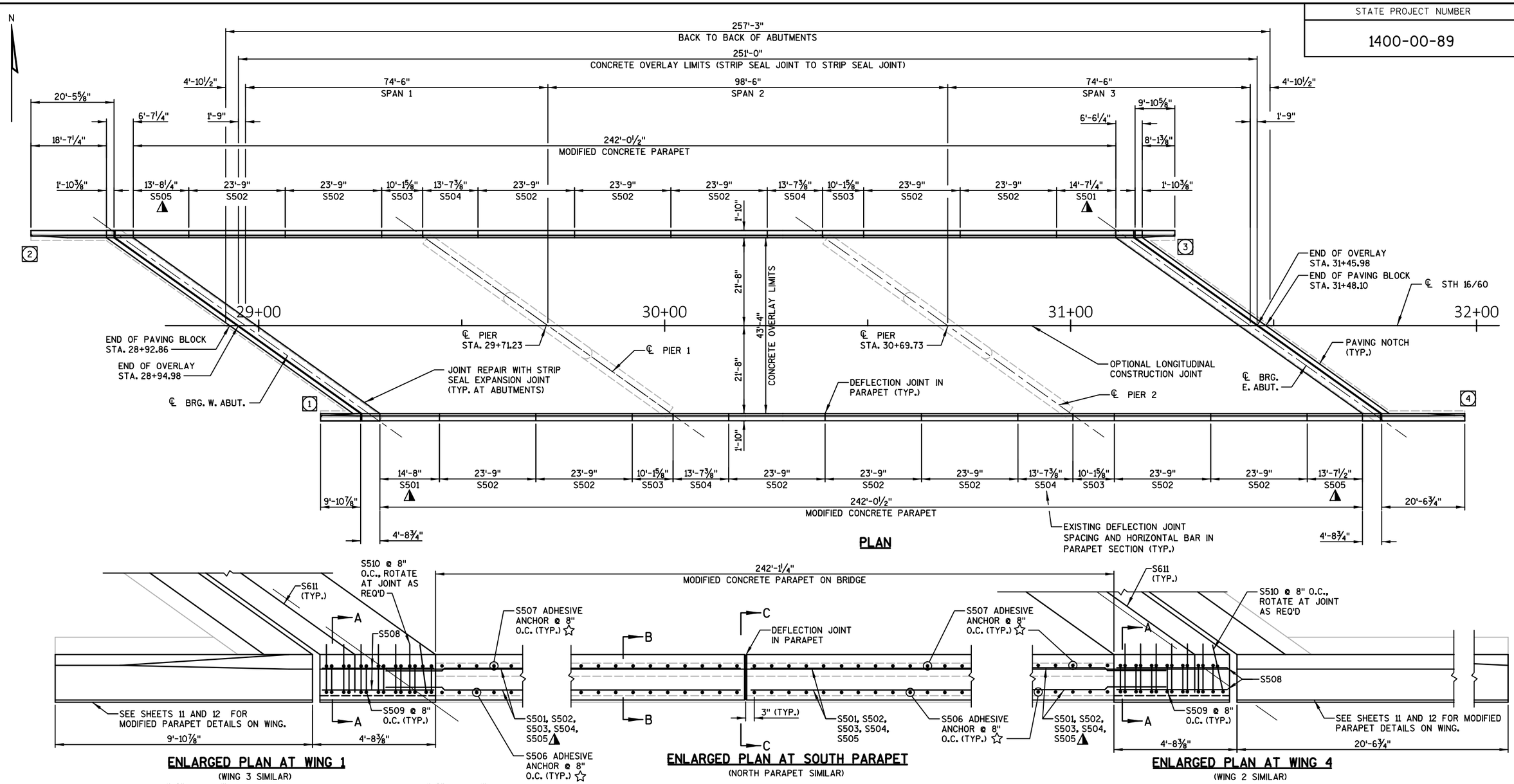


PLAN

ENLARGED PLAN AT WING 1

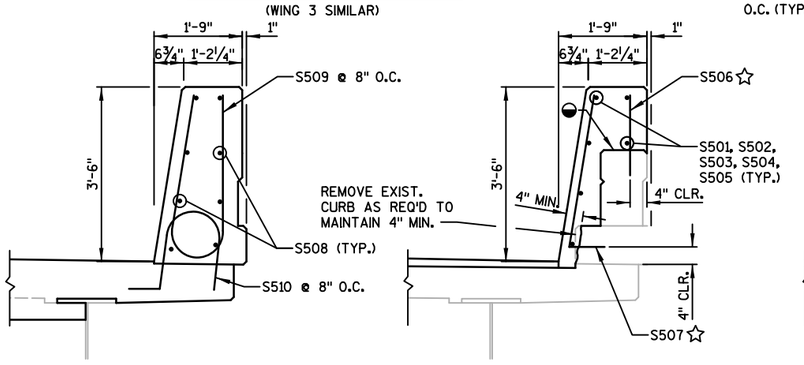
(WING 3 SIMILAR)

ENLARGED PLAN AT SOUTH PARAPET

(NORTH PARAPET SIMILAR)

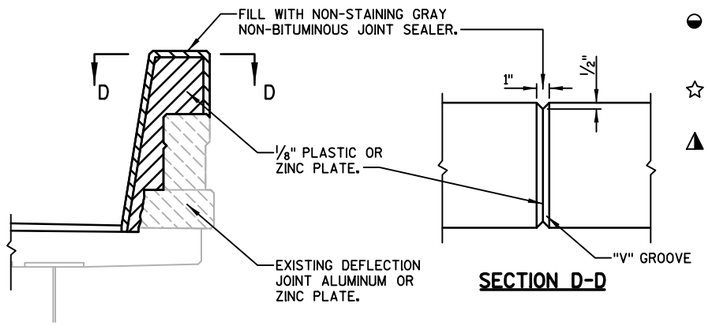
ENLARGED PLAN AT WING 4

(WING 2 SIMILAR)



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

LEGEND

◒ ROUGHEN SURFACE OF EXISTING CONCRETE TO ¼"± AMPLITUDE (ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT).

☆ ADHESIVE ANCHORS NO. 5 BAR, EMBED 5" IN CONCRETE. SPACE AT 8".

▲ EXTEND S501 AND S505 INTO NEW PARAPET AT JOINT REPAIR.

NOTES

EXISTING DEFLECTION JOINT LOCATIONS SHALL BE MATCHED WITH THE PROPOSED PARAPET MODIFICATION WORK. DEFLECTION JOINTS SHALL CONSIST OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION C-C BY HATCHED AREA. IF CONSTRUCTION JOINTS ARE USED AT DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS OMITTED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY	DTH	PLANS CK'D.	KRB

SUPERSTRUCTURE PLAN

SHEET 7
66

8

8

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STATE PROJECT NUMBER

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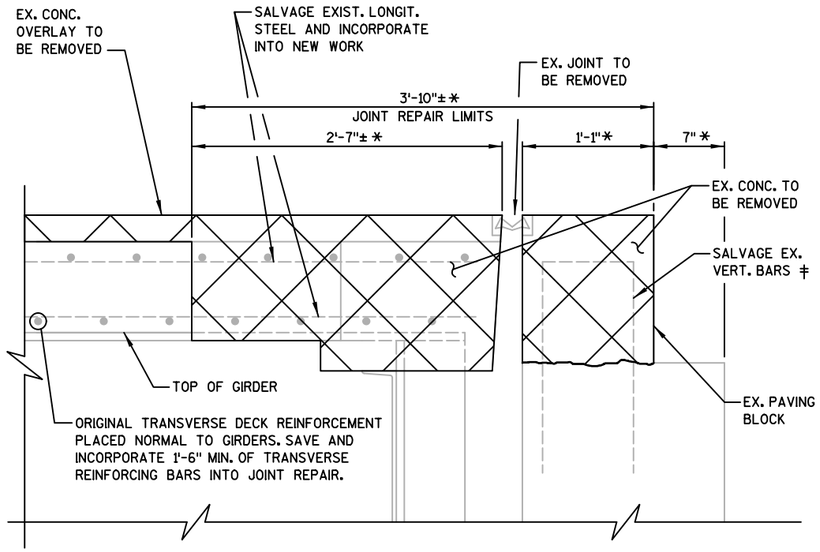
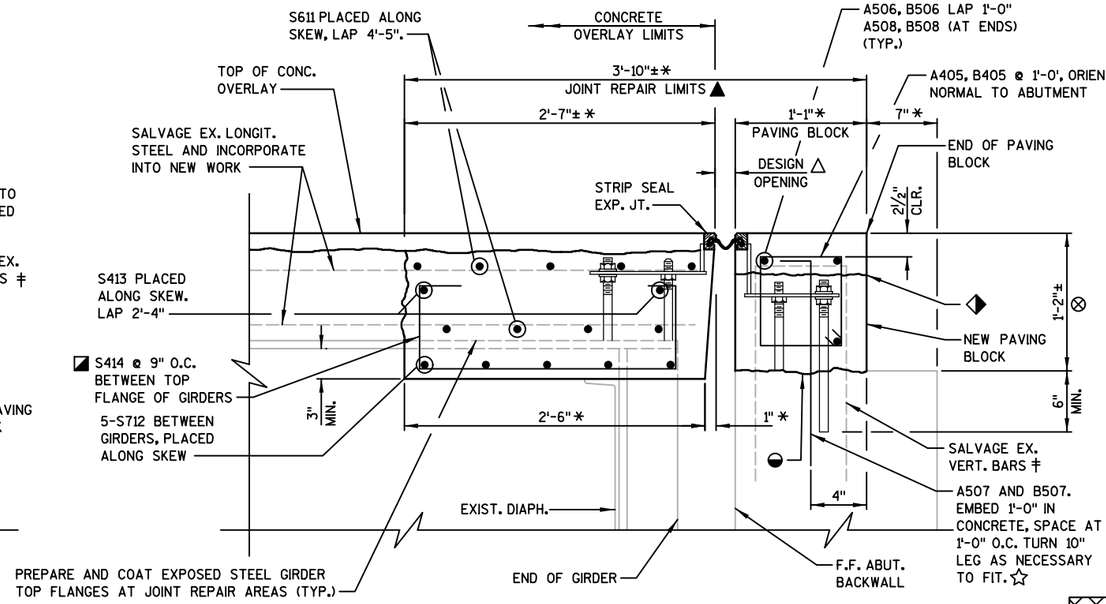


JOINT REPAIR - REMOVAL AT ABUTS.



SECTION THRU PROPOSED ABUT. JOINTS

LEGEND

△ SEE SHEET 9 FOR STRIP SEAL OPENING.

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. SALVAGE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE A507 AND B507 BARS.

☆ ADHESIVE ANCHORS NO. 5 BAR, EMBED 5" IN CONCRETE.

◆ OPT. CONST. JT. 1" MIN. BELOW EXIST. REINF.

* DIMENSIONS GIVEN ARE NORMAL TO ℄ OF SUBSTRUCTURE UNIT. INCORPORATE EXISTING REINFORCEMENT.

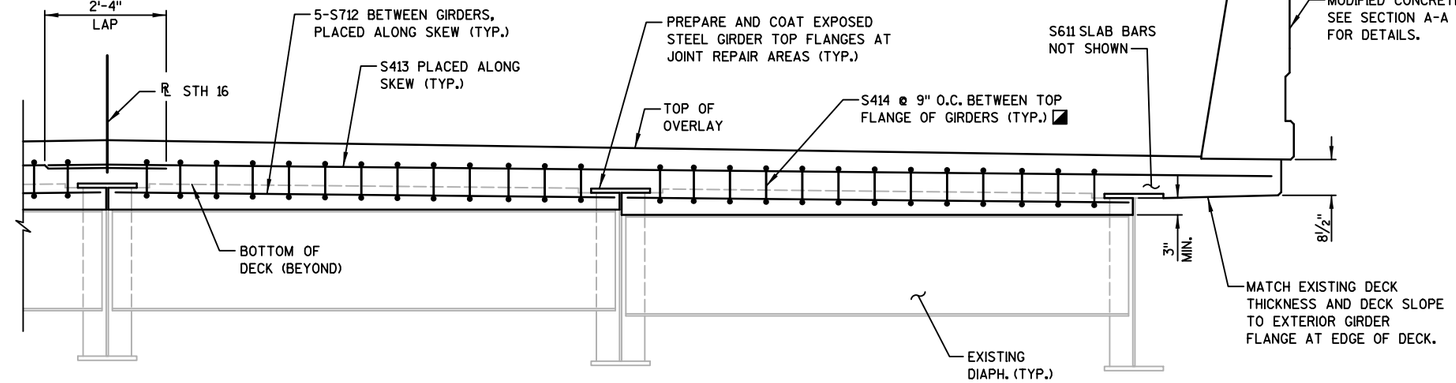
◪ BARS PLACED PARALLEL TO ℄ GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

⊗ HEIGHT OF PAVING BLOCK INDICATED ASSUMES REMOVAL OF EXIST. 2⅜" AVERAGE CONC. OVERLAY AND NEW 3¼" AVERAGE CONC. OVERLAY. ADJUST AS NECESSARY FOR FIELD CONDITIONS. POUR AFTER SUPERSTRUCTURE IS IN PLACE AND CONFORM TO SUPERSTRUCTURE DECK ELEVATIONS.

▲ VOLUME OF NEW CONCRETE USED FOR JOINT REPAIR WILL BE PAID FOR UNDER "CONCRETE MASONRY OVERLAY" BID ITEM.

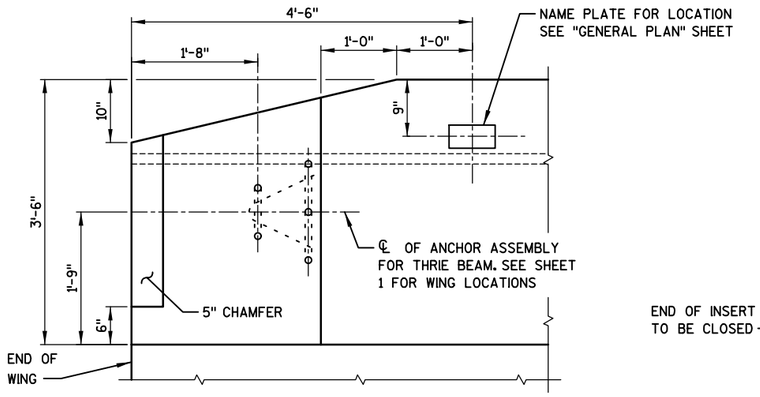
◒ ROUGHEN SURFACE OF EXISTING CONCRETE TO ±¼" AMPLITUDE.

CONCRETE REMOVAL LIMITS.



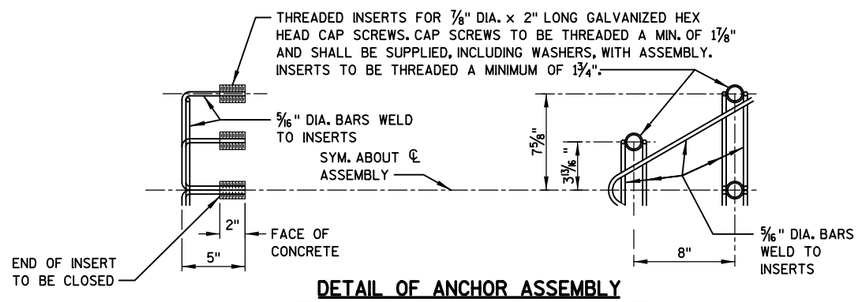
PART TRANSVERSE SECTION AT DIAPHRAGM EXPANSION END

(LOOKING WEST)



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET



DETAIL OF ANCHOR ASSEMBLY

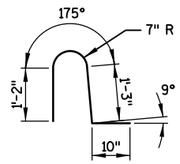
NOTE: HEX HEAD CAP SCREWS AND WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

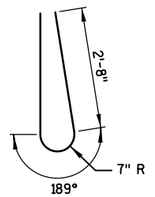
SUPERSTRUCTURE BILL OF BARS

COATED: 11,790 LBS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
S501	12	16'-3"		X	PARAPET - HORIZ.
S502	84	23'-5"		X	PARAPET - HORIZ.
S503	24	9'-9"		X	PARAPET - HORIZ.
S504	24	13'-3"		X	PARAPET - HORIZ.
S505	12	15'-3"		X	PARAPET - HORIZ.
☆ S506	728	1'-6"		X	PARAPET - VERT. - DOWEL
☆ S507	728	3'-7"	X	X	PARAPET - VERT. - DOWEL
S508	32	4'-1"		X	PARAPET - HORIZ.
S509	28	7'-4"	X	X	PARAPET - VERT.
S510	28	5'-1"	X	X	PARAPET - VERT.
S611	36	42'-0"	X	X	SLAB - TRANS. - JOINT REPAIR
S712	40	17'-0"		X	SLAB - TRANS. - BTWN GIRDERS
S413	8	41'-0"		X	SLAB - TRANS. - BTWN GIRDERS
S414	104	5'-4"	X	X	SLAB - VERT. - BTWN GIRDERS
S415	16	15'-2"		X	SLAB - TRANS. - STRIP SEAL



S510



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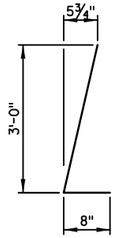
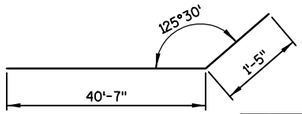


S507



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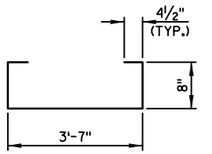

S414

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

JOINT REPAIR DETAILS

SHEET 8
67

8

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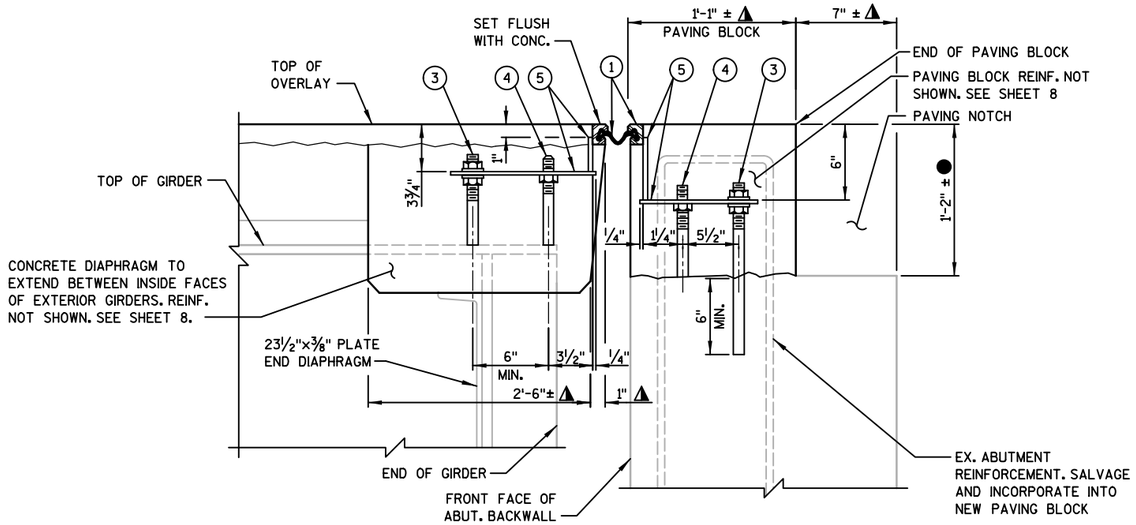
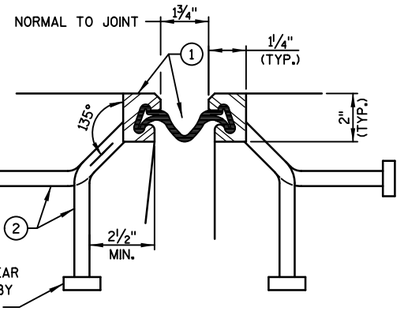
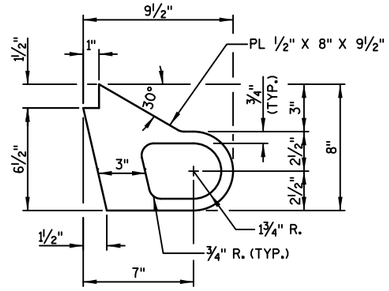


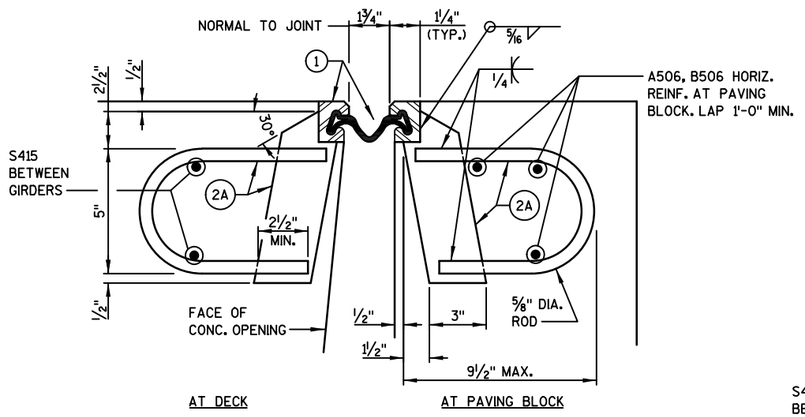
SECTION THRU JOINT AT ABUTMENT
NORMAL TO ℄ SUBSTRUCTURE



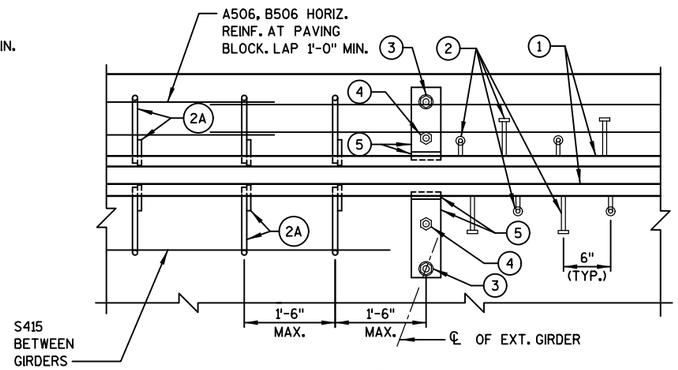
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

STATE PROJECT NUMBER

1400-00-89

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF FIELD SPLICE. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

LEGEND

(1) NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

● TOP ELEVATION OF PAVING BLOCK SHALL CONFORM WITH SUPERSTRUCTURE. POUR PAVING BLOCK AFTER SUPERSTRUCTURE IS IN PLACE.

⚠ DIMENSIONS ARE GIVEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

STRIP SEAL EXPANSION JOINT

SHEET 9
68

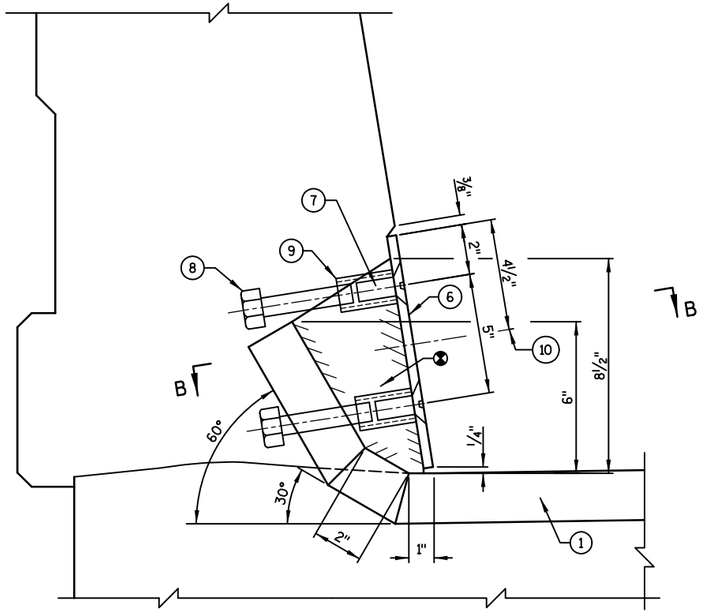
8

8

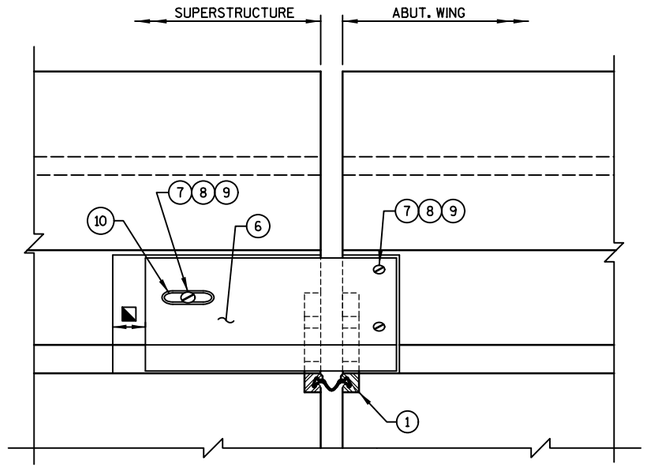
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080109_ej.dgn

STATE PROJECT NUMBER

1400-00-89



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY

NOTES

SEE NOTES ON SHEET 9.

LEGEND

(1) NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.

(2) STUDS 5/8" DIA. X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) 1/2" THICK ANCHOR PLATE WITH 5/8" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) 3/4" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) 3/4" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(6) GALVANIZED PLATE 3/8" X 10" X 3'-0" LONG WITH HOLES FOR NO. 7.

(7) 3/4" DIA. X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

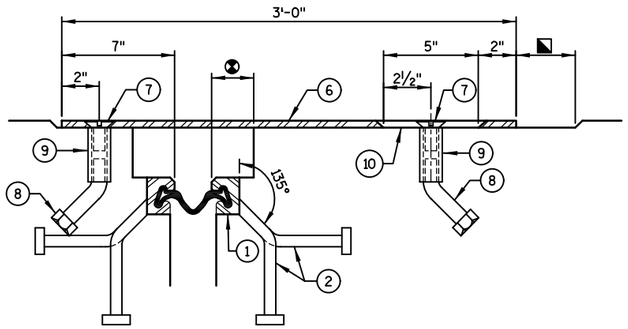
(8) 3/4" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) 3/4" DIA. X 2 1/4" GALVANIZED THREADED COUPLING.

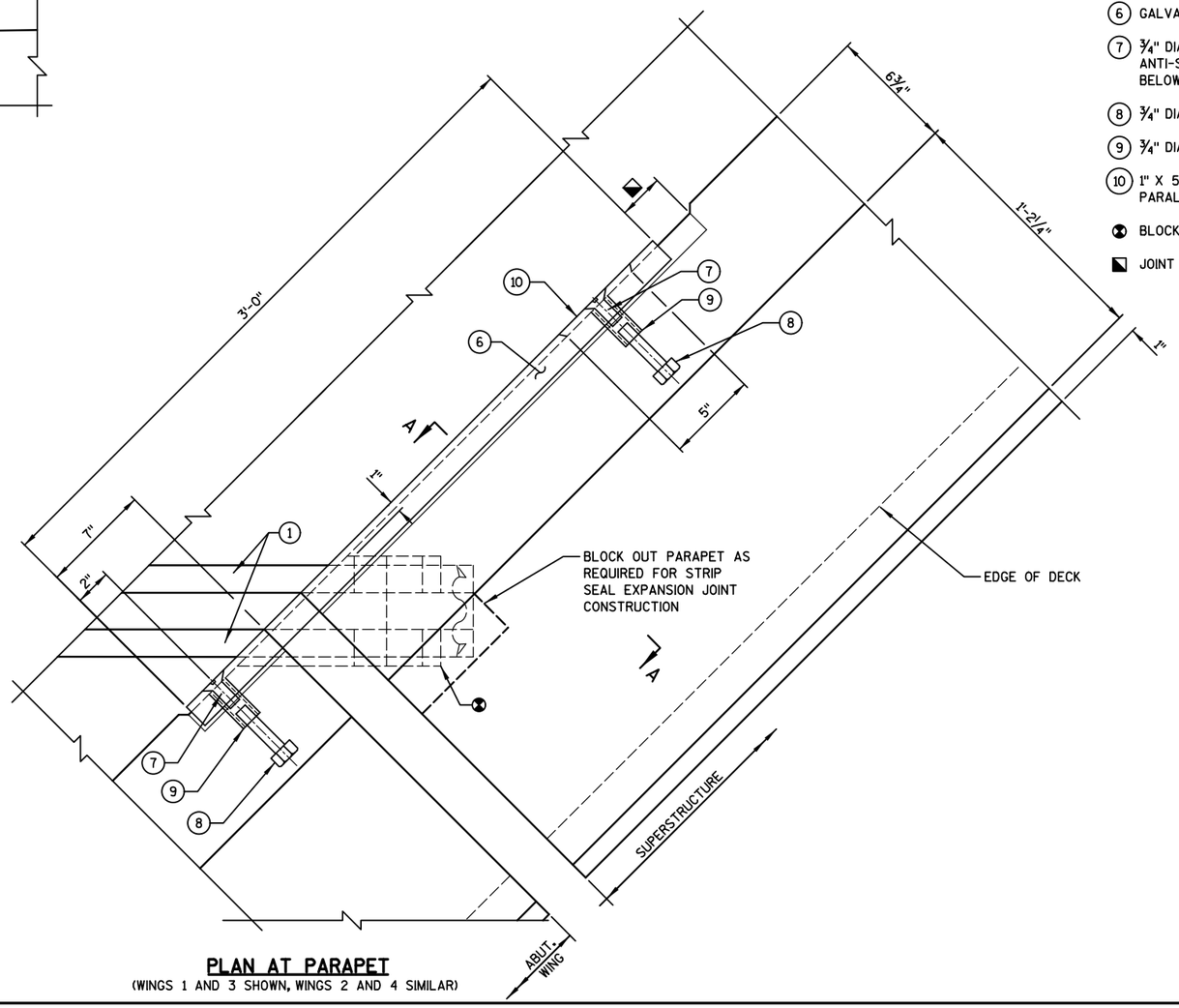
(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◥ JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".



SECTION B-B



PLAN AT PARAPET
(WINGS 1 AND 3 SHOWN, WINGS 2 AND 4 SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

COVER PLATE DETAILS

SHEET 10
69

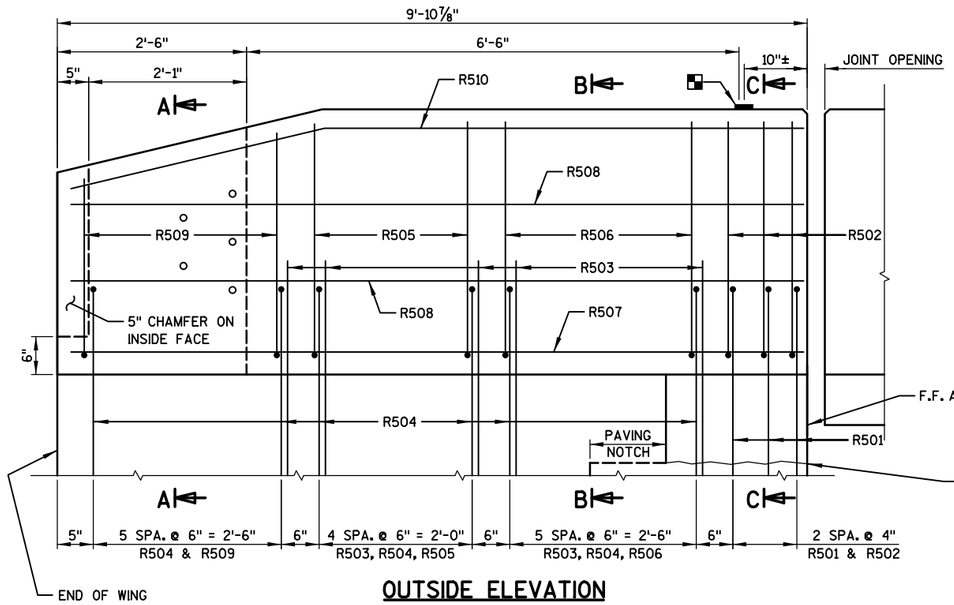
8

8

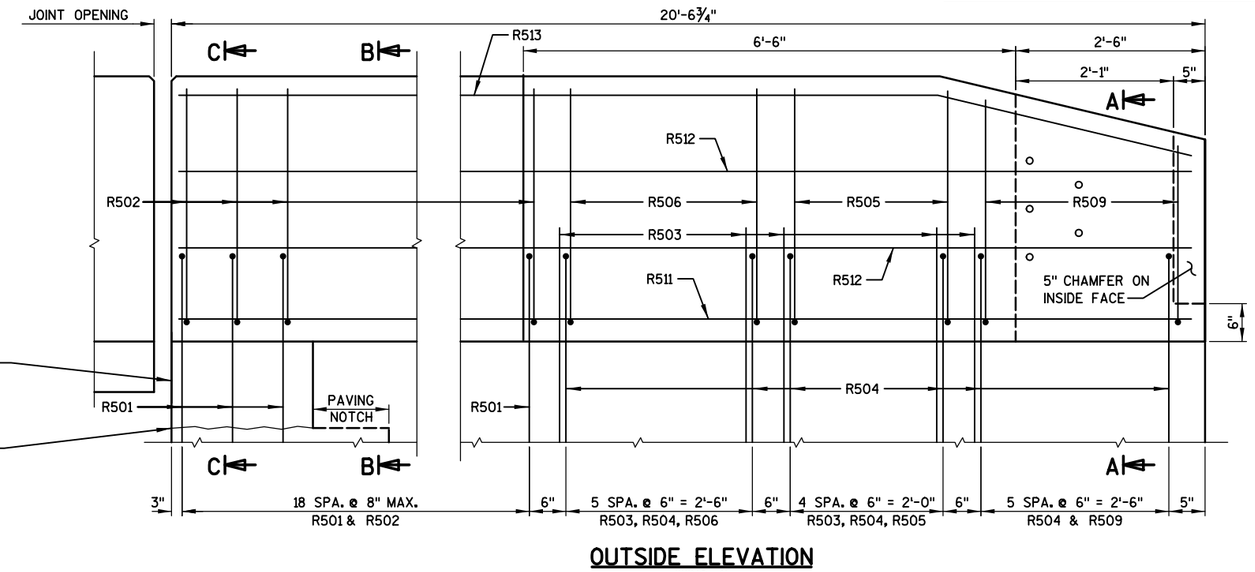
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080110_cp.dgn

STATE PROJECT NUMBER

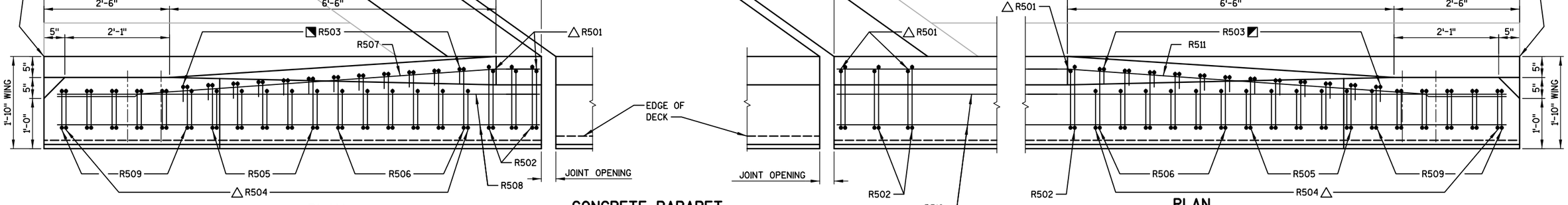
1400-00-89



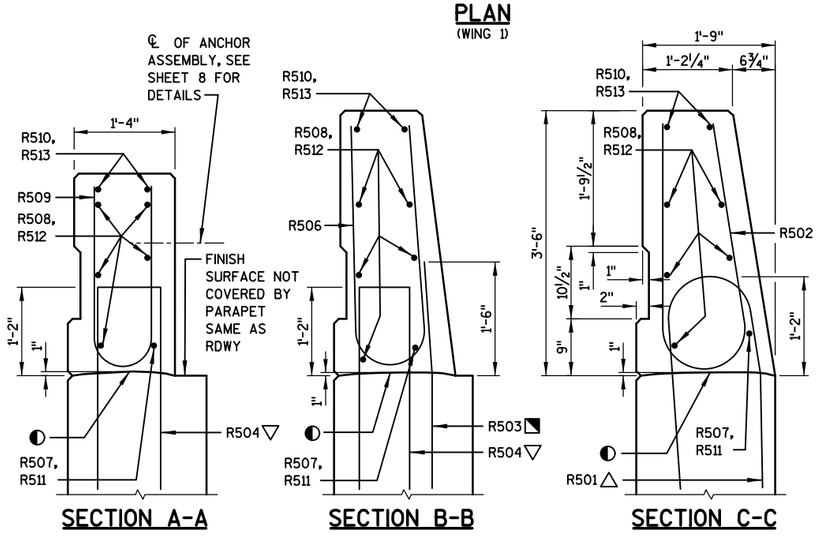
OUTSIDE ELEVATION
(WING 1)



OUTSIDE ELEVATION
(WING 4)



PLAN
(WING 1)



CONCRETE PARAPET BILL OF BARS

COATED: 1,080 LBS

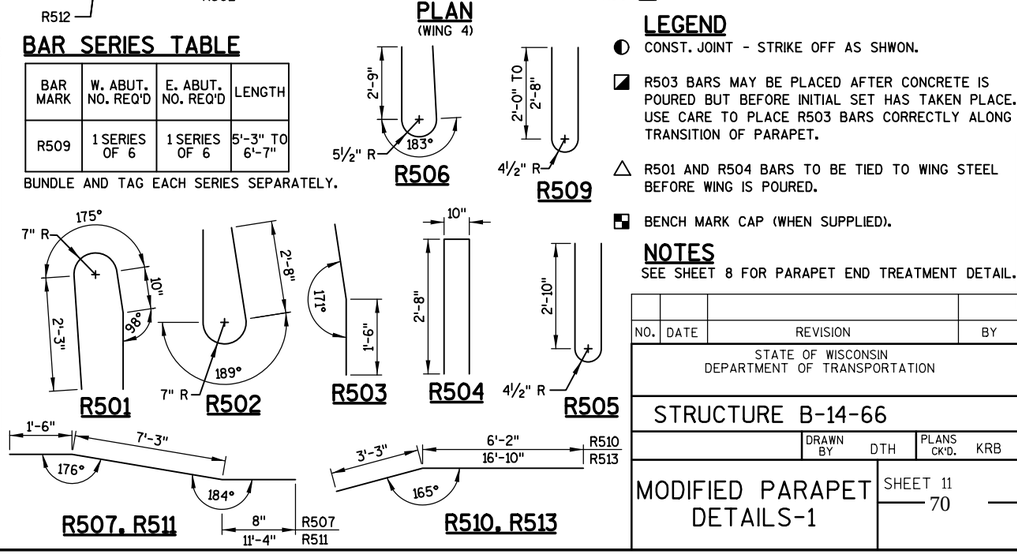
BAR MARK	W. ABUT.	E. ABUT.	LENGTH	BENT	COAT	LOCATION
R501	3	19	6'-6"	X	X	PARAPET - VERT.
R502	3	19	7'-4"	X	X	PARAPET - VERT.
R503	12	12	3'-0"	X	X	PARAPET - VERT.
R504	17	17	5'-11"	X	X	PARAPET - VERT.
R505	5	5	6'-11"	X	X	PARAPET - VERT.
R506	6	6	7'-0"	X	X	PARAPET - VERT.
R507	1	0	9'-5"	X	X	PARAPET - HORIZ.
R508	5	0	9'-5"		X	PARAPET - HORIZ.
▲ R509	6	6	5'-11"	X	X	PARAPET - VERT.
R510	2	0	9'-5"	X	X	PARAPET - HORIZ.
R511	0	1	20'-1"	X	X	PARAPET - HORIZ.
R512	0	5	20'-1"		X	PARAPET - HORIZ.
R513	0	2	20'-1"	X	X	PARAPET - HORIZ.

▲ BAR SERIES. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	W. ABUT. NO. REQ'D	E. ABUT. NO. REQ'D	LENGTH
R509	1 SERIES OF 6	1 SERIES OF 6	5'-3" TO 6'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN
(WING 4)

LEGEND

- ◐ CONST. JOINT - STRIKE OFF AS SHWON.
- ◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- △ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.
- ◩ BENCH MARK CAP (WHEN SUPPLIED).

NOTES

SEE SHEET 8 FOR PARAPET END TREATMENT DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

MODIFIED PARAPET DETAILS-1

SHEET 11
70

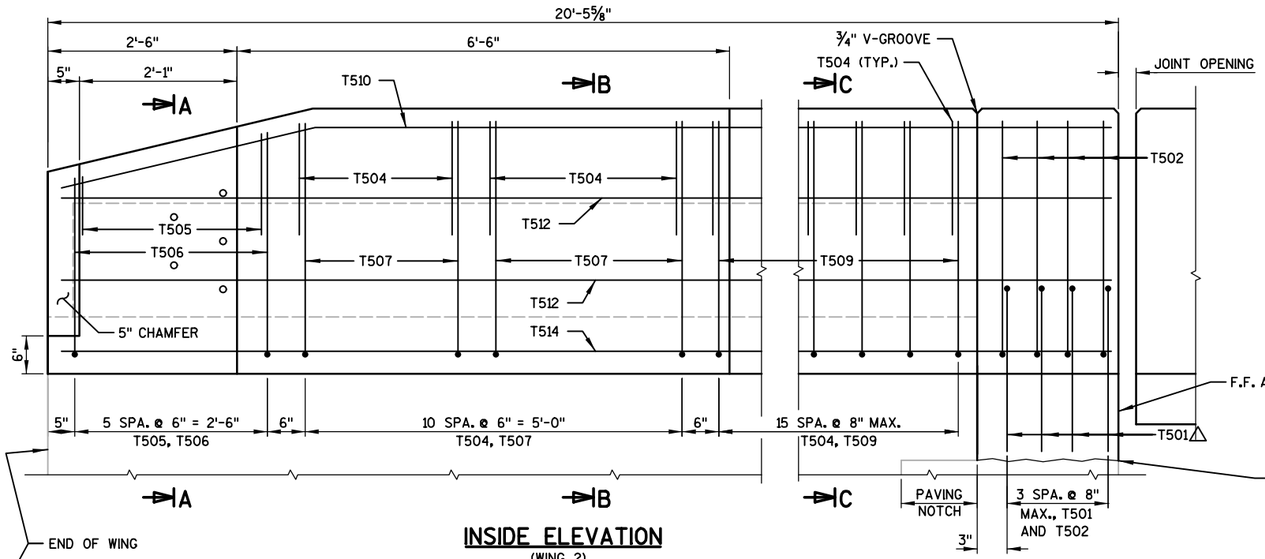
8

8

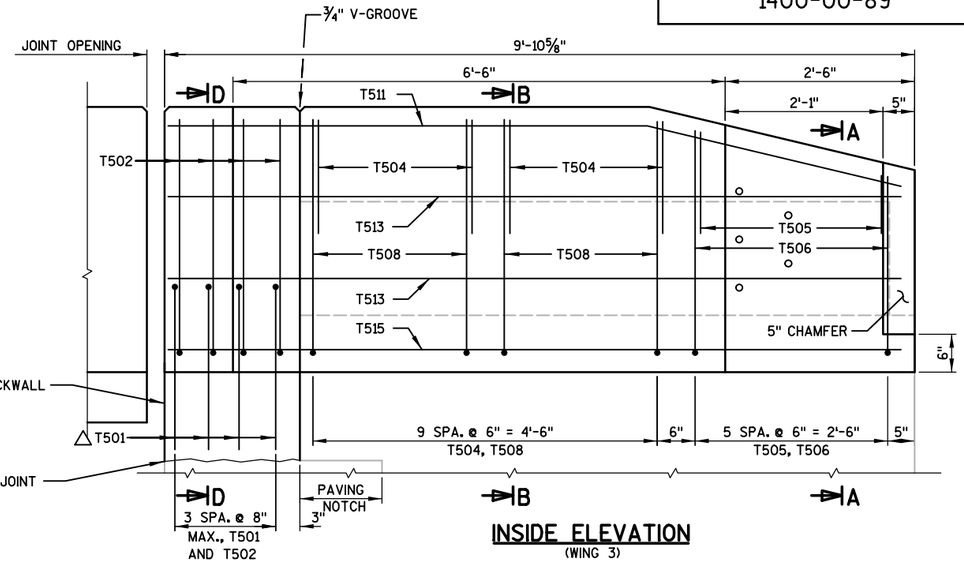
FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080111_mp.dgn

STATE PROJECT NUMBER

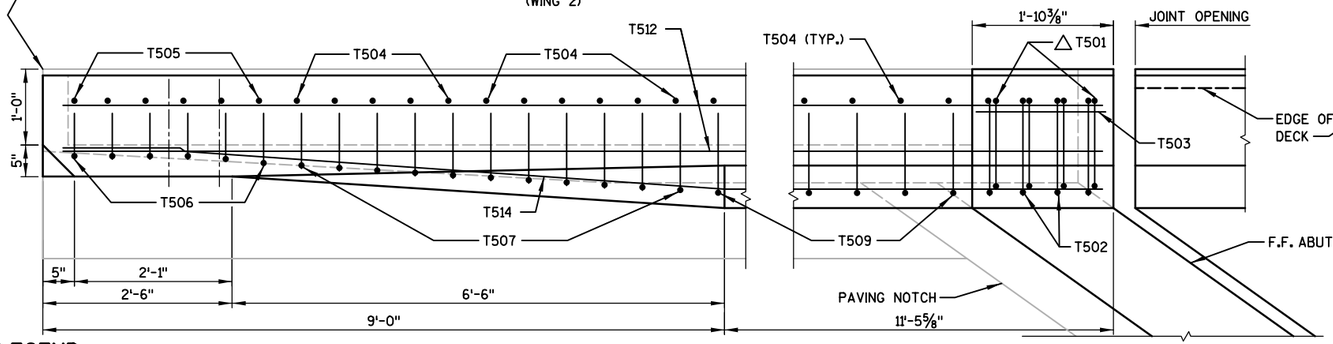
1400-00-89

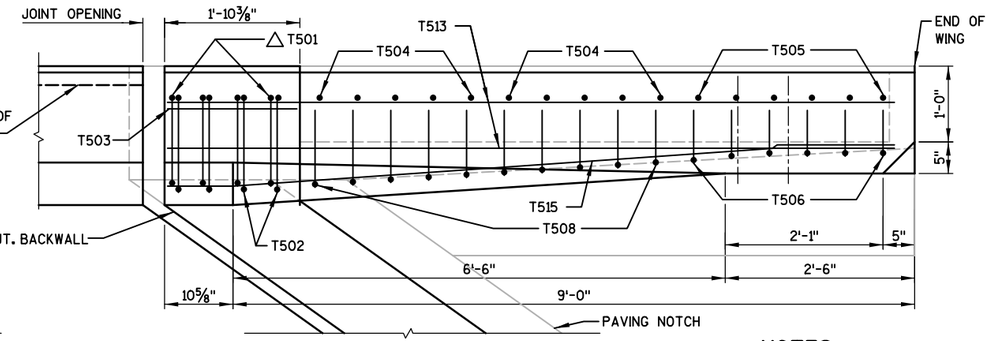


INSIDE ELEVATION
(WING 2)



INSIDE ELEVATION
(WING 3)

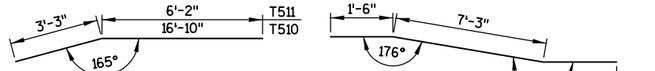




LEGEND

- ◐ CONST. JOINT - STRIKE OFF AS SHOWN.
- △ T501 BARS TO BE TIED TO PAVING NOTCH STEEL BEFORE PAVING NOTCH IS POURED.
- ☆ ADHESIVE ANCHOR NO. 5 BAR, EMBED 5" INTO EXIST. CONC.
- ■ REMOVE EXISTING CURB AS NECESSARY TO MAINTAIN 4" MIN.

PLAN
(WING 2)



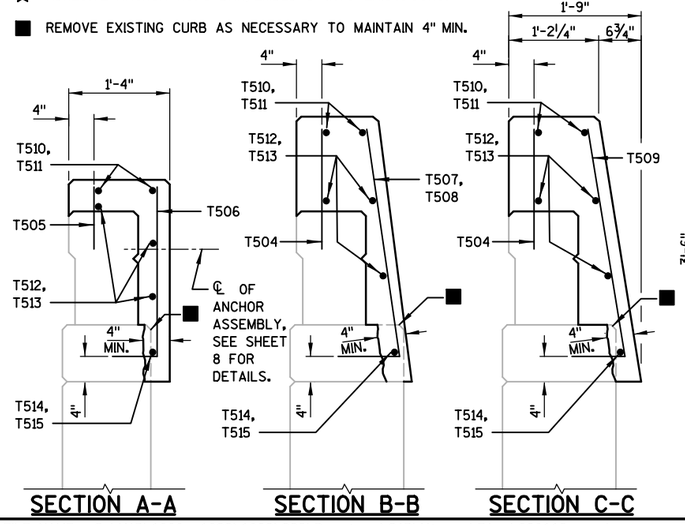
T510, T511

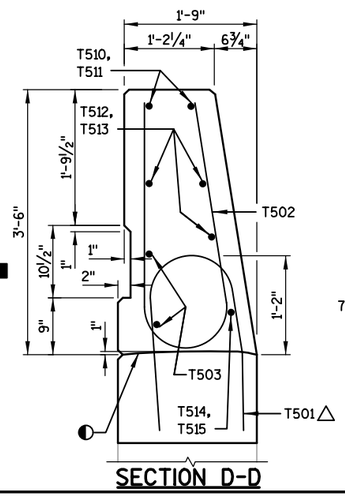
T514, T515

PLAN
(WING 3)

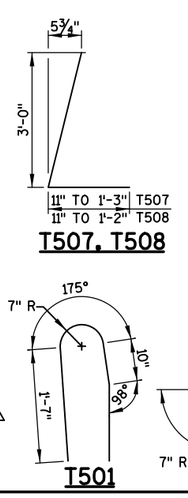
NOTES

SEE SHEET 8 FOR PARAPET END TREATMENT DETAIL.

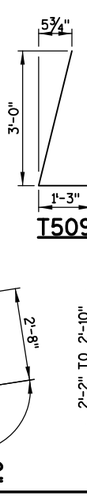




SECTION D-D

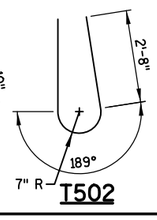


T507, T508

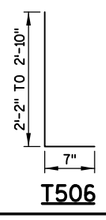


T509

T501



T502



T506

CONCRETE PARAPET BILL OF BARS

COATED: 560 LBS

	BAR MARK	W. ABUT.	E. ABUT.	LENGTH	BENT	COAT	LOCATION
	T501	4	4	5'-2"	X	X	PARAPET - VERT.
	T502	4	4	7'-4"	X	X	PARAPET - VERT.
	T503	2	2	1'-6"		X	PARAPET - HORIZ.
☆	T504	27	10	1'-6"		X	PARAPET - VERT.
☆ △	T505	6	6	1'-1"		X	PARAPET - VERT.
☆ △	T506	6	6	3'-0"	X	X	PARAPET - VERT.
☆ △	T507	11	0	4'-0"	X	X	PARAPET - VERT.
☆ △	T508	0	10	4'-0"	X	X	PARAPET - VERT.
☆	T509	16	0	4'-2"	X	X	PARAPET - VERT.
	T510	2	0	20'-1"	X	X	PARAPET - HORIZ.
	T511	0	2	9'-5"	X	X	PARAPET - HORIZ.
	T512	3	0	20'-1"		X	PARAPET - HORIZ.
	T513	0	3	9'-5"		X	PARAPET - HORIZ.
	T514	1	0	20'-1"	X	X	PARAPET - HORIZ.
	T515	0	1	9'-5"	X	X	PARAPET - HORIZ.

△ BAR SERIES. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	W. ABUT. NO. REQ'D	E. ABUT. NO. REQ'D	LENGTH
T505	1 SERIES OF 6	1 SERIES OF 6	9" TO 1'-4"
T506	1 SERIES OF 6	1 SERIES OF 6	2'-8" TO 3'-4"
T507	1 SERIES OF 11	---	3'-10" TO 4'-2"
T508	---	1 SERIES OF 10	3'-10" TO 4'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-66

DRAWN BY DTH | PLANS CK'D. KRB

MODIFIED PARAPET DETAILS-2

SHEET 12
71

8

8

FILE NAME : S:\MAD\1000--1099\1089\922\Drawings\CAD\Micros\Plan\080112_mp.dgn

EARTHWORK SUMMARY

STH 16		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	EXCAVATION COMMON NOTE 1	UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EXCAVATION COMMON NOTE 1	UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EXCAVATION COMMON 1.00 NOTE 1	EXPANDED FILL 1.25
23+00.00	---	3.7	0.0	25.2					
23+12.71	12.71	18.0	0.0	24.4	5.1	0.0	11.7	5.1	14.6
23+37.71	25.00	10.8	0.0	42.0	13.3	0.0	30.7	18.4	53.0
23+41.36	3.65	11.2	0.0	46.4	1.5	0.0	6.0	19.9	60.5
23+62.71	21.35	11.9	0.0	25.9	9.1	0.0	28.6	29.0	96.2
23+66.36	3.65	11.8	0.0	24.1	1.6	0.0	3.4	30.7	100.4
23+91.36	25.00	10.8	0.0	32.4	10.5	0.0	26.1	41.1	133.1
24+00.00	8.64	10.2	0.0	37.4	3.3	0.0	11.2	44.5	147.1
25+00.00	100.00	11.2	0.0	52.0	39.5	0.0	165.7	84.0	354.2
26+00.00	100.00	13.4	0.0	91.8	45.4	0.0	266.4	129.4	687.1
27+00.00	100.00	13.5	0.0	40.6	49.7	0.0	245.1	179.2	993.5
27+63.22	63.22	10.8	0.0	128.6	28.5	0.0	198.0	207.7	1241.1
28+00.00	36.78	17.9	0.0	74.6	19.6	0.0	138.4	227.3	1414.1
28+72.08	72.08	13.7	0.0	1.7	42.2	0.0	101.8	269.5	1541.4
28+94.70	27.92	11.6	0.0	7.8	13.1	0.0	4.9	282.6	1547.5
B-14-066	---								
31+46.20	---	13.0	0.0	192.2					
32+00.00	31.23	14.2	0.0	20.6	15.7	0.0	123.1	15.7	153.8
33+00.00	100.00	13.9	0.0	128.1	52.0	0.0	275.4	67.7	498.1
33+02.72	2.72	14.9	0.0	4.4	1.4	0.0	6.7	69.2	506.4
33+24.61	21.89	13.7	0.0	0.7	11.6	0.0	2.1	80.8	509.0
33+49.61	25.00	22.8	0.0	0.3	16.9	0.0	0.5	97.7	509.5
33+65.71	16.10	18.7	0.0	1.5	12.4	0.0	0.5	110.1	510.2
33+74.61	8.90	18.6	0.0	3.1	6.1	0.0	0.8	116.2	511.1
33+90.71	16.10	23.5	0.0	3.8	12.5	0.0	2.1	128.7	513.7
34+00.00	9.29	23.3	0.0	5.4	8.1	0.0	1.6	136.8	515.7
34+15.71	15.71	23.3	0.0	7.2	13.6	0.0	3.6	150.4	520.3
35+00.00	84.29	15.6	0.0	2.1	60.8	0.0	14.5	211.1	538.4
35+70.70	70.70	15.6	0.0	2.1	40.9	0.0	5.6	252.0	545.5

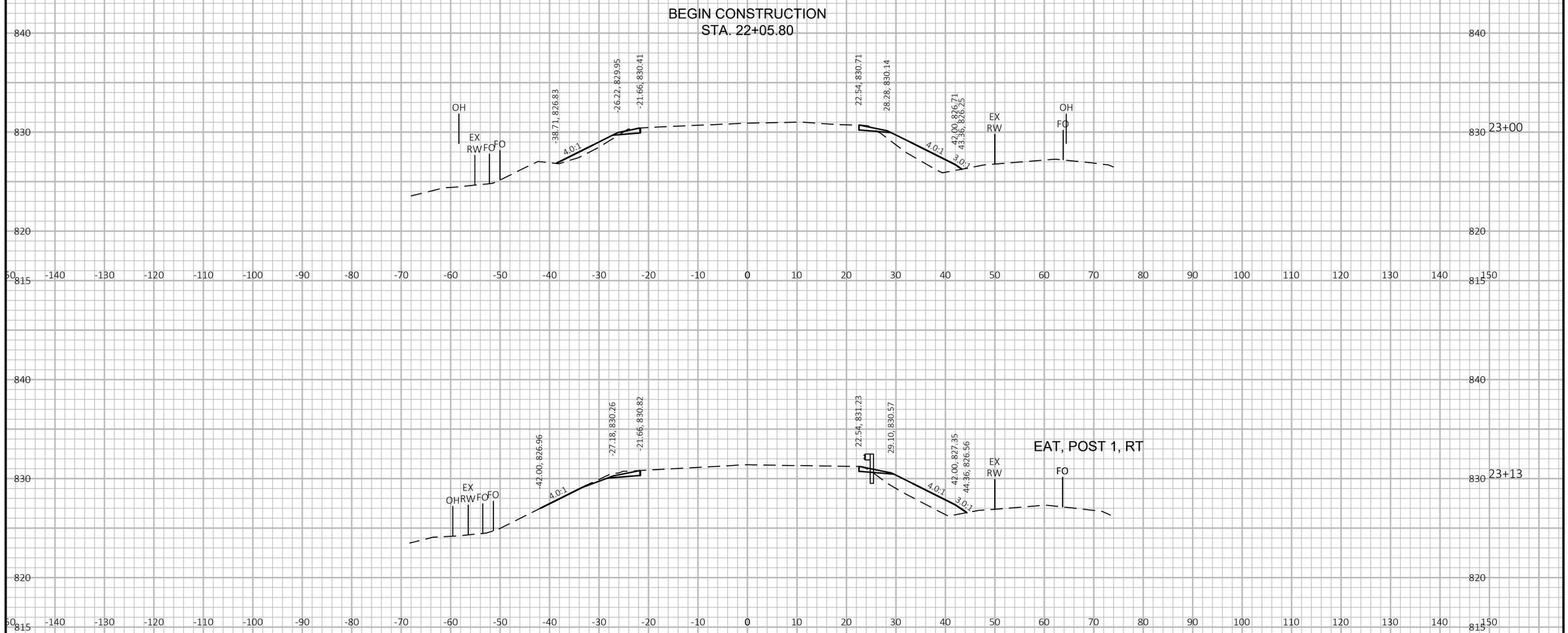
NOTES:

1) CUT: CUT INCLUDES EBS AND SALVAGED PAVEMENT MATERIAL. EBS = 5% OF CUT
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
3) FILL: FILL DOES NOT INCLUDE SALAVGED/UNUSABLE PAVEMENT MATERIAL
4) STRUCTURE B-14-066 TO REMAIN, LOCATED STA 28+94.70 - STA 31+46.20

9

9

BEGIN CONSTRUCTION
STA. 22+05.80



10 FT
20 FT

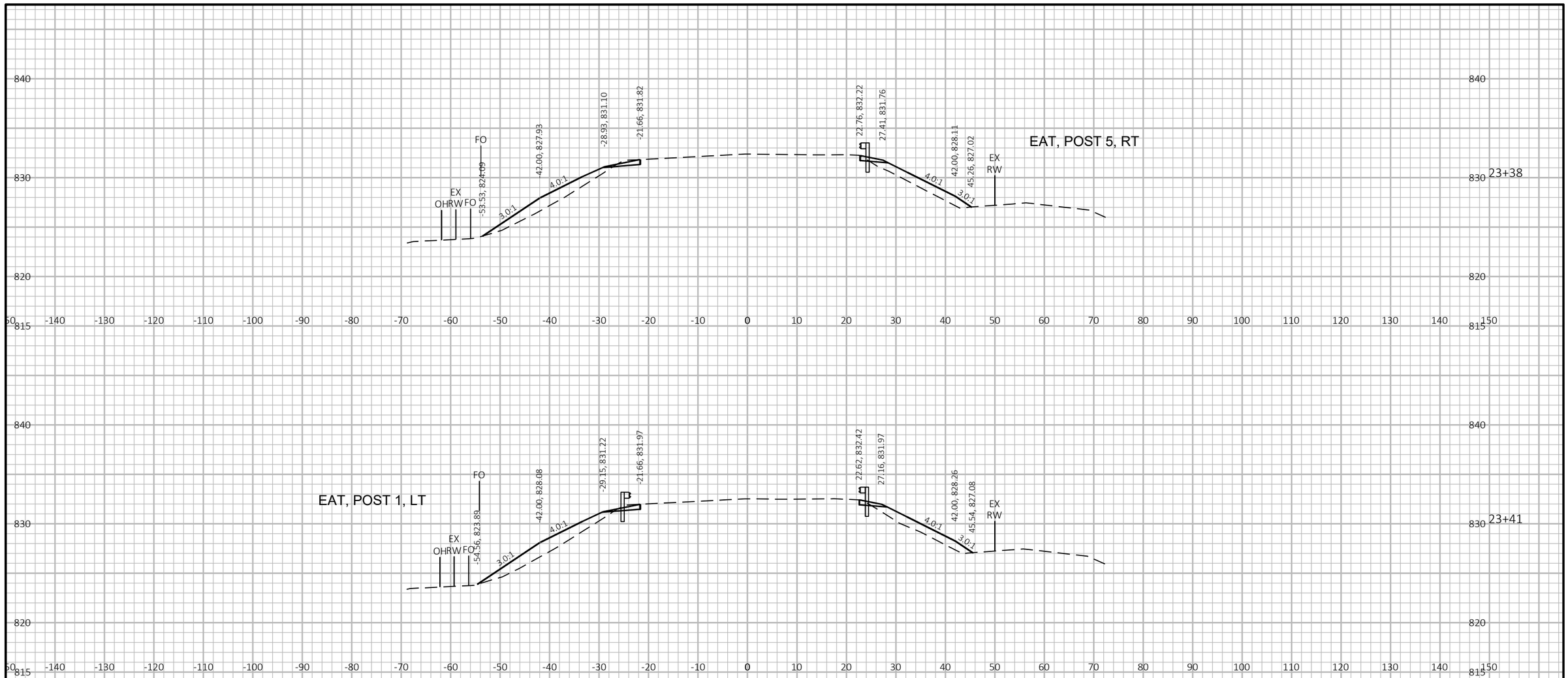
9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 73	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90201_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

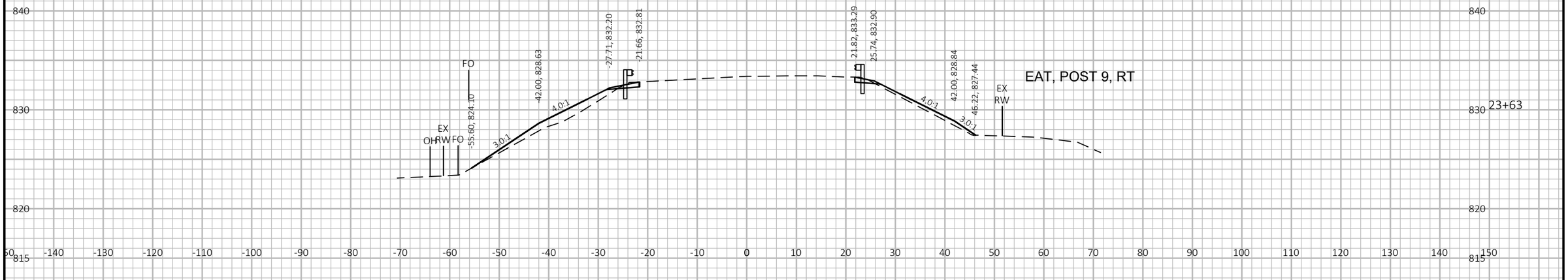
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 74	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90202_xs

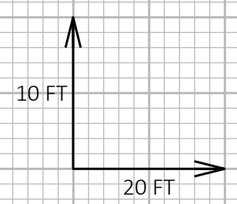
PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EAT, POST 9, RT



EAT, POST 5, LT



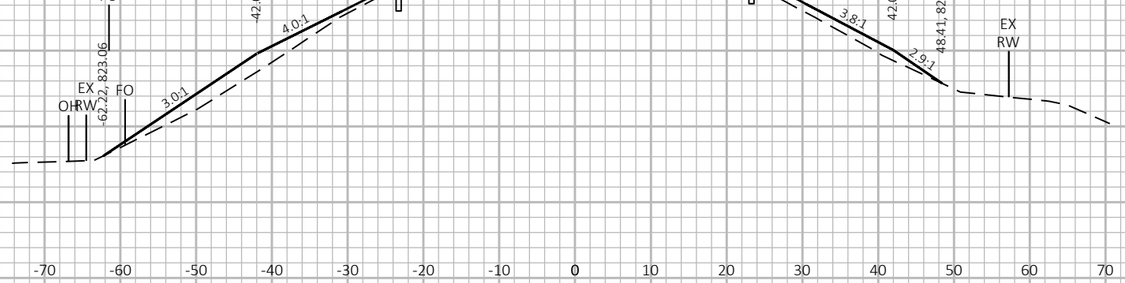
9

9

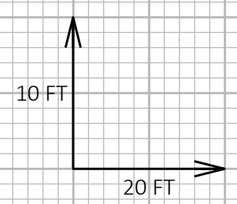
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 75	E

EAT, POST 9, LT

23+91



24+00



9

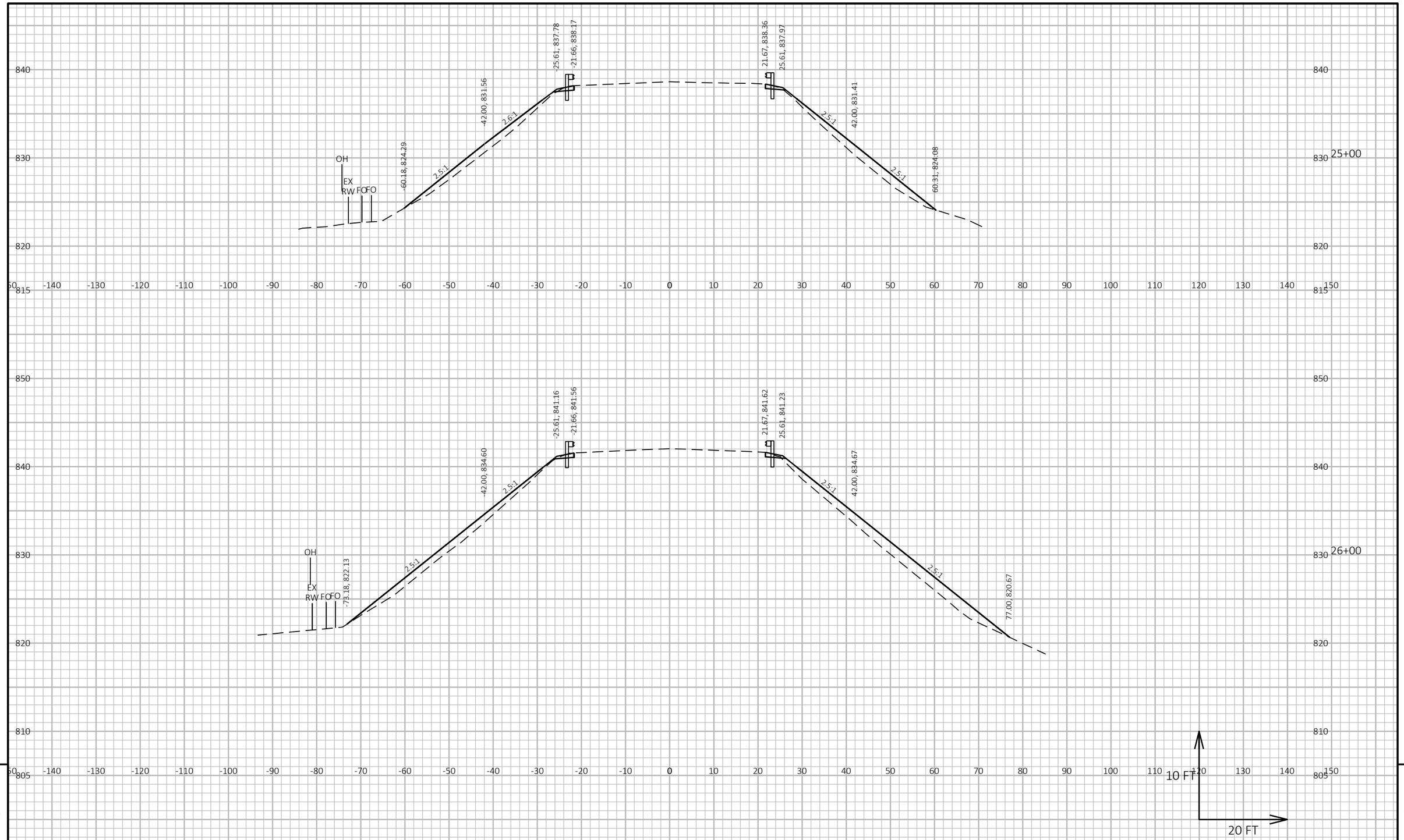
9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 76	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90204_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

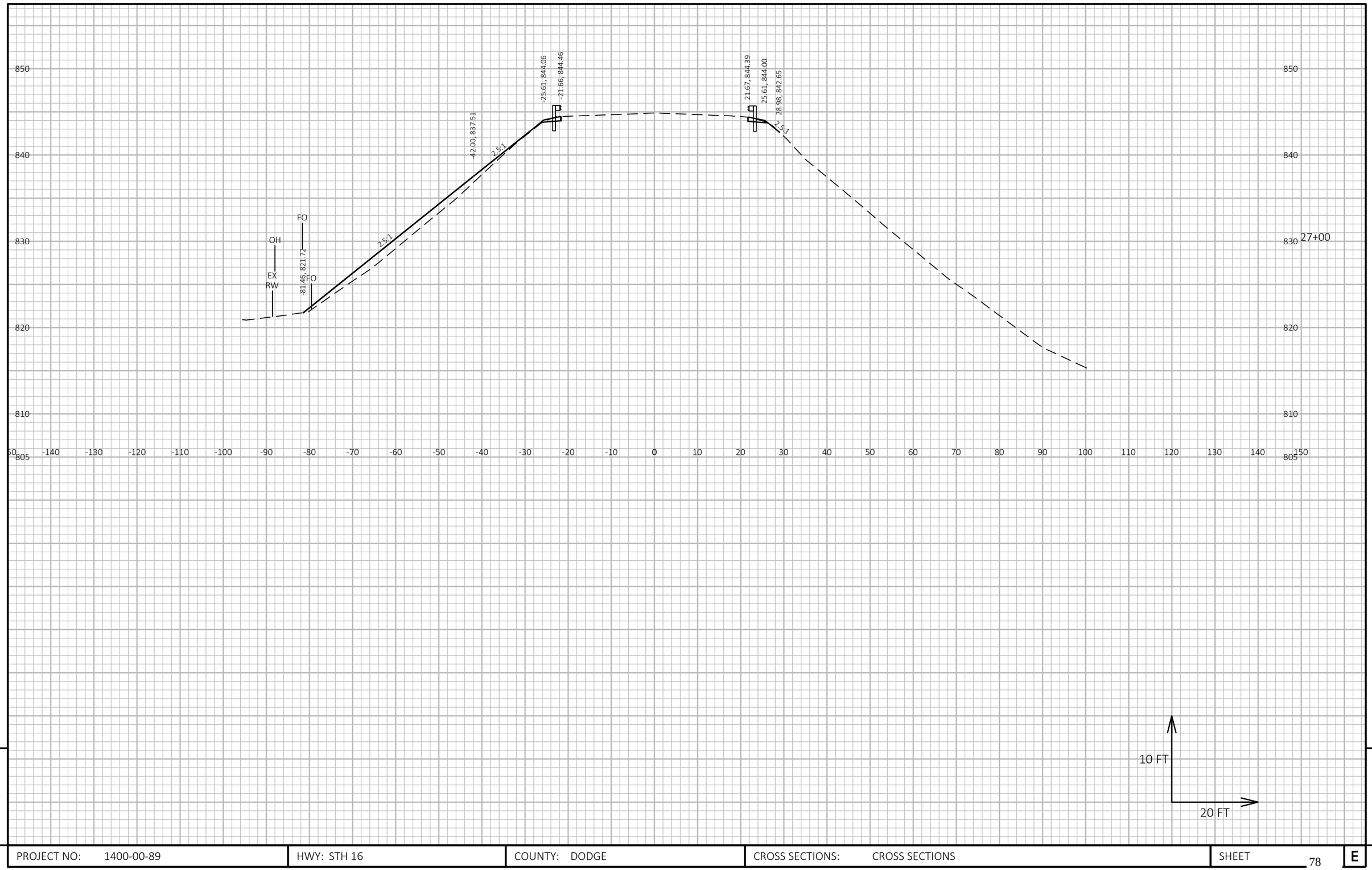
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 77	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90205_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 78	E

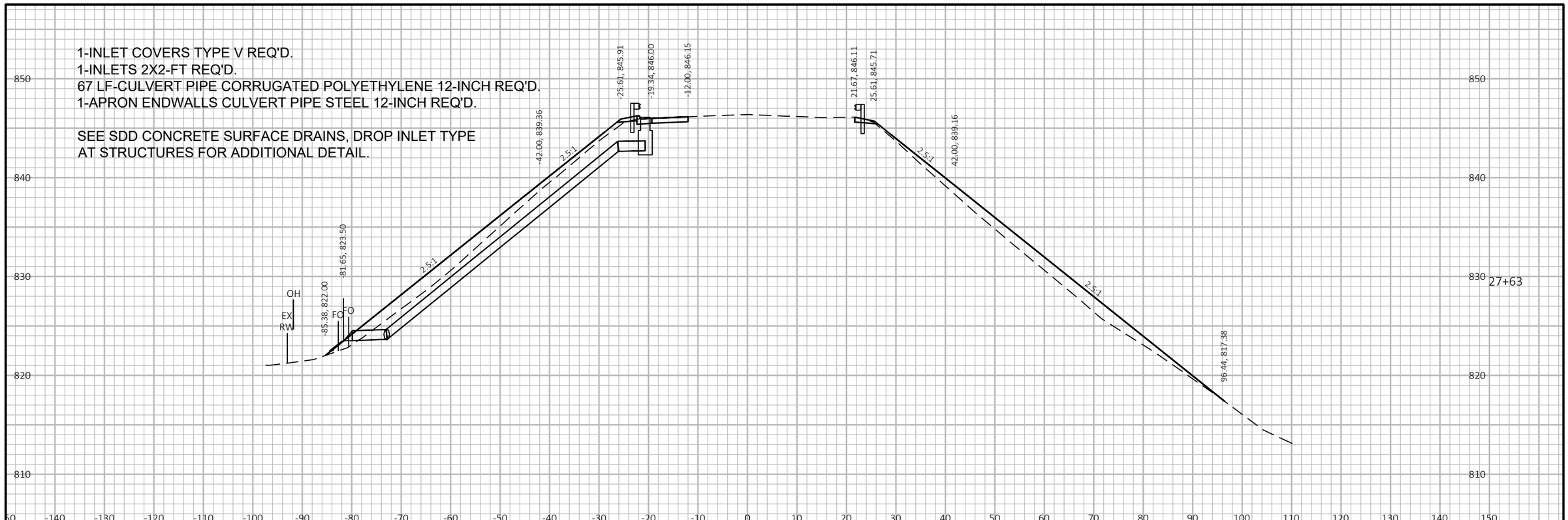
FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90206_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1-INLET COVERS TYPE V REQ'D.
1-INLETS 2X2-FT REQ'D.
67 LF-CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.

SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE
AT STRUCTURES FOR ADDITIONAL DETAIL.

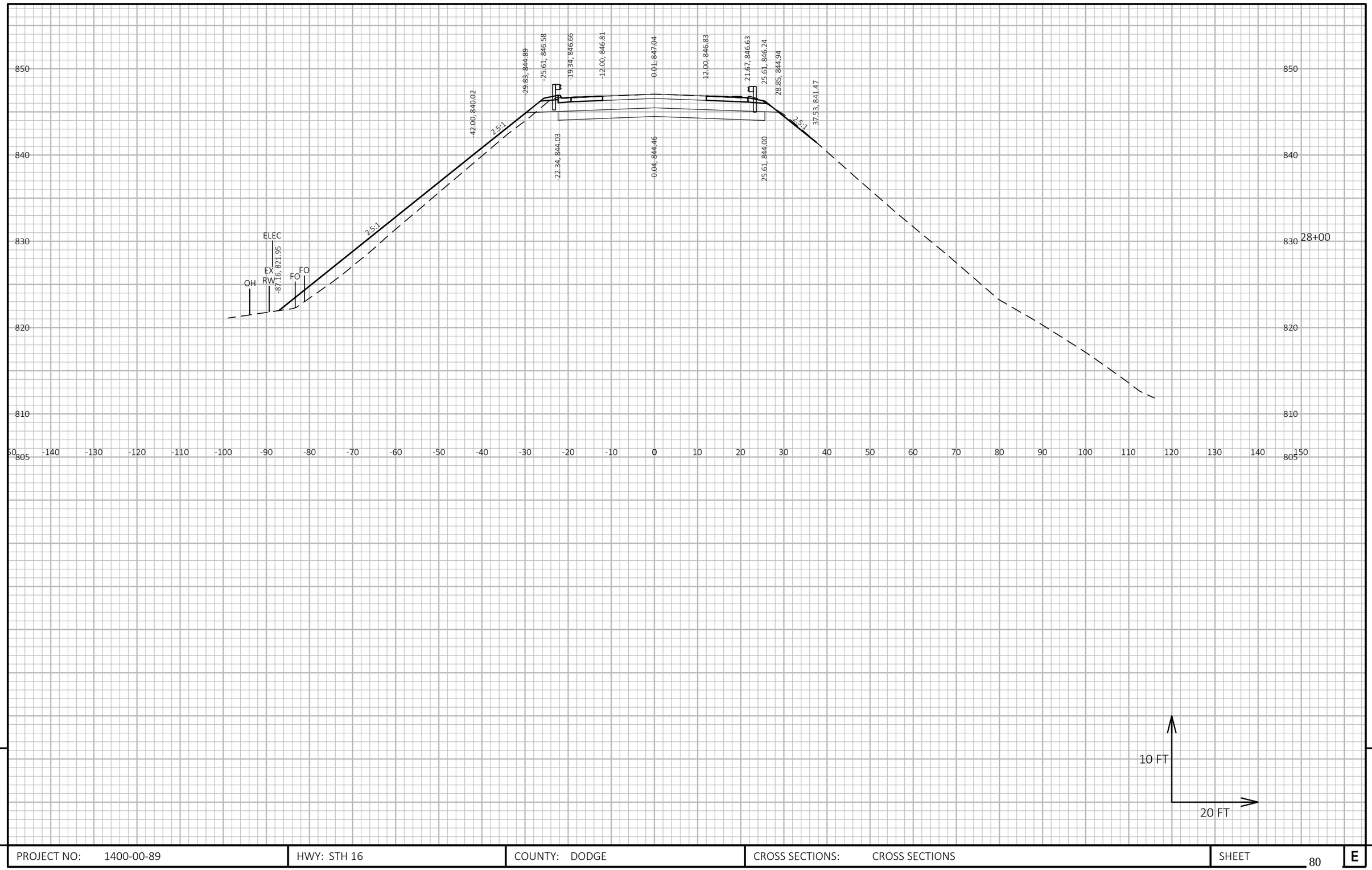


BEGIN PROJECT
STA. 27+77.33

9 9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 79	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90207_xs
PLOT DATE : 3/17/2022 9:00 AM
PLOT BY : MEYER, TERA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

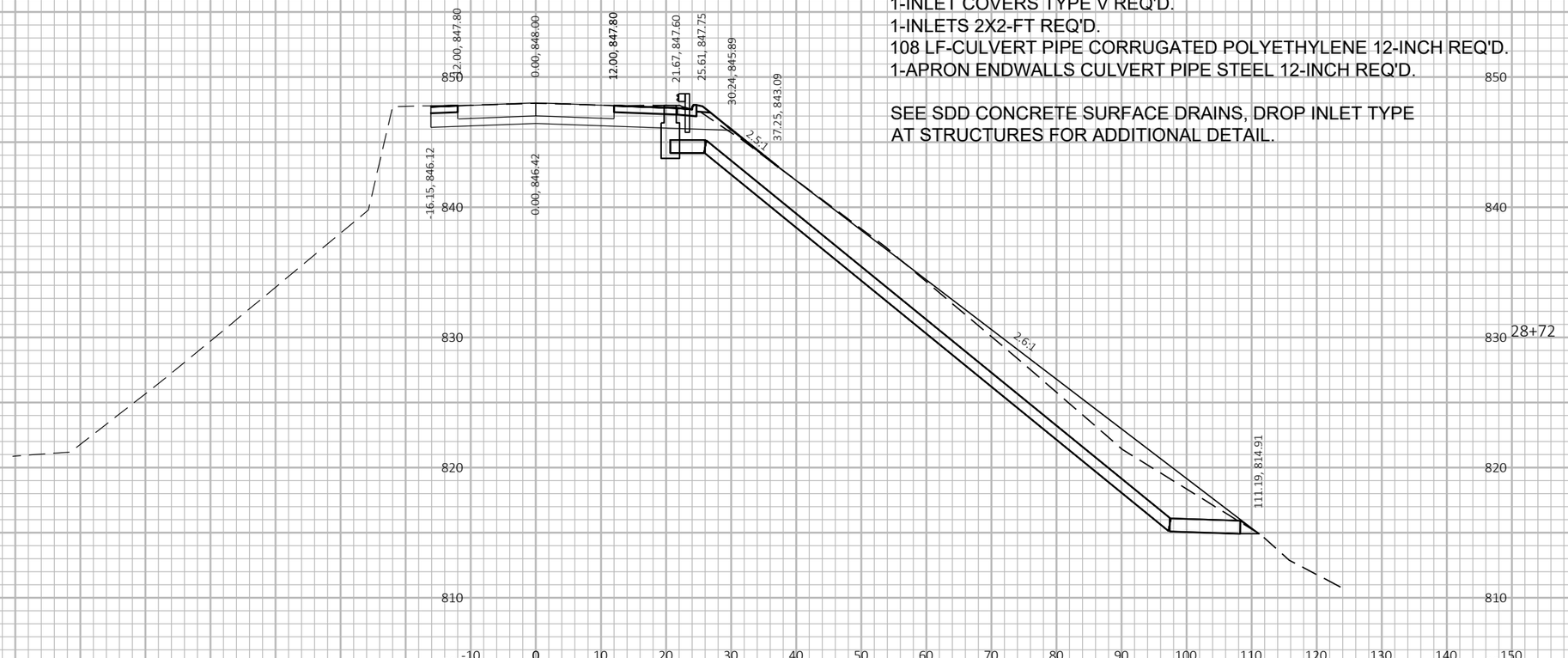
PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 80	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90208_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

1-INLET COVERS TYPE V REQ'D.
1-INLETS 2X2-FT REQ'D.
108 LF-CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.

SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE
AT STRUCTURES FOR ADDITIONAL DETAIL.

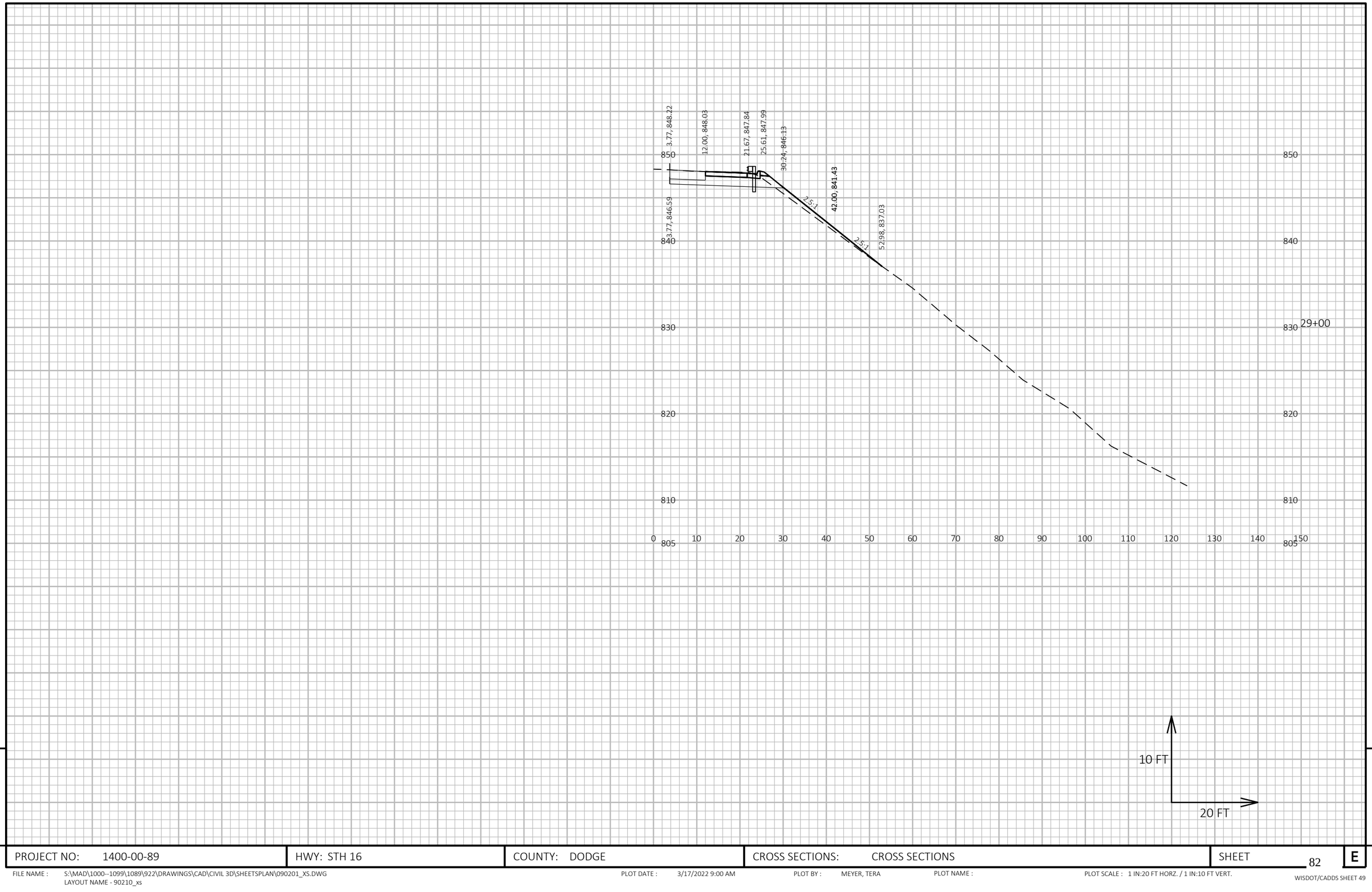


10 FT
20 FT

9 9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 81	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90209_xs
PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 82	E

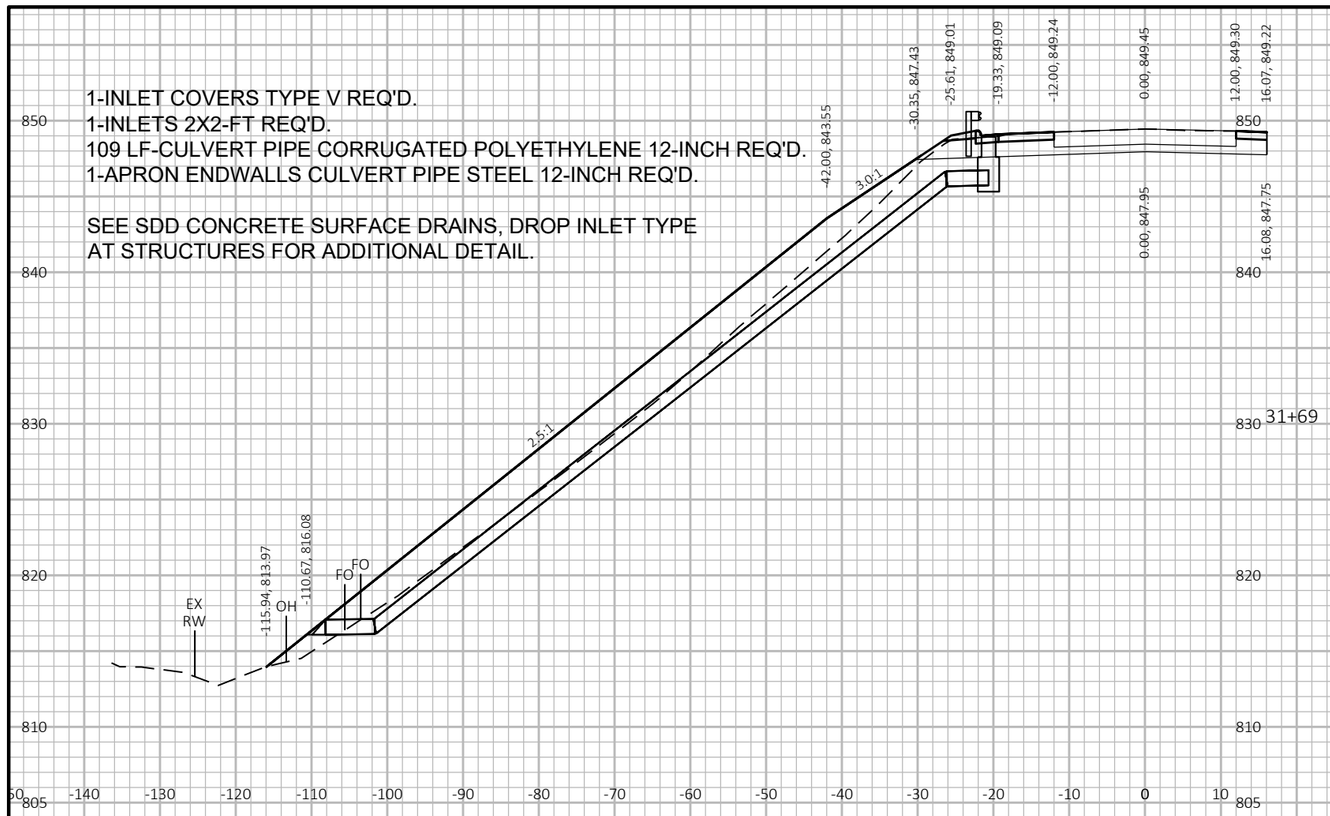
FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90210_xs

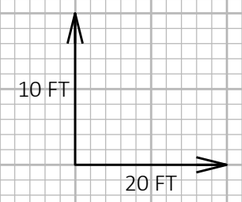
PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1-INLET COVERS TYPE V REQ'D.
1-INLETS 2X2-FT REQ'D.
109 LF-CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.

SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE
AT STRUCTURES FOR ADDITIONAL DETAIL.





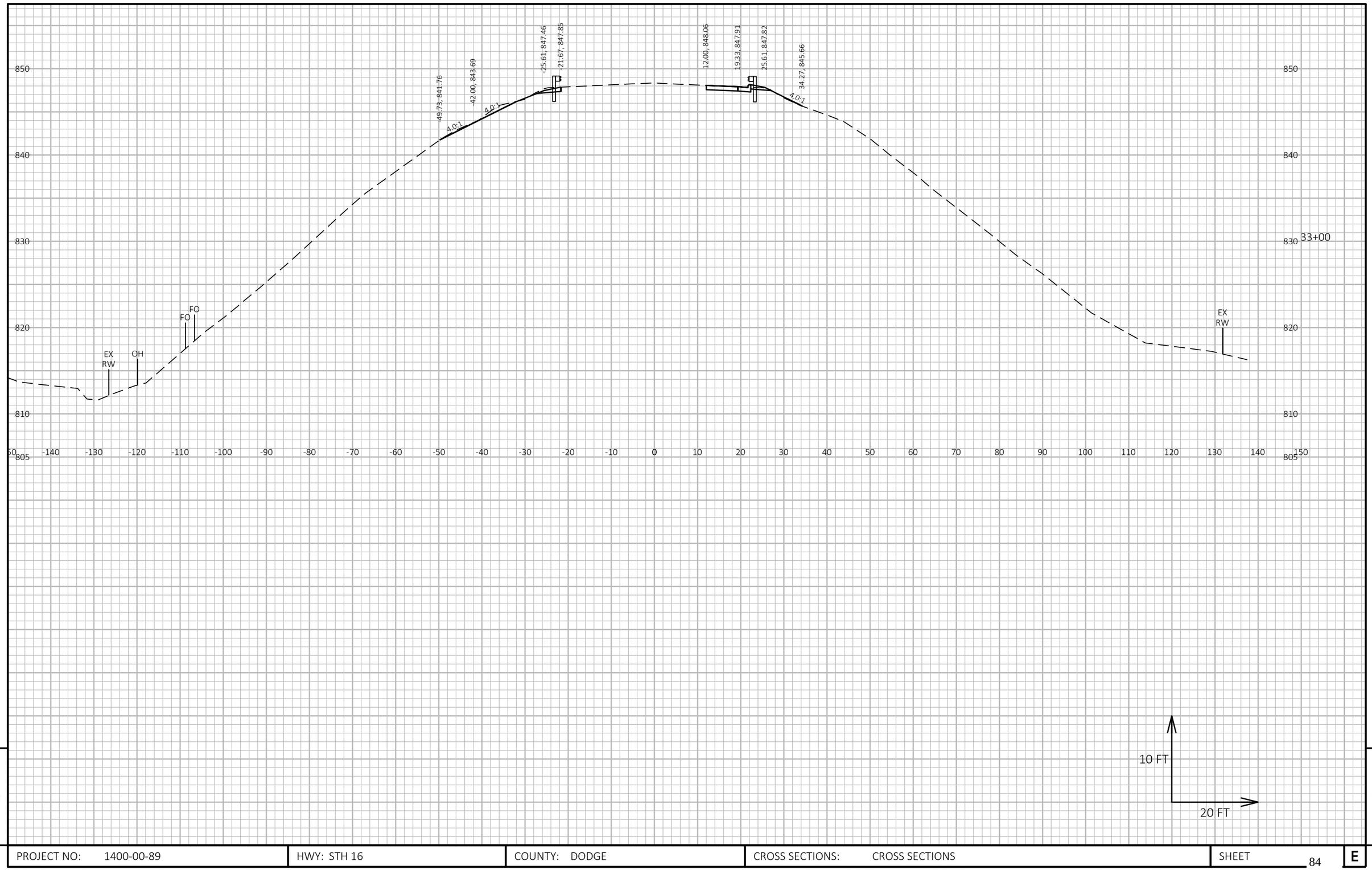
9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 83	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90211_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 84	E

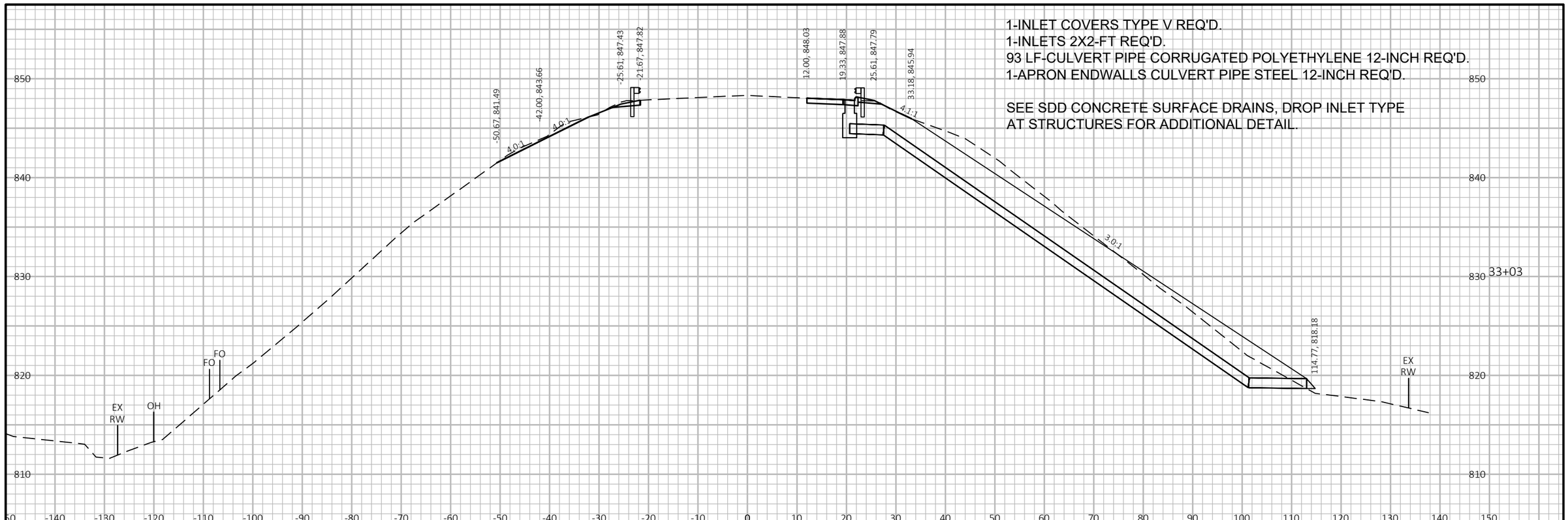
FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90213_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1-INLET COVERS TYPE V REQ'D.
1-INLETS 2X2-FT REQ'D.
93 LF-CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH REQ'D.
1-APRON ENDWALLS CULVERT PIPE STEEL 12-INCH REQ'D.

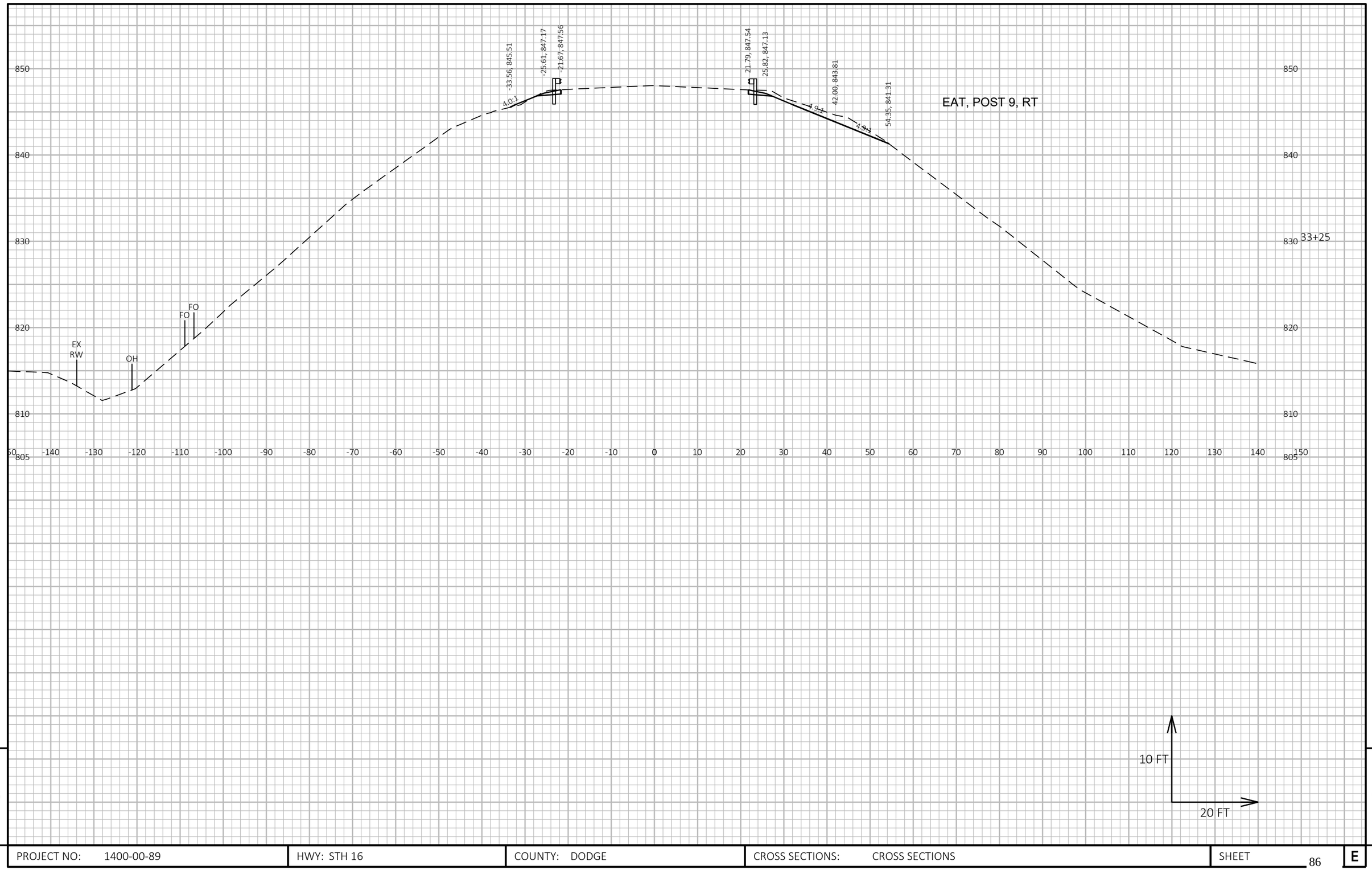
SEE SDD CONCRETE SURFACE DRAINS, DROP INLET TYPE AT STRUCTURES FOR ADDITIONAL DETAIL.



9 9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 85	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90214_xs
PLOT DATE : 3/17/2022 9:00 AM
PLOT BY : MEYER, TERA
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

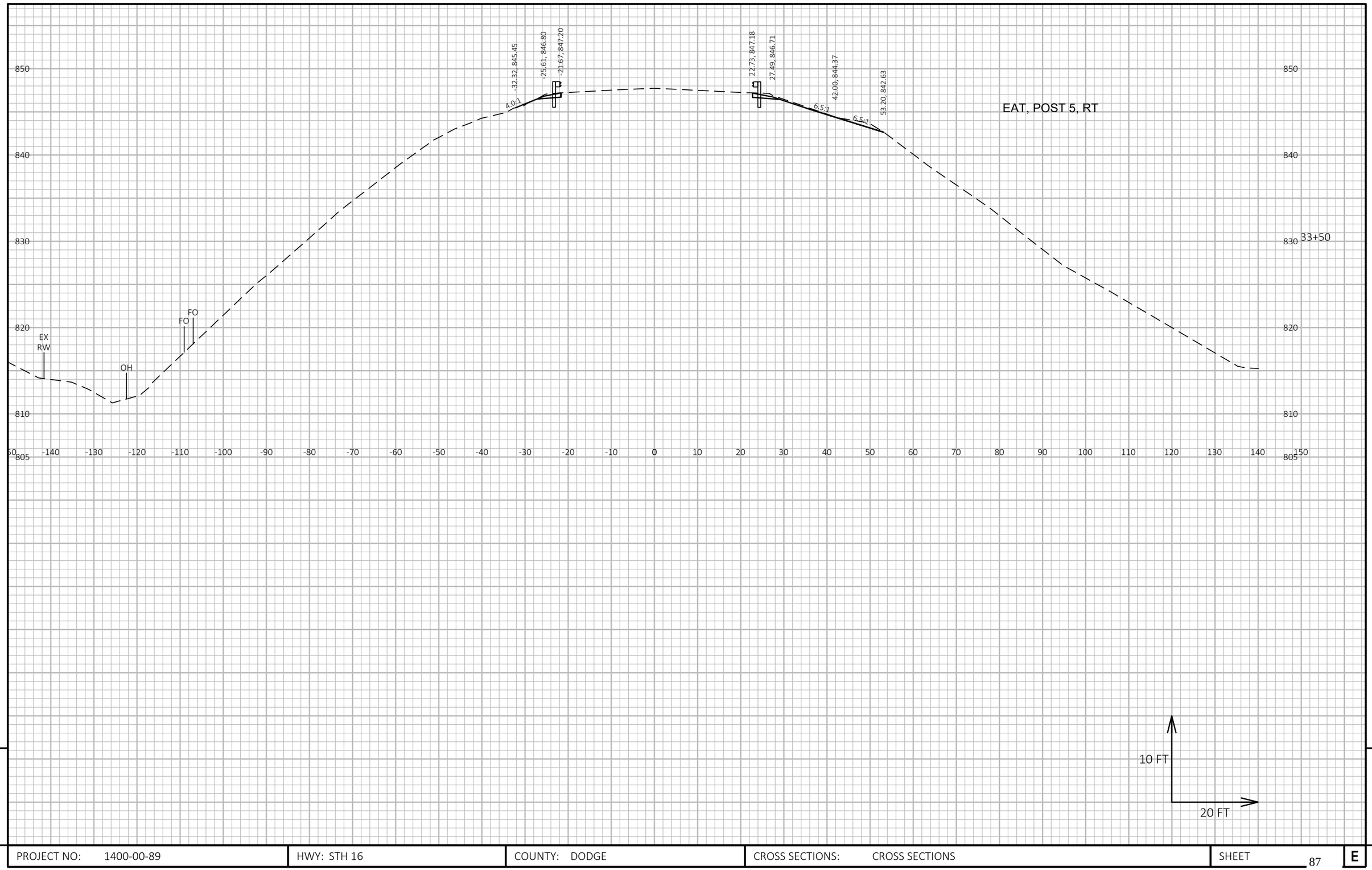
9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 86	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90215_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 87	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90216_xs

PLOT DATE : 3/17/2022 9:00 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

EAT, POST 9, LT

-34.69, 844.62
4.0:1
-25.61, 846.56
-21.67, 846.96
23.34, 846.95
28.57, 846.43
38.58, 844.84
7.3:1

33+66

EX RW
OH
FO
FO
EX RW

850 840 830 820 810 805

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

10 FT
20 FT

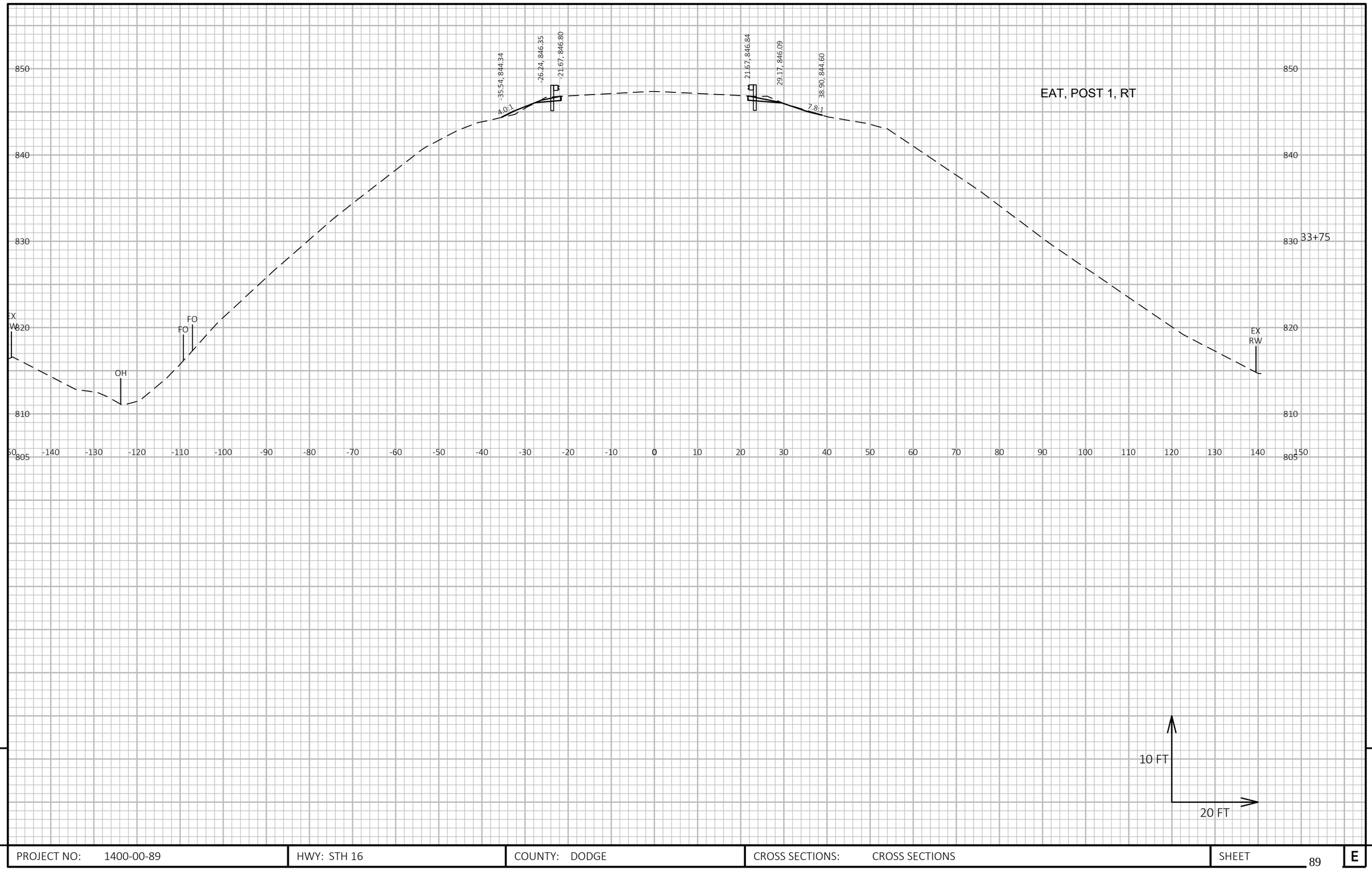
9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 88	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90217_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 89	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90218_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

EAT, POST 5, LT

-36.96, 843.85
-33.18, 844.80
-27.38, 845.96
-21.67, 846.53
21.67, 846.56
28.09, 845.92
34.81, 844.80
42.00, 844.01
55.63, 842.51

4.0:1
5.0:1
6.0:1
9.1:1
9.1:1

OH
FO
FO
EX
RW

33+91

850
840
830
820
810
805

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

10 FT
20 FT

9

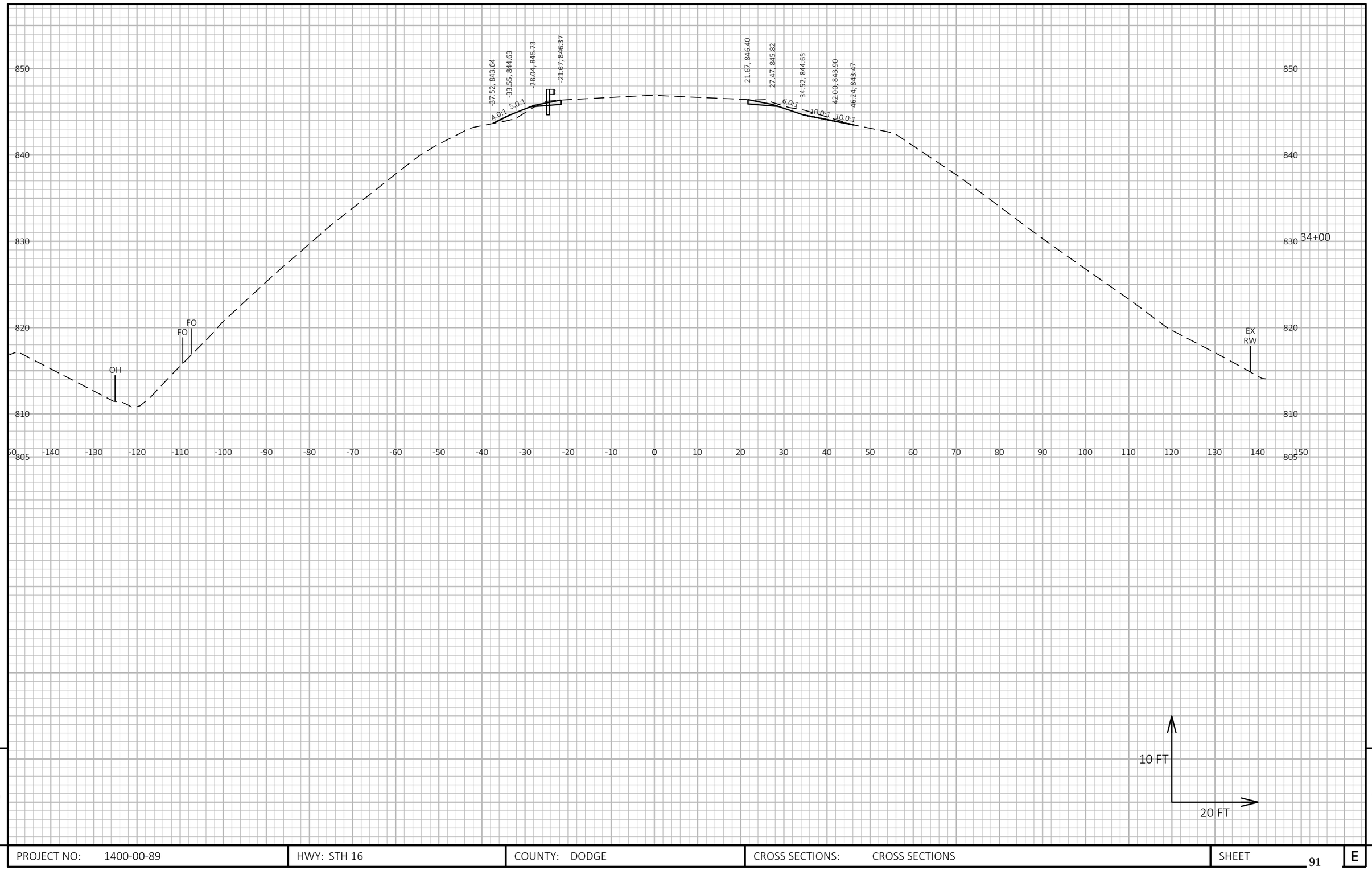
9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 90	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90219_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 91	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90220_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

EAT, POST 1, LT

-38.48, 843.27
-34.17, 844.35
-29.16, 845.35
-21.67, 846.10
21.67, 846.14
26.43, 845.66
34.00, 844.40
42.00, 843.59
56.95, 842.10

4.0:1
5.0:1
6.0:1
10.0:1
10.0:1

OH
FO
FO
EX
RW

34+16

850 840 830 820 810 805

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

10 FT
20 FT

9

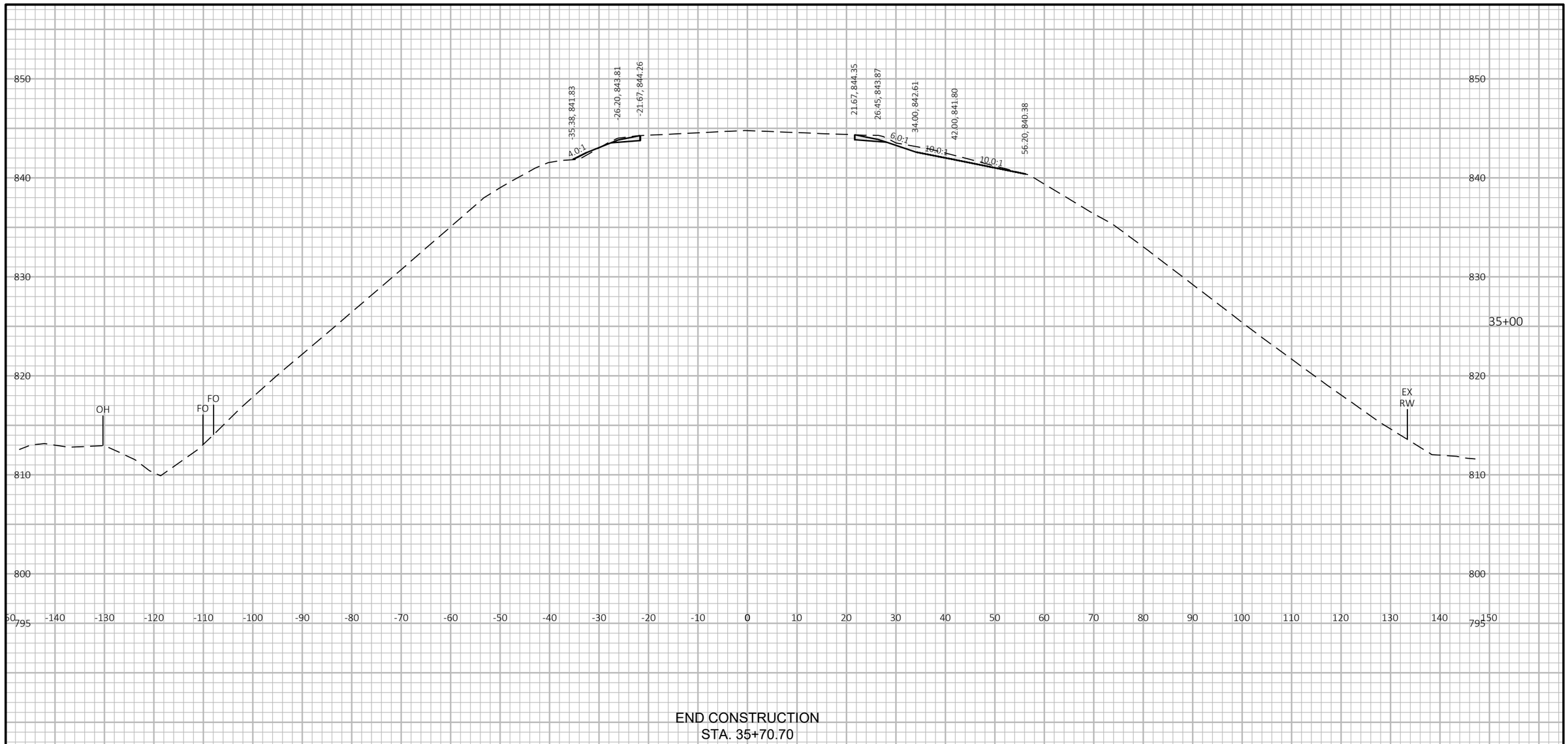
9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 92	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90221_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1400-00-89	HWY: STH 16	COUNTY: DODGE	CROSS SECTIONS: CROSS SECTIONS	SHEET 93	E

FILE NAME : S:\MAD\1000--1099\1089\922\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 90222_xs

PLOT DATE : 3/17/2022 9:01 AM PLOT BY : MEYER, TERA PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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