MAD DEC 2016

PROJECT ID: 1007-10-81
WITH: N/A

COUNTY: DANE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 304

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1007-10-81	WISC 2016462	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ILLINOIS STATE LINE - MADISON

CTH AB BRIDGE B-13-0726

IH 39
DANE COUNTY

STATE PROJECT NUMBER
1007-10-81



01

N

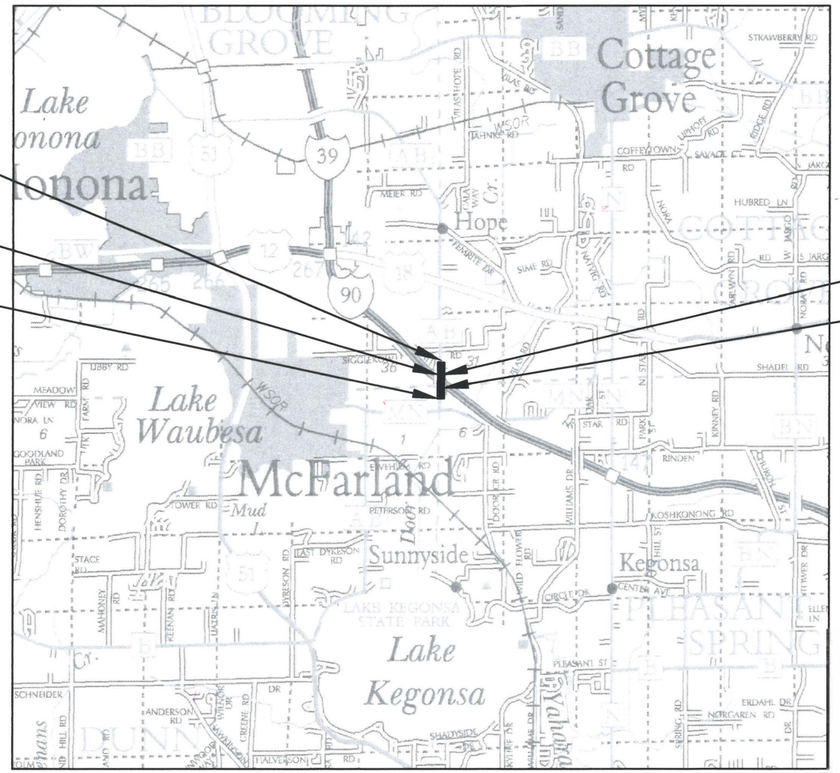
DESIGN DESIGNATION

		CTH AB
A.A.D.T.	=	2,430 (2018)
A.A.D.T.	=	3,220 (2038)
D.H.V.	=	256 (2038)
D.D.	=	62/38
T.	=	3.5 %
DESIGN SPEED	=	60 MPH
ESALS	=	250,000

END PROJECT 1007-10-81
STA. 58+60.00'AB'

STRUCTURE B-13-726

BEGIN PROJECT 1007-10-81
STA. 36+00.00'AB'
Y = 461,907.59
X = 857,813.38



STRUCTURE R-13-263

STRUCTURE R-13-262

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE
PROJECT 1007-10-81 = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988 (2007)

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		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

ORIGINAL PLANS PREPARED BY

OTIE
An Oneida Nation Company

WISCONSIN
ZACHARY M. FREEMAN
E-37609
McFARLAND, WI
PROFESSIONAL ENGINEER

07-07-16 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	DANE PARTNERS
Designer	OTIE
Project Manager	CRAIG PRINGLE
Regional Examiner	JIM BUSCHKOPF
Regional Supervisor	KATRINA FELTES

APPROVED FOR THE DEPARTMENT

DATE: 7-7-16 Katrina M. Feltes (Signature)

E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\010101_TI_AB.DWG

PLOT DATE : 7/1/2016 11:05 AM

PLOT BY : ZACH FREEMAN

PLOT NAME :

WISDOT/CADDS SHEET 10

ORDER OF SHEETS – SECTION 2:

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
EROSION CONTROL
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT DETAILS

DNR AREA LIAISON

ERIC HEGGELUND
DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711–5397
PHONE: (608) 275–3301
EMAIL: ERIC.HEFFELUND@WISCONSIN.GOV

WISDOT DESIGN

CRAIG PRINGLE
111 INTERSTATE BLVD
EDGERTON, WI 53534
PHONE: (608) 884–7132
EMAIL: CRAIG.PRINGLE@DOT.WI.GOV

CONSULTANT DESIGN

ZACH FREEMAN
OTIE
5100 EASTPARK BLVD, SUITE 300
MADISON, WI 53718
PHONE: (608) 243–6479
EMAIL: ZFREEMAN@OTIE.COM

WISDOT CONSTRUCTION

KHADER ABU AL EIS
111 INTERSTATE BLVD
EDGERTON, WI 53534
PHONE: (608) 884–1174
EMAIL: KHADER.ABUALEIS@DOT.WI.GOV

UTILITY CONTACT LIST:

*ALLIANT ENERGY – ELECTRICITY
4902 N BILTMORE LANE, SUITE 1000
MADISON, WI 53718
JASON HOGAN
PHONE: (608) 395–7395
EMAIL: JASONHOGAN@ALLIANTENERGY.COM

*ATC MANAGEMENT, INC. – ELECTRICITY
5303 FEN OAK DRIVE
MADISON WI 53718
ALEX METZ
PHONE: (608) 877–7105
EMAIL: AMETZ@ATCLLC.COM

*CHARTER COMMUNICATIONS – COMMUNICATION LINE
2701 DANIELS ST
MADISON, WI 53718
BRANDON STORM
PHONE: (608) 274–3822
EMAIL: BRANDON.STORM@CHARTER.COM

*FRONTIER COMMUNICATIONS OF WI LLC – COMMUNICATION LINE
N10843 WAAS RD.
LOMIRA, WI 53048
BRIAN WAAS
PHONE: (920) 583–4154
EMAIL: BRIAN@WAASBORING.COM

*MADISON GAS AND ELECTRIC – GAS/PETROLEUM
PO BOX 1231
MADISON WI, 53701–1231
TIM STATZ
PHONE: (608) 252–4708
EMAIL: TSTATZ@MGE.COM

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

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

* DIGGERS HOTLINE PARTICIPANTS DENOTED BY ASTERISK

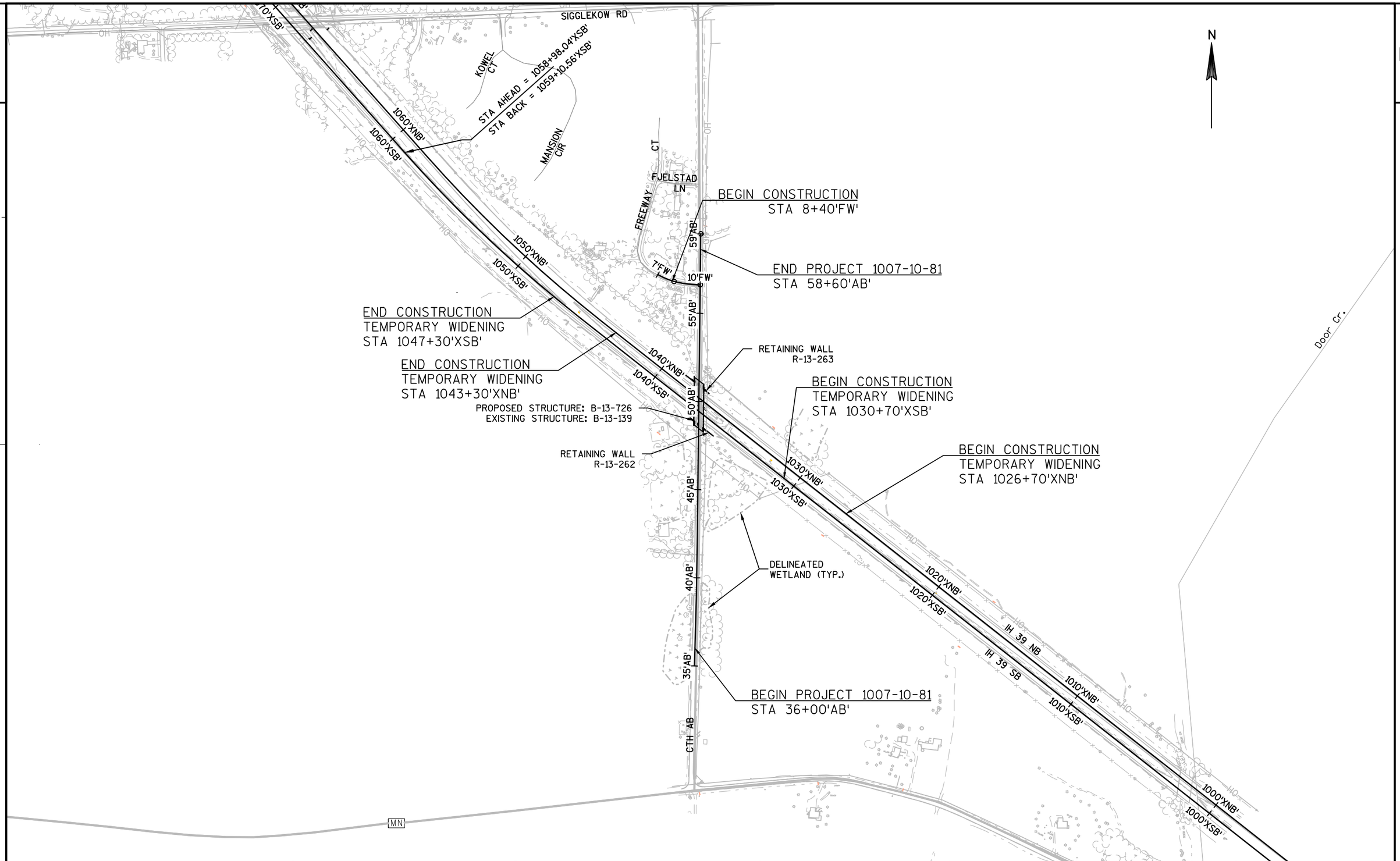
GENERAL NOTES:

1. NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
2. 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.
3. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
4. ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL WHICH WILL BE INCLUDED IN THE PRICE OF THE ABANDONED OR REMOVAL ITEM.
5. PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS WITH THE ENGINEER.
6. INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
7. WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
8. BROKEN CONCRETE CONTAINING RE–BAR SHALL NOT BE USED AS RIPRAP.
9. CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4–INCH TYPICAL DEPTH.
10. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
11. THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
12. ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
13. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED, FERTILIZED AND SEEDED.
14. FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
15. STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
16. A CONVERSION FACTOR OF 2.1 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3/4–INCH.
17. A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 1 1/4–INCH.
18. A CONVERSION FACTOR OF 2.2 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3–INCH.
19. A CONVERSION FACTOR OF 110 LBS/IN/SY IS USED TO ESTIMATE QUANTITIES FOR ASPHALT PAVEMENT.
20. ALL TYPES OF ASPHALTIC PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	HMA PAVEMENT ITEM
2.5"	2.50" UPPER	HMA PAVEMENT ITEM 4 HT 58–28 H
3.5"	1.75" UPPER 1.75" LOWER	HMA PAVEMENT ITEM 4 LT 58–28 S HMA PAVEMENT ITEM 4 LT 58–28 S
4.5"	2.00" UPPER 2.50" LOWER	HMA PAVEMENT ITEM 4 LT 58–28 S HMA PAVEMENT ITEM 3 LT 58–28 S
6.0"	2.50" UPPER 3.50" LOWER	HMA PAVEMENT ITEM 4 HT 58–28 H HMA PAVEMENT ITEM 2 HT 58–28 S
3.0"	3.0" UPPER	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
CONCRETE RUMBLE STRIPS FILL		HMA PAVEMENT ITEM 5 HT 58–28 H

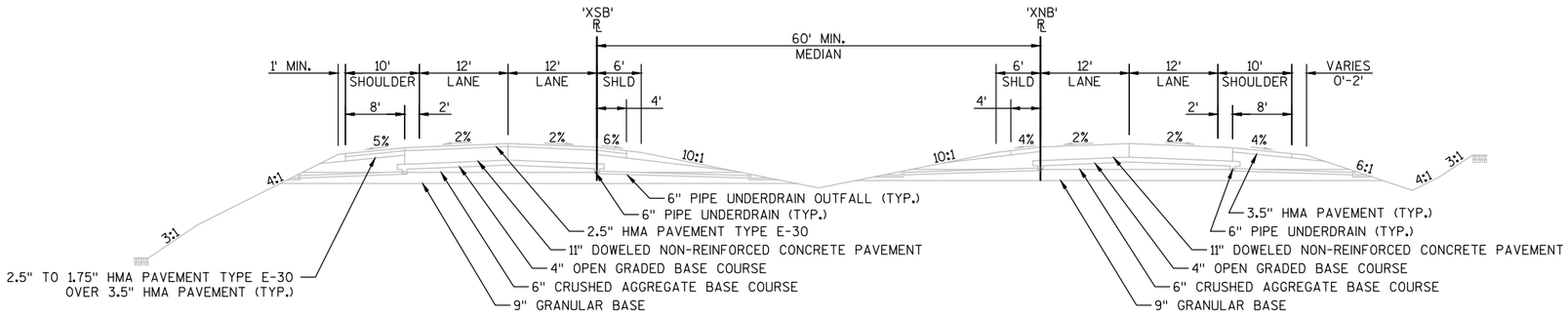
STANDARD ABBREVIATIONS:

BM	BENCH MARK
C/L	CENTER LINE
CONC	CONCRETE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CY	CUBIC–YARD
D	DEGREE OF CURVE
EL	ELEVATION
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PC	POINT–OF CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
REQ'D	REQUIRED
RT	RIGHT
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3

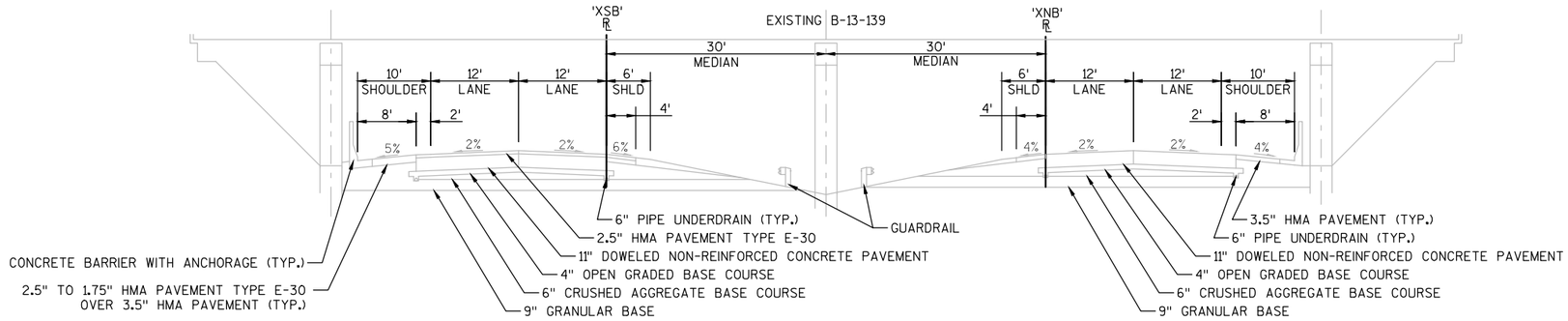
2



TYPICAL EXISTING SECTION

IH 39

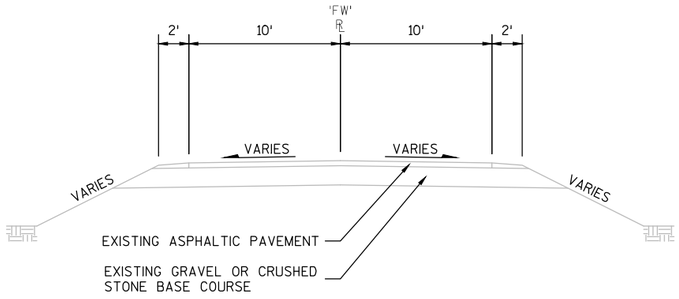
STA. 1030+70 - STA. 1047+30 'XSB'
STA. 1026+70 - STA. 1043+30 'XNB'



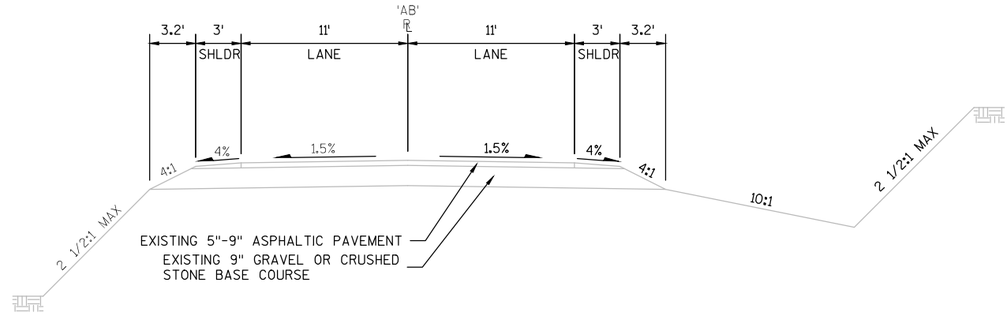
TYPICAL EXISTING SECTION

IH 39 AT CTH AB UNDERPASS

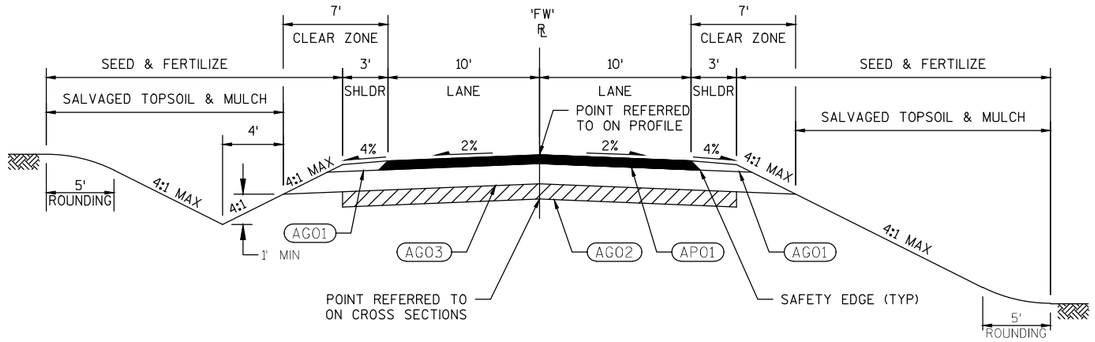
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: TYPICAL SECTION	SHEET 4	E



TYPICAL EXISTING SECTION
FREEWAY COURT



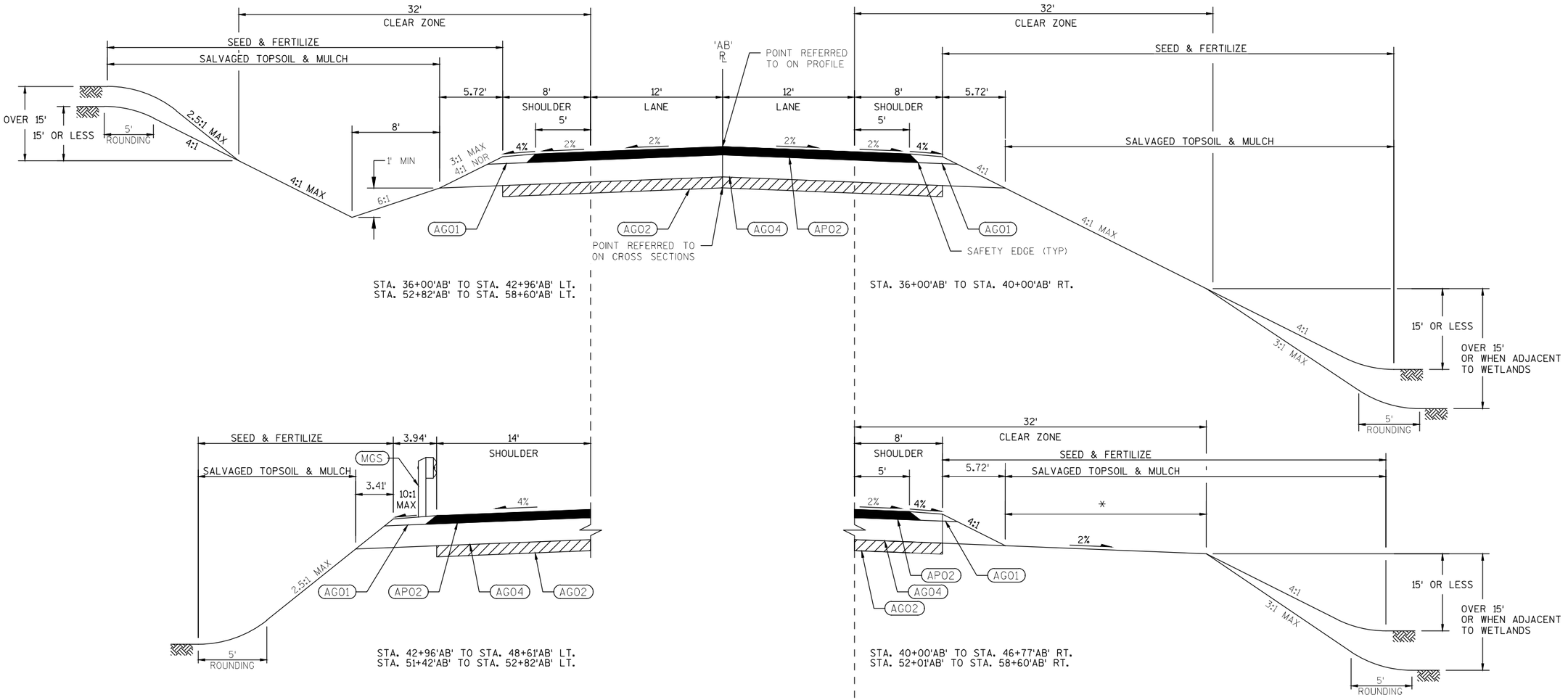
TYPICAL EXISTING SECTION
CTH AB



TYPICAL FINISHED SECTION
FREEWAY COURT
STA. 8+40'FW' TO STA. 10+00'FW'

LEGEND

	3 1/2-INCH NEW CONSTRUCTION
(AP01)	1.75" UPPER LAYER HMA PAVEMENT 4 LT 58-28 S 1.75" LOWER LAYER HMA PAVEMENT 4 LT 58-28 S
(AG01)	BASE AGGREGATE DENSE 3/4-INCH
(AG02)	BASE AGGREGATE DENSE 3-INCH, 6-INCH
(AG03)	BASE AGGREGATE DENSE 1 1/4-INCH, 8-INCH



LEGEND

AP02	4 1/2-INCH NEW CONSTRUCTION 2.00" UPPER LAYER HMA PAVEMENT 4 LT 58-28 S 2.50" LOWER LAYER HMA PAVEMENT 3 LT 58-28 S
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	BASE AGGREGATE DENSE 3-INCH, 6-INCH
AG04	BASE AGGREGATE DENSE 1 1/4-INCH, 12-INCH
MGS	MGS GUARDRAIL ITEMS

TYPICAL FINISHED SECTION

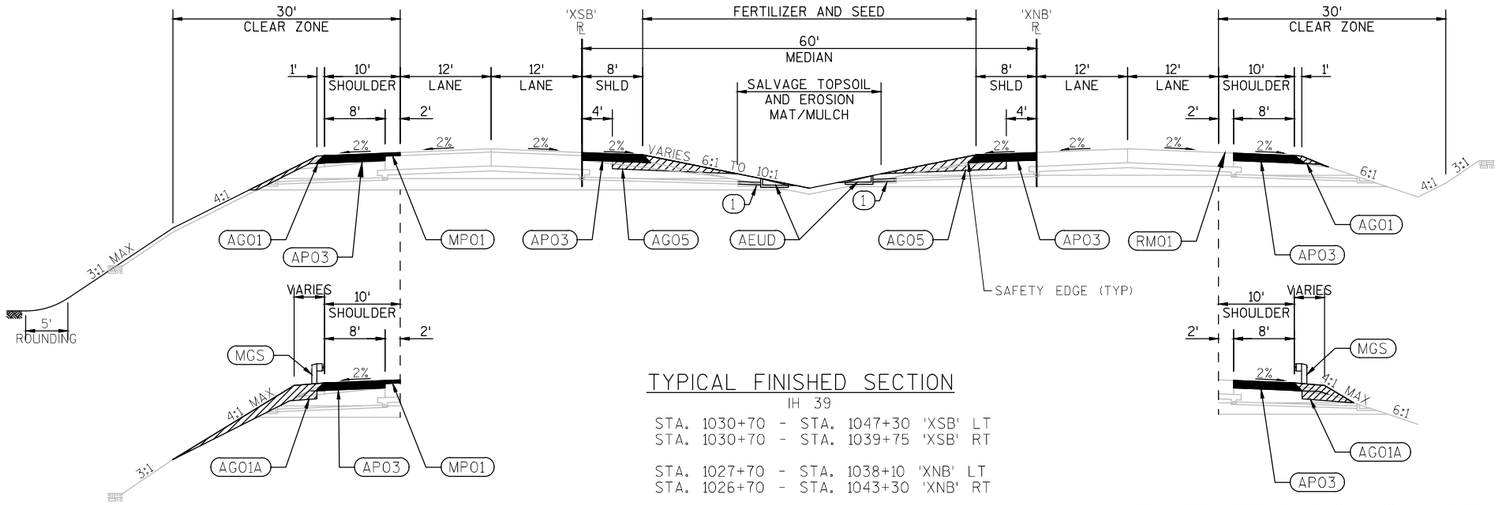
CTH AB
STA. 36+00'AB' TO STA. 58+60'AB'

*WIDTH VARIES SEE CROSS SECTIONS

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: TYPICAL SECTION	SHEET 6	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\020301_TS_AB.DWG PLOT DATE : 7/21/2016 8:12 AM PLOT BY : ZACH FREEMAN PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 42

2



TYPICAL FINISHED SECTION

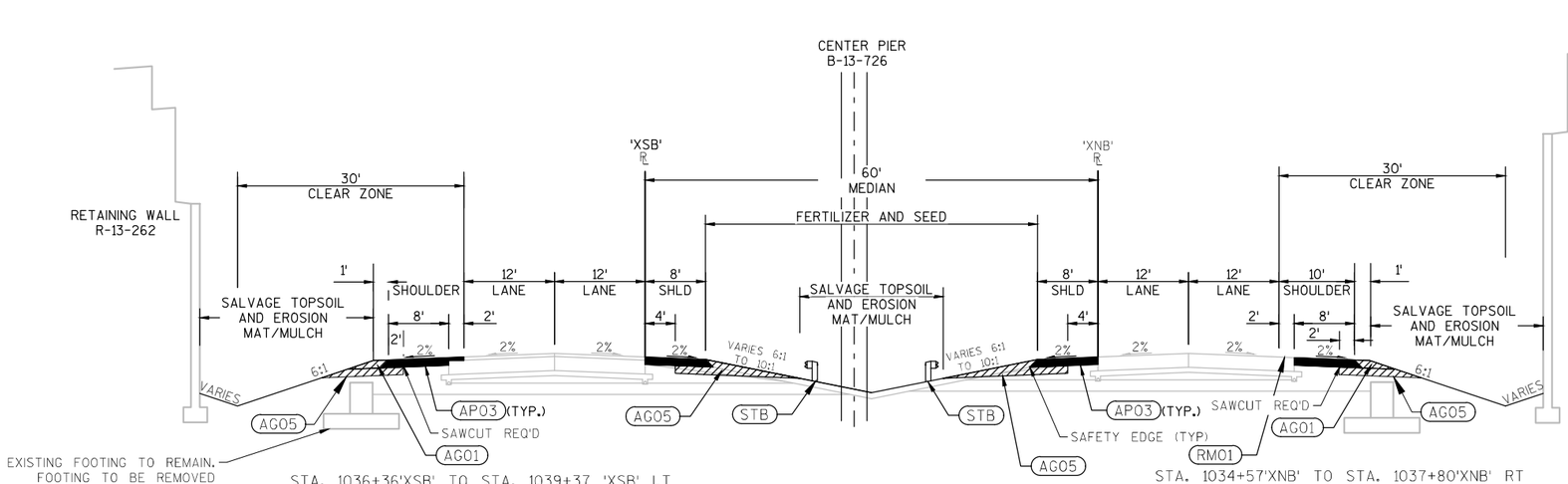
IH 39

STA. 1030+70 - STA. 1047+30 'XSB' LT
STA. 1030+70 - STA. 1039+75 'XSB' RT

STA. 1027+70 - STA. 1038+10 'XNB' LT
STA. 1026+70 - STA. 1043+30 'XNB' RT

STA. 1039+37'XSB' TO STA. 1041+35 'XSB'
STAGE 1A WIDEN SHOULDER FOR GUARDRAIL AND APPROACH TAPER.
STAGE 3G REMOVE GUARDRAIL AND CONCRETE BARRIER WITH ANCHORAGE.

STA. 1032+60'XNB' TO STA. 1034+57'XNB'
STAGE 1A WIDEN SHOULDER FOR GUARDRAIL AND APPROACH TAPER
STAGE 3G REMOVE GUARDRAIL AND CONCRETE BARRIER WITH ANCHORAGE.



STA. 1036+36'XSB' TO STA. 1039+37 'XSB' LT
STAGE 3G: SAWCUT HMA SHOULDER ALONG CONCRETE BARRIER EDGE, REMOVE CONCRETE BARRIER WITH ANCHORAGE, REPLACE VOID WITH BASE AGGREGATE AND HMA PAVEMENT.

TYPICAL FINISHED SECTION

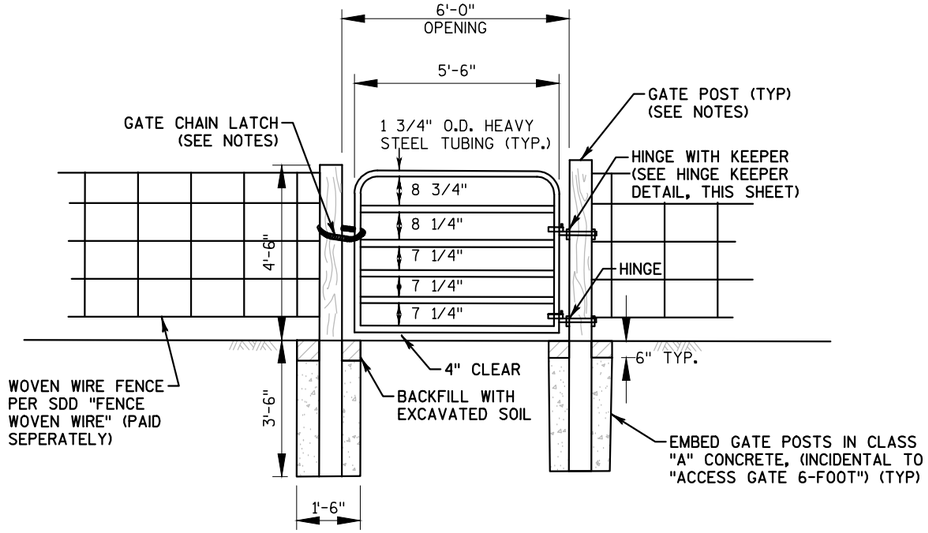
IH 39 AT CTH AB UNDERPASS

STA. 1034+57'XNB' TO STA. 1037+80'XNB' RT
STAGE 3G: SAWCUT HMA SHOULDER ALONG CONCRETE BARRIER EDGE. REMOVE CONCRETE BARRIER WITH ANCHORAGE, REPLACE VOID WITH BASE AGGREGATE AND HMA PAVEMENT.

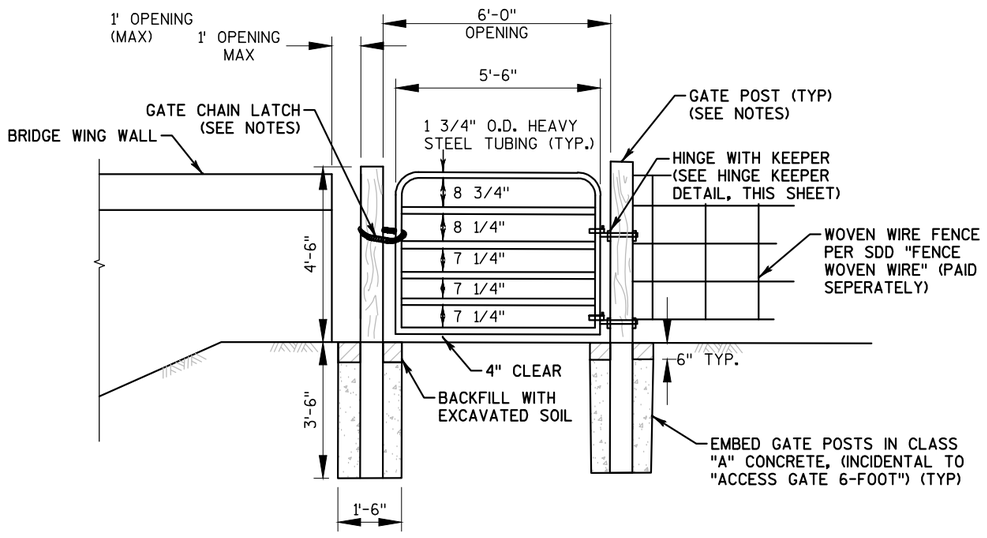
LEGEND

MP01	REMOVING ASPHALTIC SURFACE MILLING, 2 1/2-INCH 2.5-INCH NEW CONSTRUCTION 2.50" UPPER LAYER HMA PAVEMENT 4 HT 58-28 H
AP03	6-INCH NEW CONSTRUCTION 2.50" UPPER LAYER HMA PAVEMENT 4 HT 58-28 H 3.50" LOWER LAYER HMA PAVEMENT 2 HT 58-28 S
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG01A	BASE AGGREGATE DENSE 3/4-INCH, 12-INCH
AG05	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCH
RM01	FILL EXISTING CONCRETE RUMBLE STRIPS
STB	STEEL THRIE BEAM ITEMS
MGS	MGS GUARDRAIL ITEMS
AEUD	APRON ENDWALL FOR UNDERDRAIN REINFORCED CONCRETE SALVAGED 6-INCH
1	DRAINAGE OF EXISTING PIPE UNDER DRAIN 6-INCH ALONG NB AND SB IH 39 SHOULDERS TO BE MAINTAINED. EXISTING PIPE UNDER DRAIN OUTFALLS TO BE EXTENDED AND DAYLIGHTED BEYOND SUBGRADE SHOULDER POINT.

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: TYPICAL SECTION	SHEET 7	E



ACCESS GATE 6-FOOT
(CONTINUOUS FENCE LOCATION)



ACCESS GATE 6-FOOT
(BRIDGE ABUTMENT LOCATION)

NOTES:

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

GATE POST SHALL BE EQUIVALENT TO CORNER POST SPECIFICATIONS.

SEE THE PLAN FOR APPROXIMATE LOCATIONS. LOCATION MAY BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

ACCESS GATES SHALL BE SHOP FABRICATED FROM 1-3/4" OD HEAVY STEEL TUBING. ALL WELDS SHALL BE DE-SLAGGED AND CLEANED.

THE COMPLETED GATE ASSEMBLY SHALL BE THOROUGHLY CLEANED AND SPRAY PRIMED WITH A RUSTPROOF PRIMER AND SPRAY FINISHED WITH TWO COATS OF A HIGH QUALITY, DURABLE ENAMEL PAINT. PAINT SHALL BE FLAT GRAY IN COLOR.

KEEPER TO BE ATTACHED TO TOP HINGE OF EACH GATE ONLY.

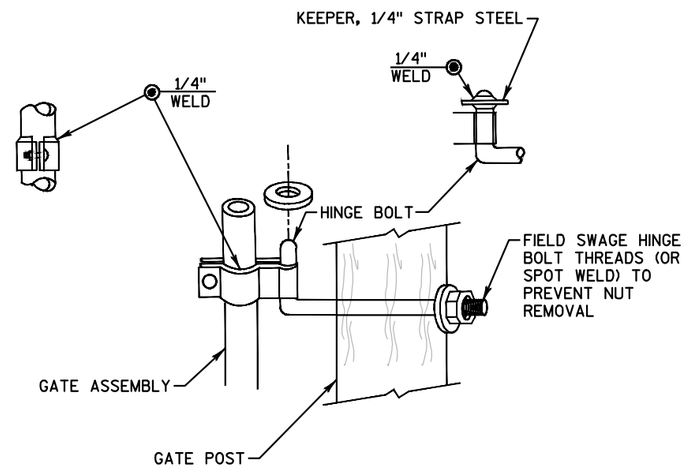
KEEPER SHALL BE FITTED AFTER THE GATE IS HUNG IN PLACE.

KEEPER TO BE OF SUCH DIMENSIONS TO PROVIDE CLEARANCE FOR LATERAL SWING.

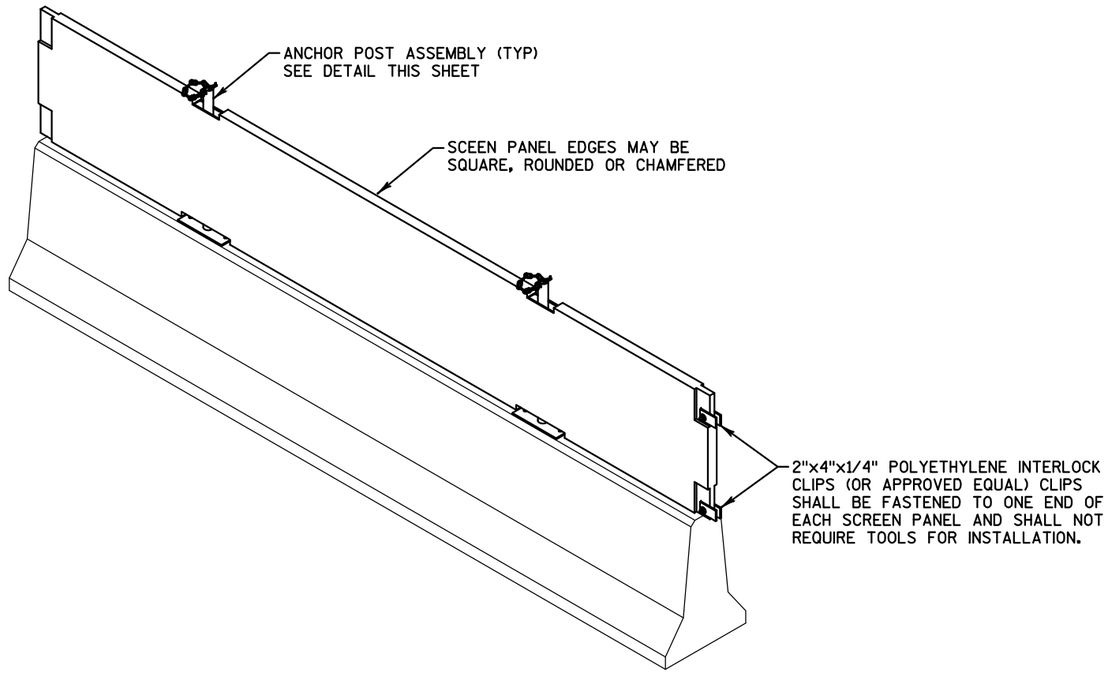
DRILL HOLE IN KEEPER OF SUFFICIENT DIAMETER TO PROVIDE SNUG FIT OVER HINGE BOLT.

ALL FIELD WELDED SURFACES SHALL BE DE-SLAGGED, CLEANED AND PRIMED WITH RUSTPROOF PRIMER AND FINISHED WITH TWO COATS OF PAINT MATCHING THE GATE ASSEMBLY PAINT.

KEYED LOCK FOR THE GATE CHAIN LATCH TO BE SUPPLIED BY THE DEPARTMENT. CONTRACTOR SHALL COORDINATE THE DELIVERY AND INSTALLATION WITH THE REGIONAL STRUCTURES MAINTENANCE MANAGER.



HINGE KEEPER



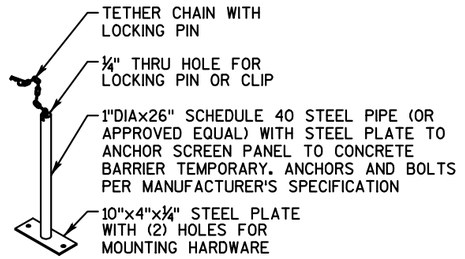
NOTE:

THE DESIGN OF THIS ITEM, WHICH INCLUDES ALL ASPECTS SHOWN, SHALL BE DESIGNED SO THAT THE SCREEN IS CAPABLE OF REMAINING IN PLACE FROM TRAFFIC GUSTS, WIND GUSTS, AND OTHER OUTDOOR ELEMENTS THAT MAY MOVE OR DISPLACE THE SCREEN.

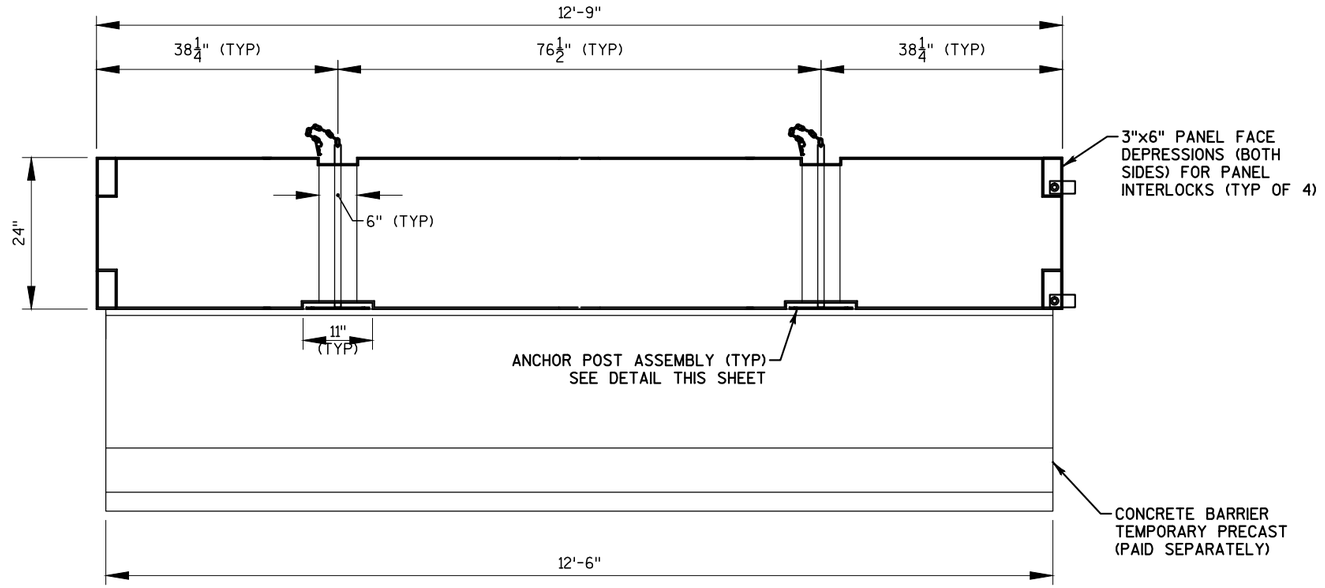
VENT HOLES THROUGH THE SCREEN PANEL ARE PERMITTED BUT NOT REQUIRED. IF VENT HOLES ARE USED, THE HOLES SHALL NOT EXCEED 3-INCHES IN DIAMETER AND SHALL BE LIMITED TO 24 OR LESS PER PANEL.

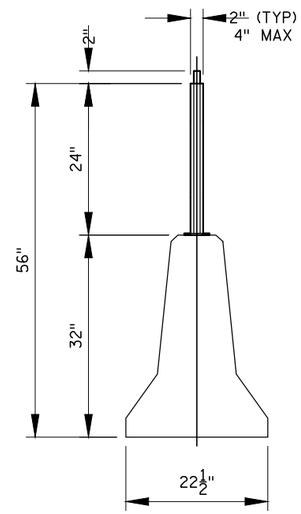
SCREEN PANELS SHALL HAVE A NON-REFLECTIVE MAT OR FLAT GRAY FINISH OR PAINTED SURFACE.

SHOP DRAWINGS WITH A FULL SIZE SAMPLE SHALL BE PROVIDED TO THE CMT (CORRIDOR MANAGEMENT TEAM) FOR APPROVAL PRIOR TO USE.

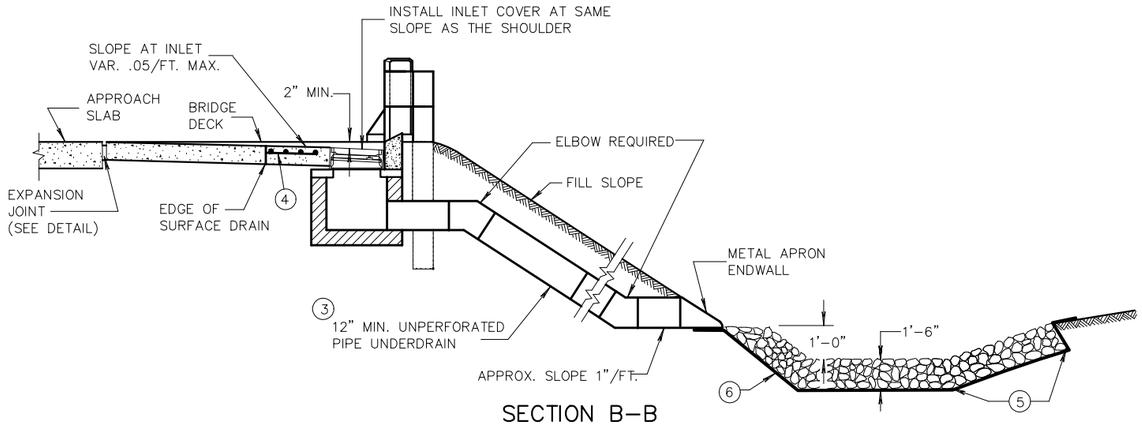


ANCHOR POST ASSEMBLY

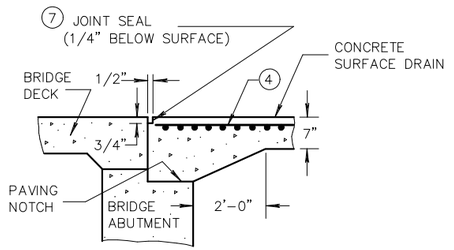




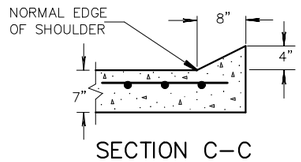
TRAFFIC CONTROL GAWK SCREEN



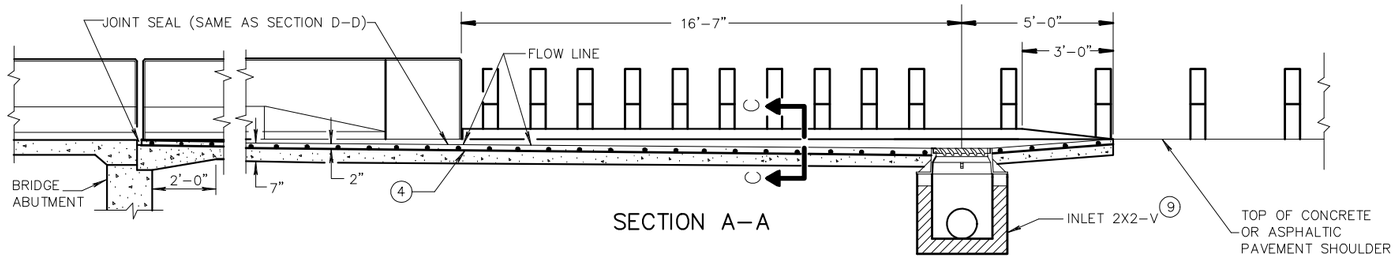
SECTION B–B



SECTION D–D



SECTION C–C



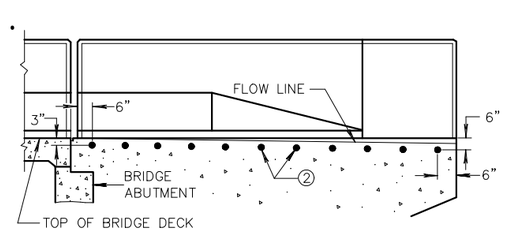
SECTION A–A

GENERAL NOTES

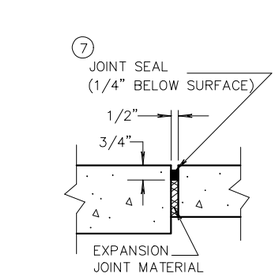
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATION AND THE APPLICABLE SPECIAL PROVISIONS.

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

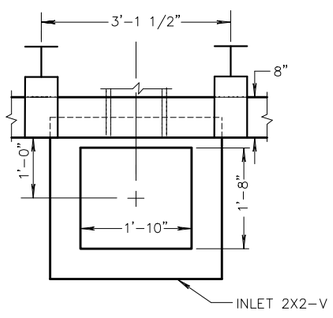
1. NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO THE P.C. CONCRETE.
2. NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.
4. MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
5. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
6. GEOTEXTILE FABRIC, TYPE 'R' OR 'HR', DEPENDENT ON RIPRAP TYPE.
7. HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
8. THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING IS 3'-1 1/2".
9. SEE CURRENT STANDARD DETAIL DRAWINGS "INLET COVERS TYPE F, HM HM-S, S, T, V, HM-GJ, & HM-GJ-S" AND "INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, & 2.5X3-FT" FOR DETAILS.
10. SEE CURRENT STANDARD DETAIL DRAWINGS "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION" FOR DETAILS.



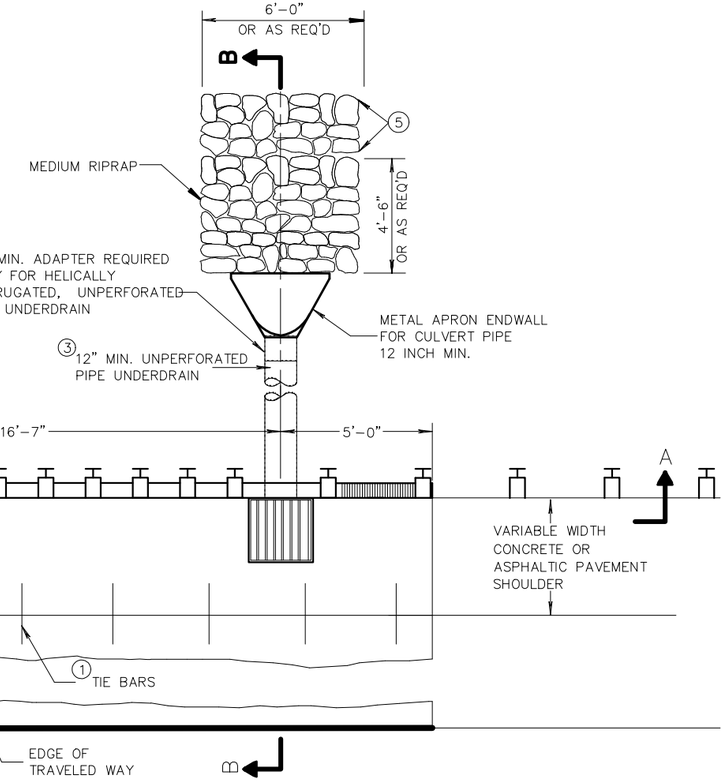
LOCATION OF TIE BARS IN WINGWALL



EXPANSION JOINT DETAIL



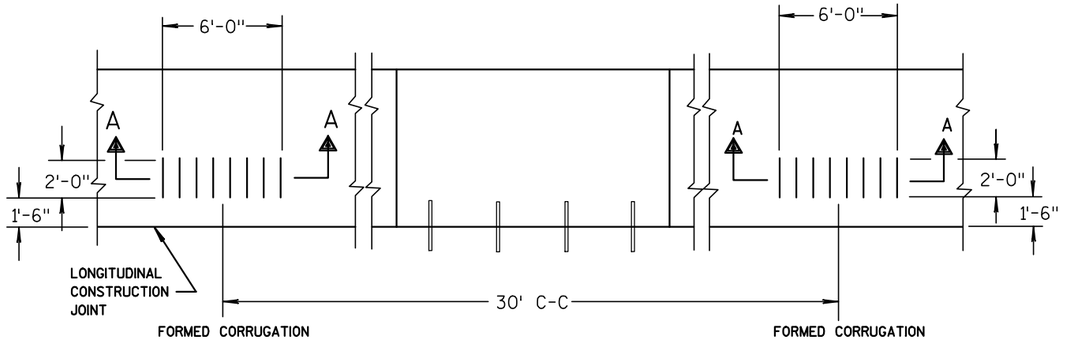
PLAN VIEW



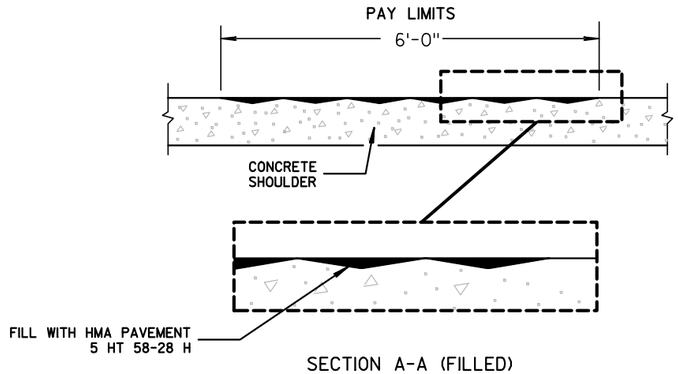
PLAN VIEW

DETAIL FOR DROP INLET AND 12" UNPERFORATED PIPE UNDERDRAIN

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 10

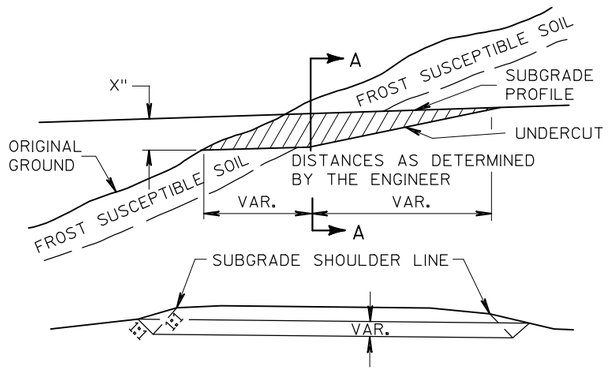


PLAN VIEW OF CONCRETE SHOULDER



SECTION A-A (FILLED)

FILL EXISTING CONCRETE RUMBLE STRIPS



SECTION A-A

CROSS SECTION SHOWING UNDERCUT

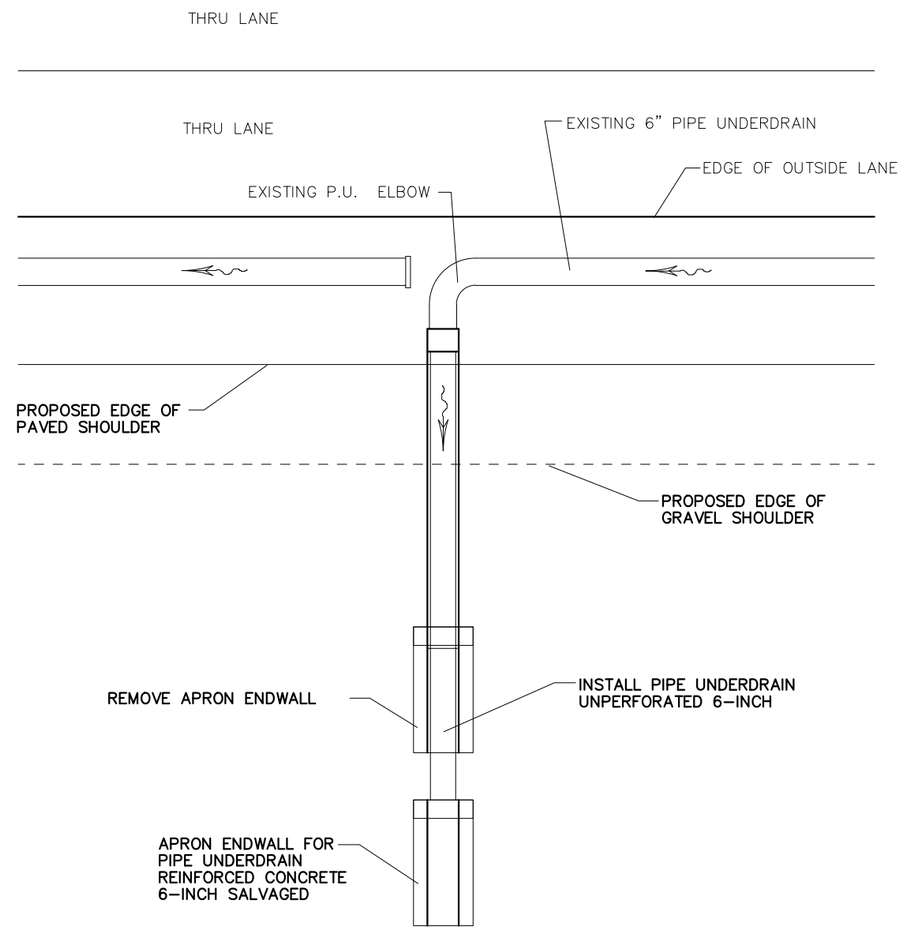
NOTE:

EXACT LOCATIONS AND EXTENT OF EBS SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

EBS AREA TO BE BACKFILLED WITH "SELECT BORROW" OR WITH MATERIAL ACCEPTABLE TO THE ENGINEER.

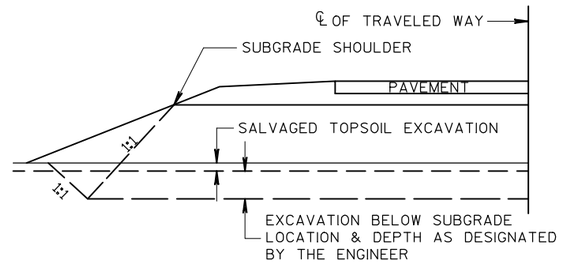
THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL EBS IS COMPLETED.

EXCAVATION BELOW SUBGRADE AT CUTS



DETAIL FOR EXTENSION OF UNDERDRAIN OUTFALLS

INTERMEDIATE LOCATIONS – NO INLETS



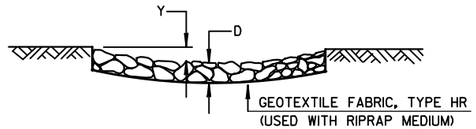
DETAIL FOR EXCAVATION BELOW SUBGRADE

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 11

RUNOFF COEFFICIENT TABLE

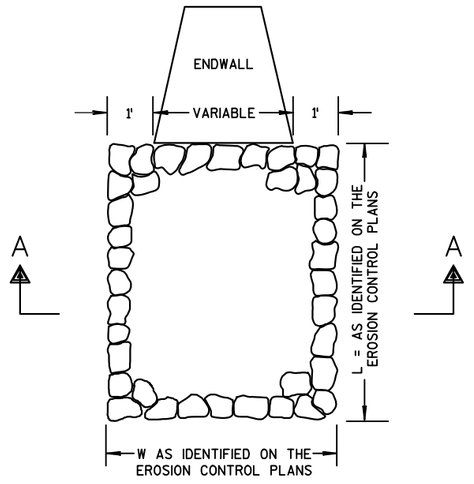
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 22.42 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 9.76 ACRES

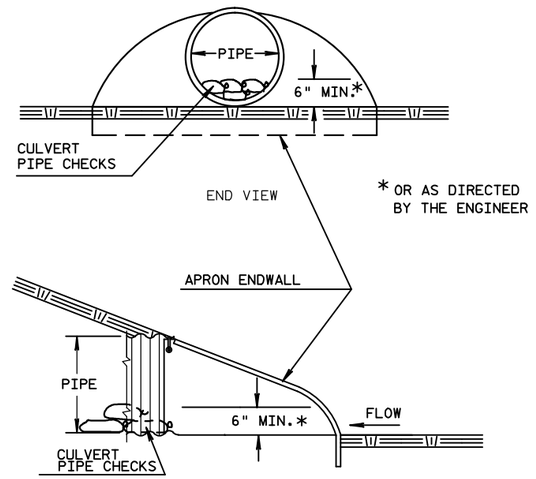


SECTION A-A

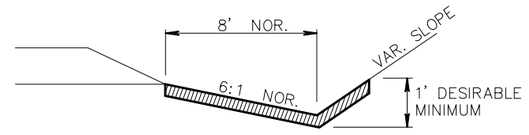
D = 18" FOR RIPRAP MEDIUM
Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
= 12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE



RIPRAP MEDIUM AND GEOTEXTILE FABRIC AT APRON ENDWALLS
(SEE EROSION CONTROL PLANS FOR APPROXIMATE LOCATIONS)



CULVERT PIPE CHECKS



EROSION MAT FOR DITCHES

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 12

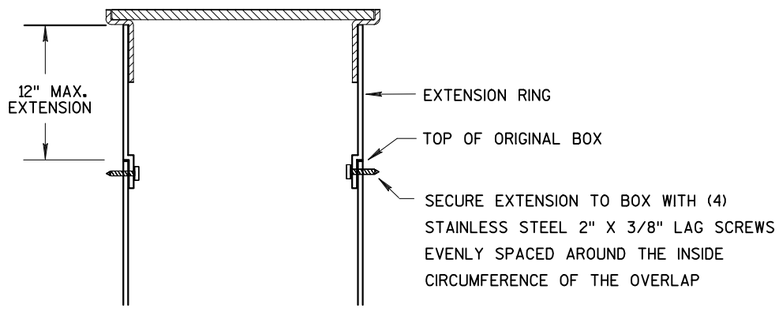
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021001_CD_AB.DWG
LAYOUT NAME - ****
PLOT DATE : 9/12/2016 9:46 AM PLOT BY : MARY PAMPERIN-VOLK PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX DIAMETER ** (OUTSIDE)	B	25	25
BOX LENGTH	C	36	42
COVER	D	25 1/2	25 1/2
FRAME	E	27	27
FRAME	F	25 3/4	25 3/4
FRAME	G	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50

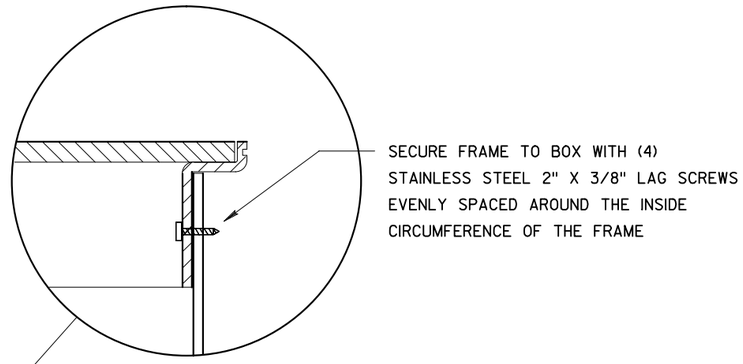
* THE ACTUAL WEIGHT OF THE COVER MAY VARY NOT TO EXCEED 100 LBS.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

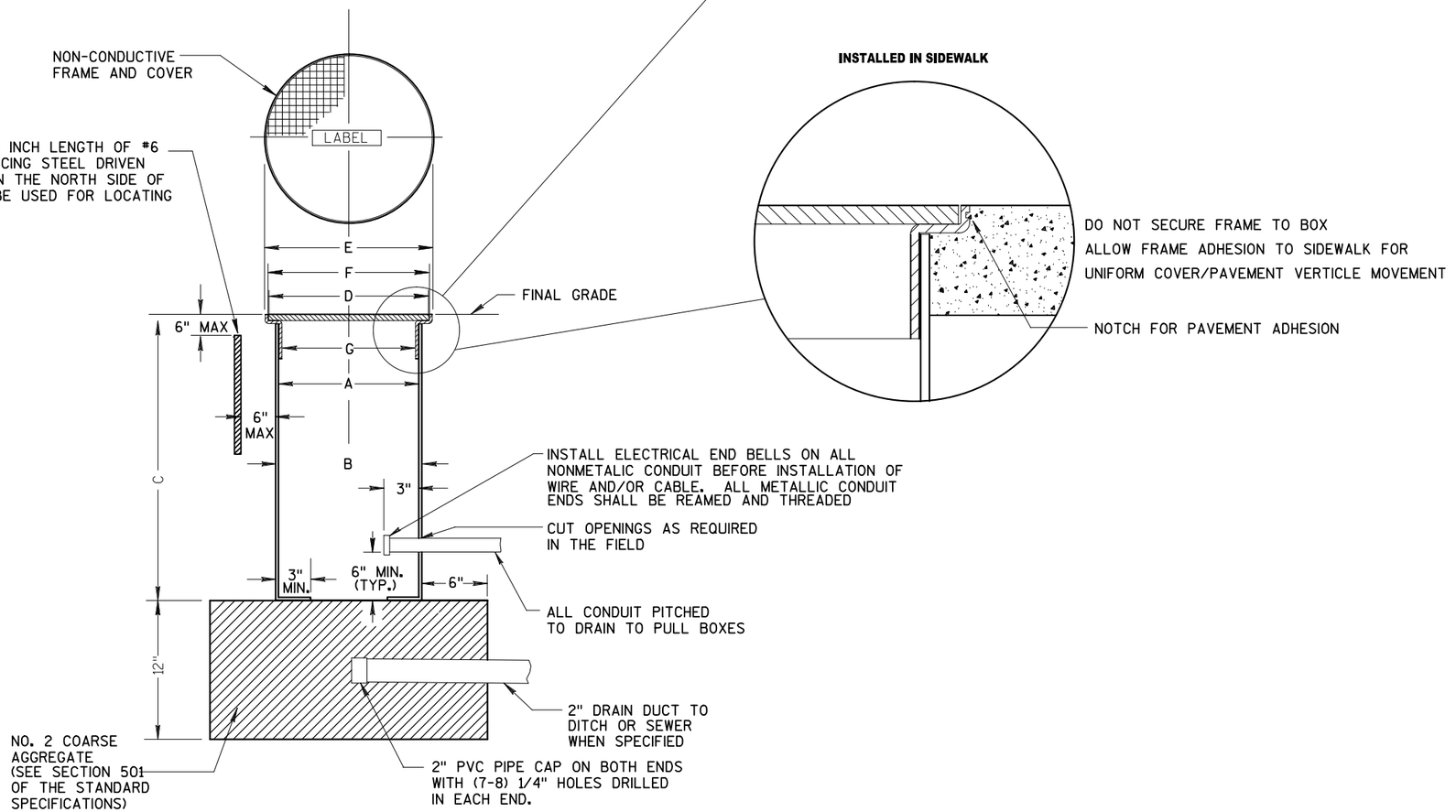


BOX EXTENSION

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



NON-CONDUCTIVE PULL BOX

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER.

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

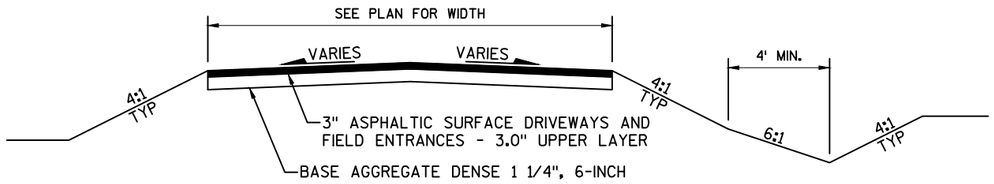
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

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

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS,

PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

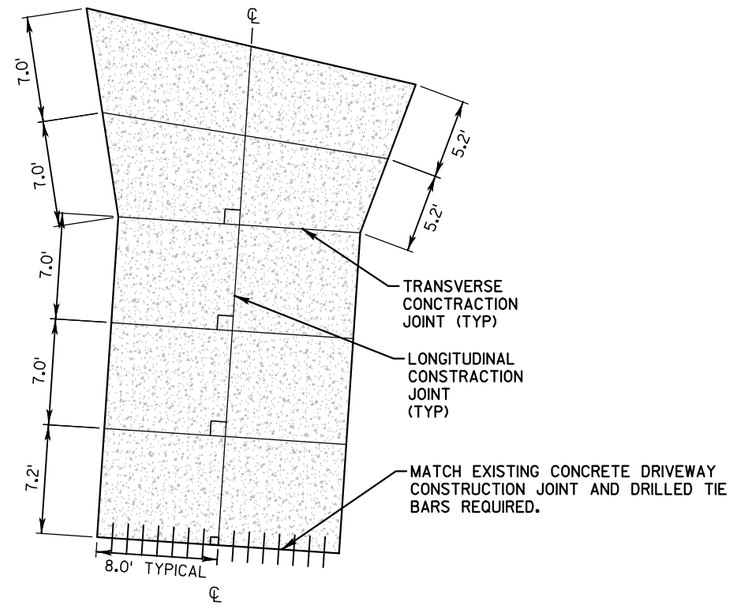
LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL OR LIGHTING SYSTEMS. "WISDOT COMMUNICATIONS" FOR COMMUNICATIONS SYSTEMS.



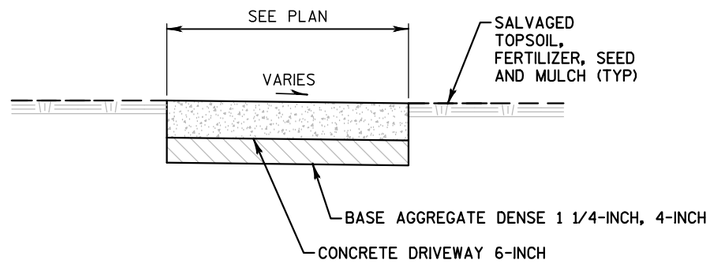
RURAL DRIVEWAY ASPHALTIC SURFACE
TYPICAL SECTION
STA. 41+50"AB" - LT

NOTE:

SEE S.D.D. "URBAN NON-DOWLED CONCRETE PAVEMENT" AND S.D.D. "CONCRETE PAVEMENT JOINT TYPES" FOR CONSTRUCTION JOINT AND CONTRACTION JOINT REQUIREMENTS.



CONTRACTION JOINT PLAN
(SEE PLAN FOR LAYOUT DETAILS)



TYPICAL SECTION

CONCRETE DRIVEWAY 6-INCH

STA. 9+25"FW" - RT

N

DELINEATED WETLAND (TYP.)

DO NOT DISTRURB LARGE OAK AND LARGE HICKORY TREE
PROTECT THE TREE TRUNKS WITH 10'X10' FENCE SAFETY.

SAFETY FENCE TO BE INSTALLED
INSIDE THE R/W FOR THIS
PROPERTY FOR THE PROTECTION
OF A CONSERVATION EASEMENT

EXISTING ROCK WALL
TO REMAIN

STA 43+32'AB' - 48+50'AB' LT
REMOVE EXISTING BEAM GUARD
AND TERMINAL ENDS

BEGIN PROJECT
STA 36+00.00'AB'

P.L.

P.L.

TLE

R/W

XXXX

GUY

REMOVING FENCE

35'AB'

CTH AB

40'AB'

45'AB'

MATCHLINE STA 48+75'AB'

R/W

SLOPE INTERCEPT (TYP.)

STA 43+24'AB' - 48+31'AB' RT
REMOVE EXISTING BEAM GUARD
AND TERMINAL ENDS

REMOVING
FENCE

STA 38+00'AB' - 49+00'AB' LT & RT
CLEARING AND GRUBBING REQUIRED

10.35'XSB'

10.35'X

IH 39 SB

IH 39 NB

LEGEND

- REMOVING SMALL PIPE CULVERTS
- REMOVING GUARDRAIL
- REMOVING FENCE
- XXXX SAWCUT ASPHALT
- FENCE SAFETY

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	REMOVAL PLAN - CTH AB	SHEET 15

N

IH 39 SB

IH 39 NB

1040'XSB'

1040'XNB'

MATCHLINE STA 48+75'AB'

50'AB'

CTH AB

STA 51+40'AB' - 51+92'AB' LT
REMOVE EXISTING BEAM GUARD
AND TERMINAL ENDS

REMOVE FENCE

INSTALL SAFETY FENCE
PRIOR TO REMOVAL OF THE
EXISTING CHAIN LINK FENCE.
SECURE THE SAFETY FENCE
AT EACH END TO THE CHAIN
LINK FENCE.

TLE

REMOVE EXISTING
CHAIN LINK FENCE

STA 51+22'AB' - 51+74'AB' RT
REMOVE EXISTING BEAM GUARD
AND TERMINAL ENDS

R/W

SLOPE INTERCEPT (TYP.)

REMOVE GUARDRAIL

STA 50+00'AB' - 58+00'AB' LT & RT
CLEARING AND GRUBBING REQUIRED
SEE NOTE BELOW

STA 8+00'FW' - 9+00'FW'
CLEARING AND GRUBBING REQUIRED
SEE NOTE BELOW

PROTECT THE
SMALL MAPLE TREE
WITH 5'X5' PERIMETER
FENCE SAFETY

FREEWAY CT

BEGIN CONSTRUCTION
STA 8+40.00'FW'

END PROJECT
STA 58+60.00'AB'

FJEISTAD LN

SEPTIC

A/C

GUY

POST

OH

LEGEND

- REMOVING SMALL PIPE CULVERTS
- REMOVING PAVEMENT
- REMOVING GUARDRAIL
- REMOVING FENCE
- XXXX SAWCUT ASPHALT
- YYYY SAWCUT CONCRETE
- FENCE SAFETY

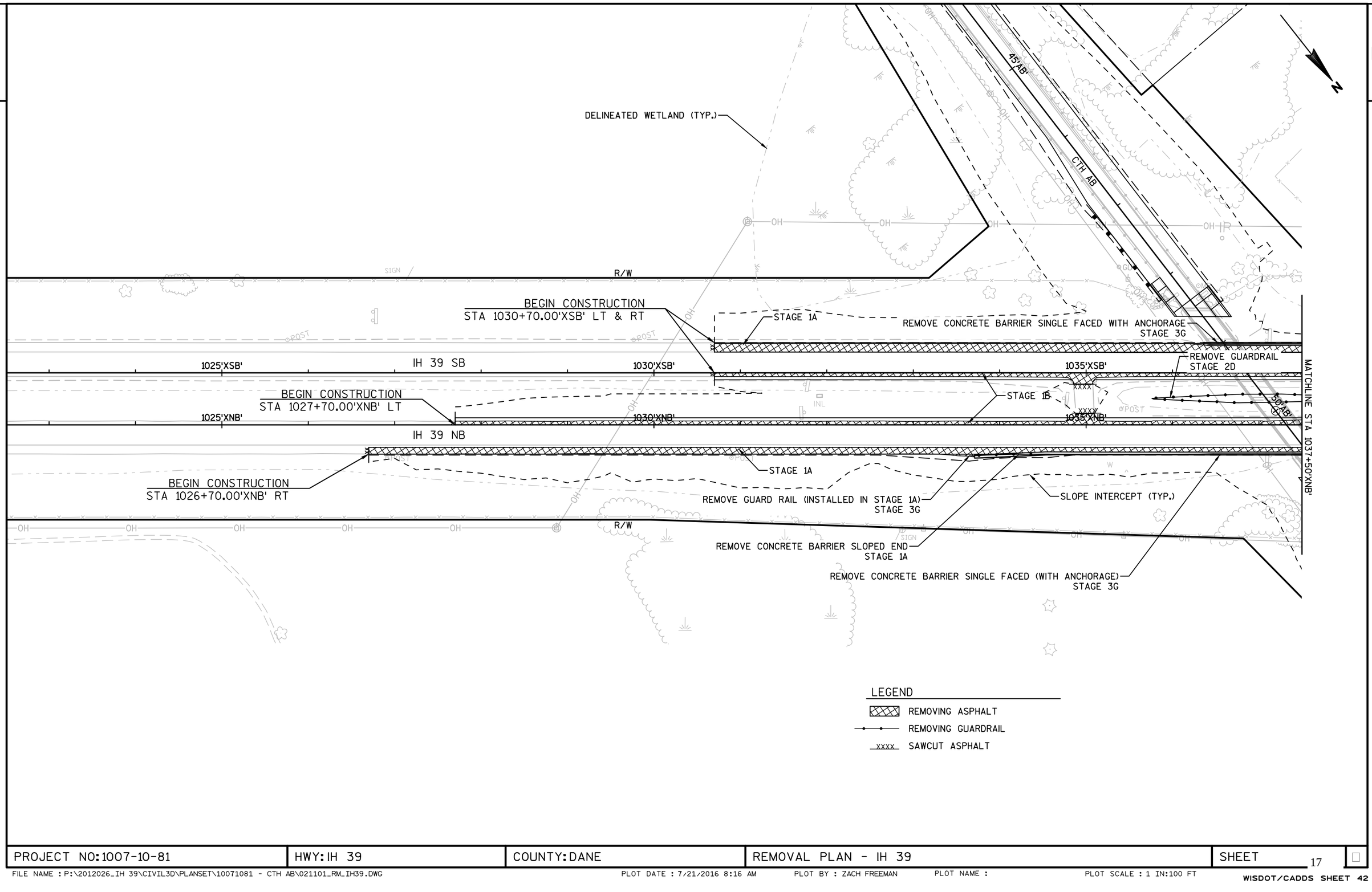
NOTES

PARCEL 7 (MICHELLE M. ELDRIDGE PROPERTY):
IF POSSIBLE, DO NOT REMOVE TREES THAT ARE OUTSIDE THE CTH AB 32' CLEAR ZONE (SEE TYPICAL SECTION) OR THE FREEWAY COURT 7' CLEAR ZONE.

DO NOT DISTURB THE SMALL MAPLE TREE NEAR THE DRIVEWAY AS SHOWN ON THIS SHEET.

SAFETY FENCE TO BE INSTALLED PRIOR TO REMOVAL OF THE EXISTING CHAIN LINK FENCE. SAFETY FENCE ALONG EXISTING R/W AND TLE TO REMAIN IN PLACE AT THE END OF THE PROJECT.

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	REMOVAL PLAN - CTH AB	SHEET 16



PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	REMOVAL PLAN - IH 39	SHEET 17

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021101_RM_IH39.DWG PLOT DATE : 7/21/2016 8:16 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

REMOVING ASPHALT

REMOVING GUARDRAIL

XXXX SAWCUT ASPHALT

REMOVE CONCRETE BARRIER SINGLE FACED (WITH ANCHORAGE)
STAGE 1A

REMOVE GUARD RAIL (INSTALLED IN STAGE 1A)
STAGE 3G

REMOVE CONCRETE BARRIER SLOPED END
STAGE 1A

STAGE 1A

END CONSTRUCTION
STA 1047+30.00'XSB'LT

REMOVE GUARDRAIL
STAGE 2D

1040'XSB'

IH 39 SB

1045'XSB'

1050'XSB'

END CONSTRUCTION
STA 1039+75.00'XSB' RT

STAGE 1B

MATCHLINE STA 1037+50'XNB'

1040'XNB'

1045'XNB'

1050'XNB'

STAGE 1A

IH 39 NB

END CONSTRUCTION
STA 1038+10.00'XNB' LT

SLOPE INTERCEPT (TYP.)

END CONSTRUCTION
STA 1043+30.00'XNB' RT

REMOVE CONCRETE BARRIER SINGLE FACED (WITH ANCHORAGE)
STAGE 1A

R/W

CTH AB

55'AB'

FREEWAY CT

MANSION CIR

POOL

TOWER

MH

POST

INL

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	REMOVAL PLAN - IH 39	SHEET

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021101_RM_IH39.DWG PLOT DATE : 7/21/2016 8:16 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

DETAILS LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP02	HMA PAVEMENT NEW CONSTRUCTION, 4 1/2-INCH
DR01	ASPHALTIC SURFACE DRIVEWAYS, 3-INCH
XXXX	SAWING ASPHALT

N

DUANE P &
CANDICE J SWALHEIM

36+30.00'AB'
17.00'LT

36+50.00'AB'
20.00'LT

36+00.00'AB'
15.00'LT

36+00.00'AB'
14.00'LT

36'AB'

37'AB'

38'AB'

39'AB'

40'AB'

41'AB'

BEGIN PROJECT
STA 36+00.00'AB'
MATCH EXISTING PAVEMENT

36+00.00'AB'
14.00'RT

36+30.00'AB'
17.00'RT

36+00.00'AB'
15.00'RT

36+50.00'AB'
20.00'RT

3%

5%

12'

12'

CTH AB

℄'AB'

2%

2%

AG01

AP02

AP02

AP02

AP02

SLOPE INTERCEPT (TYP.)

SLOPE INTERCEPT (TYP.)

41+39.54'AB'
77.43'LT

41+40.10'AB'
47.58'LT

XXXX

18'

STA. 41+10.06'AB', 47' LT

R30'

41+27.80'AB'
22.79'LT

41+10.06'AB'
17.00'LT

40+87.28'AB'
20.00'LT

DR01

PL

OHU

MATCH LINE STA. 41+55'AB'

FRONTIER
COMMUNICATIONS

ALLIANT
ENERGY

R/W (TYP.)

DOWNING 3094
CR MN LLC

DELINEATED WETLAND (TYP.)

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY:DANE	PLAN DETAILS: CTH AB	SHEET

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021201_PD_AB.DWG PLOT DATE : 7/21/2016 8:17 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

GERALD L & PAMELA JZ GERSTL

T. WESLEY & LOIS SKAAR

N

POND EDGE

PL

PL

TLE (TYP)

R/W (TYP)

SLOPE INTERCEPT (TYP.)

R/W (TYP)

DO NOT DISTURB ROCK WALL

DELINEATED WETLAND BOUNDARY

41+57.58'AB'
77.77'LT

STA. 41+88.20'AB', 47' LT

41+58.15'AB'
46.47'LT

R30'

41+67.29'AB'
25.46'LT

41+88.20'AB'
17.00'LT

DR01

42+06.38'AB'
17.00'LT

42+96.38'AB'
33.94'LT

42+96.38'AB'
28.00'LT

42+96.38'AB'
26.00'LT

BG03

43+21.38'AB'
31.33'LT

43+46.38'AB'
29.94'LT

43+46.38'AB'
26.00'LT

3.94'

BG02

AG01

AP02

4%

14'

12'

2%

42'AB'

43'AB'

CTH AB

44'AB'

45'AB'

46'AB'

47'AB'

R'AB'

MATCH LINE STA. 41+55'AB'

MATCH LINE STA. 47+60'AB'

3'

5'

FRONTIER COMMUNICATIONS

44+68.26'AB'
20.00'RT

45+87.36'AB'
17.00'RT

46+77.36'AB'
26.00'RT

46+77.36'AB'
28.00'RT

46+77.36'AB'
33.94'RT

47+02.36'AB'
31.33'RT

47+27.36'AB'
26.00'RT

47+29.62'AB'
29.94'RT

ALLIANT ENERGY

SLOPE INTERCEPT (TYP.)

DELINEATED WETLAND (TYP.)

ATC (345kV)

CAUTION

47+20.19'AB'
116.49'RT

SEE CONSTRUCTION DETAILS FOR DROP INLET AND 12" UNPERFORATED PIPE UNDERDRAIN

DOWNING 3094 CR MN LLC

R/W (TYP)

OH

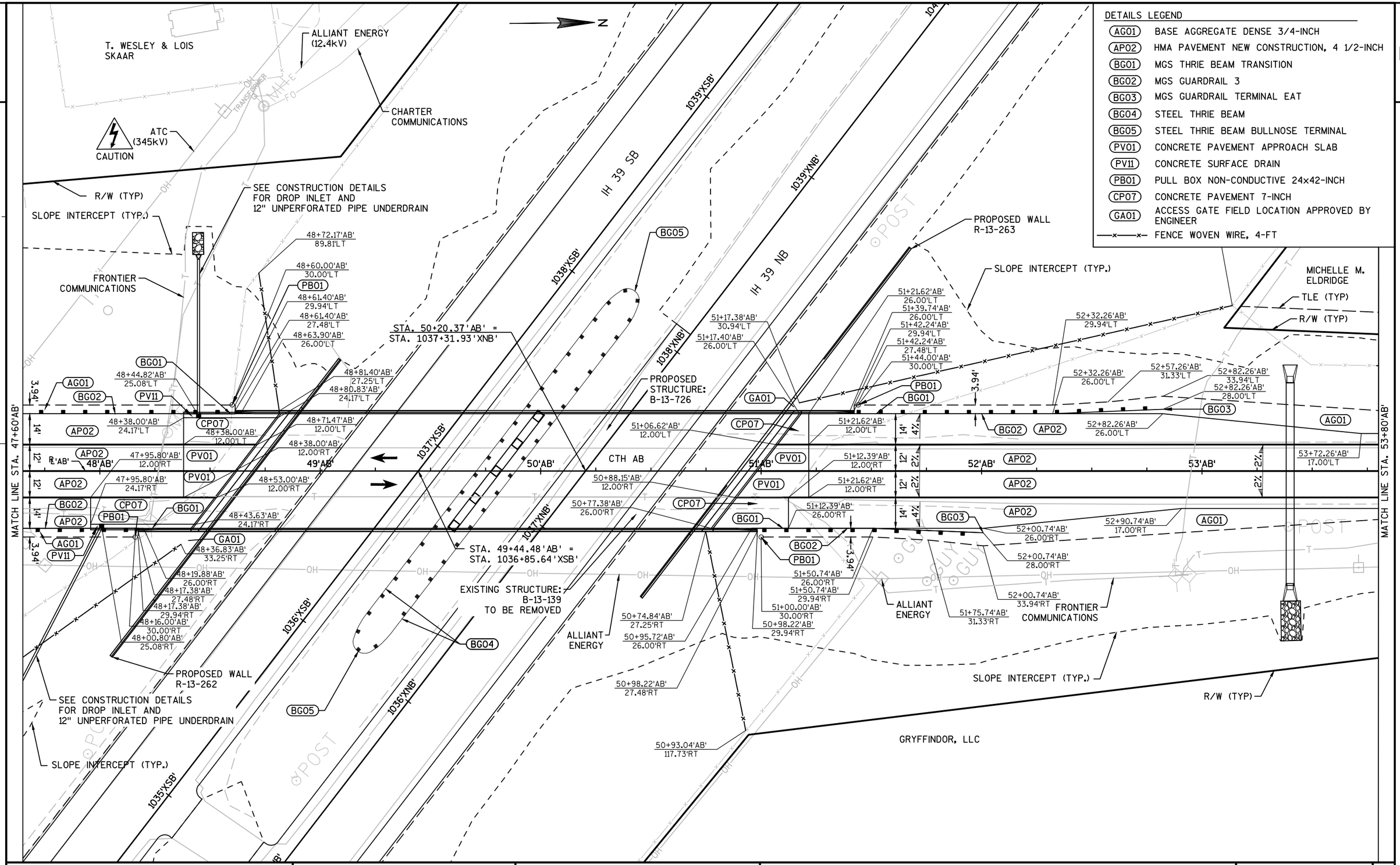
DETAILS LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP02	HMA PAVEMENT NEW CONSTRUCTION, 4 1/2-INCH
BG02	MGS GUARDRAIL 3
BG03	MGS GUARDRAIL TERMINAL EAT
DR01	ASPHALTIC SURFACE DRIVEWAYS, 3-INCH

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS: CTH AB	SHEET

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021201_PD_AB.DWG PLOT DATE : 7/21/2016 8:17 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42



PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS: CTH AB	SHEET 21

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021201_PD_AB.DWG PLOT DATE : 7/21/2016 8:17 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

DETAILS LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP01	HMA PAVEMENT NEW CONSTRUCTION, 3 1/2-INCH
AP02	HMA PAVEMENT NEW CONSTRUCTION, 4 1/2-INCH
DR02	CONCRETE PAVEMENT DRIVEWAY, 6-INCH
XXXX	SAWING ASPHALT
YYYY	SAWING CONCRETE

N

BEGIN CONSTRUCTION
STA 8+40.00'FW'

8+40.00'FW'
10.00'RT
8+40.00'FW'
13.00'RT
8+96.01'FW'
10.00'RT
9+11.86'FW'
11.07'RT
9+12.79'FW'
14.16'RT
9+15.78'FW'
24.39'RT
9+33.56'FW'
13.31'RT
9+32.83'FW'
16.24'RT
9+31.08'FW'
23.43'RT
9+17.22'FW'
45.53'RT
9+46.01'FW'
15.00'RT
9+31.98'FW'
44.60'RT
9+45.81'FW'
18.00'RT

8+40.00'FW'
10.00'LT
8+40.00'FW'
13.00'LT
8+61.58'FW'
10.00'LT
8+61.35'FW'
13.00'LT
8+71.32'FW'
36.83'LT
9+11.58'FW'
15.00'LT
9+11.49'FW'
18.00'LT
8+90.79'FW'
39.31'LT
8+88.44'FW'
55.20'LT

MICHELLE M.
ELDRIDGE

ROBERT D. BAILEY

FREEWAY COURT

STA 9+25'FW' - RT
SEE CONSTRUCTION DETAIL
"CONCRETE DRIVEWAY 6-INCH"

STA 9+18, LT
P.E. TO BE REMOVED

TLE (TYP.)
SLOPE INTERCEPT (TYP.)
R/W (TYP.)
TLE
56+08.15'AB'
65.86'LT
STA. 56+08'AB', 58' LT
STA. 9+46'FW', 55' RT

STA. 57+41'AB', 78' LT
STA. 9+12'FW', 75' LT
SLOPE INTERCEPT (TYP.)
TLE (TYP.)
58+60.00'AB'
15.00'LT
58+60.00'AB'
14.00'LT
R/W (TYP.)
57+40.91'AB'
59.52'LT
58+30.00'AB'
17.00'LT
57+41.01'AB'
21.00'LT
57+40.91'AB'
18.00'LT
57+56.01'AB'
20.00'LT
57+55.91'AB'
17.00'LT

CROSS SECTION MATCHLINE

MATCH LINE STA. 53+80'AB'

54+91.36'AB'
20.00'LT
56+08.00'AB'
21.00'LT
55+98.00'AB'
20.00'LT
55+98.15'AB'
17.00'LT
56+08.15'AB'
18.00'LT
58+10.00'AB'
20.00'LT

CROSS SECTION MATCHLINE STA 56+61.55'AB' = 9+82.00'FW'

54'AB' 55'AB' 56'AB' 57'AB' 58'AB' 59'AB'

CTH AB

MG&E
(GAS)

END PROJECT
STA 58+60.00'AB'
MATCH EXISTING PAVEMENT

STA. 56+61.55'AB' =
STA. 10+00'FW'
TYPE C INTERSECTION MODIFIED

ALLIANT
ENERGY

54+09.84'AB'
20.00'RT
58+60.00'AB'
14.00'RT
58+60.00'AB'
15.00'RT
58+10.00'AB'
20.00'RT
58+30.00'AB'
17.00'RT

FRONTIER
COMMUNICATIONS

R/W (TYP.)
SLOPE INTERCEPT (TYP.)
TLE (TYP.)
GRYFFINDOR, LLC

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS: CTH AB	SHEET 22

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021201_PD_AB.DWG PLOT DATE : 7/21/2016 8:18 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1" = 40'_XREF

DETAILS LEGEND

- FILL EXISTING CONCRETE RUMBLE STRIPS
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP03) HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- XXXX SAWING ASPHALT

N

R/W

SIGN

POST

IH 39 SB

1024'XSB' 1025'XSB' 1026'XSB' 1027'XSB' 1028'XSB' 1029'XSB'

BEGIN CONSTRUCTION
STA 1026+70.00'XNB'
MATCH EXISTING PAVEMENT

1027+70.00'XNB'
8.00'LT

1027+70.00'XNB'
0.00'

1024'XNB' 1025'XNB' 1026'XNB' 1027'XNB' 1028'XNB' 1029'XNB'

IH 39 NB

XXXX AP03 8"

26"

1026+70.00'XNB'
26.00'RT

XXXX AP03 8"

1"

AG01

POST

1026+70.00'XNB'
34.00'RT

1026+70.00'XNB'
35.00'RT

SLOPE INTERCEPT (TYP.)

CAUTION
(345kV)

MATCHLINE STA 1029+50'XNB'

R/W

OH OH OH OH OH OH OH OH OH OH

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 23

DETAILS LEGEND

- REMOVING ASPHALTIC SURFACE MILLING, 2.5-INCH
  HMA PAVEMENT NEW CONSTRUCTION, 2.5-INCH
- FILL EXISTING CONCRETE RUMBLE STRIPS
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP03) HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- (BG01) MGS THRIE BEAM TRANSITION
- (BG03) MGS GUARDRAIL TERMINAL EAT
- XXXX SAWING ASPHALT

R/W

DELINEATED WETLAND (TYP.)

BEGIN CONSTRUCTION
STA 1030+70.00'XSB'
MATCH EXISTING PAVEMENT

1030+70.00'XSB'
35.00'LT

1030+70.00'XSB'
34.00'LT

AG01

AP03

1030+70.00'XSB'
24.00'LT

1030+70.00'XSB'
0.00'

1030+70.00'XSB'
8.00'RT

1030'XSB' 1031'XSB' 1032'XSB' 1033'XSB' 1034'XSB' 1035'XSB'

IH 39 SB

MATCHLINE STA 1029+50'XNB'

MAINTAIN EXISTING INLET

XXXX

22'

MATCHLINE STA 1035+50'XNB'

1030'XNB' 1031'XNB' 1032'XNB' 1033'XNB' 1034'XNB' 1035'XNB'

IH 39 NB

INSTALL BEAMGUARD STAGE 1A
REMOVE BEAMGUARD STAGE 3G

BG03

BG01

1034+14.98'XNB'
34.00'RT

1034+57.50'XNB'
34.00'RT

1033+64.98'XNB'
36.00'RT

1032+59.98'XNB'
35.00'RT

1033+64.98'XNB'
42.00'RT

1033+89.98'XNB'
39.33'RT

1034+55.00'XNB'
38.00'RT

1034+85.00'XNB'
35.00'RT

1034+14.98'XNB'
38.00'RT

SLOPE INTERCEPT (TYP.)

R/W

PROJECT NO:1007-10-81	HWY:IH 39	COUNTY:DANE	PLAN DETAILS - IH 39	SHEET 24

DETAILS LEGEND

- REMOVING ASPHALTIC SURFACE MILLING, 2.5-INCH
  HMA PAVEMENT NEW CONSTRUCTION, 2.5-INCH
- FILL EXISTING CONCRETE RUMBLE STRIPS
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP03) HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- (BG01) MGS THRIE BEAM TRANSITION
- (BG03) MGS GUARDRAIL TERMINAL EAT
- (BG04) STEEL THRIE BEAM
- (BG05) STEEL THRIE BEAM BULLNOSE TERMINAL
- XXXX SAWING ASPHALT

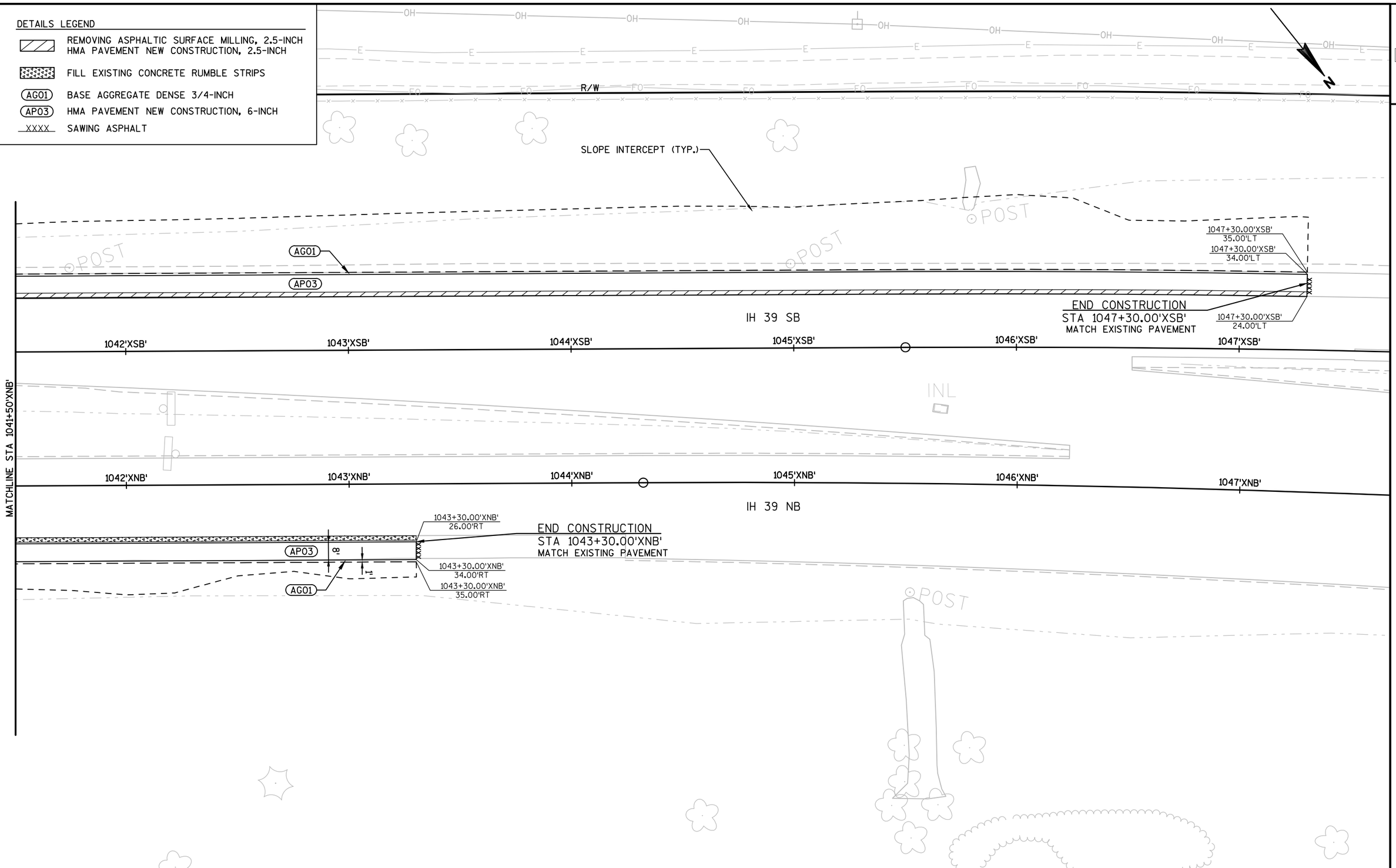
48'AB'
49'AB'
50'AB'
51'AB'
52'AB'
CTH AB
R-13-262
STRUCTURE B-13-726
EXISTING STRUCTURE B-13-139 TO BE REMOVED
STA 49+44.48'AB' = STA 1036+85.64'XSB'
STA 50+20.37'AB' = STA 1037+31.93'XNB'
IH 39 SB
IH 39 NB
INSTALL BEAM GUARD STAGE 1A
REMOVE BEAM GUARD STAGE 3G
ALLIANT ENERGY
R-13-263
SLOPE INTERCEPT (TYP.)
R/W
MATCHLINE STA 1035+50'XNB'
MATCHLINE STA 1041+50'XNB'
1036'XSB' 1037'XSB' 1038'XSB' 1039'XSB' 1040'XSB' 1041'XSB'
1036'XNB' 1037'XNB' 1038'XNB' 1039'XNB' 1040'XNB' 1041'XNB'
1039+10.00'XSB' 35.00'LT
1039+80.02'XSB' 38.00'LT
1040+05.02'XSB' 39.33'LT
1039+40.00'XSB' 38.00'LT
1040+30.02'XSB' 42.00'LT
1041+35.02'XSB' 35.00'LT
1040+30.02'XSB' 36.00'LT
1039+80.02'XSB' 34.00'LT
1039+37.50'XSB' 34.00'LT
1039+75.00'XSB' 0.00'
1039+75.00'XSB' 8.00'RT
1036+19.69'XSB' 20.90'RT
1037+94.69'XSB' 20.90'RT
1036+19.69'XSB' 35.10'RT
1037+94.69'XSB' 35.11'RT
1038+10.00'XNB' 8.00'LT
1038+10.00'XNB' 0.00'
POST 5
8'
26'
1'

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 25

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\021201_PD_IH39.DWG PLOT DATE : 7/21/2016 8:19 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

DETAILS LEGEND

- REMOVING ASPHALTIC SURFACE MILLING, 2.5-INCH HMA PAVEMENT NEW CONSTRUCTION, 2.5-INCH
- FILL EXISTING CONCRETE RUMBLE STRIPS
- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP03 HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- XXXX SAWING ASPHALT



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN DETAILS - IH 39	SHEET 26

LEGEND

- PERMITTED WETLAND IMPACTS
- EROSION MAT URBAN CLASS I, TYPE A
- SOIL STABILIZER, TYPE A
- SILT FENCE
- EROSION BALES
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- SURFACE WATER FLOW
- RIPRAP, MEDIUM
- COMPOST TUBE
- CULVERT PIPE CHECKS

GERALD L & PAMELA JZ GERSTL

T WESLEY & LOIS SKAAR

N

RIPRAP MEDIUM WITH GEOTEXTILE FABRIC TYPE HR W=5' L=10'

GERALD L & PAMELA JZ GERSTL

0.24 ACRES OF WETLAND IMPACTS (D28)

SILT FENCE, EROSION BALES AND SAFETY FENCE TO BE PLACED INSIDE R/W FOR THIS PROPERTY. (CONSERVANCY EASEMENT TO BE PROTECTED.)

0.05 ACRES OF WETLAND IMPACTS (D28A)

SLOPE INTERCEPT (TYP.)

R/W

TLE

CTH AB

35'AB'

40'AB'

45'AB'

R/W

0.02 ACRES OF WETLAND IMPACTS (D29A)

DELINEATED WETLANDS (TYP.)

0.24 ACRES OF WETLAND IMPACTS (D29)

RIPRAP MEDIUM WITH GEOTEXTILE FABRIC TYPE HR W=5' L=10'

1035'XSB'

1035'XNB'

BEGIN CONSTRUCTION
STA. 36+00.00'AB'

DOWNING 3094
CR MN LLC

IH 39 SB

IH 39 NB

R/W

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	EROSION CONTROL: CTH AB	SHEET 27

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\022001_EC_AB.DWG PLOT DATE : 9/13/2016 3:11 PM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- PERMITTED WETLAND IMPACTS
- EROSION MAT URBAN CLASS I, TYPE A
- SOIL STABILIZER, TYPE A
- SILT FENCE
- EROSION BALES
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- SURFACE WATER FLOW
- RIPRAP, MEDIUM
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS

N

IH 39 SB

IH 39 NB

50'AB'

55'AB'

CTH AB

10 FT W

8 FT W

FREEWAY CT

FJEISTAD LN

R/W

TLE

MULCH TO BE APPLIED IN AREAS NOT SHOWING EROSION MAT

RIPRAP MEDIUM WITH GEOTEXTILE FABRIC TYPE HR W=12' L=12'

ROBERT D BAILEY

SEPTIC

SEPV

END CONSTRUCTION
STA. 58+60'AB'

SLOPE INTERCEPT (TYP.)

RIPRAP MEDIUM WITH GEOTEXTILE FABRIC TYPE HR W=9' L=18'

MULCH TO BE APPLIED IN AREAS NOT SHOWING EROSION MAT

GRYFFINDOR LLC

OH

GUY

MP

POST

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	EROSION CONTROL: CTH AB	SHEET 28

LEGEND

- PERMITTED WETLAND IMPACTS
- EROSION MAT URBAN CLASS I, TYPE A
- SOIL STABILIZER, TYPE A
- SILT FENCE
- EROSION BALES
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- SURFACE WATER FLOW
- RIPRAP, MEDIUM

DELINEATED WETLAND (TYP.)

SLOPE INTERCEPT (TYP.)

R/W

CTH AB

IH 39 SB

1030'XSB'

1035'XSB'

1025'XNB'

1030'XNB'

1035'XNB'

IH 39 NB

MATCHLINE STA 1038+00'XNB'

GRYFFINDOR LLC

MULCH TO BE APPLIED IN AREAS NOT SHOWING EMAT OR SOIL STABILIZER

MATCHLINE STA 1038+00'XNB'

IH 39 SB

1040'XSB'

1045'XSB'

1050'XSB'

PC: 1044+32.18'XNB

FC: 1045+50.19'XSB'

1040'XNB'

1045'XNB'

1050'XNB'

IH 39 NB

IH 39/90

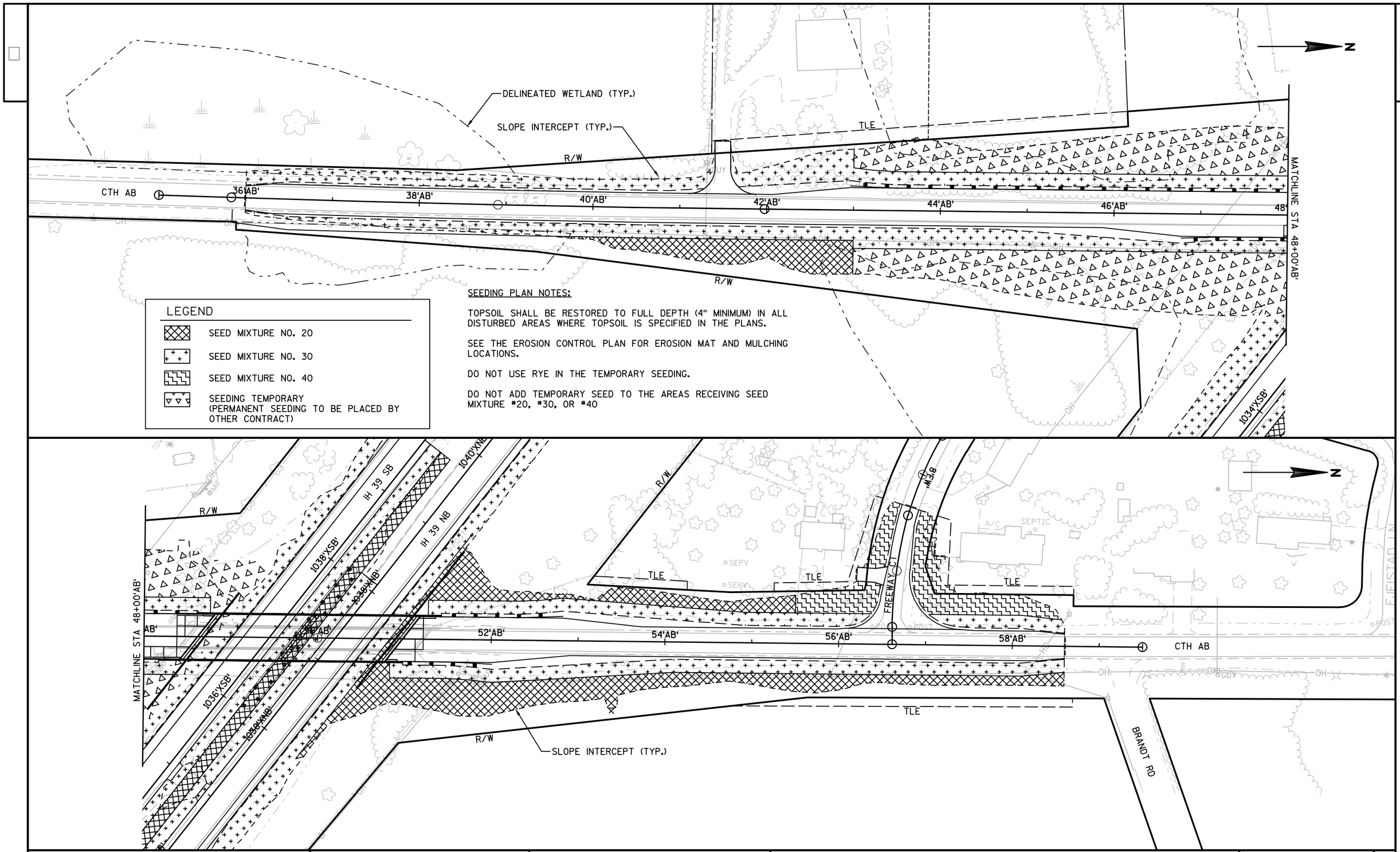
MULCH TO BE APPLIED IN AREAS NOT SHOWING EMAT OR SOIL STABILIZER

SLOPE INTERCEPT (TYP.)

CTH AB

R/W

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	EROSION CONTROL - IH 39	SHEET 29



PROJECT NO: 1007-07-81	HWY: IH 39	COUNTY: DANE	EROSION CONTROL - SEEDING PLAN	SHEET 30

SEEDING PLAN NOTES:

TOPSOIL SHALL BE RESTORED TO FULL DEPTH (4" MINIMUM) IN ALL DISTURBED AREAS WHERE TOPSOIL IS SPECIFIED IN THE PLANS.

SEE THE EROSION CONTROL PLAN FOR EROSION MAT AND MULCHING LOCATIONS.

DO NOT USE RYE IN THE TEMPORARY SEEDING.
DO NOT ADD TEMPORARY SEED TO THE AREAS RECEIVING SEED MIXTURE #20 OR #30.

DELINEATED WETLAND (TYP.)

SLOPE INTERCEPT (TYP.)

R/W

CTH AB

48'AB'

IH 39 SB

1024'XSB' 1026'XSB' 1028'XSB' 1030'XSB' 1032'XSB' 1034'XSB' 1036'XSB' 1038

1024'XNB' 1026'XNB' 1028'XNB' 1030'XNB' 1032'XNB' 1034'XNB' 1036'XNB' 1038

IH 39 NB

MATCHLINE STA 1038+00'XNB'

LEGEND

- SEED MIXTURE NO. 20
- SEED MIXTURE NO. 30
- SEEDING TEMPORARY (PERMANENT SEEDING TO BE PLACED BY OTHER CONTRACT)

MATCHLINE STA 1038+00'XNB'

XSB' IH 39 SB 1040'XSB' 1042'XSB' 1044'XSB' 1046'XSB' 1048'XSB' 1050'XSB' 1052'XSB'

XNB' 1040'XNB' 1042'XNB' 1044'XNB' 1046'XNB' 1048'XNB' 1050'XNB' 1052'XNB'

IH 39 NB

SLOPE INTERCEPT (TYP.)

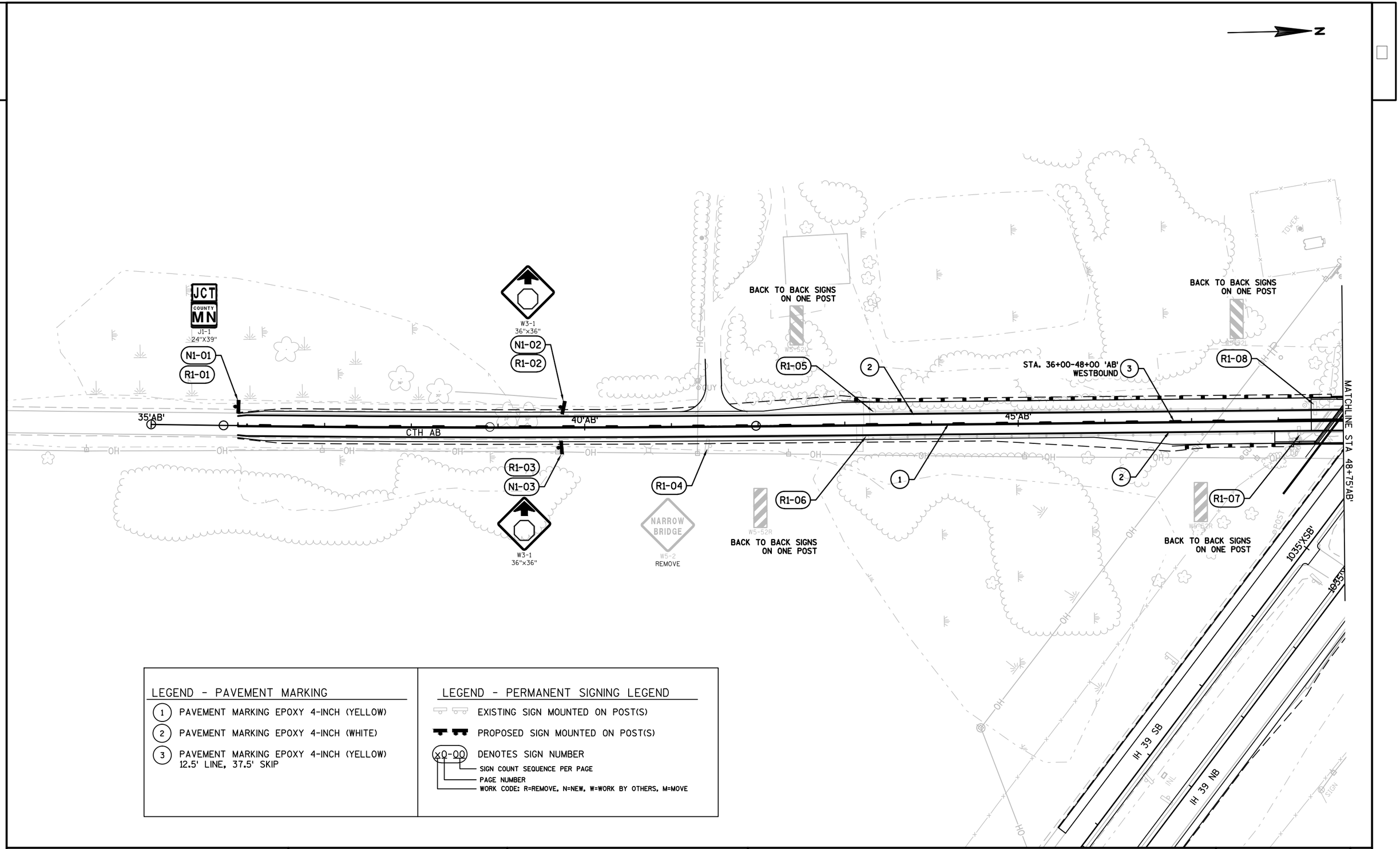
52'AB'

CTH AB

R/W

PROJECT NO:1007-07-81	HWY: IH 39	COUNTY: DANE	EROSION CONTROL - SEEDING PLAN	SHEET 31

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\022001_EC_AB_SEEDING.DWG PLOT DATE : 7/21/2016 8:22 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



LEGEND - PAVEMENT MARKING

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW) 12.5' LINE, 37.5' SKIP

LEGEND - PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- x0-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: R=REMOVE, N=NEW, W=WORK BY OTHERS, M=MOVE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 32

N

IH 39 SB

IH 39 NB

1040'XSB'

1040'XNB'

FREEWAY CT

FJEISTAD LN

EXIT ONLY

FREEWAY CT

STOP
R1-1
MOVE BY OTHERS*
W2-02

SPEED LIMIT 25
R2-1
MOVE BY OTHERS*
W2-03

WEIGHT LIMIT 8 TONS
R12-1
MOVE BY OTHERS*
W2-04

NARROW BRIDGE
REMOVE
R2-03

W5-52R
REMOVE
R2-02

MATCHLINE STA 48+75'AB'

CTH AB

55'AB'

2

1

2

4 STA. 55+48-58+50'AB' LT

R2-01

W2-01

WELCOME TO THE TOWN OF COTTAGE GROVE
MOVE BY OTHERS**

W5-52L
REMOVE

MATCHLINE STA 48+75'AB'

LEGEND - PAVEMENT MARKING

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
4. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE, 9' SKIP

LEGEND - PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (x0-00) DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: R=REMOVE, N=NEW, W=WORK BY OTHERS, M=MOVE

* TOWN OF BLOOMING GROVE
CORY BUSKE, PUBLIC WORKS SUPERVISOR
608-233-1104
pw@bimgrove.com

** TOWN OF COTTAGE GROVE
JEFF SMITH, PUBLIC WORKS
608-839-4767
publicworks@towncg.net

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 33

LEGEND - PAVEMENT MARKING

(1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

(2) PAVEMENT MARKING EPOXY 4-INCH (WHITE)

LEGEND - PERMANENT SIGNING LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(xO-OO) DENOTES SIGN NUMBER

- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: R=REMOVE, N=NEW, W=WORK BY OTHERS, M=MOVE

511 TRAVEL INFO CALL 511

D12-5
TO_REMAIN

STA 1031+65"NB"
MILE MARKER SIGNS TO BE REMOVED AND STORED DURING CONSTRUCTION. MOVE BACK TO SAME LOCATION AT END OF PROJECT.

WEST 90 90 MILE 144 .8

D10-5A
MOVE

M3-01

EAST 90 39 MILE 144 .8

D10-5A
MOVE

M3-02

BEGIN MARKING
STA 1030+70.00'XSB'

BEGIN MARKING
STA 1026+70.00'XNB'

1025'XSB' IH 39 SB 1030'XSB' 1035'XSB'

1025'XNB' IH 39 NB 1030'XNB' 1035'XNB'

45'AB'

CTH AB

50'AB'

STA 1037+11"SB"
HWY AB SIGN TO BE REMOVED AND STORED DURING CONSTRUCTION. MOVE TO STA 1037+20"SB" AT END OF PROJECT.

Hwy AB
M1-94
MOVE

M3-06

R3-01

MATCHLINE STA 1037+50'XNB'

R3-4
MOVE

M3-03

R3-4
MOVE

M3-04

STA 1034+70"NB"
R3-4 SIGNS TO BE REMOVED AND STORED DURING CONSTRUCTION. MOVE BACK TO SAME LOCATION AT END OF PROJECT.

Hwy AB
M1-94
MOVE

M3-05

STA 1037+10"NB"
HWY AB SIGN TO BE REMOVED AND STORED DURING CONSTRUCTION. MOVE TO STA 1037+00"NB" AT END OF PROJECT.

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 34

24 HR TRUCK PARKING AVAILABLE IN WEIGH STA

E5-65
TO_REMAIN

STA 1042+25"NB"
MILE MARKER SIGNS TO BE REMOVED AND STORED DURING CONSTRUCTION. MOVE BACK TO SAME LOCATION AT END OF PROJECT.

WEST 90 MILE 144 .6
D10-5A MOVE
M4-01

EAST 90 MILE 144 .6
D10-5A MOVE
M4-02

LEGEND - PAVEMENT MARKING

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)

LEGEND - PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- x0-00 DENOTES SIGN NUMBER
  - SIGN COUNT SEQUENCE PER PAGE
  - PAGE NUMBER
  - WORK CODE: R=REMOVE, N=NEW, W=WORK BY OTHERS, M=MOVE

N

MATCHLINE STA 1027+50'XNB'

IH 39 SB

1040'XSB'

1045'XSB'

1050'XSB'

END MARKING
STA 1047+30.00'XSB'

IH 39 NB

1040'XNB'

1045'XNB'

1050'XNB'

END MARKING
STA 1043+30.00'XNB'

CTH AB

55'AB'

FREEWAY CT

MANSION CIR

TOWER

POST

GUY

SEPW

POOL

OH

MH

INL

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 35

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\023201_PS&PM_IH39.DWG
PLOT DATE : 7/21/2016 8:23 AM
PLOT BY : ZACH FREEMAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE

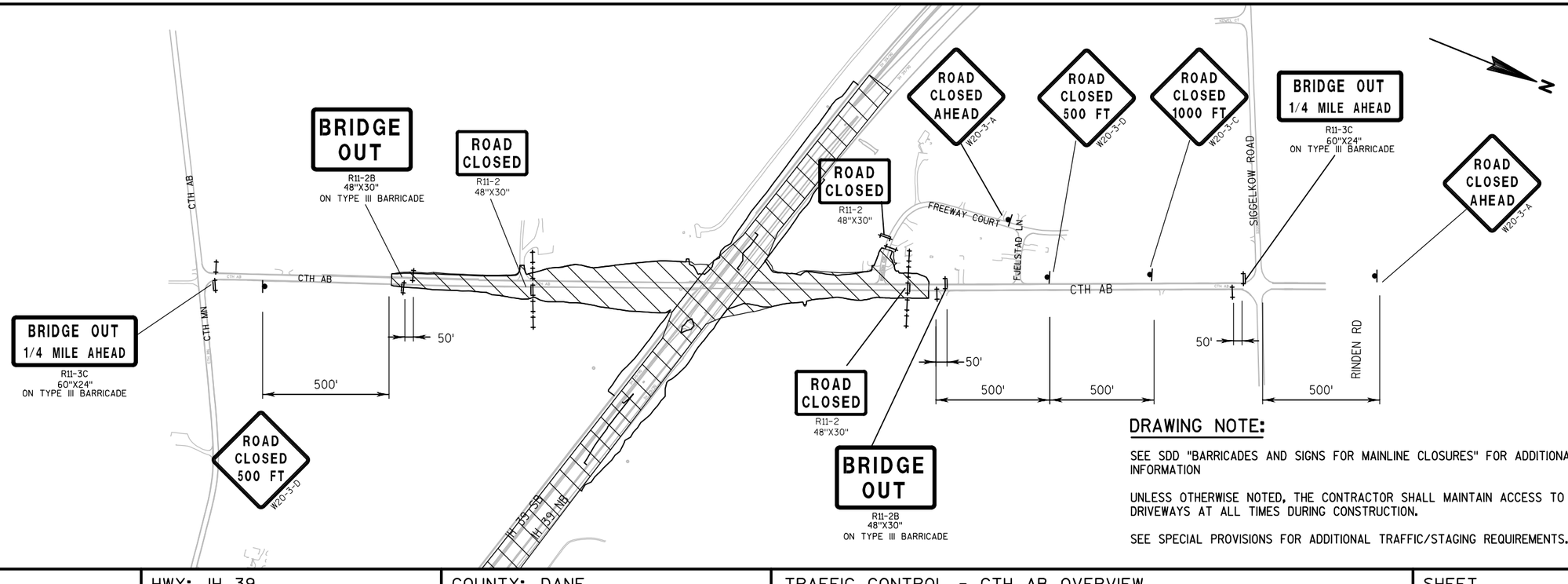
WORK SPACE

TEMPORARY PAVEMENT

16"x16" SIGN FLAGS, TEMP. (INCIDENTAL TO SIGN ITEM)

GENERAL NOTES: TRAFFIC CONTROL

1. THE FOLLOWING NOTES ARE APPLICABLE TO ALL STAGES. SEE THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL AND CONSTRUCTION STAGING REQUIREMENTS.
2. NORTH BOUND AND SOUTH BOUND, PORTABLE CHANGEABLE MESSAGES SIGNS (PCMS), ON IH 39, SHALL BE LOCATED BY WISDOT SOUTHWEST REGION TRAFFIC SECTION.
3. FOR APPLICATION OF REGULATORY OR ADVISORY SPEED LIMIT SIGNS, CONTACT RICH CANNON, I-39/90 TRAFFIC MANAGEMENT ENGINEER, AT (608) 884-1160.
4. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
5. ALL "WO" OR "W" WARNING SIGNS, SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.
6. ALL DRUMS IN TAPERS SHALL HAVE A TRAFFIC CONTROL WARNING LIGHTS TYPE C, (STEADY BURN).
7. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
8. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.
9. ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION. DRUMS ADJACENT TO GUARD RAIL SHOULD BE STORED BEHIND THE GUARD RAIL IN LOCATIONS WHERE PRACTICAL.
10. 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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.
11. SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
12. DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF THE BARRIER ADJACENT TO TRAFFIC. STATION/OFFSET CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE CENTER OF THE BARRIER.
13. ALWAYS PROVIDE A MINIMUM OF 2' CLEAR FROM EDGE OF TRAVEL LANE TO THE TOE OF THE TEMPORARY PRECAST CONCRETE BARRIER.
14. WITHIN 2 FEET OF TRAVEL LANE, EXISTING SHOULDER SHALL BE REPLACED WITH NEW PAVEMENTS IN THE SAME NIGHT. NO AGGREGATE SHOULDERS SHALL BE PERMITTED ADJACENT TO TRAVEL LANES.



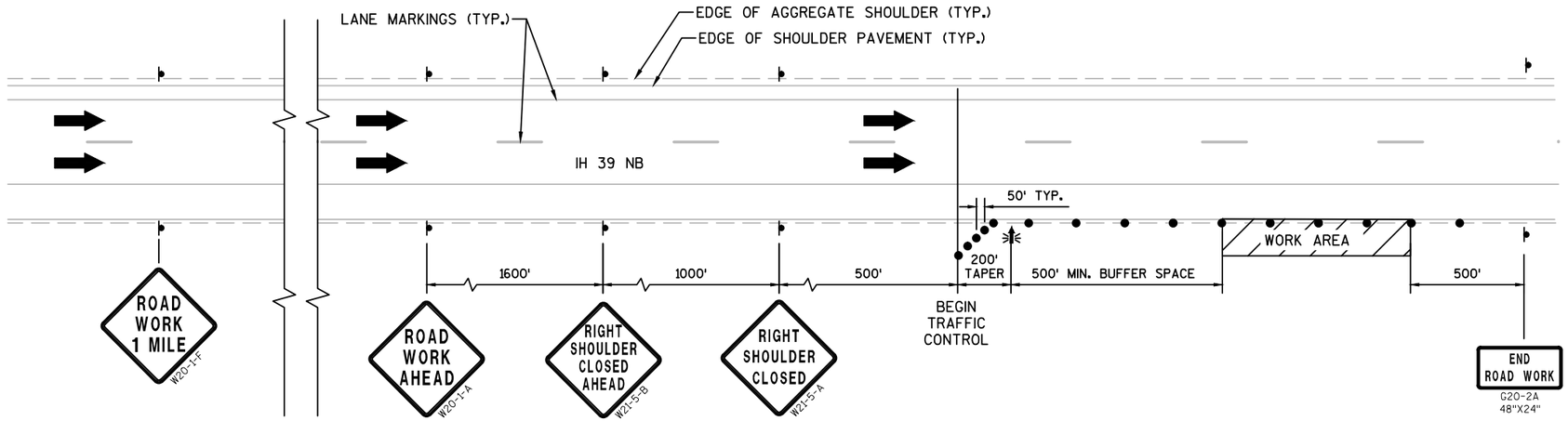
DRAWING NOTE:

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL INFORMATION

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

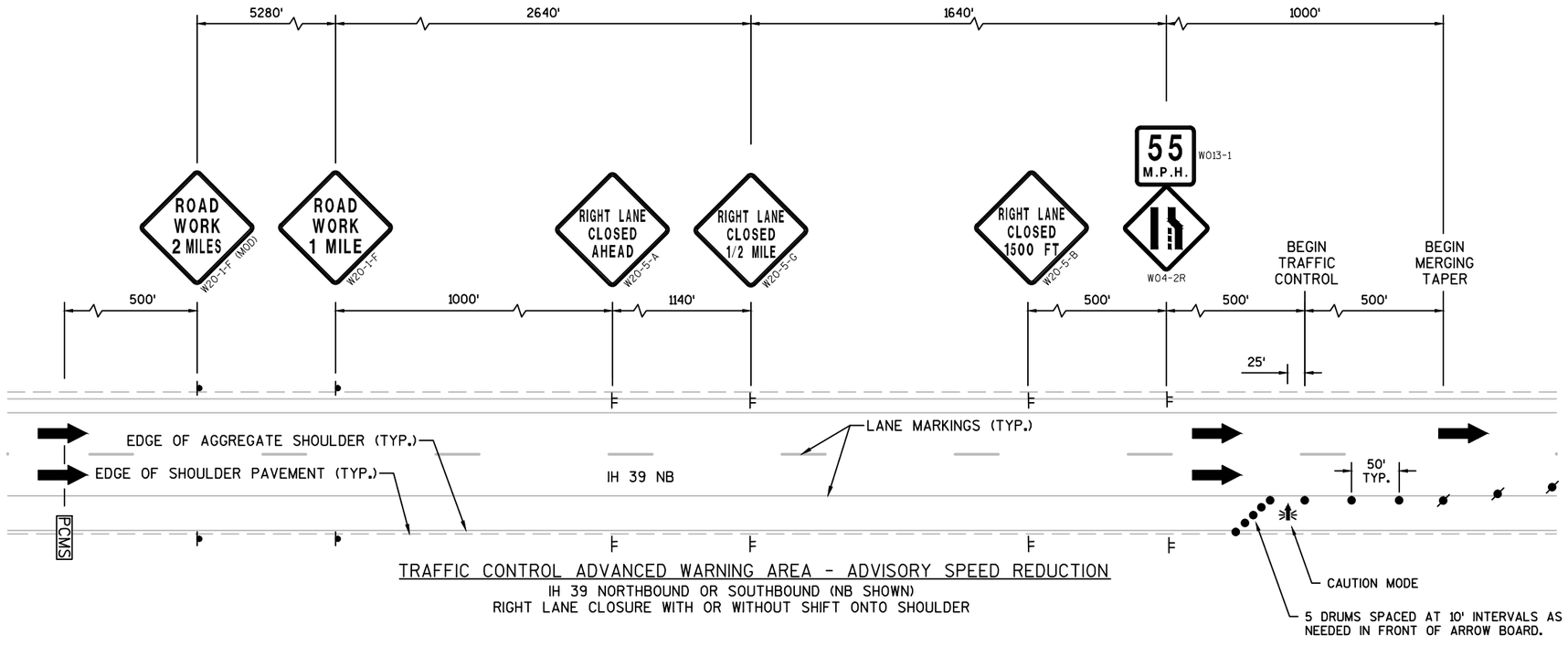
SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - CTH AB OVERVIEW	SHEET 36	E



TRAFFIC CONTROL ADVANCED WARNING AREA - SHOULDER CLOSURE

IH 39 NORTHBOUND OR SOUTHBOUND (NB SHOWN)



TRAFFIC CONTROL ADVANCED WARNING AREA - ADVISORY SPEED REDUCTION

IH 39 NORTHBOUND OR SOUTHBOUND (NB SHOWN)

RIGHT LANE CLOSURE WITH OR WITHOUT SHIFT ONTO SHOULDER

DRAWING NOTES:

SPACING AND LOCATIONS OF DEVICES IN THE FIELD SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

COORDINATE ADVANCED WARNING SIGNS WITH OTHER AREA WISDOT HIGHWAY CONSTRUCTION PROJECTS IF NEEDED.

THE USE OF ADVISORY SPEED LIMIT SIGNS WITH THIS CONSTRUCTION PROJECT WAS DETERMINED BY WISDOT. IF NECESSARY, WISDOT MAY REQUIRE THE ALTERNATE USE OF REGULATORY REDUCED POSTED SPEED LIMIT SIGNS TO BE USED IN PLACE OF THE ADVISORY SPEED LIMIT SIGNS.

FOR APPLICATION OF REGULATORY OR ADVISORY SPEED LIMIT SIGNS, CONTACT RICH CANNON, I-39/90 TRAFFIC MANAGEMENT ENGINEER, AT (608) 844-1160.

RIGHT LANE CLOSURE SHOWN. MIRROR LAYOUT AND SIGN MESSAGES FOR LEFT LANE CLOSURE.

NORTHBOUND AND SOUTHBOUND, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS), ON IH 39, SHALL BE LOCATED BY WISDOT SOUTHWEST REGION TRAFFIC SECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK AREA

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL DETAIL - ADVANCED WARNING AREA	SHEET 37

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK VEHICLE
- PCMS — PCMS
- WORK ZONE

TRUCKS EXITING RIGHT

DO NOT FOLLOW TRUCKS

PORTABLE MESSAGE BOARD SIGN MESSAGES SHOULD READ:

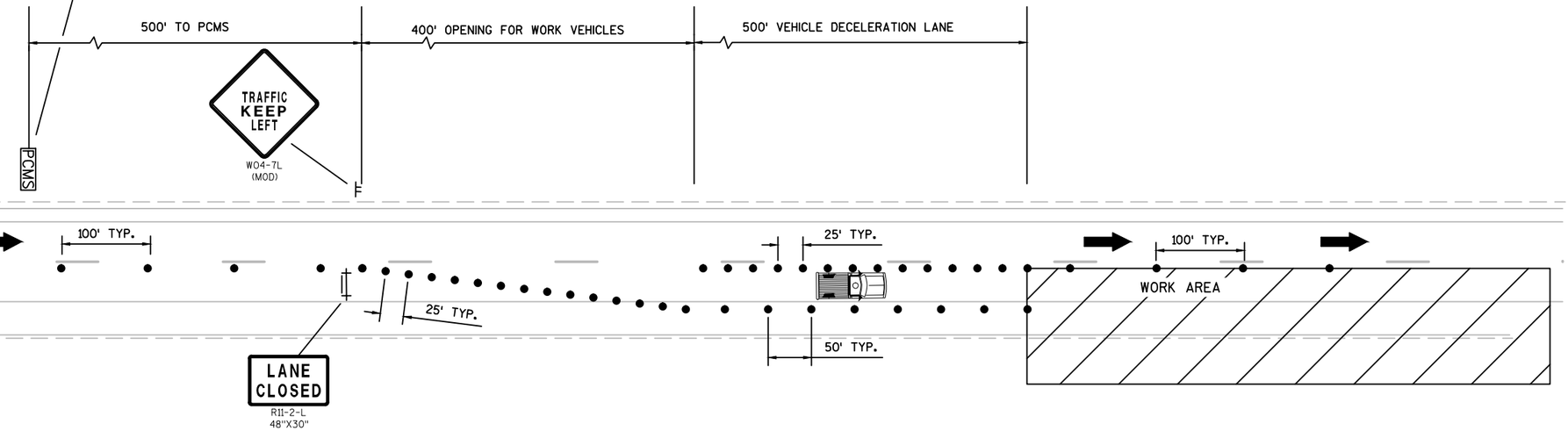
DRAWING NOTES:

SPACING AND LOCATIONS OF DEVICES IN THE FIELD SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

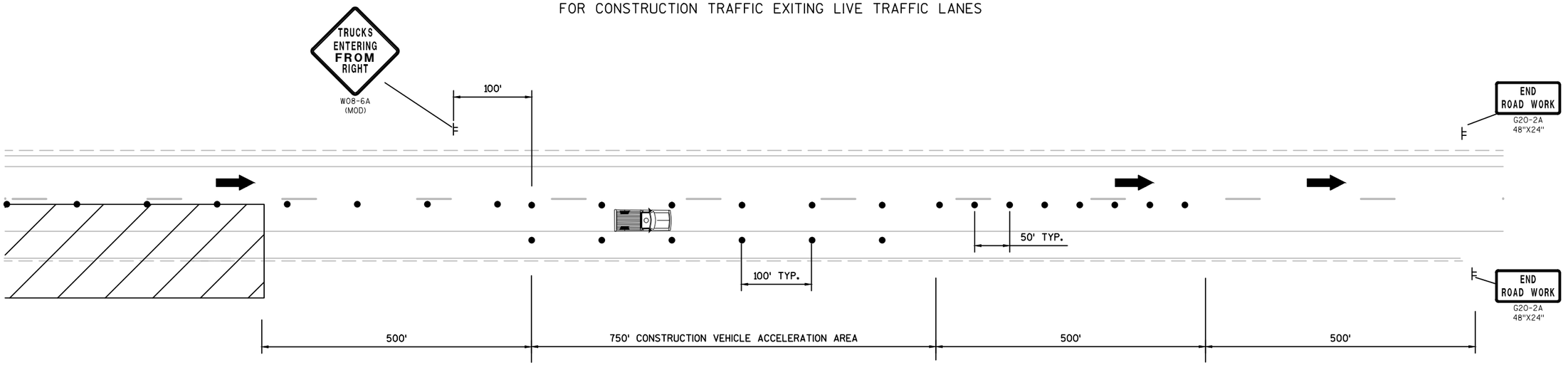
RIGHT LANE CLOSURE SHOWN. MIRROR LAYOUT AND SIGN MESSAGES FOR LEFT LANE CLOSURE.

ALL SIGNS ARE 48"X48" UNLESS NOTED.

SEE OTHER TRAFFIC CONTROL DETAILS, PLANS AND STANDARD DETAIL DRAWINGS FOR LANE CLOSURE DETIALS.



FOR CONSTRUCTION TRAFFIC EXITING LIVE TRAFFIC LANES



FOR CONSTRUCTION TRAFFIC RE-ENTERING LIVE TRAFFIC LANES

TRAFFIC CONTROL DETAIL FOR CONSTRUCTION ACCESS AT LANE CLOSURES

NIGHT USE ONLY

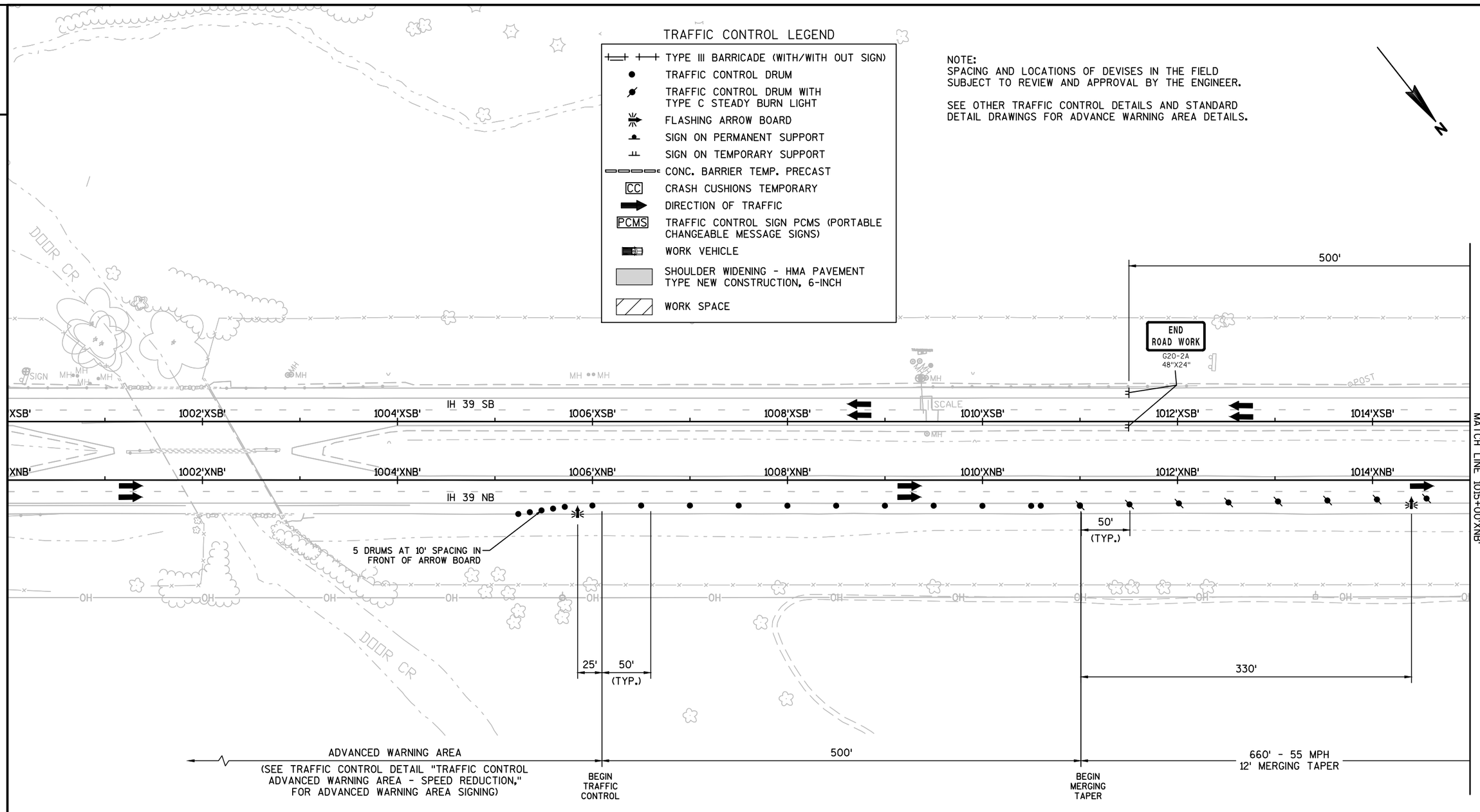
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL- CONSTRUCTION ACCESS AT LANE CLOSURES	SHEET 38

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE NEW CONSTRUCTION, 6-INCH
- WORK SPACE

NOTE:
SPACING AND LOCATIONS OF DEVISES IN THE FIELD SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

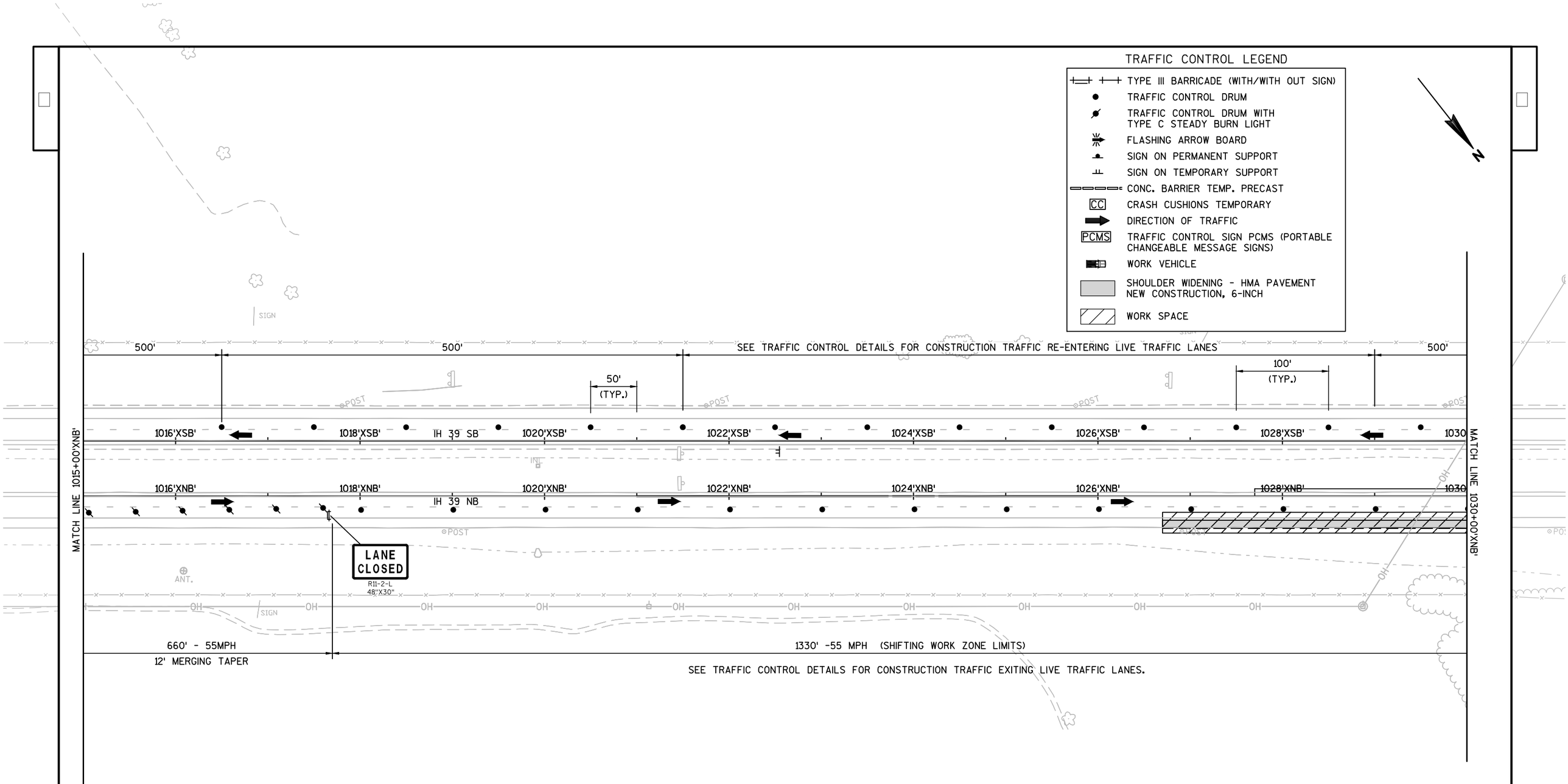
SEE OTHER TRAFFIC CONTROL DETAILS AND STANDARD DETAIL DRAWINGS FOR ADVANCE WARNING AREA DETAILS.



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A NIGHTTIME HOURS	SHEET 39

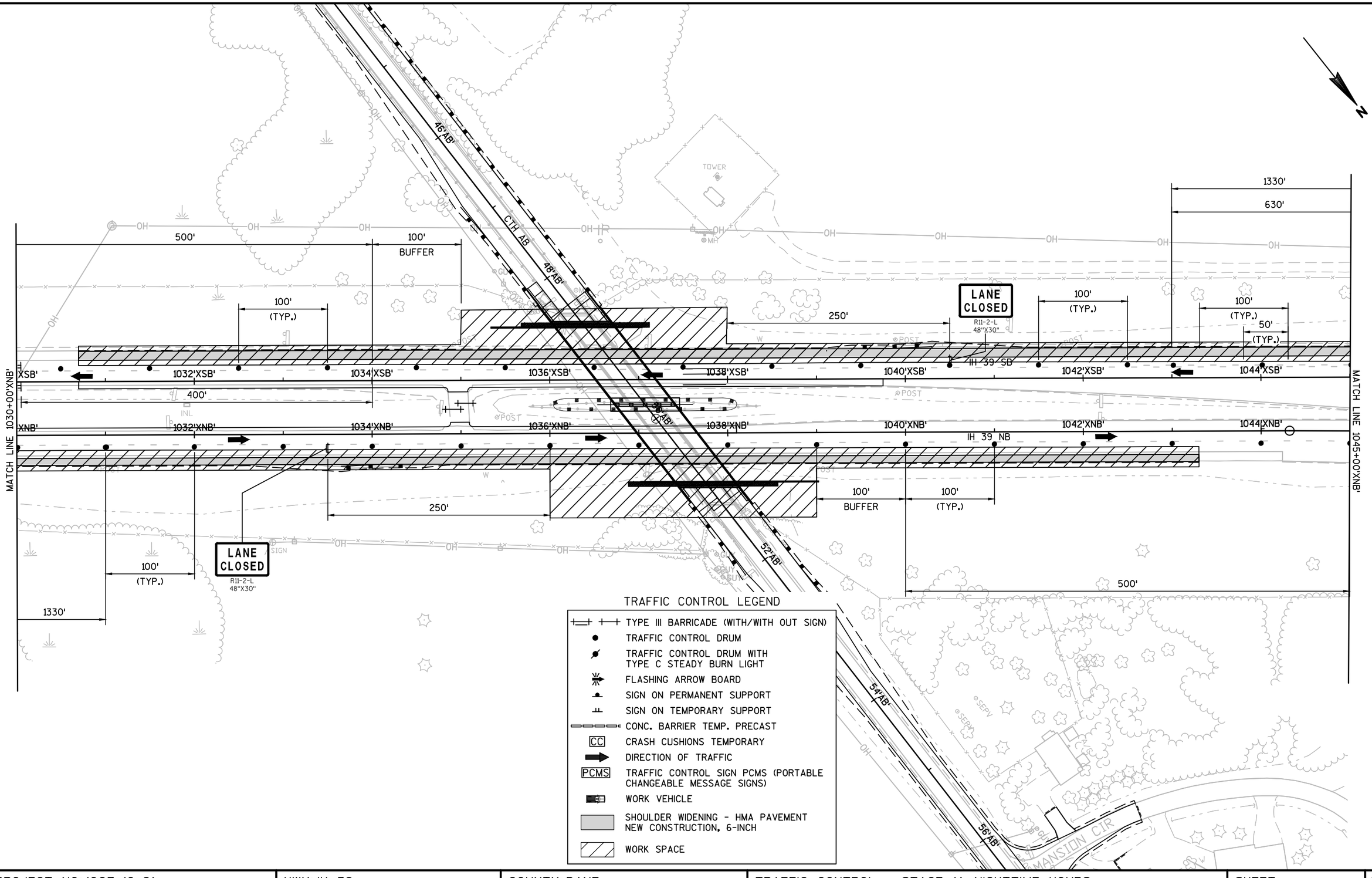
TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

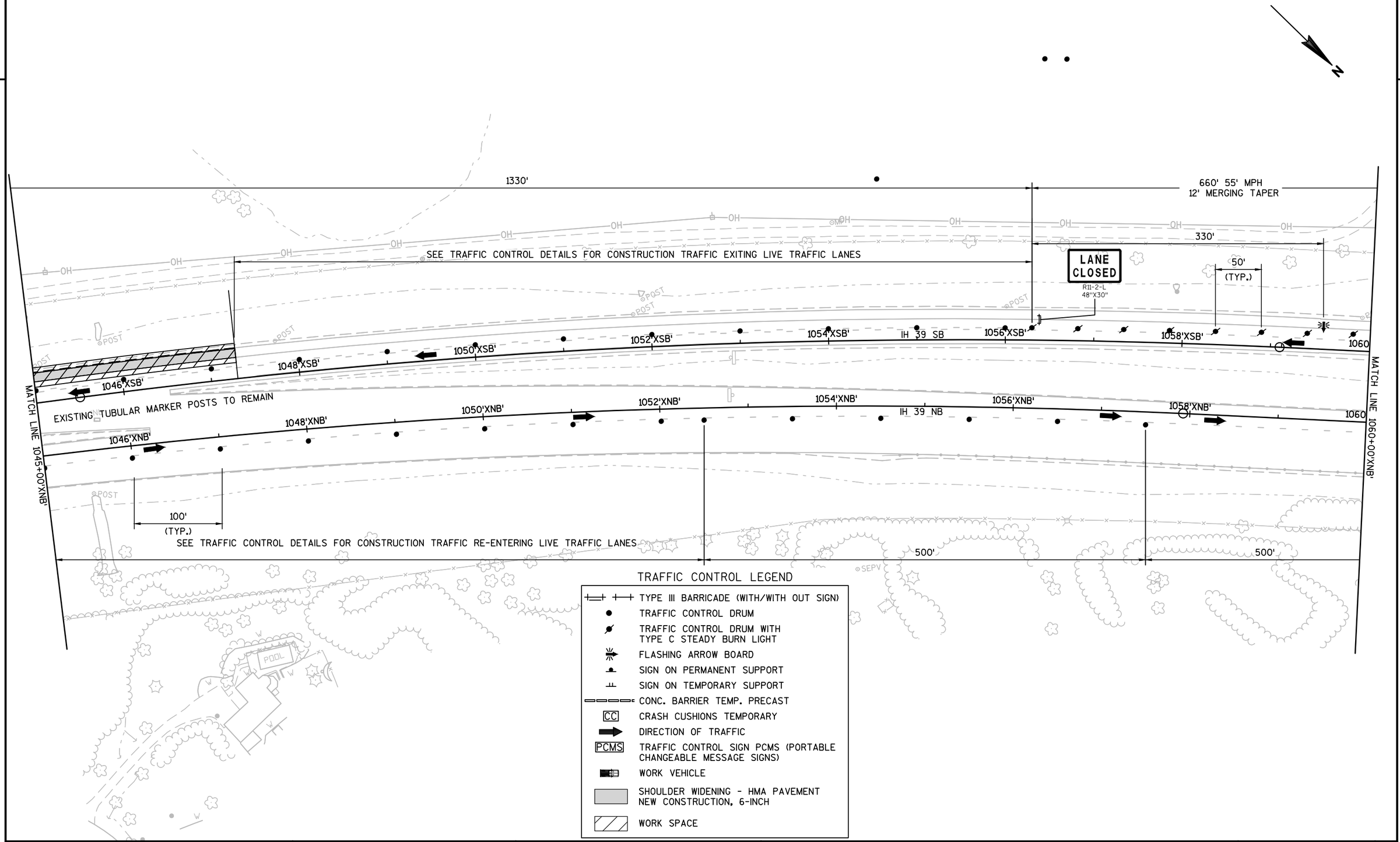


PROJECT NO: 1007-10-81 FRAME 2	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A NIGHTTIME HOURS	SHEET 40

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON EXISTING INSIDE LANE).DWG
LAYOUT NAME - 0250 (02)
PLOT DATE : 7/21/2016 8:25 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A NIGHTTIME HOURS	SHEET 41



TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A NIGHTTIME HOURS	SHEET 42

660' - 55 MPH
12' MERGING TAPER

BEGIN MERGING TAPER

500'

BEGIN TRAFFIC CONTROL

ADVANCED WARNING AREA
(SEE TRAFFIC CONTROL DETAIL "TRAFFIC CONTROL ADVANCED WARNING AREA - SPEED REDUCTION," FOR ADVANCED WARNING AREA SIGNING)

50' (TYP.)

50' (TYP.)

25'

5 DRUMS AT 10' SPACING IN FRONT OF ARROW BOARD

XSB' 1062'XSB' 1064'XSB' 1066'XSB' IH 39 SB 1068'XSB' 1070'XSB' 1072'XSB' 1074'XSB'

XNB' 1062'XNB' 1064'XNB' 1066'XNB' 1068'XNB' 1070'XNB' 1072'XNB' 1074'XNB'

IH 39 NB

MATCH LINE 1060+00'XNB'

END ROAD WORK
G20-2A-
48"X24"

500'

SIGGELKOW RD

POOL

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A NIGHTTIME HOURS	SHEET 43

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST STAGES 2C, 2D, 3A
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

N

500'

END ROAD WORK
G20-2A
48"X24"

MATCH LINE 1015+00'XNB'

XSB' 1002'XSB' 1004'XSB' 1006'XSB' 1008'XSB' 1010'XSB' 1012'XSB' 1014'XSB'

IH 39 SB

XNB' 1002'XNB' 1004'XNB' 1006'XNB' 1008'XNB' 1010'XNB' 1012'XNB' 1014'XNB'

IH 39 NB

5 DRUMS AT 10' SPACING IN FRONT OF ARROW BOARD

50' (TYP.)

330'

25' 50' (TYP.)

DOOR CR

ADVANCED WARNING AREA
(SEE TRAFFIC CONTROL DETAIL "TRAFFIC CONTROL ADVANCED WARNING AREA - SPEED REDUCTION," FOR ADVANCED WARNING AREA SIGNING)

500'

660' - 55 MPH
12' MERGING TAPER

BEGIN TRAFFIC CONTROL

BEGIN MERGING TAPER

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B, 2C, 3B NIGHTTIME HOURS	SHEET 44

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON EXISTING OUTSIDE LANE).DWG
LAYOUT NAME - 0250 (01)
PLOT DATE : 7/21/2016 8:27 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST STAGES 2C, 2D, 3A
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

N

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

500' 500' 750' 500'

100' (TYP.) 100' (TYP.)

MATCH LINE 1015+00'XNB'

1016'XSB' 1018'XSB' 1020'XSB' IH 39 SB 1022'XSB' 1024'XSB' 1026'XSB' 1028'XSB' 1030

1016'XNB' 1018'XNB' 1020'XNB' 1022'XNB' 1024'XNB' 1026'XNB' 1028'XNB' CC 4030

IH 39 NB

MATCH LINE 1030+00'XNB'

100' (TYP)

ANT.

LANE CLOSED
R11-2-L
48"X30"

660' - 55MPH
12' MERGING TAPER

1330' - 55 MPH

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B, 2C, 3B NIGHTTIME HOURS	SHEET 45

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON EXISTING OUTSIDE LANE).DWG
LAYOUT NAME - 0250 (02)
PLOT DATE : 7/21/2016 8:27 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

500'

100'
BUFFER

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

1330'

46'AB'

CTH AB

48'AB'

IH 39 SB

IH 39 NB

XSB'
1032'XSB'
1034'XSB'
1036'XSB'
1038'XSB'
1040'XSB'
1042'XSB'
1044'XSB'

XNB'
1032'XNB'
1034'XNB'
1036'XNB'
1038'XNB'
1040'XNB'
1042'XNB'
1044'XNB'

MATCH LINE 1030+00'XNB'

MATCH LINE 1045+00'XNB'

LANE CLOSED
R11-2-L
48"X30"

LANE CLOSED
R11-2-L
48"X30"

CC

100'
BUFFER

100'
(TYP.)

500'

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

52'AB'

54'AB'

56'AB'

TOWER

MH

POST

SIGN

SEPV

SEPH

GUY

OHP

OH

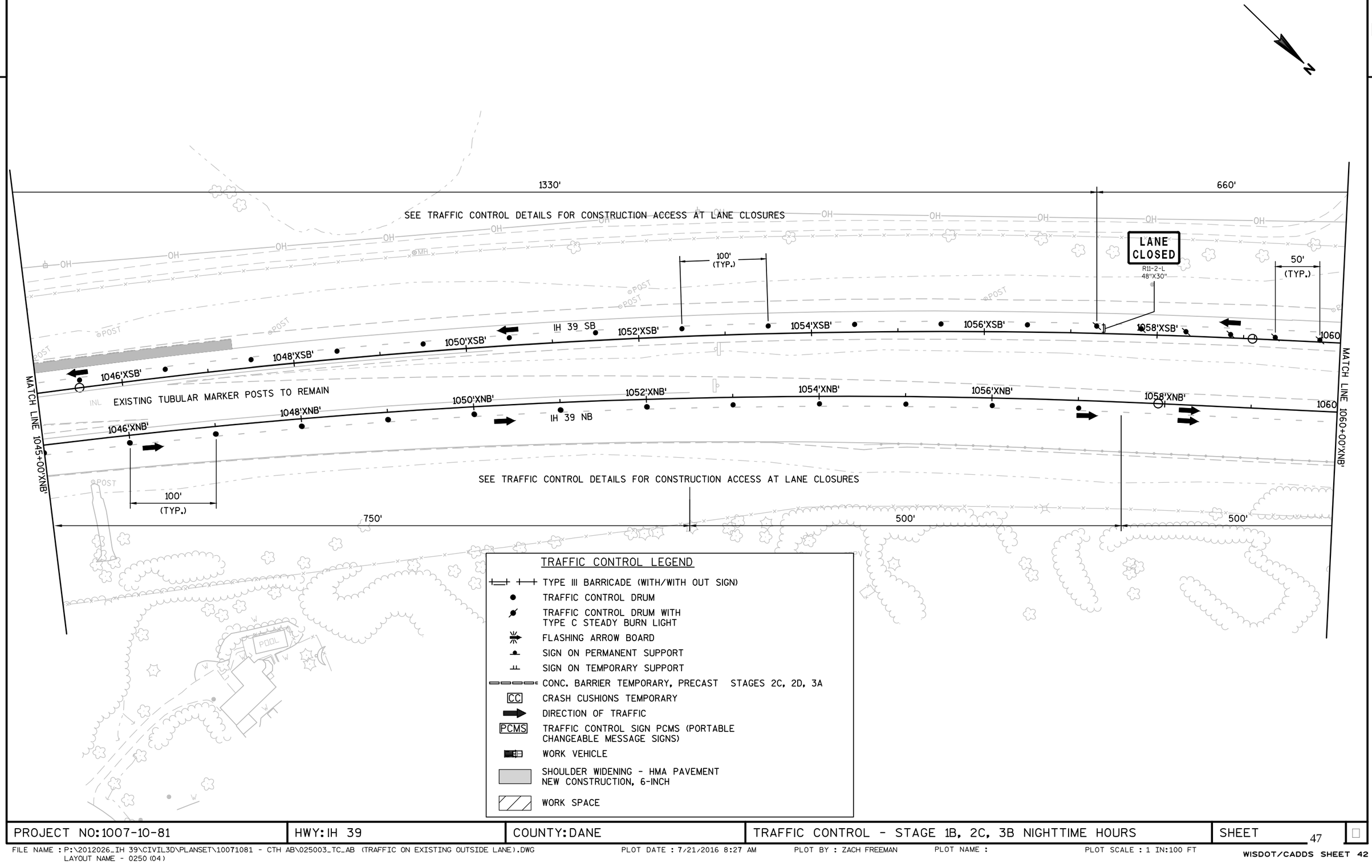
W

N

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST STAGES 2C, 2D, 3A
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B, 2C, 3B NIGHTTIME HOURS	SHEET 46



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B, 2C, 3B NIGHTTIME HOURS	SHEET 47

660' - 55 MPH
12' MERGING TAPER

500'

BEGIN TRAFFIC CONTROL

ADVANCED WARNING AREA
(SEE TRAFFIC CONTROL DETAIL "TRAFFIC CONTROL ADVANCED WARNING AREA - SPEED REDUCTION," FOR ADVANCED WARNING AREA SIGNING)

330'

50' (TYP.)

50' (TYP.)

25'

5 DRUMS AT 10' SPACING IN FRONT OF ARROW BOARD

XSB' 1062'XSB' 1064'XSB' 1066'XSB' 1068'XSB' 1070'XSB' 1072'XSB' 1074'XSB'

IH 39 SB

XNB' 1062'XNB' 1064'XNB' 1066'XNB' 1068'XNB' 1070'XNB' 1072'XNB' 1074'XNB'

IH 39 NB

MATCH LINE 1060+00'XNB'

END ROAD WORK
G20-2A
48"X24"

500'

SIGGELKOW RD

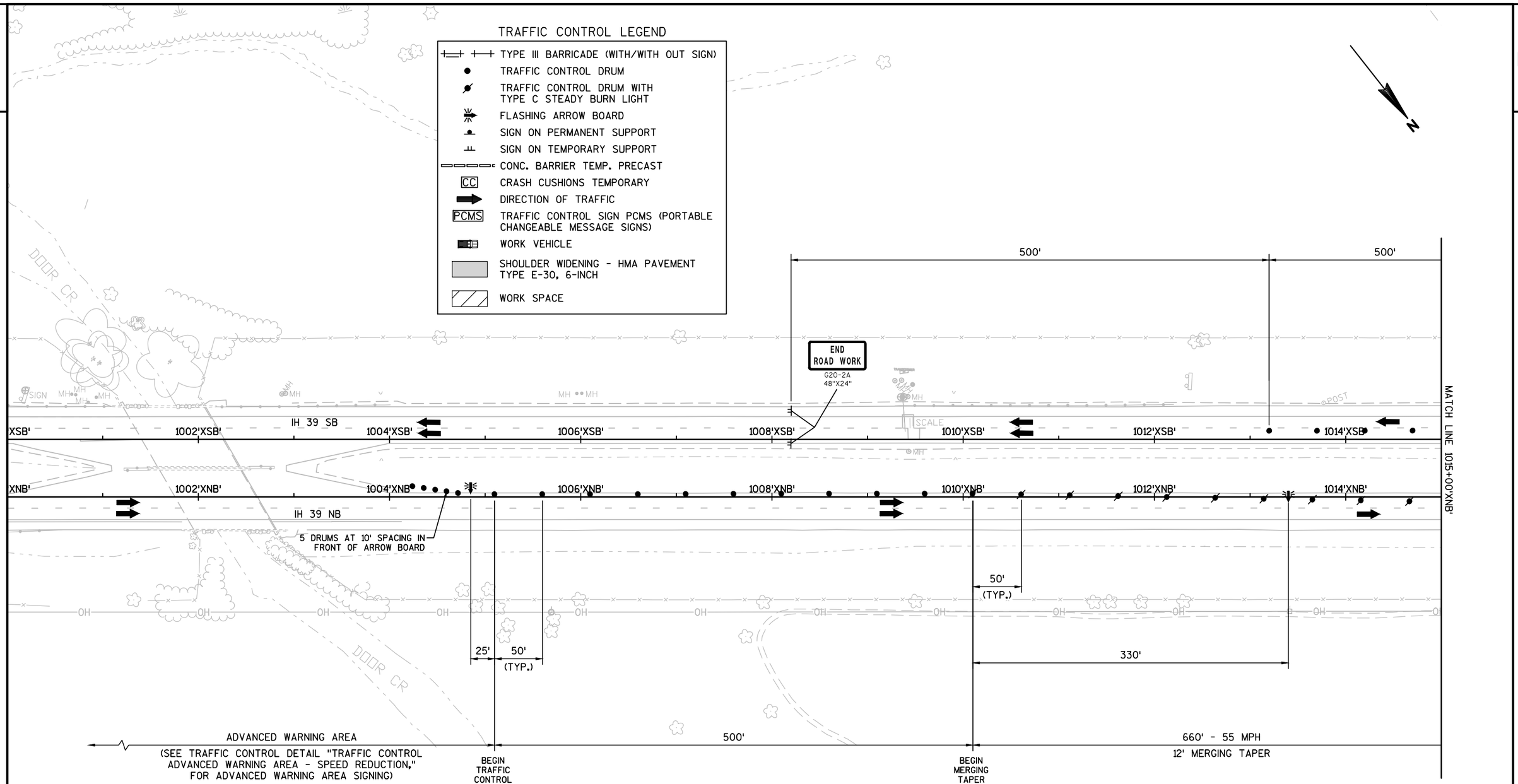
TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST STAGES 2C, 2D, 3A
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT NEW CONSTRUCTION, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B, 2C, 3B NIGHTTIME HOURS	SHEET 48

TRAFFIC CONTROL LEGEND

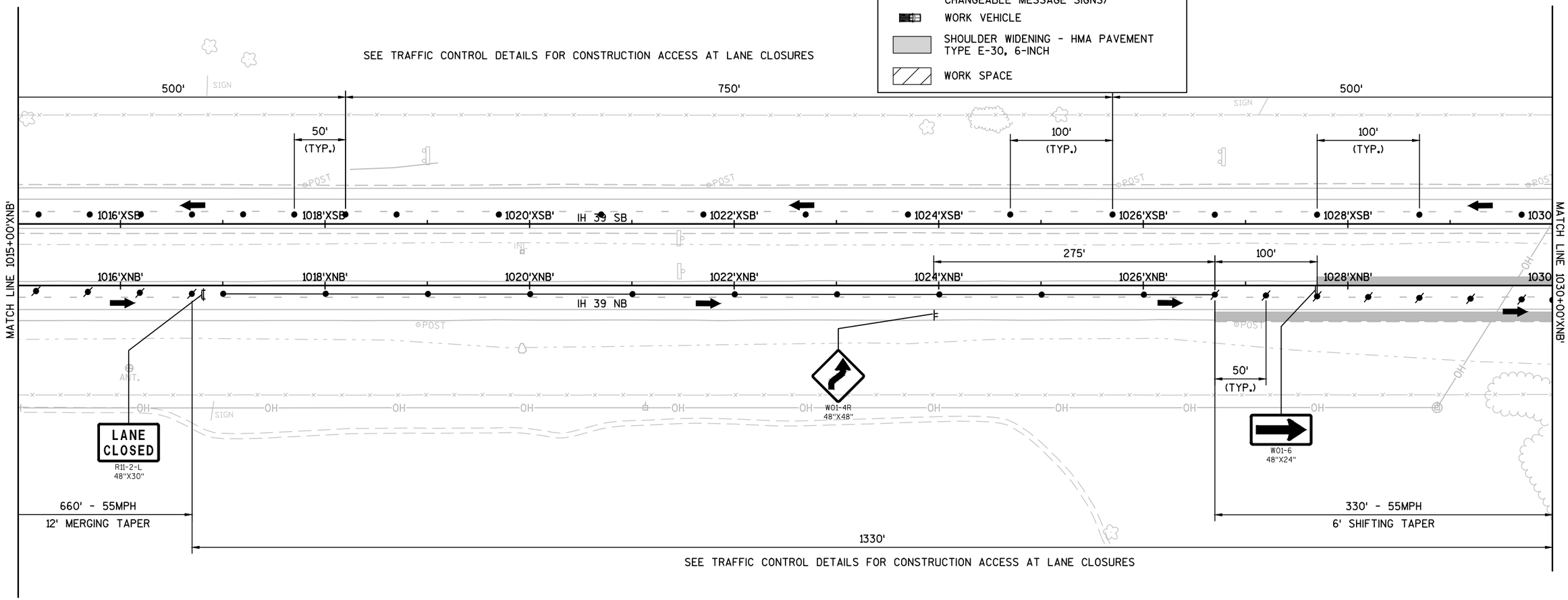
- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2A, 3D, 3F NIGHTTIME HOURS	SHEET 49

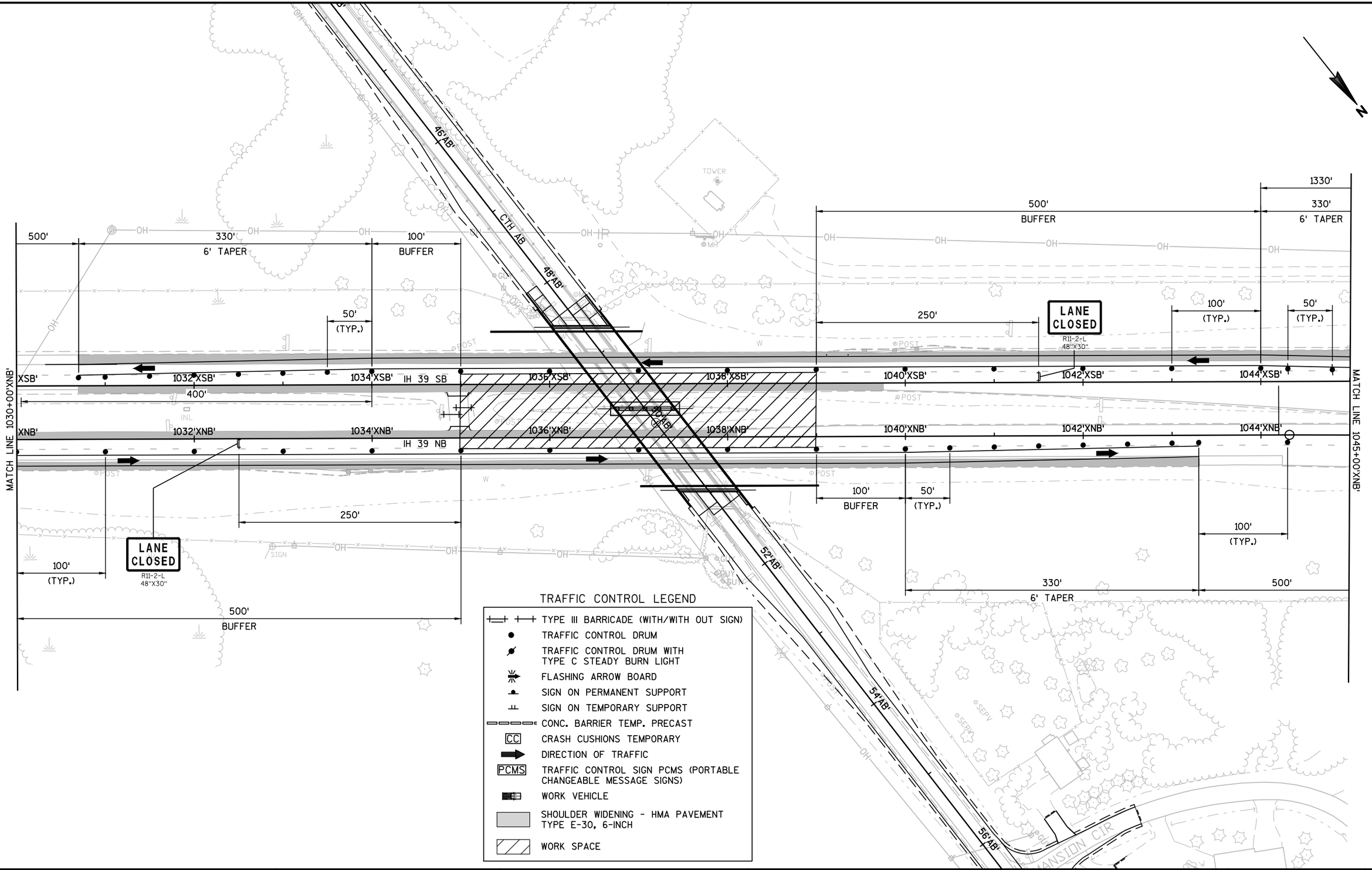
TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2A, 3D, 3F NIGHTTIME HOURS	SHEET 50

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON NEW OUTSIDE SHLD).DWG
PLOT DATE : 7/21/2016 8:30 AM
PLOT BY : ZACH FREEMAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2A, 3D, 3F NIGHTTIME HOURS	SHEET 51

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

1330'

330' - 55 MPH
6' SHIFTING TAPER

660' -55 MPH
12' MERGING TAPER

50'
(TYP.)

W01-6
48"X24"

W01-4R
48"X48"

LANE
CLOSED
R11-2-L
48"X30"

50'
(TYP.)

IH 39 SB

1046'XSB'
1048'XSB'
1050'XSB'
1052'XSB'
1054'XSB'
1056'XSB'
1058'XSB'
1060

100'
275'
100'

EXISTING TUBULAR MARKER POSTS TO REMAIN

MATCH LINE 1045+00'XNB'

1046'XNB'
1048'XNB'
1050'XNB'
1052'XNB'
1054'XNB'
1056'XNB'
1058'XNB'
1060

IH 39 NB

MATCH LINE 1060+00'XNB'

100'
(TYP.)

100'
(TYP.)

50'
(TYP.)

500'
750'
500'

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2A, 3D, 3F NIGHTTIME HOURS	SHEET 52

660' - 55 MPH
12' MERGING TAPER

500'

BEGIN TRAFFIC CONTROL

ADVANCED WARNING AREA
(SEE TRAFFIC CONTROL DETAIL "TRAFFIC CONTROL ADVANCED WARNING AREA - SPEED REDUCTION," FOR ADVANCED WARNING AREA SIGNING)

330'

50' (TYP.)

50' (TYP.)

25'

5 DRUMS AT 10' SPACING IN FRONT OF ARROW BOARD

MATCH LINE 1060+00'XNB'

XSB' 1062'XSB' 1064'XSB' 1066'XSB' 1068'XSB' 1070'XSB' 1072'XSB' 1074'XSB'

IH 39 SB

XNB' 1062'XNB' 1064'XNB' 1066'XNB' 1068'XNB' 1070'XNB' 1072'XNB' 1074'XNB'

IH 39 NB

50' (TYP.)

END ROAD WORK
G20-2A
48"X24"

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

500'

500'

SIGGELKOW RD

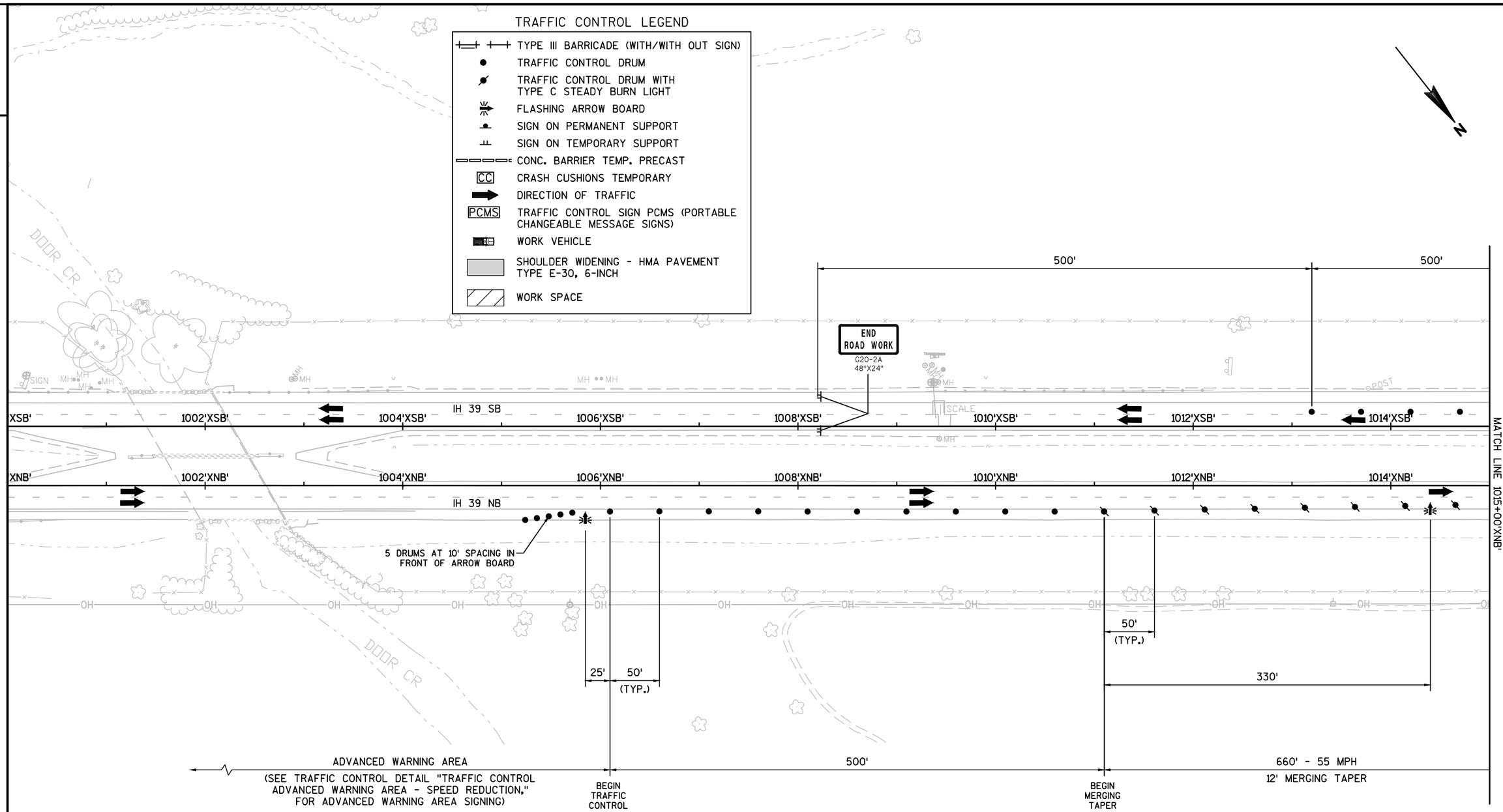
TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2A, 3D, 3F NIGHTTIME HOURS	SHEET 53

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

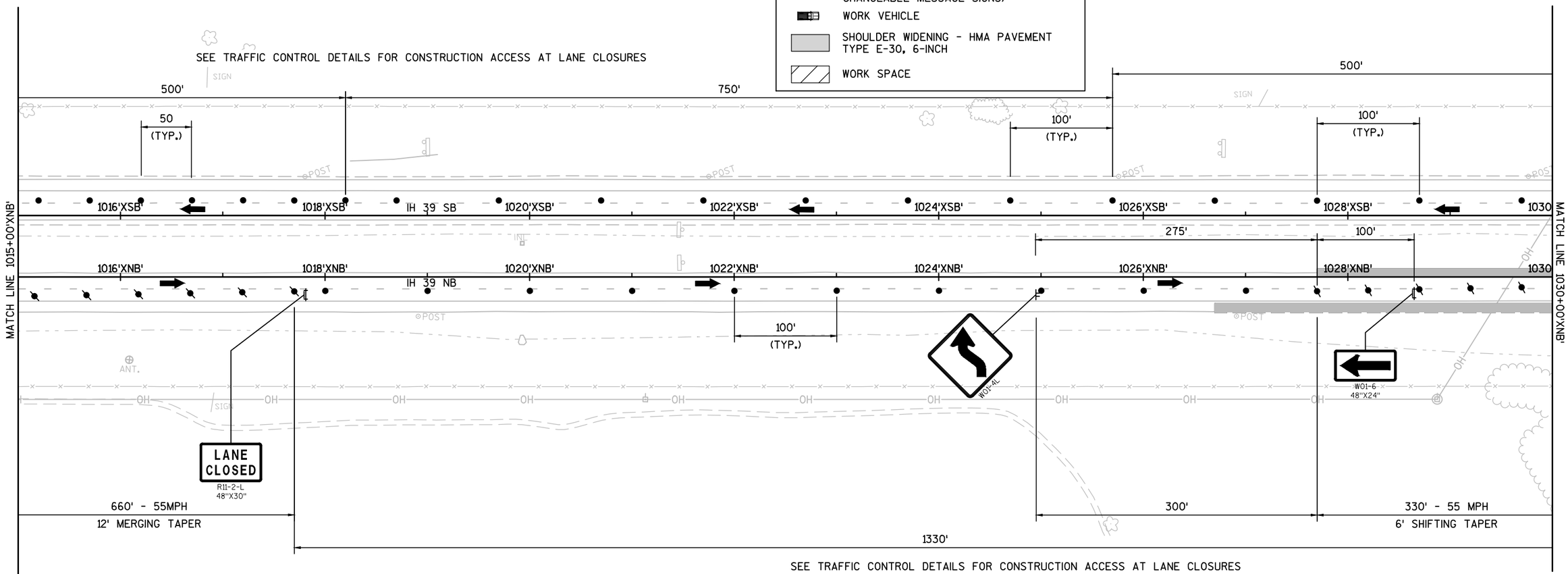


PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2B, 3C, 3G NIGHTTIME HOURS	SHEET 54

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON NEW INSIDE SHLD).DWG
LAYOUT NAME - 0250 (01)
PLOT DATE : 7/21/2016 8:28 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2B, 3C, 3G NIGHTTIME HOURS	SHEET 55

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

500' BUFFER | 330' - 55 MPH 6' SHIFTING TAPER | 100' BUFFER

50' (TYP.)

400'

250'

100' (TYP.)

330' | 500' BUFFER | 1330'

LANE CLOSED
R11-2-L
48"X30"

1330' | 330' - 55 MPH 6' SHIFTING TAPER | 500' BUFFER

100' (TYP.) | 50' (TYP.)

250'

LANE CLOSED
R11-2-L
48"X30"

100' (TYP.) | 50' (TYP.) | 100' (TYP.)

330' - 55 MPH 6' SHIFTING TAPER | 500'

MATCH LINE 1030+00'XNB'

MATCH LINE 1045+00'XNB'

1030+00'XSB' 1032'XSB' 1034'XSB' 1036'XSB' 1038'XSB' 1040'XSB' 1042'XSB' 1044'XSB'

1030+00'XNB' 1032'XNB' 1034'XNB' 1036'XNB' 1038'XNB' 1040'XNB' 1042'XNB' 1044'XNB'

46'AB' 48'AB' 50'AB' 52'AB' 54'AB' 56'AB'

CTH AB

IH 39 SB

IH 39 NB

EXISTING MARKER POSTS TO REMAIN

MANSION CTR

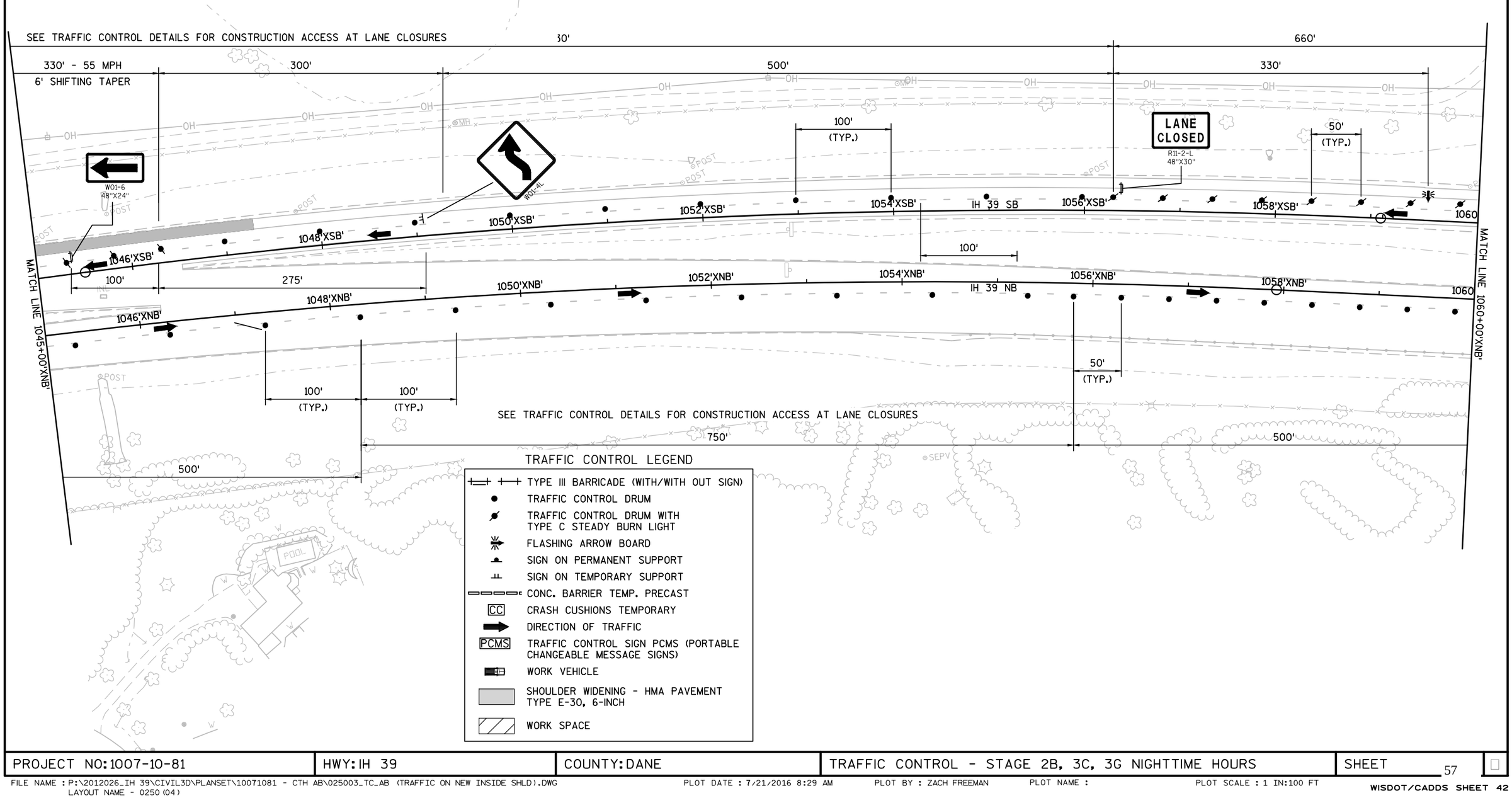
SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

SEE TRAFFIC CONTROL DETAILS FOR CONSTRUCTION ACCESS AT LANE CLOSURES

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2B, 3C, 3G NIGHTTIME HOURS	SHEET 56



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2B, 3C, 3G NIGHTTIME HOURS	SHEET 57

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON NEW INSIDE SHLD).DWG
LAYOUT NAME - 0250 (04)
PLOT DATE : 7/21/2016 8:29 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

660' - 55 MPH
12' MERGING TAPER

500'

BEGIN TRAFFIC CONTROL

ADVANCED WARNING AREA
(SEE TRAFFIC CONTROL DETAIL "TRAFFIC CONTROL ADVANCED WARNING AREA - SPEED REDUCTION," FOR ADVANCED WARNING AREA SIGNING)

50' (TYP.)

50' (TYP.)

25'

5 DRUMS AT 10' SPACING IN FRONT OF ARROW BOARD

XSB' 1062'XSB' 1064'XSB' 1066'XSB' IH 39 SB 1068'XSB' 1070'XSB' 1072'XSB' 1074'XSB'

MATCH LINE 1060+00'XNB'

XNB' 1062'XNB' 1064'XNB' 1066'XNB' 1068'XNB' 1070'XNB' 1072'XNB' 1074'XNB'

IH 39 NB

END ROAD WORK
G20-2A
48"X24"

50' (TYP.)

500' 500'

SIGGELKOW RD

TRAFFIC CONTROL LEGEND

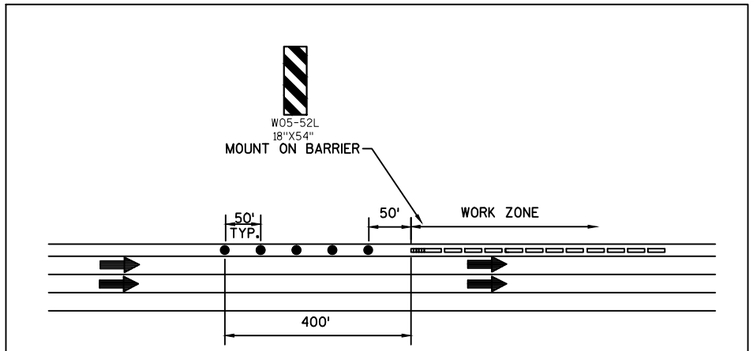
- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - STAGE 2B, 3C, 3G NIGHTTIME HOURS	SHEET 58

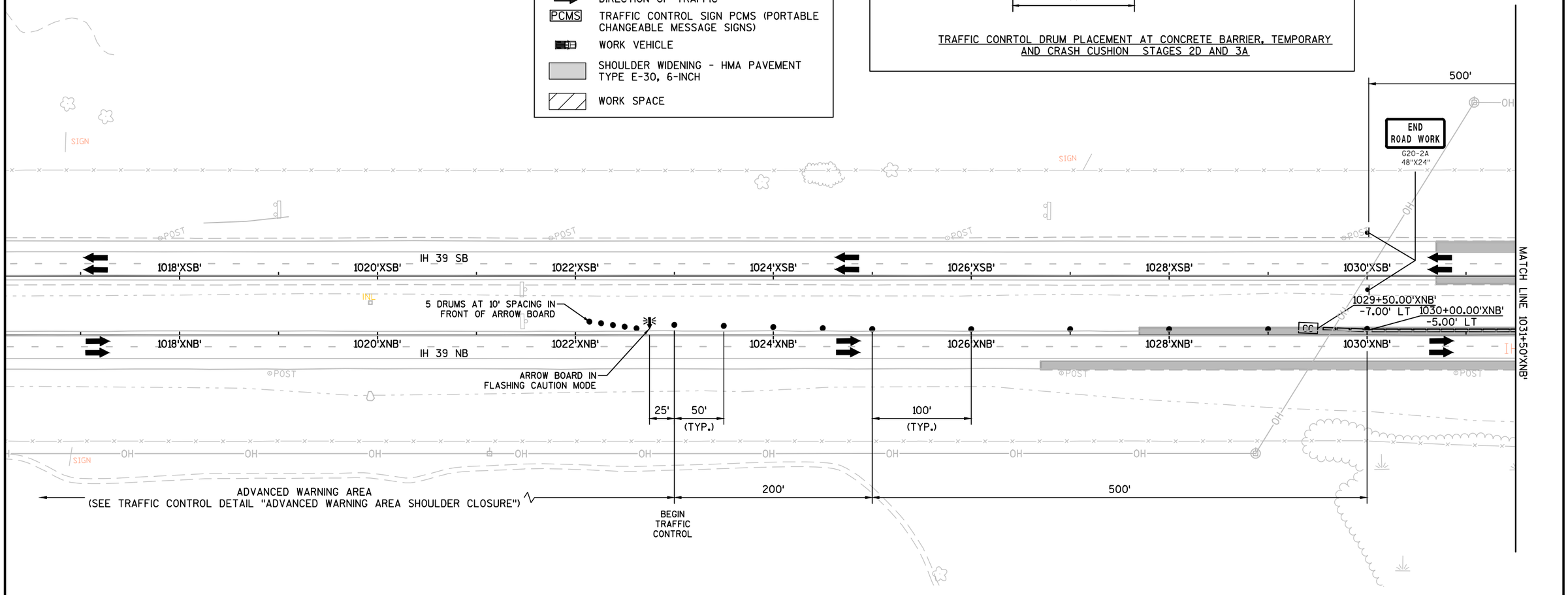
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON NEW INSIDE SHLD).DWG
LAYOUT NAME - 0250 (05)
PLOT DATE : 7/21/2016 8:29 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE



TRAFFIC CONRTOL DRUM PLACEMENT AT CONCRETE BARRIER, TEMPORARY AND CRASH CUSHION STAGES 2D AND 3A

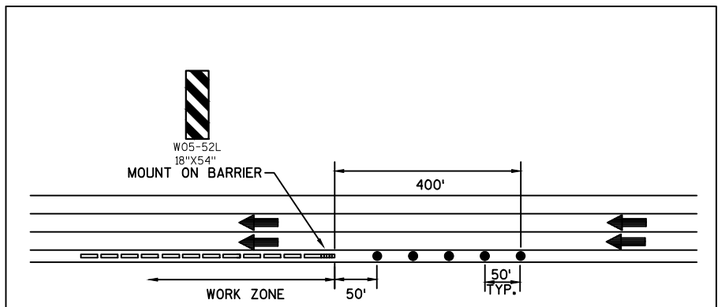


PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL- STAGE 2D, 3A, 3E DAYTIME & NIGHTTIME HOURS	SHEET 59

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON EXISTING LANES).DWG
LAYOUT NAME - 0250 (02)
PLOT DATE : 8/1/2016 11:04 AM PLOT BY : MARY PAMPERIN-VOLK PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

TRAFFIC CONTROL LEGEND

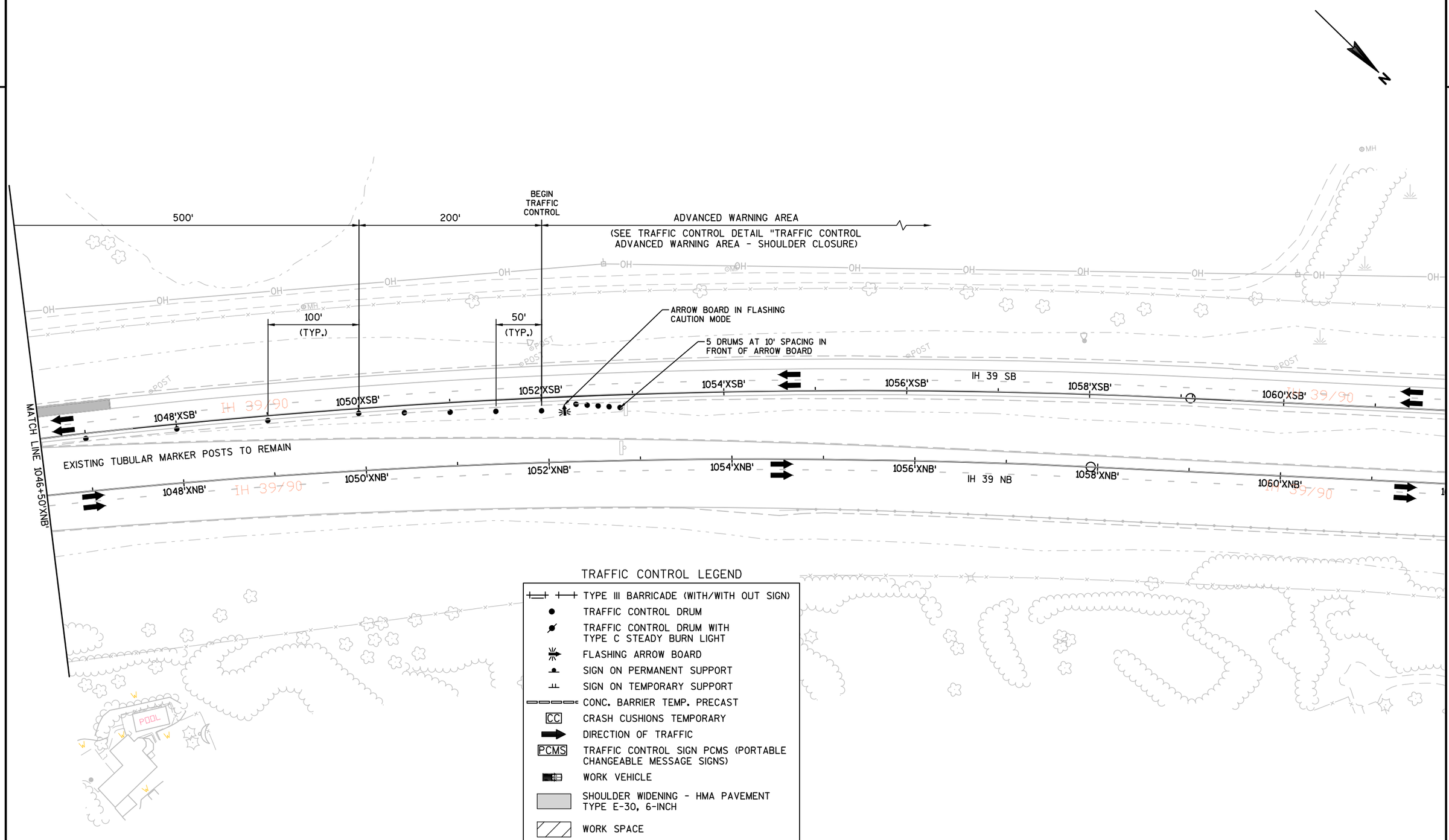
- TYPE III BARRICADE (WITH/WITH OUT SIGN)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONC. BARRIER TEMP. PRECAST
- CC — CRASH CUSHIONS TEMPORARY
- DIRECTION OF TRAFFIC
- PCMS — TRAFFIC CONTROL SIGN PCMS (PORTABLE CHANGEABLE MESSAGE SIGNS)
- WORK VEHICLE
- SHOULDER WIDENING - HMA PAVEMENT TYPE E-30, 6-INCH
- WORK SPACE



TRAFFIC CONRTOL DRUM PLACEMENT AT CONCRETE BARRIER, TEMPORARY AND CRASH CUSHION STAGES 2D AND 3A

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL- STAGE 2D, 3A, 3E DAYTIME & NIGHTTIME HOURS	SHEET 60

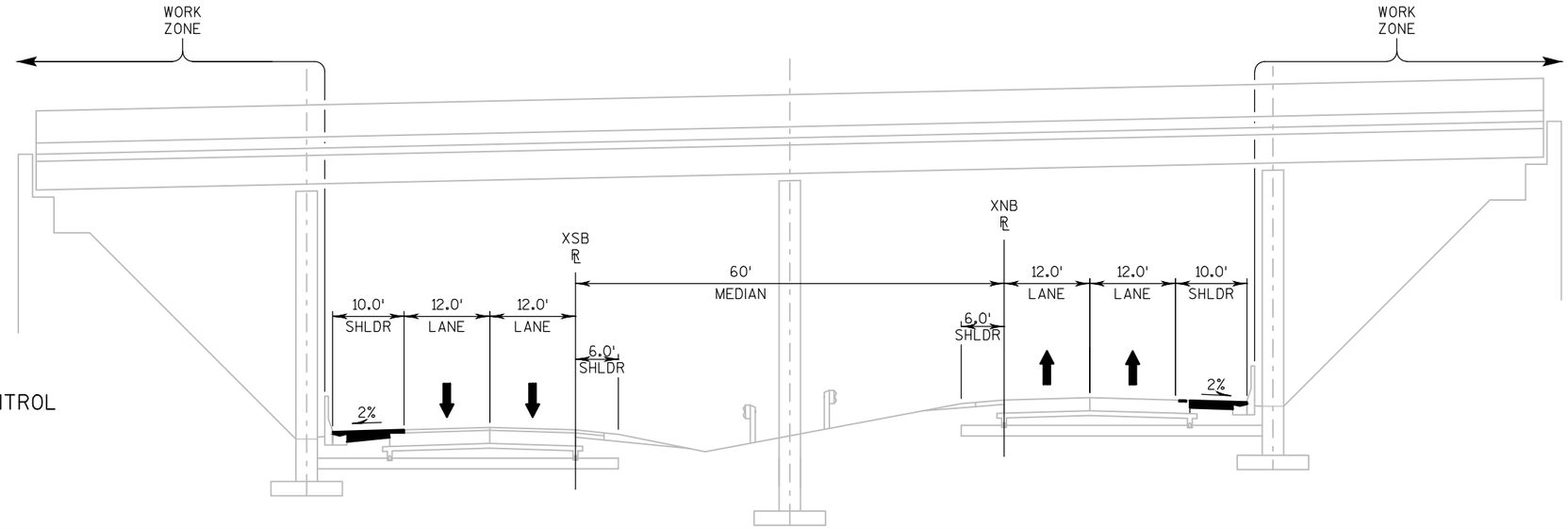
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025003_TC_AB (TRAFFIC ON EXISTING LANES).DWG
LAYOUT NAME - 0250 (03)
PLOT DATE : 8/1/2016 11:04 AM
PLOT BY : MARY PAMPERIN-VOLK
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL- STAGE 2D, 3A, 3E DAYTIME & NIGHTTIME HOURS	SHEET 61

STAGE 1A: DAYTIME CONSTRUCTION SUMMARY

TRAFFIC TO REMAIN ON EXISTING CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 1A DAYTIME

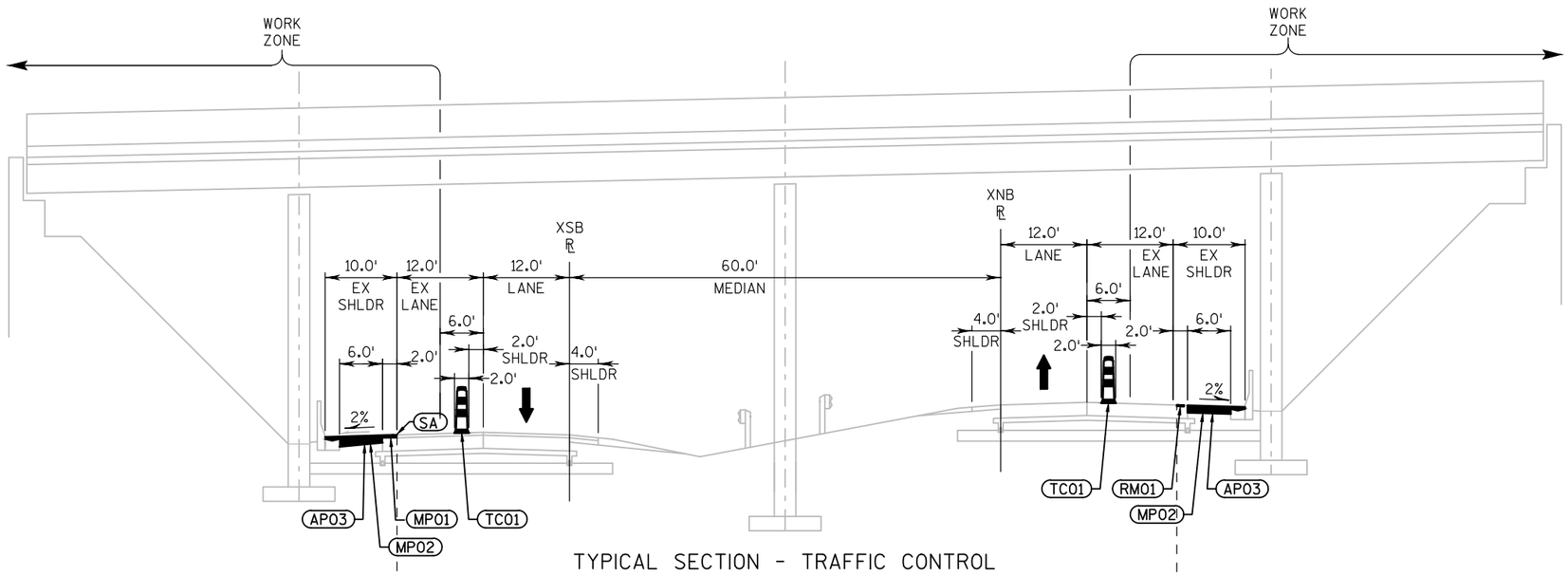
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 1A: NIGHTTIME CONSTRUCTION SUMMARY

MERGE I-39/90 NB & SB TRAFFIC TO A SINGLE INSIDE LANE DURING NIGHTTIME HOURS.

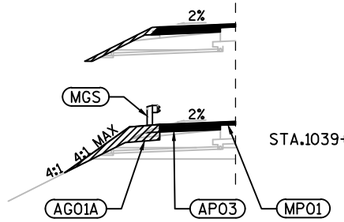
CONSTRUCT OUTSIDE SHOULDER WIDENING INCLUDING:
- REMOVING SLOPED END BARRIER WALL AND REPLACING WITH GUARDRAIL THE SAME DAY.
- SAWCUT AT 24' LT PARALLEL TO ROADWAY WHERE REMOVING EXISTING ASPHALTIC SURFACE.
- WIDENING OUTSIDE SHOULDER WITH BASE AGGREGATE DENSE 3/4-INCH AND HMA PAVEMENT WITH SAFETY EDGE.
- FILL RUMBLE STRIPS.

WITHIN 2 FT OF TRAVEL LANE, EXISTING SHOULDER AND MILLED RUMBLE STRIPS SHALL BE REPLACED WITH NEW PAVEMENT IN THE SAME NIGHT.

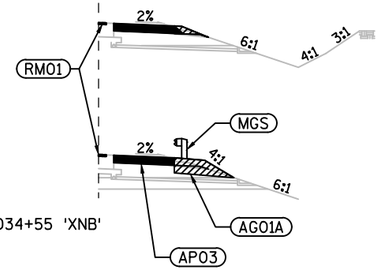


TYPICAL SECTION - TRAFFIC CONTROL
STAGE 1A NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'



STA.1039+40 'XSB' TO STA. 1041+35 'XSB'



STA.1032+60 'XNB' TO STA. 1034+55 'XNB'

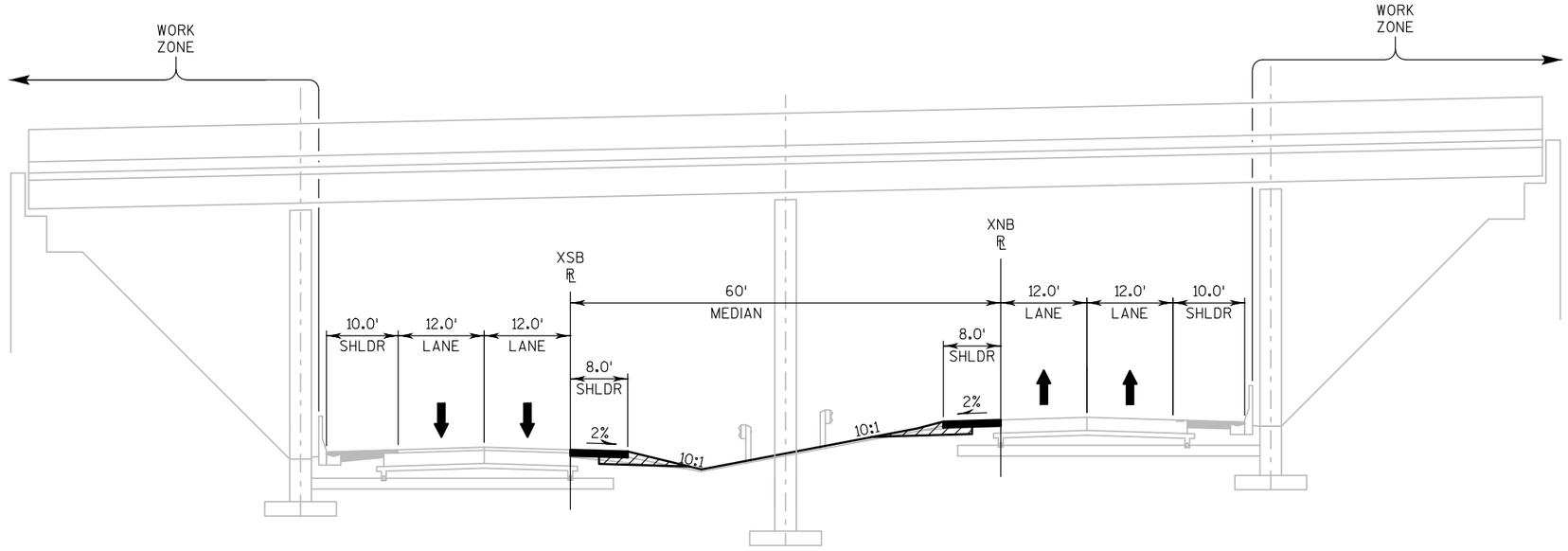
LEGEND

AG01A	BASE AGGREGATE DENSE 3/4-INCH, 12-INCH
AP03	6-INCH NEW CONSTRUCTION 2.5" UPPER LAYER HMA PAVEMENT 4 LT 58-28 H 3.5" LOWER LAYER HMA PAVEMENT 2 LT 58-28 S
MP01	REMOVING ASPHALTIC SURFACE MILLING, 2.5-INCH HMA PAVEMENT 4 LT 58-28 H, 2.5-INCH
MP02	REMOVING ASPHALTIC SURFACE
RM01	FILL EXISTING CONCRETE RUMBLE STRIPS
TC01	TYPICAL DRUM SPACING 100'
MGS	MGS GUARDRAIL ITEMS
SA	SAWING APSHALT

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 1A	SHEET 62

STAGE 1B: DAYTIME CONSTRUCTION SUMMARY

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 1B DAYTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

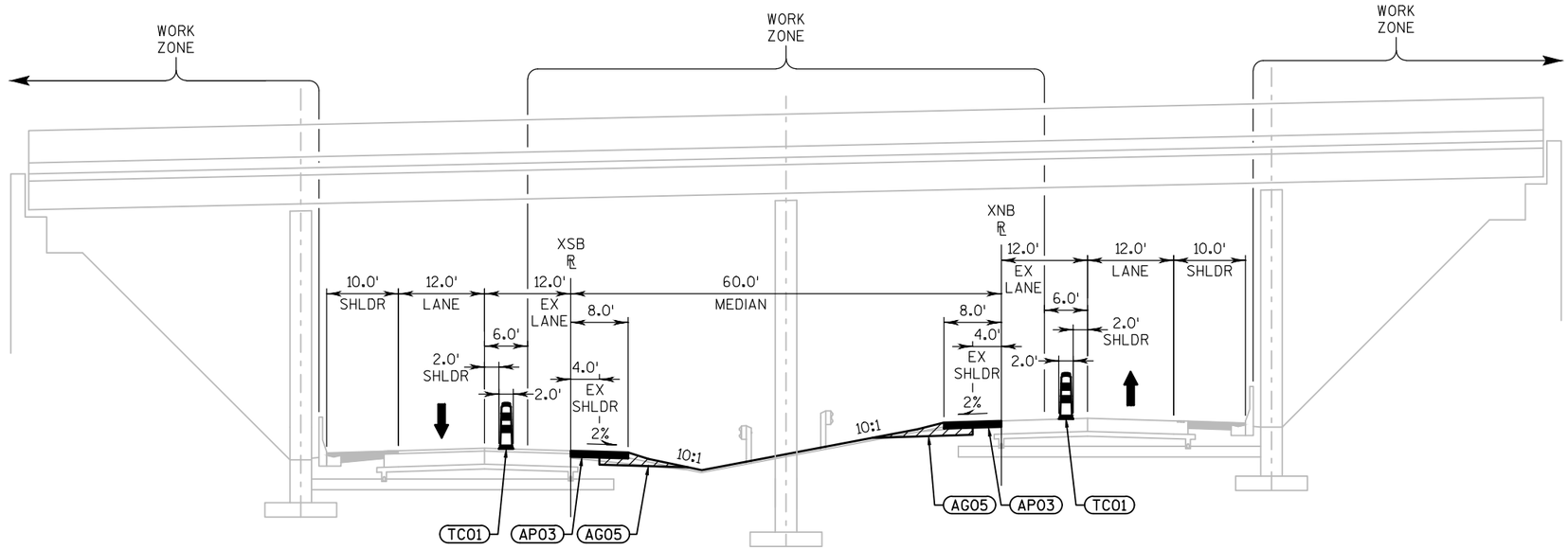
STAGE 1B: NIGHTTIME CONSTRUCTION SUMMARY

MERGE I-39/90 NB & SB TRAFFIC TO A SINGLE OUTSIDE LANE DURING NIGHTTIME HOURS.

RECONSTRUCT IH 39 NB & SB INSIDE SHOULDERS (8 FEET WIDE, 6 INCHES DEEP) DURING NIGHTTIME HOURS.

CONSTRUCT INSIDE SHOULDER WIDENING INCLUDING:
- REMOVING ASPHALTIC SHOULDER
- WIDENING INSIDE SHOULDER WITH BAD 1 1/4-INCH AND HMA PAVEMENT WITH SAFETY EDGE.

WITHIN 2 FEET OF TRAVEL LANE, EXISTING SHOULDER SHALL BE REPLACED WITH NEW PAVEMENT IN THE SAME NIGHT. NO AGGREGATE SHOULDERS SHALL BE PERMITTED ADJACENT TO TRAVEL LANES.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 1B NIGHTTIME

STA 1030+70'XSB' TO 1039+75'XSB'
STA 1027+70'XNB' TO 1038+10'XNB'

LEGEND

(AP03) 6-INCH NEW CONSTRUCTION
2.00" UPPER LAYER HMA PAVEMENT 4 LT 58-28 H
4.00" LOWER LAYER HMA PAVEMENT 2 LT 58-28 S

(AG05) BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCH

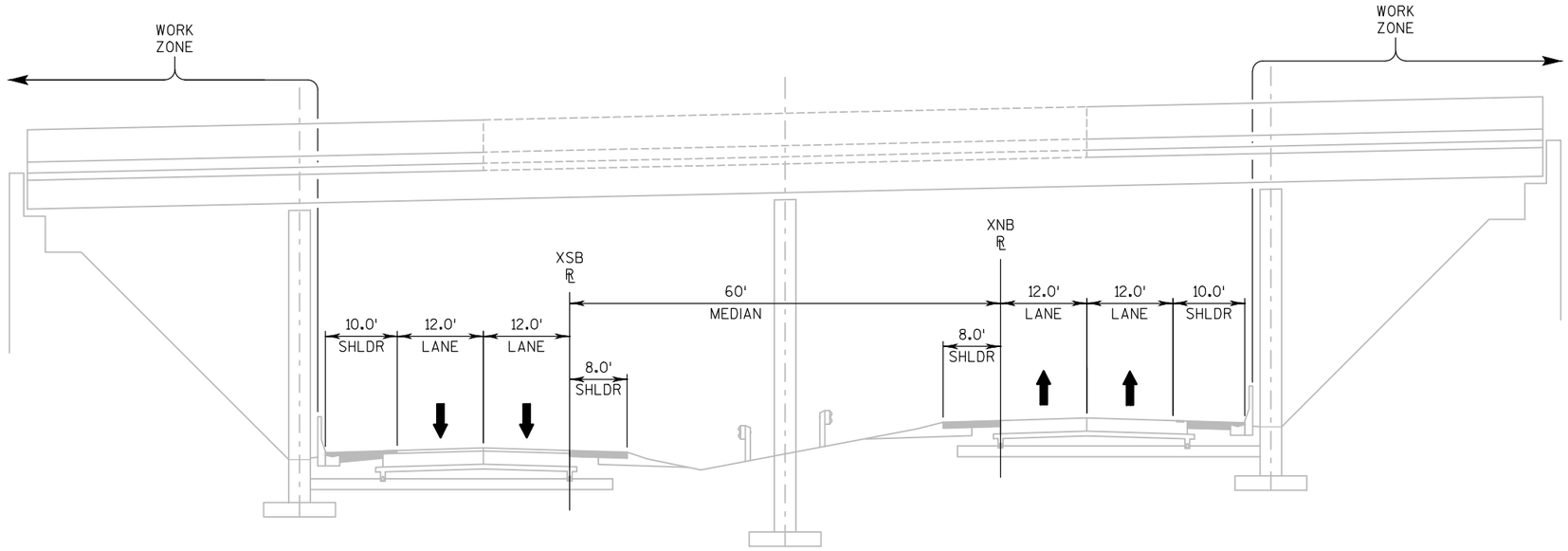
(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 1B	SHEET 63

STAGE 2A: DAYTIME CONSTRUCTION SUMMARY

CLOSE ALL TRAFFIC ON CTH AB WITHIN WORK ZONE.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2A DAYTIME

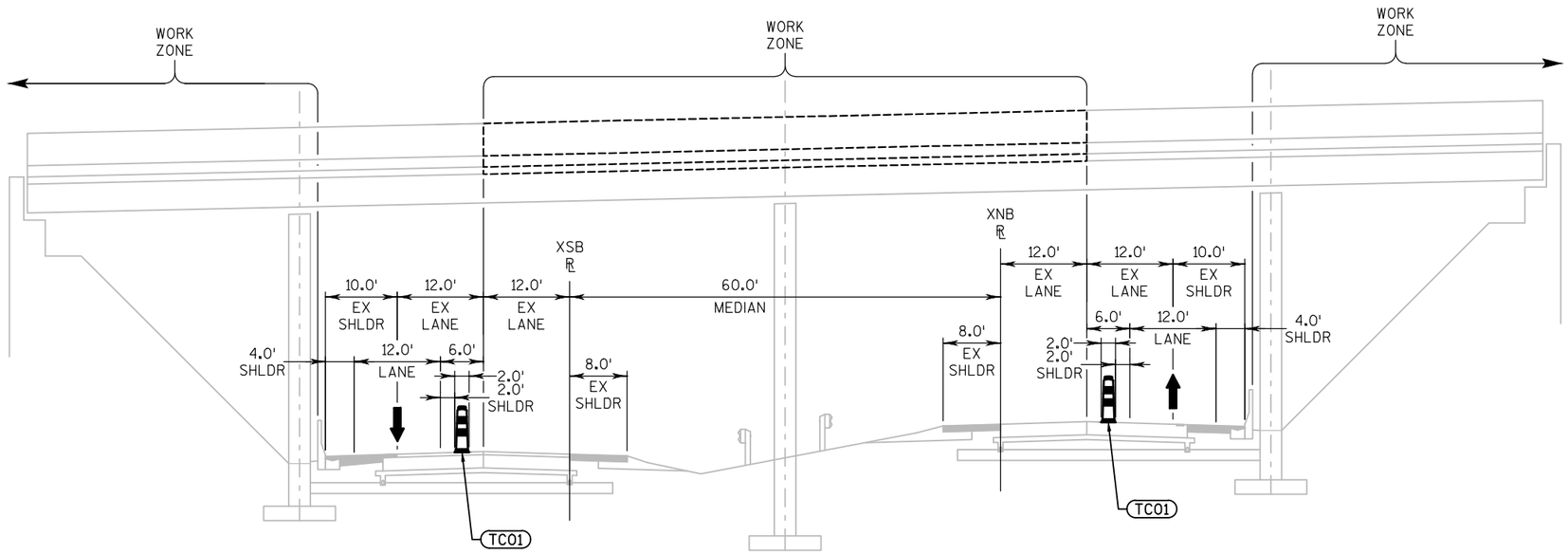
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 2A: NIGHTTIME CONSTRUCTION SUMMARY

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SINGLE SHIFTED OUTSIDE LANE TO UTILIZE OUTSIDE SHOULDERS DURING NIGHTTIME HOURS.

CLOSE ALL TRAFFIC ON CTH AB WITHIN WORK ZONE.

REMOVE EXISTING BRIDGE DECK & PARAPETS DURING NIGHTTIME HOURS.



LEGEND

(TC01) TYPICAL DRUM SPACING 100'

TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2A NIGHTTIME

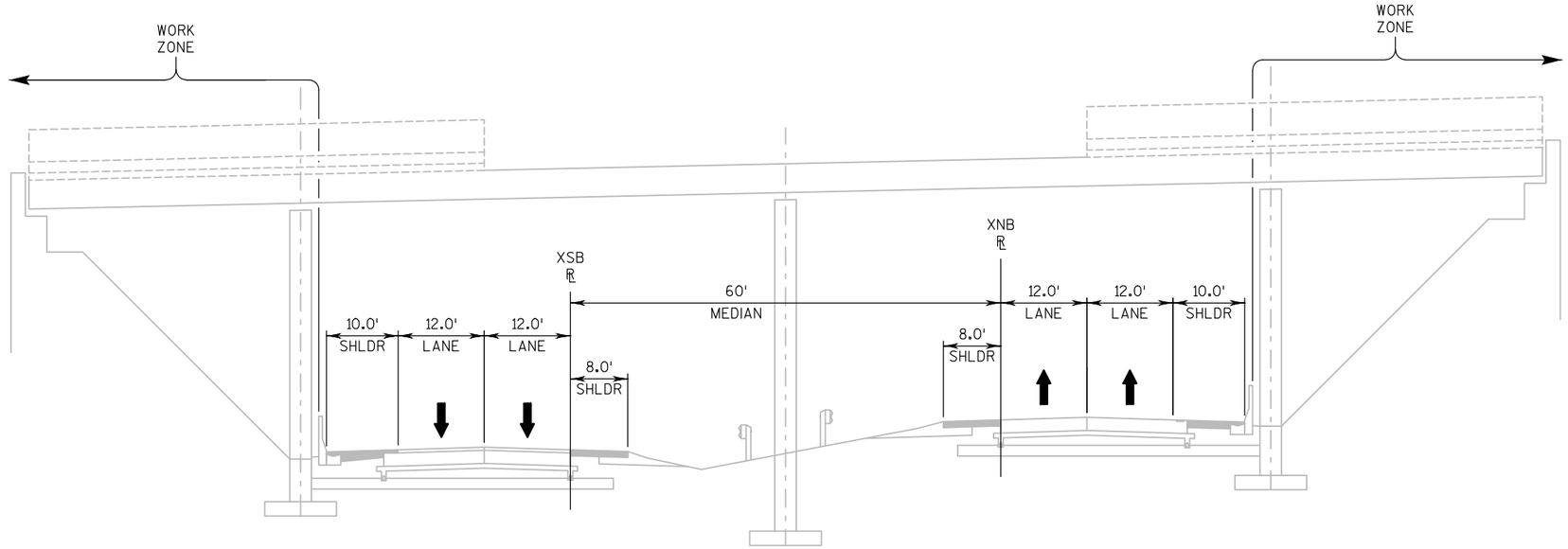
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 2A	SHEET 64

STAGE 2B: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2B DAYTTIME

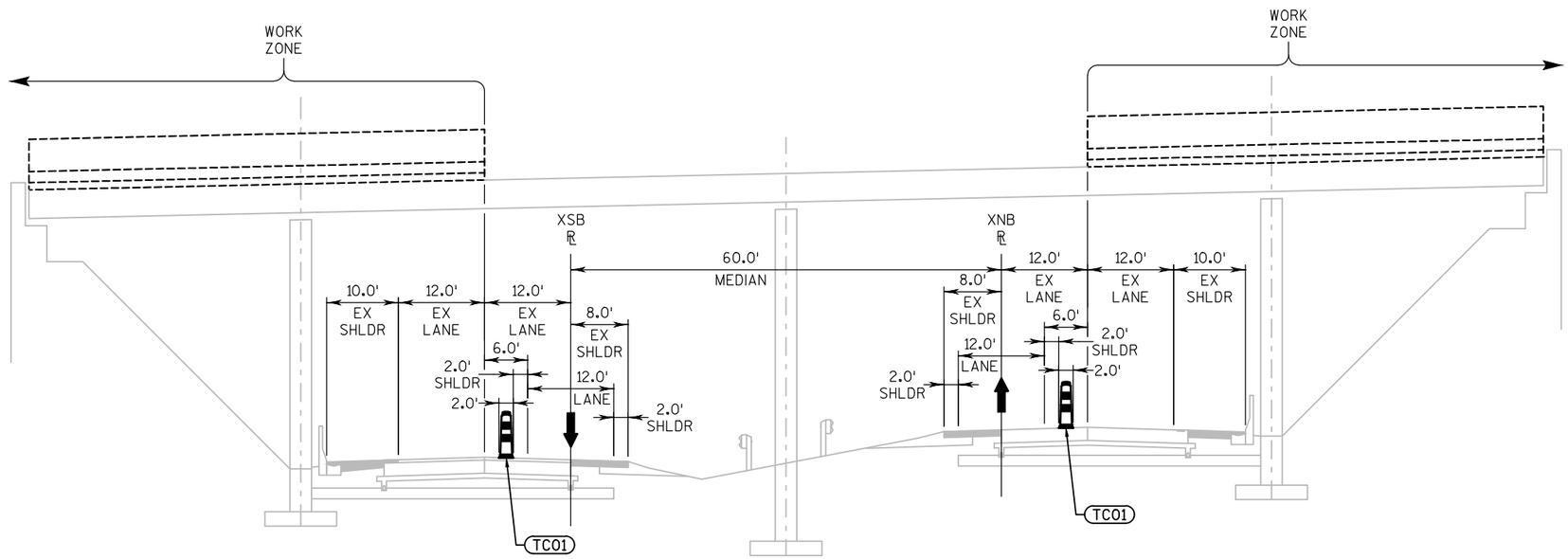
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 2B: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SINGLE SHIFTED INSIDE LANE TO UTILIZE INSIDE SHOULDERS DURING NIGHTTIME HOURS.

REMOVE REMAINDER OF EXISTING BRIDGE DECK & PARAPETS DURING NIGHTTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2B NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

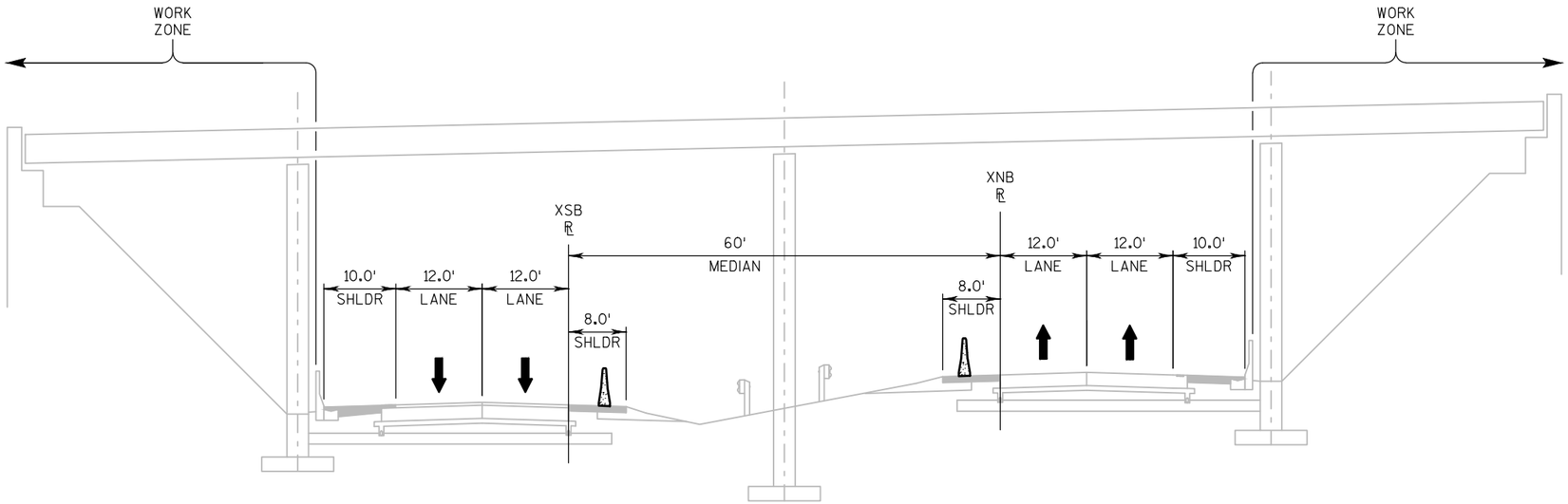
(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 2B	SHEET 65

STAGE 2C: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2C DAYTIME

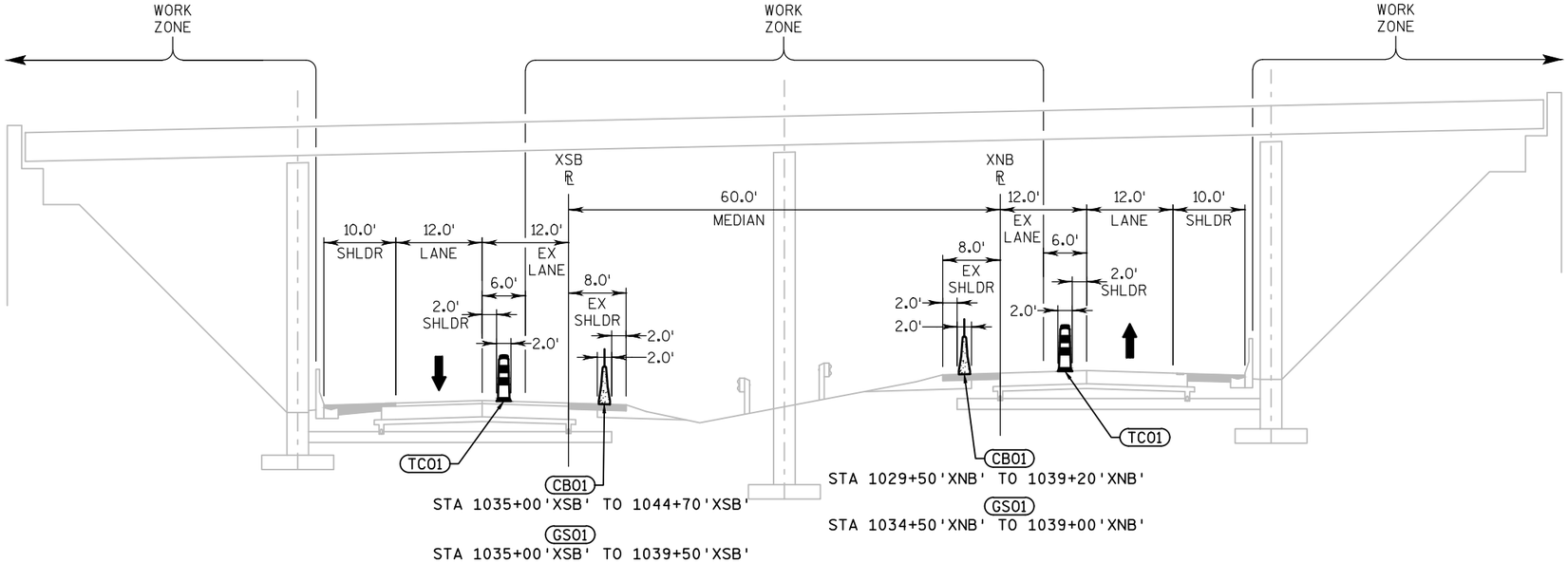
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 2C: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE I-39/90 NB & SB TRAFFIC TO A SINGLE OUTSIDE LANE DURING NIGHTTIME HOURS.

PLACE TEMPORARY BARRIER & GAWK SCREEN ALONG INSIDE SHOULDERS DURING NIGHTTIME HOURS.



STA 1035+00'XSB' TO 1044+70'XSB'

GS01

STA 1035+00'XSB' TO 1039+50'XSB'

STA 1029+50'XNB' TO 1039+20'XNB'

GS01

STA 1034+50'XNB' TO 1039+00'XNB'

TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2C NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

(CB01) CONCRETE BARRIER TEMPORARY PRECAST

(GS01) GAWK SCREEN

(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 2C	SHEET

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\025301_TC_TS_AB.DWG PLOT DATE : 7/21/2016 8:32 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

STAGE 2D: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.

REMOVE EXISTING MEDIAN BEAM GUARD & BULLNOSES.

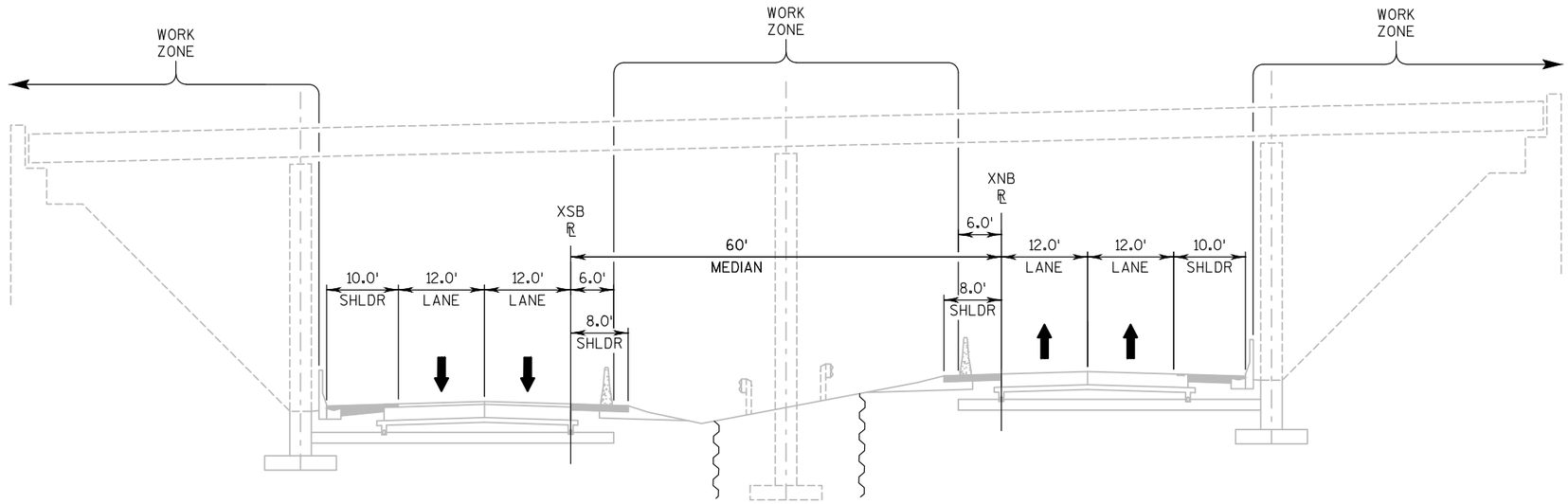
INSTALL TEMPORARY SHORING FOR THE REMOVAL OF THE CENTER PIER COLUMN AND FOOTING.

REMOVE EXISTING MEDIAN PIER COLUMNS/CAP.

REMOVE EXISTING NORTH & SOUTH PIER COLUMNS/CAPS TO GROUND LEVEL.

REMOVE EXISTING NORTH & SOUTH BRIDGE ABUTMENTS.

REMOVE EXISTING FILL BETWEEN EXISTING & PROPOSED BRIDGE ABUTMENTS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2D DAYTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 2D: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

REMOVE EXISTING MEDIAN GUARDRAIL & BULLNOSES.

INSTALL TEMPORARY SHORING FOR THE REMOVAL OF THE CENTER PIER COLUMN AND FOOTING.

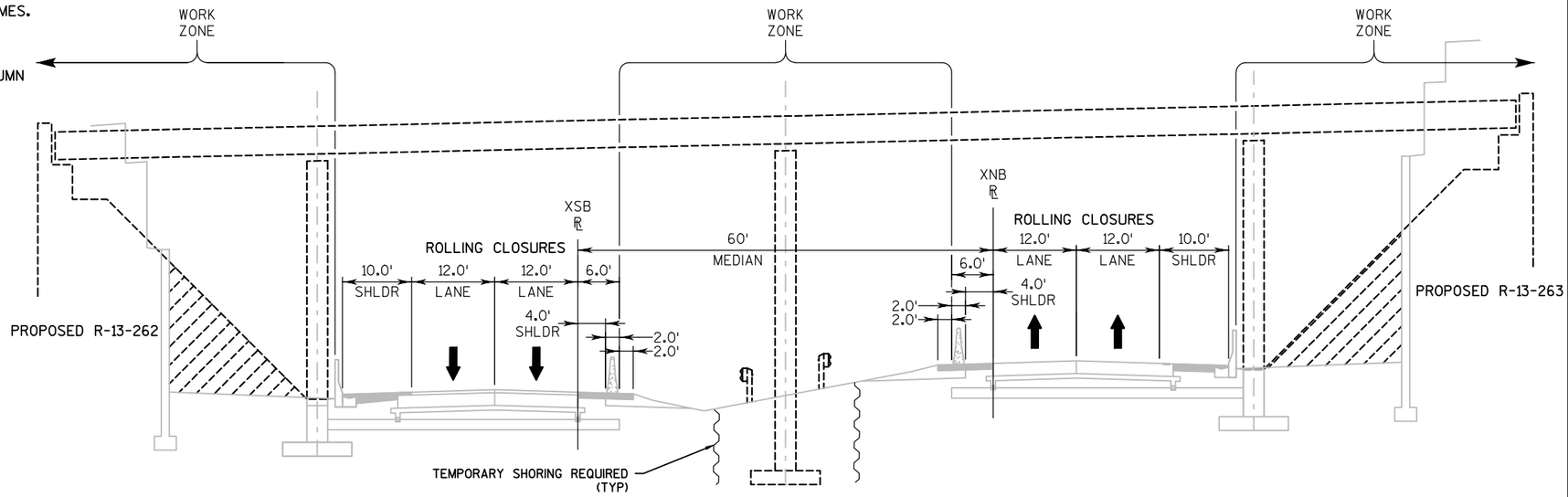
REMOVE EXISTING MEDIAN PIER COLUMNS/CAP.

REMOVE EXISTING NORTH & SOUTH PIER COLUMNS/CAPS TO GROUND LEVEL.

REMOVE EXISTING NORTH & SOUTH BRIDGE ABUTMENTS.

REMOVE EXISTING FILL BETWEEN EXISTING & PROPOSED BRIDGE ABUTMENTS.

REMOVE EXISTING BRIDGE GIRDERS DURING NIGHTTIME HOURS USING ROLLING CLOSURES DURING NIGHTTIME HOURS, 11PM - 5 AM MONDAY THRU THURSDAY.



REMOVE EMBANKMENT

TYPICAL SECTION - TRAFFIC CONTROL
STAGE 2D NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 2D	SHEET 67

STAGE 3A: DAYTIME CONSTRUCTION SUMMARY

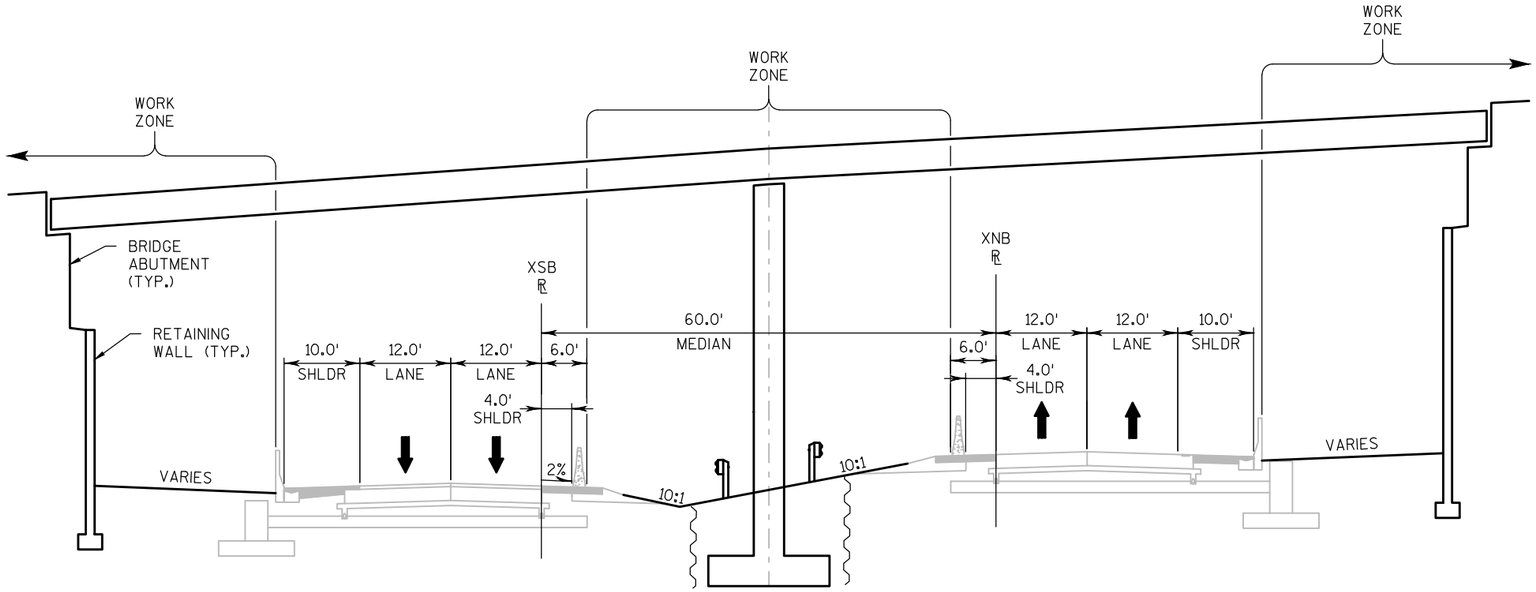
CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39-90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.

CONSTRUCT PROPOSED BRIDGE ABUTMENTS, PIER COLUMNS/CAP, & RETAINING WALLS.

INSTALL TEMPORARY SHORING FOR THE CENTER PIER CONSTRUCTION.

INSTALL MEDIAN STEEL THRIE BEAM AND BULLNOSES.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3A DAYTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3A: NIGHTTIME CONSTRUCTION SUMMARY

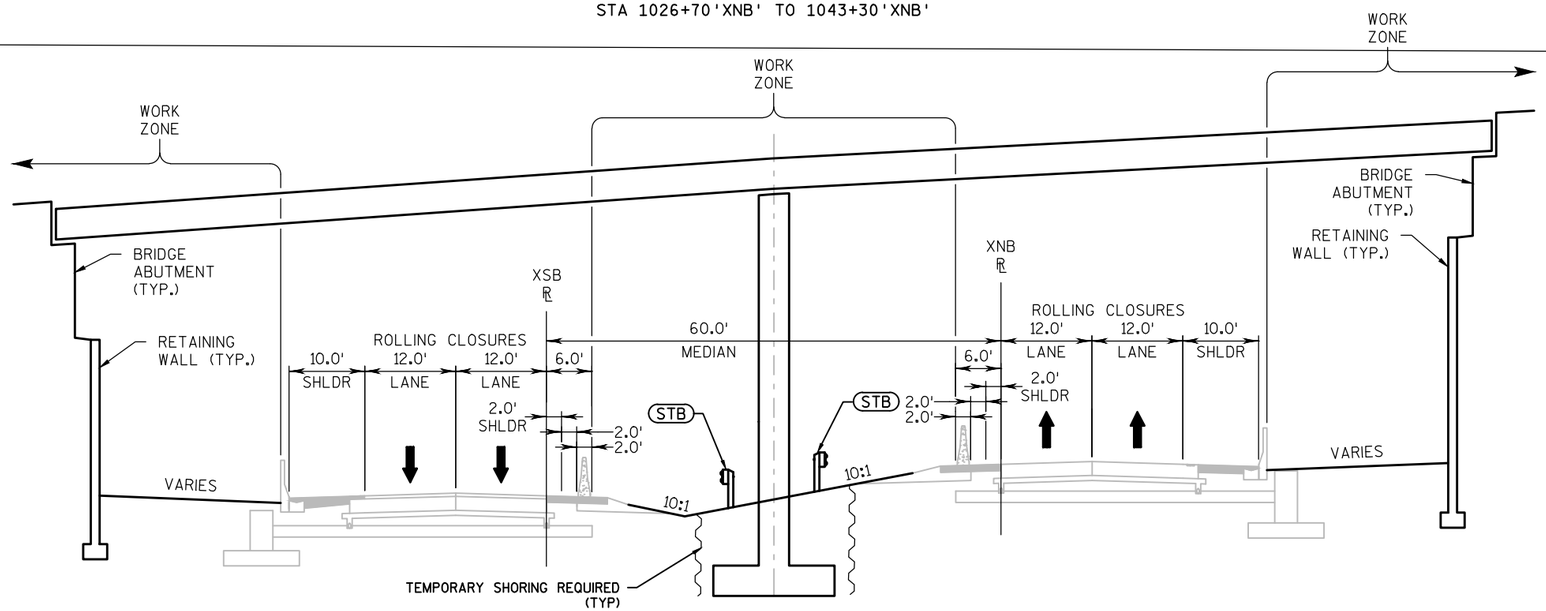
CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

CONSTRUCT PROPOSED BRIDGE ABUTMENTS, PIER COLUMNS/CAP, & RETAINING WALLS.

INSTALL TEMPORARY SHORING FOR THE CENTER PIER CONSTRUCTION.

INSTALL MEDIAN THRIE BEAM AND BULLNOSES.

PLACE PROPOSED BRIDGE GIRDERS DURING NIGHTTIME HOURS USING I-39/90 ROLLING CLOSURES DURING NIGHTTIME HOURS, 11PM-5AM MONDAY THRU THURSDAY.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3A NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

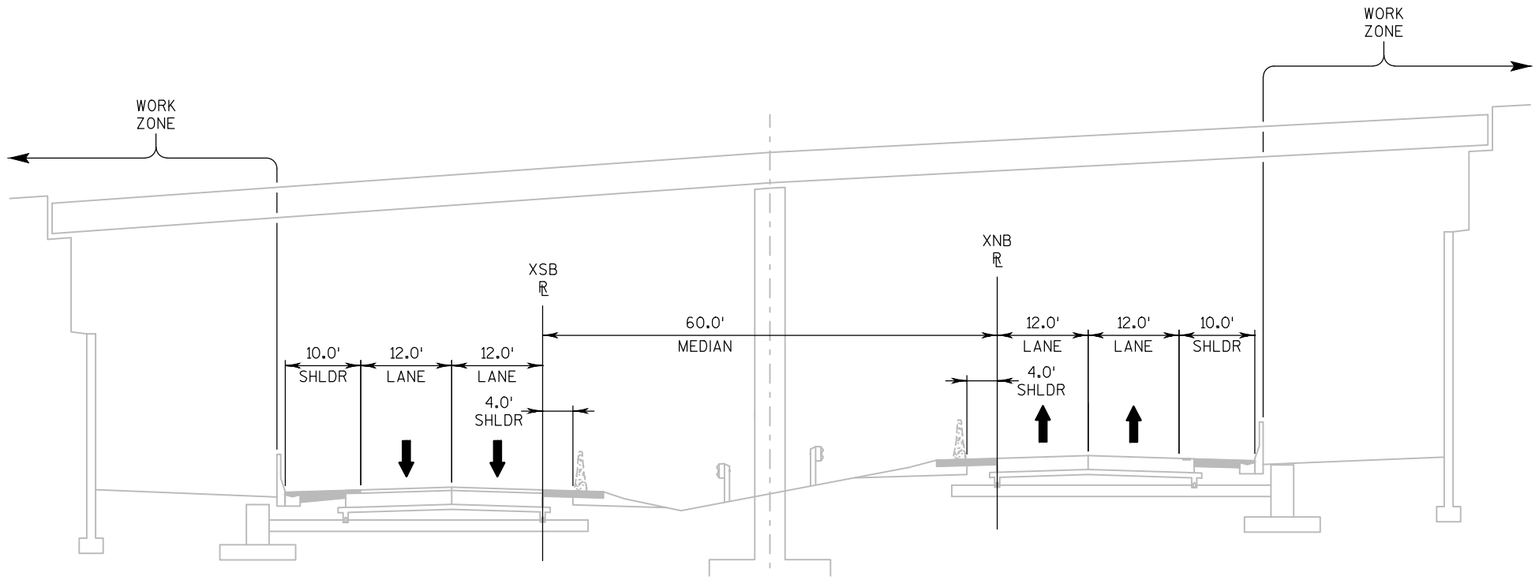
(STB) STEEL THIRE BEAM ITEMS

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3A	SHEET 68

STAGE 3B: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3B DAYTIME

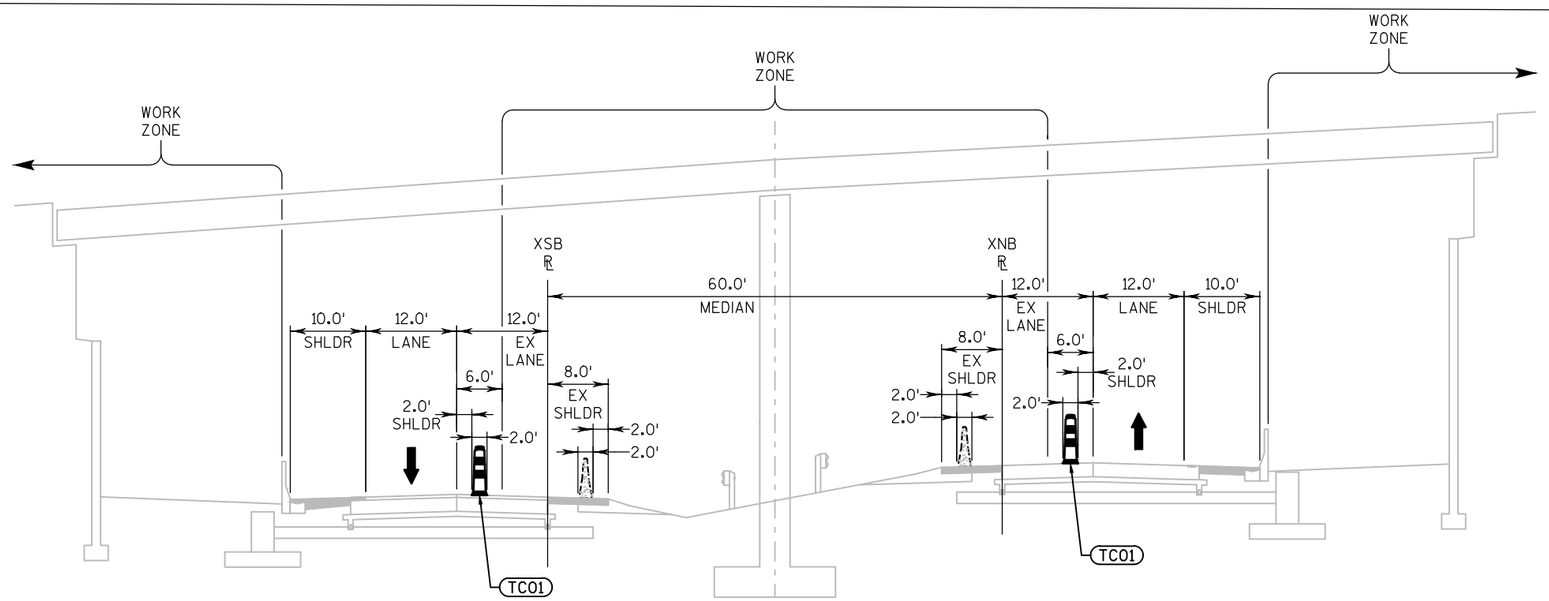
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3B: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE I-39/90 NB & SB TRAFFIC TO A SINGLE OUTSIDE LANE DURING NIGHTTIME HOURS.

REMOVE TEMPORARY BARRIER & TEMPORARY BARRIER CRASH CUSHION ON INSIDE SHOULDERS DURING NIGHTTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3B NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

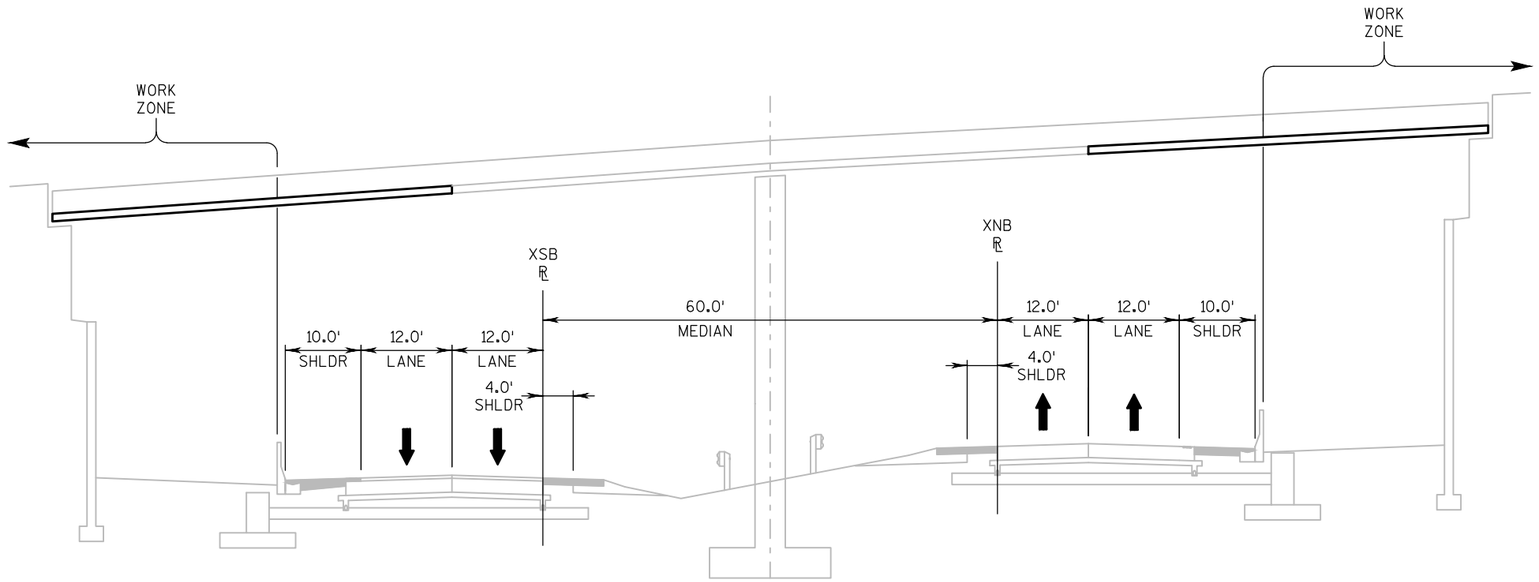
(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3B	SHEET 69

STAGE 3C: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3C DAYTIME

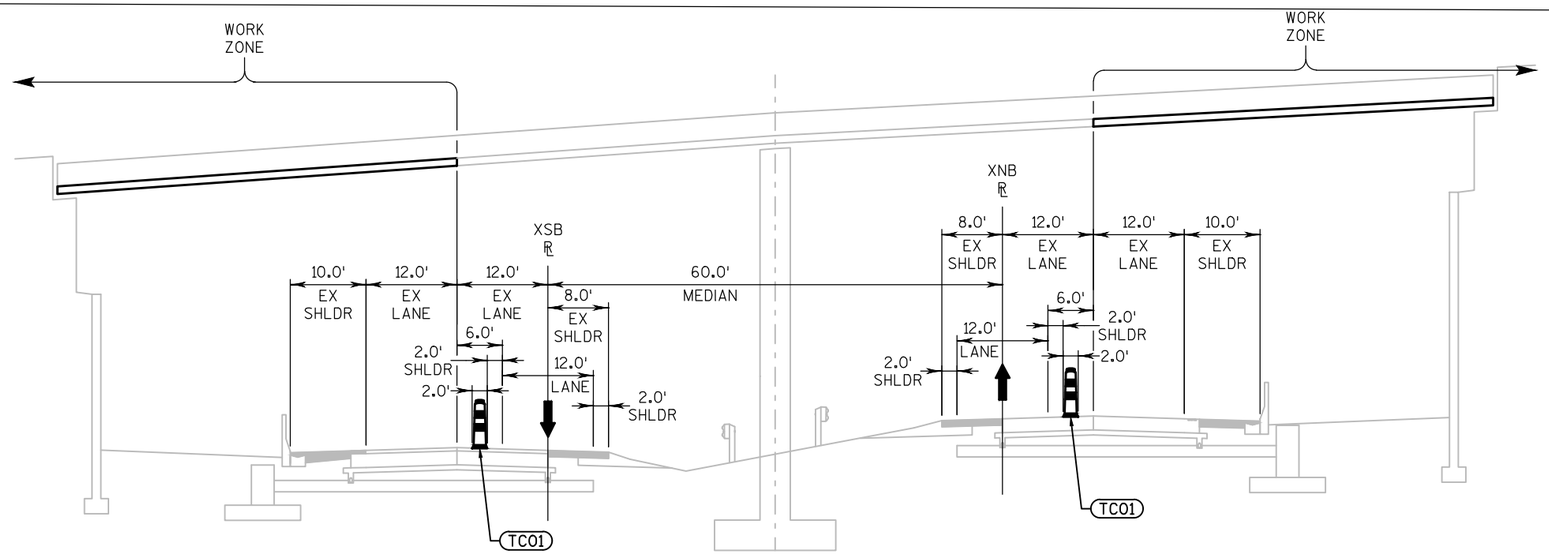
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3C: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE INSIDE LANE TO UTILIZE INSIDE SHOULDERS DURING NIGHTTIME HOURS.

CONSTRUCT FALSEWORK FOR NEW BRIDGE DURING NIGHTTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3C NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

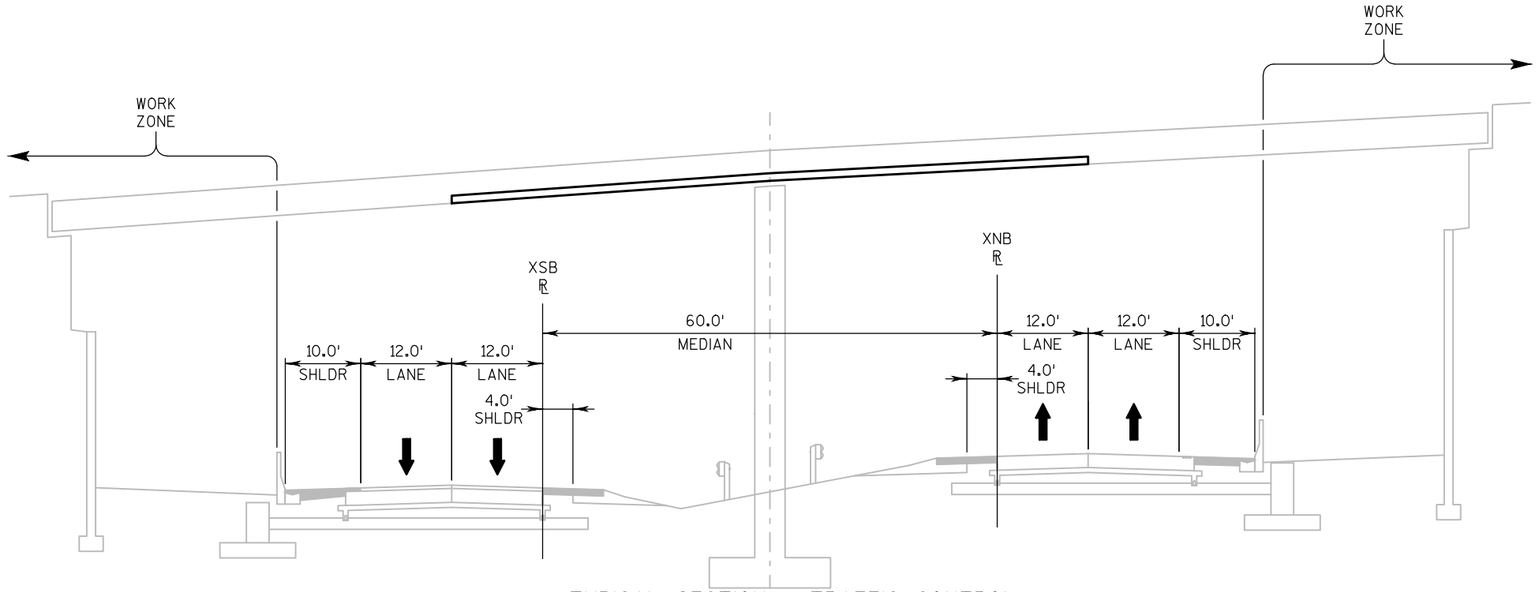
(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3C	SHEET 70

STAGE 3D: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3D DAYTIME

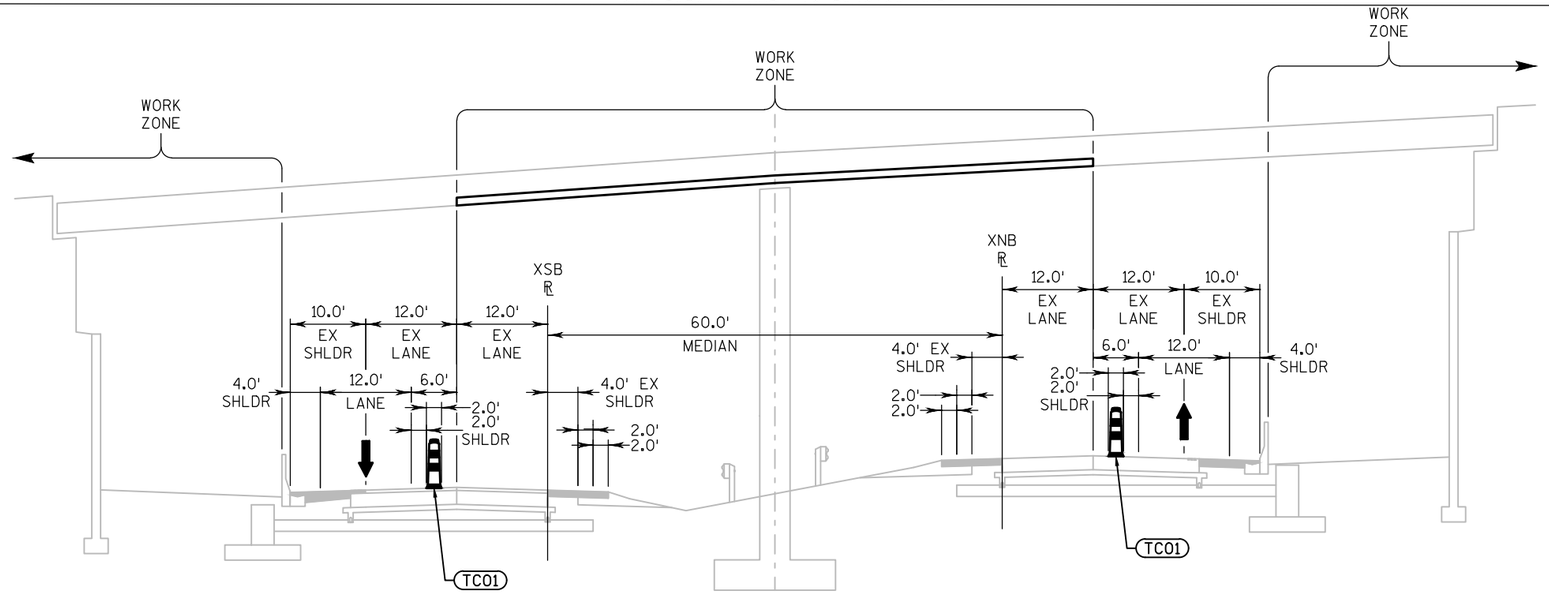
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3D: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE OUTSIDE LANE TO UTILIZE OUTSIDE SHOULDERS DURING NIGHTTIME HOURS.

CONSTRUCT FALSEWORK FOR NEW BRIDGE DURING NIGHTTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3D NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

(TC01) TYPICAL DRUM SPACING 100'

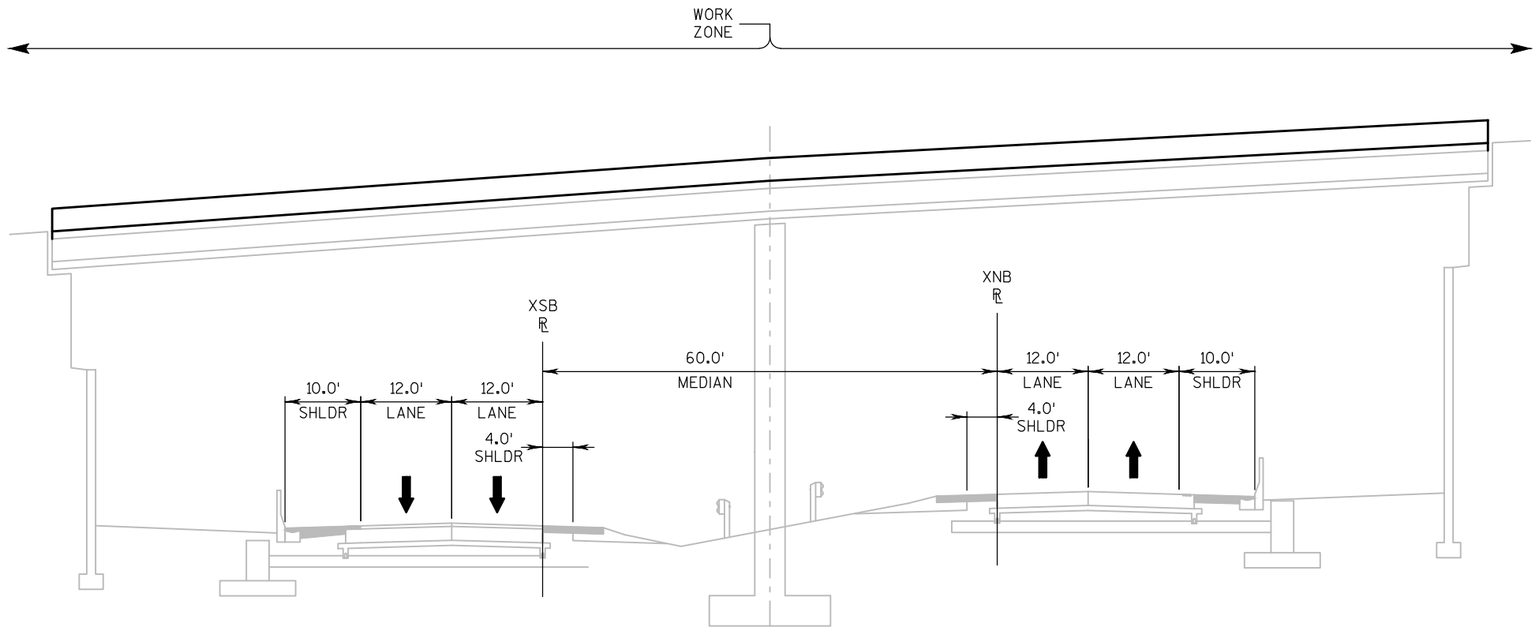
PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3D	SHEET 71

STAGE 3E: DAYTIME AND NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON EXISTING CONFIGURATION DURING NIGHTTIME HOURS.

POUR BRIDGE DECK & CONSTRUCT PARAPETS FOR NEW BRIDGE.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3E DAYTIME AND NIGHTTIME

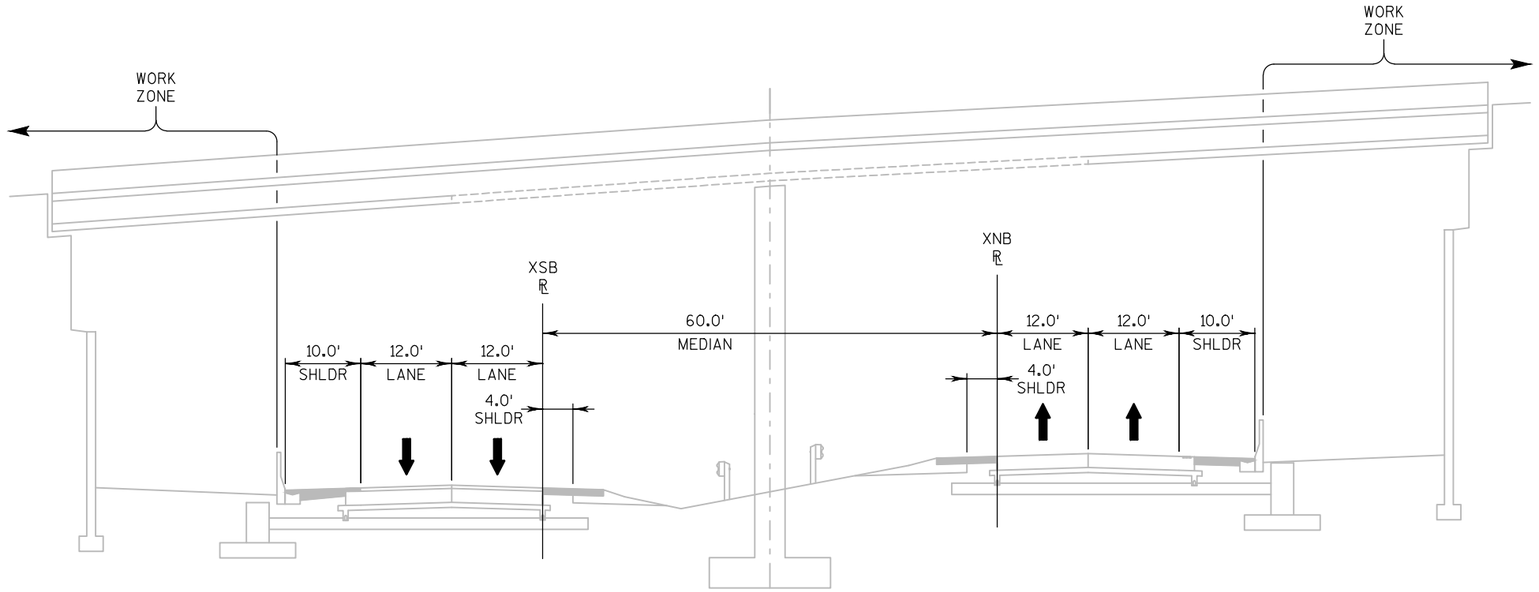
STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3E	SHEET 72

STAGE 3F: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3F DAYTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3F: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE OUTSIDE LANE TO UTILIZE OUTSIDE SHOULDERS DURING NIGHTTIME HOURS.

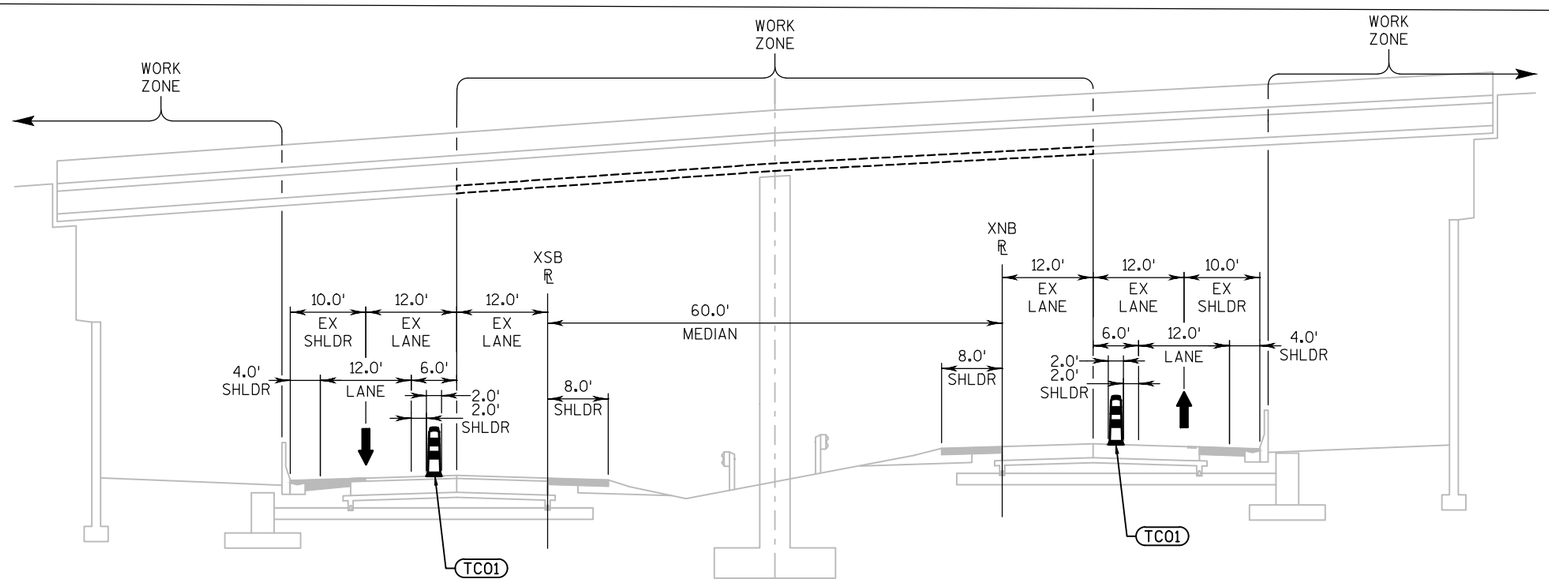
REMOVE FALSEWORK FOR NEW BRIDGE DECK DURING NIGHTTIME HOURS.

STAINING A: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN OPEN TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE OUTSIDE LANE TO UTILIZE OUTSIDE SHOULDERS DURING NIGHTTIME HOURS.

AFTER CONCRETE CURE ON STRUCTURE IS COMPLETE, STAIN THE B-13-726 STRUCTURE COMPONENTS ABOVE INSIDE LANES AND MEDIAN.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3F NIGHTTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

LEGEND

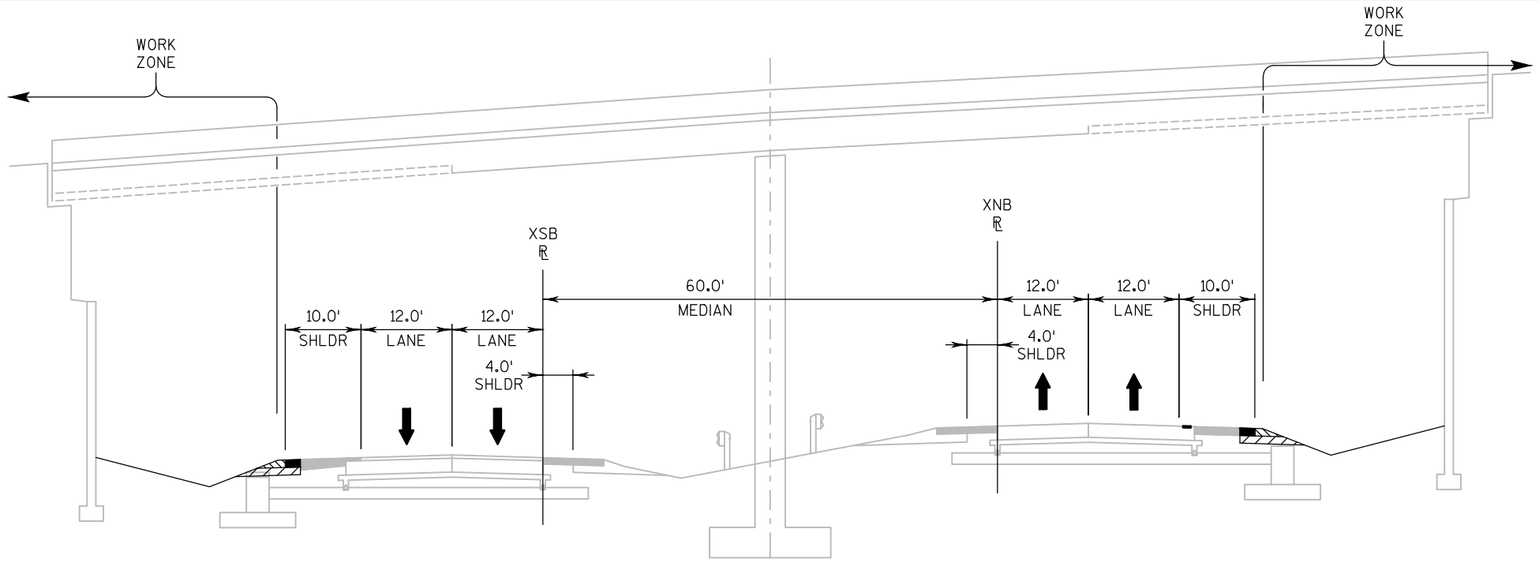
(TC01) TYPICAL DRUM SPACING 100'

PROJECT NO:1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3F & STAINING A	SHEET 73

STAGE 3G: DAYTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

I-39/90 TRAFFIC TO REMAIN ON DAYTIME CONFIGURATION DURING DAYTIME HOURS.



TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3G DAYTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

STAGE 3G: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN CLOSED TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE INSIDE LANE TO UTILIZE INSIDE SHOULDERS DURING NIGHTTIME HOURS.

REMOVE REMAINDER OF FALSEWORK FOR NEW BRIDGE DECK DURING NIGHTTIME HOURS.

REMOVE CONCRETE BARRIER AND GUARDRAIL.
- SAWCUT ASPHALTIC SHOULDER PARALLEL TO CONCRETE BARRIER TO BE REMOVED
- REMOVE CONCRETE BARRIER
- REPLACE VOID WITH BASE AGGREGATE AND HMA PAVEMENT WITH SAFETY EDGE

PLACE BASE AGGREGATE DENSE 3/4" AND HMA TYPE E-30 IN VOID CREATED BY REMOVAL OF BARRIER WALL.

STAINING B: NIGHTTIME CONSTRUCTION SUMMARY

CTH AB TO REMAIN OPEN TO ALL TRAFFIC WITHIN WORK ZONE AT ALL TIMES.

MERGE & SHIFT I-39/90 NB & SB TRAFFIC TO A SHIFTED SINGLE INSIDE LANE TO UTILIZE INSIDE SHOULDERS DURING NIGHTTIME HOURS.

AFTER CONCRETE CURE ON STRUCTURE IS COMPLETE, STAIN THE B-13-726 STRUCTURE COMPONENTS ABOVE THE OUTSIDE LANES.

LEGEND

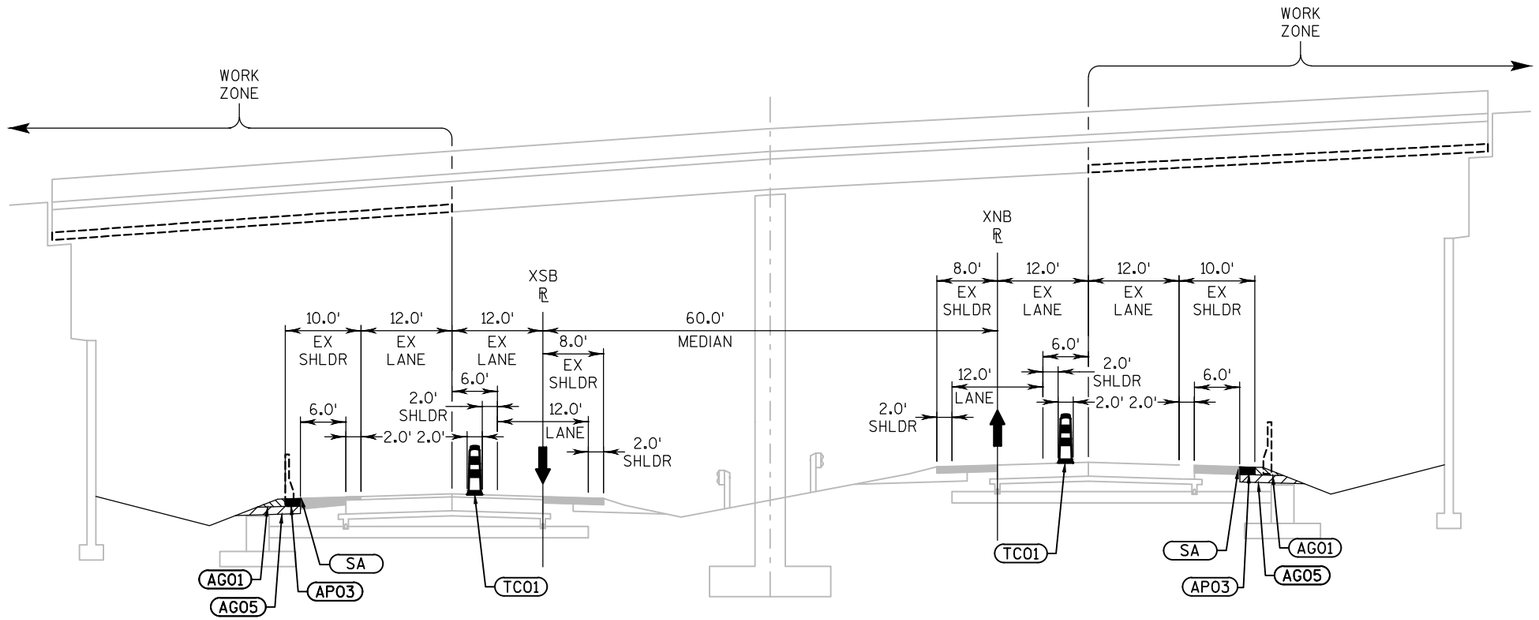
(AG01) BASE AGGREGATE DENSE 3/4-INCH, 6-INCH

(AG05) BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCH

(AP03) 6-INCH NEW CONSTRUCTION
2.5" UPPER LAYER HMA PAVEMENT 4 LT 58-28 H
3.5" LOWER LAYER HMA PAVEMENT 2 LT 58-28 S

(TC01) TYPICAL DRUM SPACING 100'

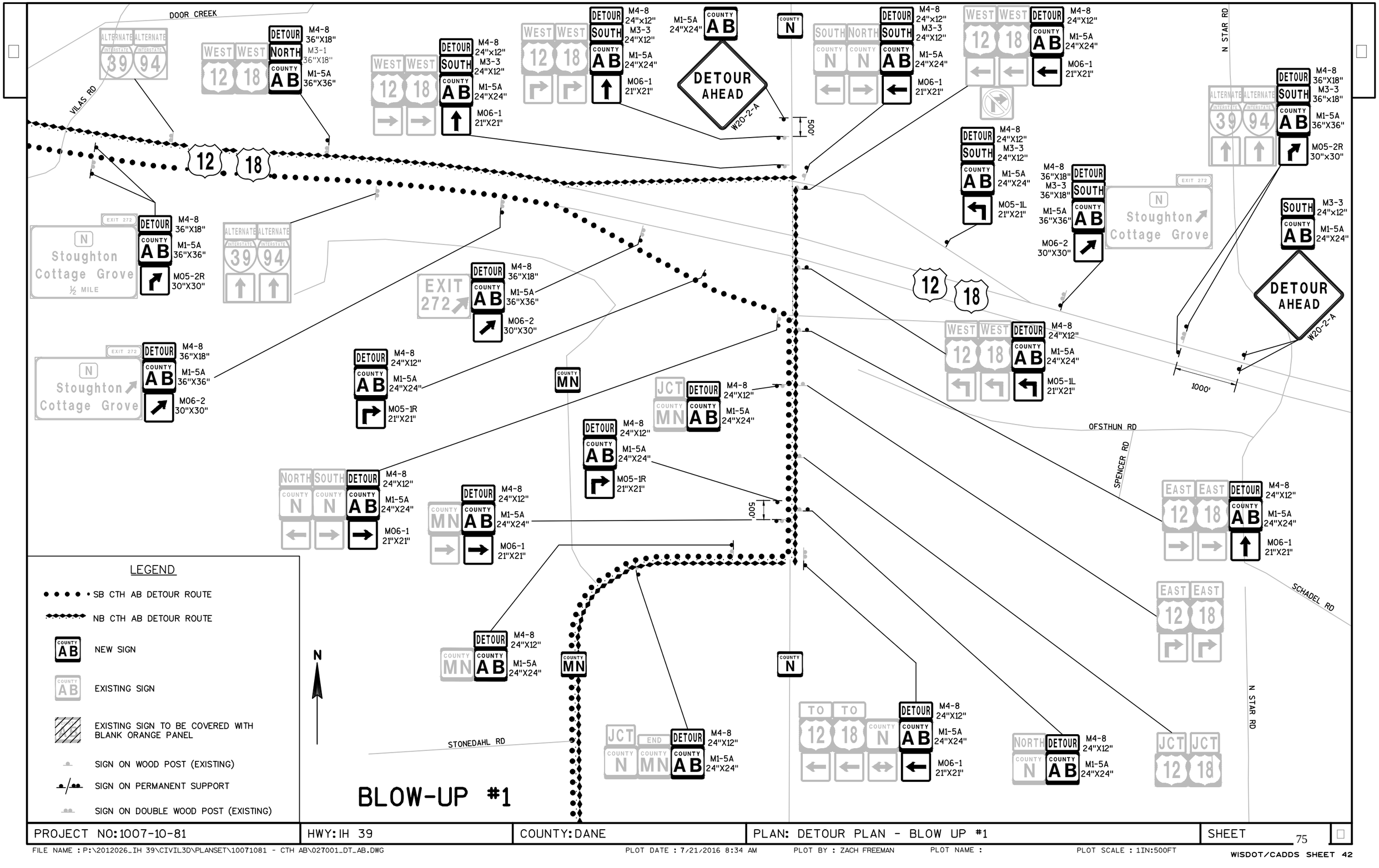
(SA) SAWING ASPHALT



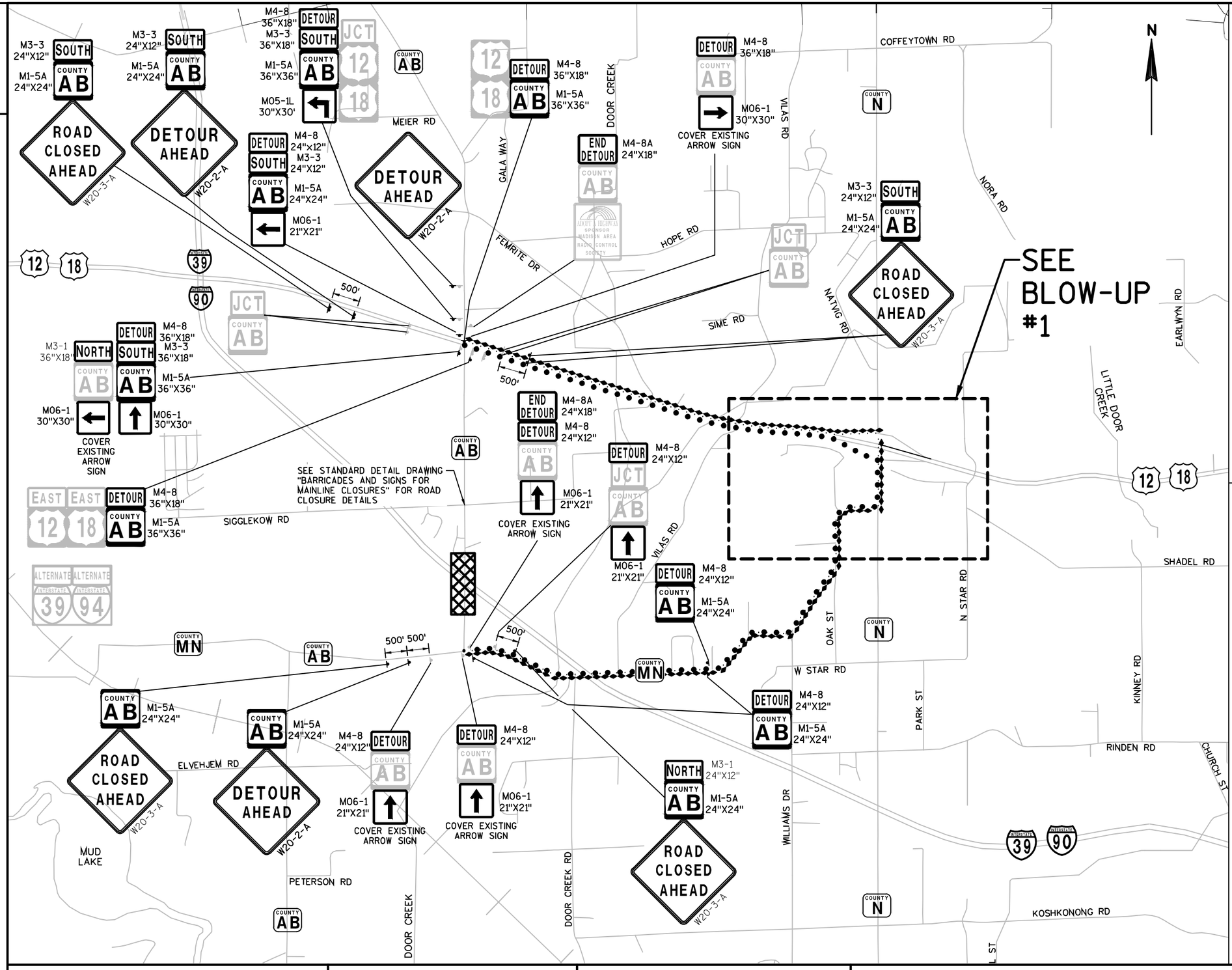
TYPICAL SECTION - TRAFFIC CONTROL
STAGE 3G NIGHTTIME

STA 1030+70'XSB' TO 1047+30'XSB'
STA 1026+70'XNB' TO 1043+30'XNB'

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - TYPICAL SECTIONS, STAGE 3G AND STAINING B	SHEET 74



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: DETOUR PLAN - BLOW UP #1	SHEET 75



GENERAL NOTES: TRAFFIC CONTROL AND DETOURS

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE TRAFFIC CONTROL PLAN, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

ALL"W" AND "WO" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED AND SHALL HAVE REFLECTIVE FLORESCENT DIAMOND GRADE SHEETING.

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

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

SIGNS SHALL BE PLACED A MINIMUM OF 10 CALENDAR DAYS PRIOR TO CONSTRUCTION AND COVERED UNTIL NEEDED. COVERED SIGNS IS INCIDENTAL TO ITEM DETOUR SIGNS PAID AS COVERING SIGHS TYPE 1/TYPE 2.

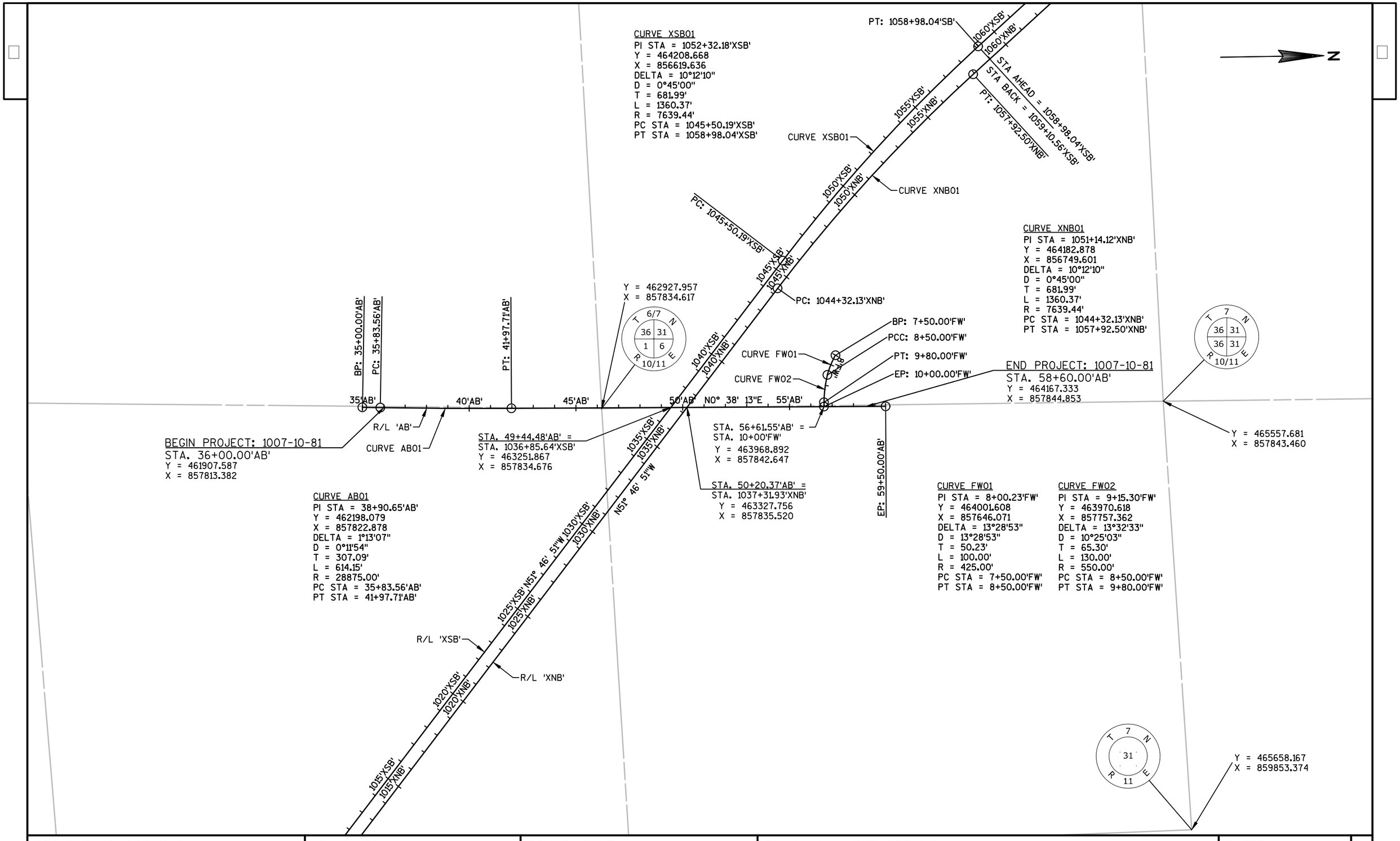
PCMS SHALL BE IN PLACE A MINIMUM OF 10 DAYS PRIOR TO CONSTRUCTION. CONTACT SW REGION TRAFFIC TEAM LEADER JEFF GUSTAFSON 608-516-6400 FOR LOCATIONS AND MESSAGES.

LEGEND

- SB CTH AB DETOUR ROUTE
- NB CTH AB DETOUR ROUTE
- WORK AREA
- NEW SIGN
- EXISTING SIGN
- EXISTING SIGN TO BE COVERED WITH BLANK ORANGE PANEL
- SIGN ON WOOD POST (EXISTING)
- SIGN ON PERMANENT SUPPORT
- SIGN ON DOUBLE WOOD POST (EXISTING)

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: DETOUR PLAN - CTH AB	SHEET

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\027001_DT_AB.DWG
PLOT DATE : 7/21/2016 8:34 AM
PLOT BY : ZACH FREEMAN
PLOT NAME :
PLOT SCALE : 1IN:3000FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN: ALIGNMENT DETAILS	SHEET 77

DATE 28SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1007-10-81 QUANTITY
0010	201.0105	Clearing	STA	20.000	20.000
0020	201.0205	Grubbing	STA	20.000	20.000
0030	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0040	203.0200	Removing Old Structure (station) 001. 49+79.81	LS	1.000	1.000
0050	203.0210.S	Abatement of Asbestos Containing Material (structure) 001. B-13-139	LS	1.000	1.000
0060	203.0225.S	Debris Containment (structure) 001. B-13-139	LS	1.000	1.000
0070	204.0100	Removing Pavement	SY	66.000	66.000
0080	204.0110	Removing Asphaltic Surface	SY	3,816.000	3,816.000
0090	204.0120	Removing Asphaltic Surface Milling	SY	370.000	370.000
0100	204.0157	Removing Concrete Barrier	LF	815.000	815.000
0110	204.0165	Removing Guardrail	LF	1,835.000	1,835.000
0120	204.0170	Removing Fence	LF	817.000	817.000
0130	204.0180	Removing Delineators and Markers	EACH	8.000	8.000
0140	205.0100	Excavation Common	CY	6,695.000	6,695.000
0150	205.0400	Excavation Marsh	CY	1,000.000	1,000.000
0160	206.1000	Excavation for Structures Bridges (structure) 001. B-13-726	LS	1.000	1.000
0170	208.1100	Select Borrow	CY	800.000	800.000
0180	209.2100	Backfill Granular Grade 2	CY	3,327.000	3,327.000
0190	210.1500	Backfill Structure Type A	TON	1,410.000	1,410.000
0200	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	53.000	53.000
0210	213.0100	Finishing Roadway (project) 001. 1007-10-81	EACH	1.000	1.000
0220	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,005.000	1,005.000
0230	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	9,027.000	9,027.000
0240	305.0130	Base Aggregate Dense 3-Inch	TON	5,443.000	5,443.000
0250	312.0110	Select Crushed Material	TON	800.000	800.000
0260	415.0070	Concrete Pavement 7-Inch **P**	SY	183.000	183.000
0270	415.0410	Concrete Pavement Approach Slab **P**	SY	130.000	130.000
0280	416.0160	Concrete Driveway 6-Inch	SY	63.000	63.000
0290	416.0610	Drilled Tie Bars	EACH	14.000	14.000
0300	416.1010	Concrete Surface Drains **P**	CY	4.400	4.400
0310	440.4410	Incentive IRI Ride	DOL	4,000.000	4,000.000
0320	450.4000	HMA Cold Weather Paving	TON	415.000	415.000
0330	455.0605	Tack Coat	GAL	720.000	720.000
0340	460.2000	Incentive Density HMA Pavement	DOL	2,480.000	2,480.000
0350	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,173.000	1,173.000
0360	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,043.000	1,043.000
0370	460.7222	HMA Pavement 2 HT 58-28 S	TON	926.000	926.000
0380	460.7424	HMA Pavement 4 HT 58-28 H	TON	732.000	732.000
0390	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	27.000	27.000
0400	502.0100	Concrete Masonry Bridges **P**	CY	949.000	949.000
0410	502.3200	Protective Surface Treatment **P**	SY	1,370.000	1,370.000
0420	502.3210	Pigmented Surface Sealer	SY	280.000	280.000
0430	503.0155	Prestressed Girder Type I 54W-Inch **P**	LF	1,629.000	1,629.000
0440	505.0400	Bar Steel Reinforcement HS Structures **P**	LB	26,720.000	26,720.000
0450	505.0600	Bar Steel Reinforcement HS Coated Structures **P**	LB	146,320.000	146,320.000
0460	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	28.000	28.000

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DATE 28SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1007-10-81 QUANTITY
0470	506.4000	Steel Diaphragms (structure) 001. B-13-726 **P**	EACH	24.000	24.000
0480	511.1200	Temporary Shoring (structure) 001. B-13-726	SF	1,515.000	1,515.000
0490	513.4091	Railing Tubular Screening (structure) 001. R-13-262	LF	176.000	176.000
0500	513.4091	Railing Tubular Screening (structure) 002. R-13-263	LF	206.000	206.000
0510	516.0500	Rubberized Membrane Waterproofing	SY	40.000	40.000
0520	517.1010.S	Concrete Staining (structure) 001. B-13-726 **P**	SF	13,340.000	13,340.000
0530	517.1010.S	Concrete Staining (structure) 002. R-13-262 **P**	SF	2,280.000	2,280.000
0540	517.1010.S	Concrete Staining (structure) 003. R-13-263 **P**	SF	3,000.000	3,000.000
0550	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	35.000	35.000
0560	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0570	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0580	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	62.000	62.000
0590	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	139.000	139.000
0600	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0610	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0620	523.0129	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	92.000	92.000
0630	523.0529	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	2.000	2.000
0640	550.0020	Pre-Boring Rock or Consolidated Materials	LF	340.000	340.000
0650	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,105.000	1,105.000
0660	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,940.000	1,940.000
0670	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,940.000	1,940.000
0680	604.0400	Slope Paving Concrete	SY	40.000	40.000
0690	606.0200	Riprap Medium	CY	25.600	25.600
0700	611.0654	Inlet Covers Type V	EACH	2.000	2.000
0710	611.3220	Inlets 2x2-FT	EACH	2.000	2.000
0720	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	20.000	20.000
0730	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	170.000	170.000
0740	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	640.000	640.000
0750	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0760	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000
0770	614.0230	Steel Thrie Beam	LF	200.000	200.000
0780	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0790	614.2300	MGS Guardrail 3	LF	587.500	587.500
0800	614.2500	MGS Thrie Beam Transition	LF	236.400	236.400
0810	614.2610	MGS Guardrail Terminal EAT	EACH	6.000	6.000

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DATE 28SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1007-10-81 QUANTITY
0820	616.0100	Fence Woven Wire (height) 001. 4-Feet **P**	LF	510.000	510.000
0830	616.0700.S	Fence Safety	LF	700.000	700.000
0840	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1007-10-81	EACH	1.000	1.000
0850	619.1000	Mobilization	EACH	1.000	1.000
0860	624.0100	Water	MGAL	153.000	153.000
0870	625.0500	Salvaged Topsoil **P**	SY	32,220.000	32,220.000
0880	627.0200	Mulching	SY	18,420.000	18,420.000
0890	628.1104	Erosion Bales	EACH	460.000	460.000
0900	628.1504	Silt Fence	LF	4,300.000	4,300.000
0910	628.1520	Silt Fence Maintenance	LF	8,600.000	8,600.000
0920	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0930	628.1910	Mobilizations Emergency Erosion Control	EACH	10.000	10.000
0940	628.2006	Erosion Mat Urban Class I Type A	SY	9,350.000	9,350.000
0950	628.6505	Soil Stabilizer Type A	ACRE	1.000	1.000
0960	628.6510	Soil Stabilizer Type B	ACRE	1.000	1.000
0970	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0980	628.7020	Inlet Protection Type D	EACH	2.000	2.000
0990	628.7504	Temporary Ditch Checks	LF	60.000	60.000
1000	628.7555	Culvert Pipe Checks	EACH	14.000	14.000
1010	628.7560	Tracking Pads	EACH	6.000	6.000
1020	628.7570	Rock Bags	EACH	20.000	20.000
1030	629.0205	Fertilizer Type A	CWT	23.000	23.000
1040	630.0120	Seeding Mixture No. 20	LB	170.000	170.000
1050	630.0130	Seeding Mixture No. 30	LB	400.000	400.000
1060	630.0140	Seeding Mixture No. 40	LB	24.000	24.000
1070	630.0200	Seeding Temporary	LB	200.000	200.000
1080	633.0100	Delineator Posts Steel	EACH	8.000	8.000
1090	633.0500	Delineator Reflectors	EACH	8.000	8.000
1100	633.5200	Markers Culvert End	EACH	10.000	10.000
1110	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
1120	637.2210	Signs Type II Reflective H	SF	6.500	6.500
1130	637.2230	Signs Type II Reflective F	SF	18.000	18.000
1140	638.2102	Moving Signs Type II	EACH	8.000	8.000
1150	638.2602	Removing Signs Type II	EACH	11.000	11.000
1160	638.3000	Removing Small Sign Supports	EACH	13.000	13.000
1170	638.4000	Moving Small Sign Supports	EACH	7.000	7.000
1180	642.5001	Field Office Type B	EACH	1.000	1.000
1190	643.0200.S	Traffic Control Surveillance and Maintenance (project) 001. 1007-10-81	DAY	1.000	1.000
1200	643.0300	Traffic Control Drums	DAY	14,832.000	14,832.000
1210	643.0420	Traffic Control Barricades Type III	DAY	3,198.000	3,198.000
1220	643.0705	Traffic Control Warning Lights Type A	DAY	4,032.000	4,032.000
1230	643.0715	Traffic Control Warning Lights Type C	DAY	1,624.000	1,624.000
1240	643.0800	Traffic Control Arrow Boards	DAY	344.000	344.000
1250	643.0900	Traffic Control Signs	DAY	4,168.000	4,168.000
1260	643.1050	Traffic Control Signs PCMS	DAY	200.000	200.000
1270	643.2000	Traffic Control Detour (project) 001. 1007-10-81	EACH	1.000	1.000
1280	643.3000	Traffic Control Detour Signs	DAY	18,144.000	18,144.000
1290	645.0120	Geotextile Type HR	SY	80.000	80.000
1300	646.0106	Pavement Marking Epoxy 4-Inch	LF	14,620.000	14,620.000
1310	652.0125	Conduit Rigid Metallic 2-Inch	LF	48.000	48.000

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DATE 28SEP16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1007-10-81 QUANTITY
1320	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch **P**	LF	1,170.000	1,170.000
1330	653.0222	Junction Boxes 18x12x6-Inch	EACH	4.000	4.000
1340	690.0150	Sawing Asphalt	LF	2,508.000	2,508.000
1350	690.0250	Sawing Concrete	LF	16.000	16.000
1360	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
1370	715.0502	Incentive Strength Concrete Structures	DOL	5,694.000	5,694.000
1380	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,000.000	1,000.000
1390	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,000.000	1,000.000
1400	SPV.0035	Special 001. Roadway Embankment	CY	25,416.000	25,416.000
1410	SPV.0060	Special 001. Baseline CPM Progress Schedule	EACH	1.000	1.000
1420	SPV.0060	Special 002. CPM Progress Schedule Updates and Accepted Revisions	EACH	7.000	7.000
1430	SPV.0060	Special 003. Access Gate 6-Foot	EACH	2.000	2.000
1440	SPV.0060	Special 004. Landmark Reference Monuments Special	EACH	1.000	1.000
1450	SPV.0060	Special 005. Apron Endwall For Underdrain Reinforced Concrete Salvaged 6-Inch	EACH	4.000	4.000
1460	SPV.0060	Special 006.Sawing Concrete Barrier	EACH	2.000	2.000
1470	SPV.0060	Special 007. Pull Box Non-Conductive 24X42-Inch	EACH	4.000	4.000
1480	SPV.0090	Special 001. Fill Existing Concrete Rumble Strips	LF	330.000	330.000
1490	SPV.0090	Special 150. Compost Tube	LF	2,020.000	2,020.000
1500	SPV.0090	Special 200. Traffic Control Gawk Screen Furnished	LF	900.000	900.000
1510	SPV.0090	Special 201. Traffic Control Gawk Screen Installed	LF	900.000	900.000
1520	SPV.0090	Special 700. Fence Chain Link Polymer Coated 6-FT	LF	562.000	562.000
1530	SPV.0105	Special 001. Survey Project 1007-10-81	LS	1.000	1.000
1540	SPV.0165	Special 850. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP **p**	SF	5,036.000	5,036.000

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CLEARING AND GRUBBING

LOCATION	STATION				201.0105 CLEARING STA	201.0205 GRUBBING STA
CTH AB	38+00	-	49+00	'AB'	11	11
CTH AB	50+00	-	58+00	'AB'	8	8
FREEWAY COURT	8+00	-	9+00	'FW'	1	1
STAGE 1 SUBTOTALS					20	20
PROJECT TOTALS					20	20

REMOVING PAVEMENT

LOCATION	STATION				OFFSET	204.0100 SY	REMARKS
FREEWAY COURT	9+11	-	9+33	'FW'	RT	66	CONCRETE DRIVEWAY
STAGE 2 SUBTOTAL						66	
PROJECT TOTAL						66	

REMOVING ASPHALTIC SURFACE

STAGE	LOCATION	STATION					204.0110 REMOVING ASPHALTIC SURFACE SY	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
1A	IH 39	1030+70	-	1047+30	'SB'	LT	1,476	17	370	8' WIDE OUTSIDE SHOULDER
1B	IH 39	1030+70	-	1039+75	'SB'	RT	402	9	0	4' WIDE MEDIAN SHOULDER
1A	IH 39	1026+70	-	1043+30	'NB'	RT	1,476	17	0	8' WIDE OUTSIDE SHOULDER
1B	IH 39	1027+70	-	1038+10	'NB'	LT	462	10	0	4' WIDE MEDIAN SHOULDER
SUBTOTAL							3,816	53	370	
PROJECT TOTAL							3,816	53	370	

REMOVING SMALL PIPE CULVERTS

LOCATION	STATION	OFFSET	DESCRIPTION	203.0100 EACH	REMARKS
CTH AB	44+43 'AB'	LT/RT	24" X 120' CPCM	1	CROSS PIPE
	53+42'AB'	LT/RT	36" X 48' CPCM	1	CROSS PIPE
	9+10'FW' - 9+26'FW'	LT	12" x 25' CPCM	1	DRIVEWAY PIPE
	9+13'FW' - 9+44"FW"	RT	12" x 25' CPCM	1	DRIVEWAY PIPE
	9+77'FW'	LT/RT	18" x 43' CPCM	1	SIDEROAD PIPE
			SUBTOTAL	5	
			PROJECT TOTAL	5	

REMOVING GUARDRAIL

STAGE	LOCATION	STATION		STATION		OFFSET	204.0165 LF	REMARKS
2	CTH AB	43+33	-	48+49	'AB'	LT	517	
2	CTH AB	43+23	-	48+31	'AB'	RT	507	
2	CTH AB	51+40	-	51+92	'AB'	LT	51	
2	CTH AB	51+21	-	51+74	'AB'	RT	52	
2D	IH 39	1035+76	-	1038+37	'XNB'	LT	522	IH 39 MEDIAN
						STAGE 2 SUBTOTAL	1,649	
3G	IH 39	1039+37	-	1040+30	'XSB'	LT	93	OUTSIDE SHOULDER
3G	IH 39	1033+55	-	1034+57	'XNB'	RT	93	OUTSIDE SHOULDER
						STAGE 3 SUBTOTAL	186	
						PROJECT TOTAL	1,835	

REMOVING CONCRETE BARRIER

STAGE	LOCATION	STATION		STATION		OFFSET	204.0157 LF	REMARKS
1A	IH 39 SB	1039+37	-	1040+42	'XSB'	LT	105	REMOVE SLOPED END REPLACE WITH GUARDRAIL THE SAME NIGHT
1A	IH 39 NB	1033+71	-	1034+57	'XNB'	RT	86	REMOVE SLOPED END REPLACE WITH GUARDRAIL THE SAME NIGHT
						STAGE 1 SUBTOTAL	191	
3G	IH 39 SB	1036+36	-	1039+37	'XSB'	LT	301	INCLUDES THE 2' WIDE FOOTING AS SHOWN IN SDD CONCRETE BARRIER SINGLE-FACED (WITH ANCHORAGE)
3G	IH 39 NB	1034+57	-	1037+80	'XNB'	RT	323	INCLUDES THE 2' WIDE FOOTING AS SHOWN IN SDD CONCRETE BARRIER SINGLE-FACED (WITH ANCHORAGE)
						STAGE 3 SUBTOTAL	624	
						PROJECT TOTAL	815	

REMOVING FENCE

LOCATION	STATION				OFFSET	204.0170 LF	REMARKS
CTH AB	53+14	'AB' -	55+53	'AB'	LT	262	CHAIN LINK FENCE
IH 39	1034+56	'XSB' -	1036+10	'XSB'	LT	158	WOVEN WIRE FENCE
IH 39	1036+44	'XSB' -	1037+13	'XSB'	LT	78	WOVEN WIRE FENCE
IH 39	1036+89	'XNB' -	1037+77	'XNB'	RT	127	WOVEN WIRE FENCE
IH 39	1038+11	'XNB' -	1039+70	'XNB'	RT	192	WOVEN WIRE FENCE
					CATEGORY 1000 SUBTOTAL	817	
					PROJECT TOTAL	817	

REMOVING DELINEATORS AND MARKERS

LOCATION	204.0180 EACH	REMARKS
IH 39 SB	4	LT & RT SHOULDERS - UNDISTRIBUTED
IH 39 NB	4	LT & RT SHOULDERS - UNDISTRIBUTED
SUBTOTAL	8	
PROJECT TOTAL	8	

EARTHWORK SUMMARY

DIVISION	STATION				LOCATION	205.0100 EXCAVATION COMMON (1) CUT(2) CY	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3) CY	205.0400 MARSH EXCAVATION (4) CY	FILL CY	208.1100 SELECT BORROW (3) CY	SPV.0035.001 ROADWAY EMBANKMENT (5) CY	MASS ORDINATE +/- (5) (6) CY	312.0110 SELECT CRUSHED MATERIAL (7) TON
1A	1026+70	'XNB' -	1043+30	'XNB' - RT	IH 39 NB OUTSIDE SHOULDER WIDENING	300	0	0	400	0	400	-100	0
1A	1030+70	'XSB'	1047+30	'XSB' - LT	IH 39 SB OUTSIDE SHOULDER WIDENING	346	0	0	454	0	454	-108	0
1B	1026+70	'XNB'	1043+30	'XNB' - LT	IH 39 NB MEDIAN SHOULDER WIDENING	352	0	0	411	0	411	-59	0
1B	1030+70	'XSB'	1047+30	'XSB' - RT	IH 39 SB MEDIAN SHOULDER WIDENING	350	0	0	94	0	94	256	0
					STAGE 1 SUBTOTAL	1,348	0	0	1,359	0	1,359	-11	0
3A	1035+34	'XSB'	1036+85	'XSB' - LT	SOUTH BRIDGE AND WALL GRADING	402	0	0	0	0	0	402	0
3A	1036+50	'XNB'	1039+02	'XNB' - RT	NORTH BRIDGE AND WALL GRADING	351	0	0	0	0	0	351	0
					STRUCTURE SUBTOTAL	753	0	0	0	0	0	753	0
2/3	36+00	'AB'	49+04	'AB' - LT & RT	CTH AB SOUTH APPROACH	753	0	0	18,996	0	18,996	-18,243	0
2/3	50+49	'AB'	58+60	'AB' - LT & RT	CTH AB NORTH APPROACH	2,156	0	0	4,480	0	4480	-2,324	0
2/3	9+25	'FW'	9+82	'FW' - LT & RT	FREEWAY COURT	885	0	0	2	0	2	883	0
2/3	36+00	'AB'	49+04	'AB' - LT & RT	CTH AB SOUTH APPROACH - UNDISTRIBUTED	0	0	1,000	0	0	579	1,000	800
2/3				UNDISTRIBUTED	CTH AB UNDISTRIBUTED EBS	0	800	0	0	800	0	0	
					CTH AB SUBTOTAL	3,794	800	1,000	23,478	800	24,057	-18,684	800
					PROJECT TOTALS	5,895	800	1,000		800	25,416	-17,200	800
						6,695							

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS . ITEM NUMBER 205.0100.

2) CUT VOLUME INCLUDES CONCRETE AND ASPHALTIC SURFACE MATERIAL.

3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW.

4) MARSH EXCAVATION TO BE BACKFILLED WITH ROADWAY EMBANKMENT EXCEPT AS NOTED IN NOTE 7. THE NEED FOR MARSH EXCAVATION IS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.

5) ROADWAY EMBANKMENT = (FILL + MARSH EXCAVATION - (SELECT CRUSHED MATERIAL DIVIDED BY 1.9 TONS/CY))

6) THE MASS ORDINATE IS CALCULATED BY DIVISION. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION AND A NEGATIVE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. STRUCTURE EXCAVATION IS NOT INCLUDED IN THIS CALCULATION
MASS ORDINATE = (CUT + MARSH EXCAVATION - FILL). THE MASS ORDINATE IS FOR INFORMATION PURPOSES ONLY AS EXCAVATION COMMON AND ROADWAY EMBANKMENT ARE NOT BALANCED FOR QUANTITY PURPOSES AND DOES NOT GUARANTEE THE QUANTITY OF EXCAVATION COMMON, AND IF IT CAN BE REUSED ON SITE.

7) SELECT CRUSHED MATERIAL IS USED IN MARSH EXCAVATION AREAS WHERE WATER IS ENCOUNTERED DURING EXCAVATION. PLACE SELECT CRUSHED MATERIAL TO AN ELEVATION 1' ABOVE THE WATER LINE.

3

BASE AGGREGATE DENSE ITEMS

STAGE	LOCATION	STATION				305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0130 BASE AGGREGATE DENSE 3-INCH TON	*624.0100 WATER (MGAL)	REMARKS
1A	IH 39 NB	1026+70	-	1043+30	'XNB'	243	-	-	2	NB OUTSIDE SHOULDER
1A	IH 39 SB	1030+70	-	1047+30	'XSB'	245	-	-	2	SB OUTSIDE SHOULDER
1B	IH 39 NB	1027+70	-	1038+10	'XNB'	-	636	-	6	NB INSIDE SHOULDER
1B	IH 39 SB	1030+70	-	1039+75	'XSB'	-	553	0	6	NB INSIDE SHOULDER
				STAGE 1 SUBTOTALS		488	1,189	0	16	
-	CTH AB	36+00	-	48+61	'AB'	264	4,600	2,353	72	ROADWAY SOUTH OF STRUCTURE
	DRIVEWAY			41+50	'AB' LT	-	41	-	0	DRIVEWAY
	CTH AB	50+98	-	58+60	'AB'	158	2,743	1,432	43	ROADWAY NORTH OF STRUCTURE
	FREEWAY COURT	8+40	-	10+00	'FW'	22	274	1,658	20	ROADWAY
	DRIVEWAY			9+25	'FW' RT	-	18	-	0	DRIVEWAY
				STAGE - SUBTOTALS		444	7,676	5,443	135	
3G	IH 39 NB	1034+57	-	1037+80	'XNB'	38	84	-	1	TRAVEL LANES/SHOULDER
	IH 39 SB	1036+36	-	1039+37	'XSB'	35	78	-	1	TRAVEL LANES/SHOULDER
				STAGE 3G SUBTOTALS		73	162	0	2	
				PROJECT TOTALS		1,005	9,027	5,443	153	

* WATER CONVERSION IS 1 MGAL/100 TON OF BASE AGGREGATE DENSE MATERIAL. USE WATER FOR BASE COMPACTION AND DUST CONTROL.

CONCRETE PAVEMENT

LOCATION	STATION			OFFSET		415.0070 7-INCH SY	REMARKS
CTH AB	48+00	-	48+53	'AB'	RT	71	WIDE RIGHT SHOULDER
	48+37	-	48+82	'AB'	LT	51	WIDE LEFT SHOULDER
CTH AB	50+77	-	51+12	'AB'	RT	46	WIDE RIGHT SHOULDER
	51+07	-	21+22	'AB'	LT	15	WIDE LEFT SHOULDER
					SUBTOTAL	183	
					PROJECT TOTAL	183	

CONCRETE PAVEMENT APPROACH SLAB

LOCATION	STATION	-	STATION		415.0410 SY	COMMENTS
CTH AB	48+38	-	48+61	'AB'	65	SOUTH APPROACH
	50+98	-	51+21	'AB'	65	NORTH APPROACH
			SUBTOTALS		130	
			PROJECT TOTAL		130	

CONCRETE DRIVEWAY

LOCATION	STATION		OFFSET		416.0160 CONCRETE DRIVEWAY 6-INCH SY	416.0610 DRILLED TIE BARS EACH	REMARKS
FREEWAY COURT	9+25	'FW'	RT		63	14	CONCRETE DRIVEWAY
			SUBTOTAL		63	14	
			PROJECT TOTAL		63	14	

ASPHALTIC PAVEMENT ITEMS

STAGE	LOCATION	STATION			OFFSET	LAYER THICKNESS INCHES	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.7222 HMA PAVEMENT 2 HT 58-28 S TON	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	450.4000 HMA COLD WEATHER PAVING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	REMARKS
1A	IH 39 NB	1026+70	- 1043+30	'XNB'	RT	3.50	-	-	-	268	-	67	_	LOWER LAYER OUTSIDE SHOULDER
1A	IH 39 NB	1026+70	- 1043+30	'XNB'	RT	2.50	74	-	-	-	203	51	_	UPPER LAYER OUTSIDE SHOULDER
1B	IH 39 NB	1027+70	- 1038+10	'XNB'	LT	3.50	-	-	-	178		44	_	LOWER LAYER INSIDE WIDENING
1B	IH 39 NB	1027+70	- 1038+10	'XNB'	LT	2.50	46	-	-	-	127	32	_	UPPER LAYER INSIDE WIDENING
1A	IH 39 SB	1030+70	- 1047+27	'XSB'	LT	3.50	-	-	-	272		68	_	LOWER LAYER OUTSIDE SHOULDER
1A	IH 39 SB	1030+70	- 1047+27	'XSB'	LT	2.50	92	-	-		254	63	_	UPPER LAYER OUTSIDE SHOULDER
1B	IH 39 SB	1030+70	- 1039+75	'XSB'	RT	3.50	-	-	-	155		39	_	LOWER LAYER INSIDE WIDENING
1B	IH 39 SB	1030+70	- 1039+75	'XSB'	RT	2.50	40	-	-		110	28	_	UPPER LAYER INSIDE WIDENING
					STAGE 1 SUBTOTALS		252	0	0	873	694	392	0	
3	CTH AB	36+00	- 48+67	'AB'	LT/RT	2.50	-	741	-	-	-	-	_	LOWER LAYER TRAVEL AND SHOULDER LANES
	CTH AB	36+00	- 48+67	'AB'	LT/RT	2.00	270	-	593	-	-	-	_	UPPER LAYER TRAVEL AND SHOULDER LANES
	CTH AB	41+10	- 41+88	'AB'	LT	3.00	-	-	-	-	-	-	27	DRIVEWAY
	CTH AB	50+78	- 58+60	'AB'	LT/RT	2.50	-	432	-	-	-	-	-	LOWER LAYER TRAVEL AND SHOULDER LANES
	CTH AB	50+78	- 58+60	'AB'	LT/RT	2.00	157	-	346	-	-	-	-	UPPER LAYER TRAVEL AND SHOULDER LANES
	FREEWAY COURT	08+40	- 10+00	'FW'	LT/RT	3.50	27	-	104	-	-	-	-	1.75" UPPER AND 1.75" LOWER LAYERS TRAVEL LANES AND SHOULDERS
3G	IH 39 NB	1034+57	- 1037+80	'XNB'	RT	3.50	-	-	-	28	-	7	-	LOWER LAYER HMA TO REPLACE VOID LEFT BY REMOVAL OF CONCRETE BARRIER
	IH 39 NB	1034+57	- 1037+80	'XNB'	RT	2.50	7	-	-	-	20	5	-	UPPER LAYER HMA TO REPLACE VOID LEFT BY REMOVAL OF CONCRETE BARRIER
	IH 39 SB	1036+36	- 1039+37	'XSB'	LT	3.50	-	-	-	26	-	6	-	LOWER LAYER HMA TO REPLACE VOID LEFT BY REMOVAL OF CONCRETE BARRIER
	IH 39 SB	1036+36	- 1039+37	'XSB'	LT	2.50	7	-	-	-	18	5	-	UPPER LAYER HMA TO REPLACE VOID LEFT BY REMOVAL OF CONCRETE BARRIER
					STAGE 3 SUBTOTALS		468	1,173	1,043	53	38	23	27	
					PROJECT SUBTOTALS		720	1,173	1,043	926	732	415	27	

TACK CALCULATED AT 0.05 GAL/SY

DROP INLET AND SURFACE DRAIN ITEMS

STAGE	LOCATION	STATION		OFFSET	FLANGE ELEVATION	TOP OF STRUCTURE ELEVATION	BOTTOM OF STRUCTURE ELEVATION	PIPE UNDERDRAIN OUTLET STA	OUTLET OFFSET	OUTLET ELEVATION	OUTLET DEPTH	416.1010 CONCRETE SURFACE DRAINS CY	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	*606.0200 RIPRAP MEDIUM CY	611.3220 INLETS 2X2-FT EACH	611.0654 INLET COVERS TYPE V EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	*645.0120 GEOTEXTILE FABRIC TYPE HR SY	*633.5200 MARKERS CULVERT END EACH	REMARKS
3	CTH AB	48+01	'AB'	RT	892.70	891.87	889.87	47+62 'AB'	100' RT	864.20	2.00	2.2	1	2.8	1	1	95	8	1	PIPE IS SKEWED TO KEEP RIPRAP OUTSIDE OF FUTURE IH 39 CLEARZONE
	CTH AB	48+45	'AB'	LT	894.13	893.30	891.30	48+45 'AB'	90' LT	866.80	2.00	2.2	1	2.8	1	1	75	8	1	
	SUBTOTAL											4.4	2	5.6	2	2	170	16	2	
	PROJECT TOTAL											4.4	2	5.6	2	2	170	16	2	

*ADDITIONAL QUANTITES LISTED ELSEWHERE IN PLAN

CULVERT ITEMS

LOCATION	INLET STATION	INLET OFFSET	INLET ELEVATION	OUTLET STATION	OUTLET OFFSET	OUTLET ELEVATION	SLOPE %	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.0118 MIN. PIPE THICKNESS STEEL IN	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	523.0129 CULVERT PIPE REINFORCED CONCRETE HE CLASS HE-III 29x45-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29x45-INCH EACH	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	*633.5200 MARKERS CULVERT END EACH	REMARKS
CTH AB	44+43 'AB'	62.0' LT	`	44+43 'AB'	77.0' RT	862.20	0.00	-	-	-	139	-	-	2	-	-	2	
	53+40 'AB'	40.0' LT	897.35	53+40 'AB'	52.0' RT	896.43	1.00	-	-	-	-	92	-	-	2	-	2	
FREEWAY CT	9+12 'FW'	27.0' RT	907.65	9+45 'FW'	33.5' RT	904.95	7.74	35	0.064	-	-	-	-	-	-	2	2	DRIVEWAY
	9+50 'FW'	34.5' LT	904.80	9+54 'FW'	27.5' RT	903.95	1.37	-	-	62	-	-	2	-	-	-	2	
						SUBTOTALS		35	0	62	139	92	2	2	2	2	8	
						PROJECT TOTALS		35		62	139	92	2	2	2	2	8	

NOTE: STATION, OFFSET AND ELEVATION INFORMATION PROVIDED IS TO THE END OF PIPE
* ADDITIONAL QUANTITIES LISTED ELSEWHERE IN PLANS

PIPE UNDERDRAIN ITEMS

STAGE	LOCATION	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	SPV.0060.005 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE SALVAGED 6-INCH EACH	REMARKS
1	IH 39	20	4	UNDISTRIBUTED
	SUBTOTALS	20	4	
	PROJECT TOTALS	20	4	

CONCRETE BARRIER TEMPORARY ITEMS

STAGE	LOCATION	STATION	OFFSET	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	SPV.0090.200 TRAFFIC CONTROL GAWK SCREEN FURNISHED LF	SPV.0090.201 TRAFFIC CONTROL GAWK SCREEN INSTALLED LF	REMARKS
2C	IH 39	1029+50 - 1039+20 'XNB'	LT	970	970	1	-	-	INSIDE MEDIAN SHOULDER
		1035+00 - 1044+70 'XSB'	RT	970	970	1	-	-	INSIDE MEDIAN SHOULDER
		1034+50 - 1039+00 'XNB'	LT	-	-	-	450	450	INSIDE MEDIAN SHOULDER
		1035+00 - 1039+50 'XSB'	RT	-	-	-	450	450	INSIDE MEDIAN SHOULDER
			SUBTOTAL	1,940	1,940	2	900	900	
			PROJECT TOTAL	1,940	1,940	2	900	900	

FENCING ITEMS

STAGE	LOCATION	STATION	OFFSET	616.0100 FENCE WOVEN WIRE 4-FEET LF	SPV.0060.003 ACCESS GATE 6-FOOT EACH
3	IH 39 NB	1036+83 - 1037+43 'XNB'	RT	92	-
	IH 39 NB	1038+13 - 1039+70 'XNB'	RT	203	1
	IH 39 SB	1034+56 - 1036+01 'XSB'	LT	152	1
	IH 39 SB	1036+69 - 1037+13 'XSB'	LT	63	-
			SUBTOTAL	510	2
			PROJECT TOTAL	510	2

FENCE SAFETY

LOCATION	STATION	616.0700.S LF	REMARKS
CTH AB	39+10 - 41+30 'AB' LT	220	PROTECT CONSERVATION EASEMENT
CTH AB	41+70 & 42+40 'AB' LT	80	10'X10' PERIMETER AROUND LARGE OAK AND WALNUT TREE
CTH AB	53+10 - 53+55'AB' LT	260	PLACE SAFETY FENCE PRIOR TO REMOVING THE EXISTING FENCE. SAFETY FENCE TO REMAIN AT COMPLETION OF PROJECT.
CTH AB	56+00 'AB' LT	20	5'X5' PERIMETER AROUND SMALL MAPLE TREE
	UNDISTRIBUTED	120	
SUBTOTAL		700	
PROJECT TOTAL		700	

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EROSION CONTROL MOBILIZATION

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 EMERGENCY MOBILIZATIONS EROSION CONTROL EACH
PROJECT 1007-10-89 - UNDISTRIBUTED	6	10
SUBTOTALS	6	10
PROJECT TOTALS	6	10

FINISHING ITEMS

STAGE	LOCATION	STATION				625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB
1	IH 39 NB	1715+00	- 1772+00	'XNB'	LT& RT SHOULDER WIDENING	5,970	5,970	4	40	100	-	-
	IH 39 SB	550+76	- 567+57	'XSB'	LT& RT SHOULDER WIDENING	2,980	2,980	4	-	110	-	-
					STAGE 1 SUBTOTALS	8,950	8,950	8	40	210	0	0
3	CTH AB	36+00	- 48+90	'AB'	LT& RT	11,290	1,100	7	20	80	-	170
	CTH AB	50+41	58+60	'AB'	LT, RT & FREEWAY COURT	6,610	5,300	4	80	40	20	-
					STAGE 3 SUBTOTALS	17,900	6,400	11	100	120	20	170
					UNDISTRIBUTED	5,370	3,070	4	30	70	4	30
					PROJECT TOTALS	32,220	18,420	23	170	400	24	200

3

GUARDRAIL ITEMS

STAGE	LOCATION	STATION			OFFSET	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
1A	IH 39 NB	1033+65	1034+57	'XNB'	RT	-	-	-	39.4	1
1A	IH 39 SB	1039+37	1040+30	'XSB'	LT	-	-	-	39.4	1
			STAGE 2 SUBTOTALS			0	0	0.0	78.8	2
3	AB	42+96	- 48+64	'AB'	LT	-	-	475.0	39.4	1
	AB	46+77	- 48+20	'AB'	RT	-	-	50.0	39.4	1
	AB	51+40	- 52+82	'AB'	LT	-	-	50.0	39.4	1
	'AB'	50+96	52+01	'AB'	LT	-	-	12.5	39.4	1
3A	IH 39 SB	1036+04	- 1038+10	'XSB'	LT	2	200	-	-	-
			STAGE 3 SUBTOTALS			2	200	587.5	157.6	4
			PROJECT TOTALS			2	200	587.5	236.4	6

EROSION CONTROL ITEMS

LOCATION	STATION				*606.0200 RIPRAP MEDIUM CY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTAINANCE LF	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.6505 SOIL STABILIZER TYPE A ACRE	628.6510 SOIL STABILIZER TYPE B ACRE	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	*645.0120 GEOTEXTILE FABRIC TYPE HR SY	SPV.0090.150 COMPOST TUBE LF
IH 39 NB SHOULDER & MEDIAN WIDENING	1715+00	- 1772+00	'XNB'		-	-	-	-	2,130			1	-	-	-	-	-	-	
IH 39 SB SHOULDER WIDENING	550+76	- 567+57	'XSB'		-	-	-	-	520			-	-	-	-	-	-	-	
CTH AB	36+00	- 48+90	'AB'		-	380	2,540	5,080	3,250	1	1	2	2	-	-	-	-	0	1,620
CTH AB & FREEWAY COURT	50+41	58+60	'AB'		17	-	960	1,920	1,580	-	-	-	-	48	-	-	-	51	
UNDISTRIBUTED					3	80	800	1,600	1,870	-	-	-	-	12	14	6	20	13	400
SUBTOTALS					20	460	4,300	8,600	9,350	1	1	3	2	60	14	6	20	64	2,020
PROJECT TOTALS					20	460	4,300	8,600	9,350	1	1	3	2	60	14	6	20	64	2,020

*ADDITIONAL QUANTITIES LISTED ELSEWHERE IN PLANS

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	MISCELLANEOUS QUANTITIES	SHEET 87	E

3

PERMANENT SIGNING

SIGN NO.	CODE NO.	SIGN MESSAGE	SIZE INCH	x	INCH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II RELECTIVE H SF	637.2230 SIGNS TYPE II RELECTIVE F SF
N1-01	J1-1	JCT MN	24	x	39	1	6.5	-
N1-02	W3-1	STOP AHEAD	36	x	36	1	-	9.0
N1-03	W3-1	STOP AHEAD	36	x	36	1	-	9.0
		SUBTOTALS				3	6.5	18.0
		PROJECT TOTALS				3	6.5	18.0

MOVING AND REMOVING SIGN ITEMS

SIGN NO.	SIGN MESSAGE	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
R1-01	JCT MN	-	-	1	1	-
R1-02	STOP AHEAD	-	-	1	1	-
R1-03	STOP AHEAD	-	-	1	1	-
R1-04	NARROW BRIDGE	-	-	1	1	-
R1-05	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R1-06	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R1-07	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R1-08	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R2-01	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R2-02	CLEARANCE STRIPER DOWN	-	-	1	1	TWO SIGNS ON ONE SUPPORT
R2-03	NARROW BRIDGE	-	-	1	1	-
M3-01	MILE MARKER	1	1	-	1	-
M3-02	MILE MARKER	1	-	-	-	TWO SIGNS ON ONE SUPPORT
M3-03	NO U TURN SYMBOL	1	1	-	-	-
M3-04	NO U TURN SYMBOL	1	-	-	-	TWO SIGNS ON ONE SUPPORT
M3-05	HWY AB	1	2	-	-	ONE SIGN ON TWO SUPPORTS
M3-06	HWY AB	1	2	-	-	ONE SIGN ON TWO SUPPORTS
R3-01	IH 39 SB	-	-	-	1	SIGN POST WITHOUT A SIGN
M4-01	MILE MARKER	1	1	-	-	-
M4-02	MILE MARKER	1	-	-	-	TWO SIGNS ON ONE SUPPORT
	SUBTOTALS	8	7	11	13	
	PROJECT TOTALS	8	7	11	13	

DELINEATOR ITEMS

LOCATION	STATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS (WHITE) EACH
IH 39 NB	1026+70 - 1043+30 'XNB'	4	4
IH 39 SB	1030+70 - 1047+30 'XSB'	4	4
	SUBTOTALS	8	8
	PROJECT TOTALS	8	8

PAVEMENT MARKING

LOCATION	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	REMARKS
IH 39 NB	1026+70 - 1043+30 'XNB'	1,660	1,660	
IH 39 SB	1030+70 - 1047+30 'XSB'	1,690	1,680	
CTH AB	36+00 - 58+60 'AB'	4,310	3,620	SEE PLAN FOR LINE AND GAP LOCATIONS
	SUBTOTALS	7,660	6,960	
	PROJECT TOTALS	14,620		

PULL BOX ITEMS

LOCATION	STATION	OFFSET	*652.0225 CONDUIT RIGID NON METALLIC SCHEDULE 40 2-INCH LF	SPV.0060.007 PULL BOX NON-CONDUCTIVE 24x42-INCH EACH
CTH AB	48+16	'AB' 30' RT	5	1
CTH AB	48+60	'AB' 30' LT	5	1
CTH AB	51+00	'AB' 30' RT	5	1
CTH AB	51+44	'AB' 30' LT	5	1
		SUBTOTALS	20	4
		PROJECT TOTALS	20	4

* ADDITIONAL QUANTITY SHOWN ON STRUCTURE PLAN.

LANDMARK REFERENCE MONUMENTS SPECIAL

LOCATION	STATION	OFFSET	SPV.0060.004 EACH	REMARKS
'AB'	46+20.59	'AB' 3.54' RT	1	SECTION CORNER
		SUBTOTALS	1	
		PROJECT TOTALS	1	

3

TRAFFIC CONTROL ITEMS

STAGE	LOCATION	NUMBER OF DAYS	643.0300 DRUMS NO.	643.0300 DRUMS (DAYS)	643.0420 BARRICADES TYPE III NO.	643.0420 BARRICADES TYPE III (DAYS)	643.0705 WARNING LIGHTS TYPE A NO.	643.0705 WARNING LIGHTS TYPE A (DAYS)	643.0715 WARNING LIGHTS TYPE C NO.	643.0715 WARNING LIGHTS TYPE C (DAYS)	643.0800 ARROW BOARDS NO.	643.0800 ARROW BOARDS (DAYS)	643.0900 SIGNS NO.	643.0900 SIGNS (DAYS)	643.1050 SIGNS PCMS NO.	643.1050 SIGNS PCMS (DAYS)	643.3000 DETOUR SIGNS NO.	643.3000 DETOUR SIGNS (DAYS)	REMARKS
ALL STAGES	CTH AB	144	0	0	20	2880	28	4032	0	0	0	0	12	1728	2	20	126	18144	CTH AB ROAD CLOSURE AND DETOUR
1A	IH 39 NB & SB	4	208	832	5	20	0	0	28	112	4	16	27	108	2	8	0	0	NIGHT TIME OUTSIDE LANE CLOSURE
1B	IH 39 NB & SB	4	210	840	5	20	0	0	28	112	4	16	27	108	2	8	0	0	NIGHT TIME MEDIAN LANE CLOSURE
2A	IH 39 NB & SB	2	244	488	7	14	0	0	42	84	4	8	29	58	2	4	0	0	NIGHT TIME MEDIAN LANE CLOSURE, TRAFFIC SHIFT TO OUTSIDE SHOULDER
2B	IH 39 NB & SB	2	244	488	7	14	0	0	42	84	4	8	31	62	2	4	0	0	NIGHT TIME OUTSIDE LANE CLOSURE, TRAFFIC SHIFT TO MEDIAN SHOULDER
2C	IH 39 NB & SB	4	210	840	5	20	0	0	28	112	4	16	27	108	2	8	0	0	NIGHT TIME MEDIAN LANE CLOSURE
2D	IH 39 NB & SB	6	108	648	1	6	0	0	0	0	2	12	25	150	2	12	0	0	NIGHT TIME TRAFFIC ON BOTH LANES WITH SHOULDER CLOSURES
3A	IH 39 NB & SB	39	108	4212	1	39	0	0	0	0	4	156	25	975	2	78	0	0	NIGHT TIME TRAFFIC ON BOTH LANES WITH SHOULDER CLOSURES
3B	IH 39 NB & SB	1	210	210	5	5	0	0	28	28	4	4	27	27	2	2	0	0	NIGHT TIME MEDIAN LANE CLOSURE
3C	IH 39 NB & SB	5	244	1220	7	35	0	0	42	210	4	20	31	155	2	10	0	0	NIGHT TIME OUTSIDE LANE CLOSURE, TRAFFIC SHIFT TO MEDIAN SHOULDER
3D	IH 39 NB & SB	5	244	1220	7	35	0	0	42	210	4	20	31	155	2	10	0	0	NIGHT TIME MEDIAN LANE CLOSURE, TRAFFIC SHIFT TO OUTSIDE SHOULDER
3E	IH 39 NB & SB	2	108	216	1	2	0	0	0	0	2	4	25	50	2	4	0	0	NIGHT TIME TRAFFIC ON BOTH LANES WITH SHOULDER CLOSURES
3F	IH 39 NB & SB	7	244	1708	7	49	0	0	42	294	4	28	31	217	2	14	0	0	NIGHT TIME MEDIAN LANE CLOSURE, TRAFFIC SHIFT TO OUTSIDE SHOULDER
3G	IH 39 NB & SB	5	244	1220	7	35	0	0	42	210	4	20	31	155	2	10	0	0	NIGHT TIME OUTSIDE LANE CLOSURE, TRAFFIC SHIFT TO MEDIAN SHOULDER
STAINING-A	IH 39 NB & SB	2	174	348	6	12	0	0	42	84	4	8	28	56	2	4	0	0	NIGHT TIME MEDIAN LANE CLOSURE, TRAFFIC SHIFT TO OUTSIDE SHOULDER
STAINING-B	IH 39 NB & SB	2	171	342	6	12	0	0	42	84	4	8	28	56	2	4	0	0	NIGHT TIME OUTSIDE LANE CLOSURE, TRAFFIC SHIFT TO MEDIAN SHOULDER
	PROJECT TOTALS			14,832		3,198		4,032		1,624		344		4,168		200		18,144	

3

SAWING PAVEMENT

STAGE	LOCATION	STATION		LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	SPV.0060.006 SAWING CONCRETE BARRIER EACH	REMARKS
1	CTH AB	36+00	'AB'	-	22	-	-	TRANSVERSE
	CTH AB	41+40 - 41+58	'AB'	LT	18	-	-	DRIVEWAY
	CTH AB	58+60	'AB'	-	22	-	-	TRANSVERSE
	FREEWAY CT	8+40	'FW'	-	20	-	-	TRANSVERSE
	FREEWAY CT	8+71 - 8+88	'FW'	LT	34	-	-	REMOVE DRIVEWAY
	FREEWAY CT	9+17 - 9+32	'FW'	RT	-	16	-	DRIVEWAY
	IH 39 NB	1026+70	'XNB'	RT	8	-	-	TRANSVERSE OUTSIDE SHOULDER
	IH 39 NB	1027+70	'XNB'	LT	8	-	-	TRANSVERSE INSIDE SHOULDER
	IH 39 NB	1034+57	'XNB'	RT	-	-	1	REMOVE CONCRETE BARRIER SLOPED END
	IH 39 NB	1034+88 - 1035+10	'XNB'	LT	20	-	-	MEDIAN MAINTENANCE CROSSOVER
	IH 39 NB	1039+75	'XNB'	LT	8	-	-	TRANSVERSE INSIDE SHOULDER
	IH 39 NB	1043+30	'XNB'	RT	8	-	-	TRANSVERSE OUTSIDE SHOULDER
	IH 39 SB	1030+70 - 1047+30	'XSB'	LT	1,660	-	-	LONGITUDINAL ALONG SHOULDER MILLING
	IH 39 SB	1030+70	'XSB'	RT	8	-	-	TRANSVERSE INSIDE SHOULDER
	IH 39 SB	1030+70	'XSB'	LT	10	-	-	TRANSVERSE OUTSIDE SHOULDER
	IH 39 NB	1034+88 - 1035+10	'XSB'	RT	20	-	-	MEDIAN MAINTENANCE CROSSOVER
	IH 39 SB	1039+37	'XSB'	LT	-	-	1	REMOVE CONCRETE BARRIER SLOPED END
	IH 39 SB	1039+75	'XSB'	RT	8	-	-	TRANSVERSE INSIDE SHOULDER
	IH 39 SB	1047+30	'XSB'	LT	10	-	-	TRANSVERSE OUTSIDE SHOULDER
		STAGE SUBTOTALS			1,884	16	2	
3G	IH 39 NB	1034+57 - 1037+80	'XNB'	RT	323	-	-	LONGITUDINAL ALONG CONCRETE BARRIER TO BE REMOVED
	IH 39 SB	1036+36 - 1039+37	'XSB'	LT	301	-	-	LONGITUDINAL ALONG CONCRETE BARRIER TO BE REMOVED
		STAGE SUBTOTALS			624	0	0	
		PROJECT TOTAL			2,508	16	2	

RUMBLE STRIP ITEMS

STAGE	LOCATION	STATION			OFFSET	SPV.0090.001 FILL EXISTING CONCRETE RUMBLE STRIPS LF	REMARKS
1	IH 39	1026+70	-	1043+30 XNB	RT	330	CONCRETE RUMBLE STRIPS; 6-FOOT SEGMENTS
	STAGE 1 SUBTOTALS					330	
	PROJECT SUBTOTALS					330	

CPM PROGRESS SCHEDULE

PROJECT NUMBER	LOCATION	OFFSET	SPV.0060.001 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.002 CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS EACH
1007-10-81	PROJECT	3.54' RT	1	7
		SUBTOTALS	1	7
		PROJECT TOTALS	1	7

UNOFFICIAL COPY

4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

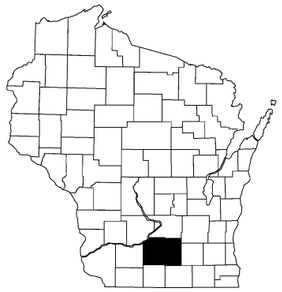
TRANSPORTATION PROJECT PLAT TITLE SHEET

PROJECT 1007-11-24
ILLINOIS STATE LINE - MADISON

CTH AB BRIDGE/APPRS B-13-0726

I-39/90

DANE COUNTY



CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) — W — (TYPE)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT

SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS — CAUTION
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES — CAUTION

R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN — IP (1" UNLESS NOTED)
VALVE (GAS, WATER, ETC.) — (TYPE)
SIGN — SIGN
OFF-PREMISE SIGN — I-25 — SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	□
TELEPHONE POLE	⌀	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	⌀	⌀

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)

BRIDGE

PARCEL NUMBER 25
UTILITY NUMBER 40

CONVENTIONAL ABBREVIATIONS

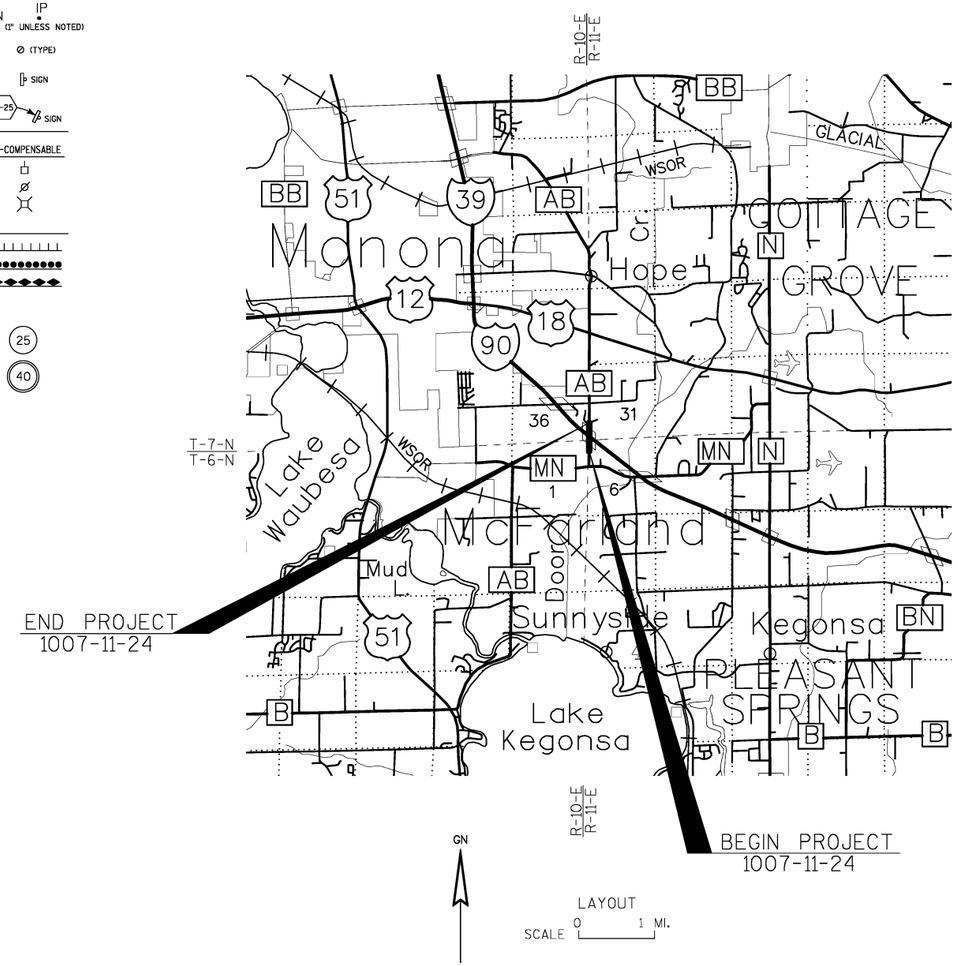
ACCESS RIGHTS	AR	POINT OF BEGINNING	POB
ACRES	AC.	POINT OF CURVATURE	PC
AND OTHERS	ET AL	POINT OF COMPOUND CURVE	PCC
ANTENNA	ANT.	POINT OF INTERSECTION	PI
BUILDING	B	PROPERTY LINE	P.L.
CERTIFIED SURVEY MAP	CSM	RECORDED AS	(100')
COUNTY TRUNK HIGHWAY	CTH	REFERENCE	REF.
CORNER	COR.	REFERENCE LINE	℞
DIRECTION AHEAD	D.A.	REMAINING	REM.
DOCUMENT NUMBER	DOC.	RIGHT	RT
EXISTING	EX	RIGHT OF WAY	R/W
GRID NORTH	GN	SECTION	SEC.
IDENTIFICATION	INT.	STATION	STA.
LEFT	LT	TANGENT	TAN.
MISCELLANEOUS	MISC.	TELEPHONE PEDESTAL	TP
MONUMENT	MON	TEMPORARY LIMITED EASEMENT	TLE
NATIONAL GEODETIC SURVEY	NGS	TRANSPORTATION PROJECT PLAT	TPP
NUMBER	NO.	UNITED STATES HIGHWAY	USH
OUTLOT	OL	VOLUME	V.
PAGE	P.		
POINT OF TANGENCY	POT		
PERMANENT LIMITED EASEMENT	PLE		

CURVE DATA

LONG CHORD	LC
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1007-11-24.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED BY OTHERS PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLEs ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING ACCESS CONTROL ALONG I-39/90 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT I-90-3(29)140

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON.

EXISTING ACCESS CONTROL ALONG CTH AB HAS BEEN ESTABLISHED FROM COUNTY TRUNK HIGHWAY ACCESS CONTROL REGULATIONS - CHAPTER 79 OF DANE COUNTY ORDINANCES, PREVIOUS PROJECT I-90-3(29)140, AND FREEWAY MANOR SUBDIVISION PLAT.

FOR THE LATEST ACCESS CONTROL INFORMATION ON CTH AB, CONTACT DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY & TRANSPORTATION.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR I-39/90 ESTABLISHED FROM PREVIOUS PROJECT I-90-3(29)140.

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH AB ESTABLISHED FROM DANE COUNTY HIGHWAY REGISTRY, COTTAGE GROVE BOOK, VOLUME 1, PAGE 21, FREEWAY MANOR SUBDIVISION PLAT, CSM 8262 AND PREVIOUS PROJECT I-90-3(29)140.

EXISTING RIGHT-OF-WAY FOR FREEWAY COURT ESTABLISHED FROM FREEWAY MANOR SUBDIVISION PLAT.

EXISTING RIGHT-OF-WAY FOR BRANDT ROAD ESTABLISHED FROM DANE COUNTY HIGHWAY REGISTRY, COTTAGE GROVE BOOK VOLUME 1, PAGE 89.

PROJECT NUMBER 1007-11-24 - 4.01
SHEET 2 OF 2

FILE NAME : V:\SURVEY\MD\45-0361.04 IH 39 CORRIDOR\RW PLATS\CADD FILES\10071024\10071124-040100_RP.DWG
APPRAISAL PLAT DATE : 9/25/2014
PLOT DATE : 11/18/2015 3:29 PM
PLOT BY : AYRES ASSOCIATES PLOT NAME : ----------
1007-10-81 1007-11-24 4.01

COMPOSITE DRAWING - ORGINAL IS ON FILE AT THE DANE COUNTY REGISTER OF DEEDS OFFICE

TRANSPORTATION PROJECT PLAT NO: 1007-11-24 - 4.01 AMENDMENT NO. 1

REMOVES PARCEL 2 OF TPP 1007-11-24-4.01 RECORDED AS DOCUMENT NO. 5200115
THAT PART OF LOTS 1 AND 2, C.S.M. 10686, IN THE NORTHEAST 1/4 OF THE NORTHEAST 1/4, , ALL IN SECTION 1, T6N, R10E, TOWN OF DUNN. ALSO THAT PART OF THE NORTHWEST 1/4 OF THE FRACTIONAL NORTHWEST 1/4, SECTION 6, T6N, R11E, TOWN OF PLEASANT SPRINGS, ALL IN DANE COUNTY, WISCONSIN.

RELOCATION ORDER I-39/90 ILLINOIS STATE LINE-MADISON (CTH AB BRIDGE/APPRS B-13-0726)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SIGN NUMBER	SIGN OWNER	OASIS NO.
1-1	THE LAMAR COMPANY, LLC DBA LAMAR ADVERTISING OF JANESVILLE DOWNING 3094 CR MN LLC	14593
1-2	THE LAMAR COMPANY, LLC DBA LAMAR ADVERTISING OF JANESVILLE DOWNING 3094 CR MN LLC	14594

KRISTI CHLEBOWSKI
DANE COUNTY
REGISTER OF DEEDS

DOCUMENT #
5219202
03/08/2016 9:25 AM
Trans. Fee:
Exempt #:
Rec. Fee: 25.00
Pages: 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1007-11-24 4.01
AMENDMENT NO. 1

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
1	DOWNING 3094 CR MN LLC THE LAMAR COMPANY, LLC DBA LAMAR ADVERTISING OF JANESVILLE	FEE	0.624	---	0.624	---	---
3	GERALD L. & PAMELA J.Z. GERSTL	TLE	---	---	---	0.177	---

ALL AREAS SHOWN IN ACRES UNLESS OTHERWISE NOTED

UTILITY SCHEDULE & INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
200	AMERICAN TRANSMISSION COMPANY, LLC.	RELEASE OF RIGHTS
202	WISCONSIN POWER AND LIGHT COMPANY	RELEASE OF RIGHTS

200 AMERICAN TRANSMISSION COMPANY, LLC.
DOC. 4749996 - PARCEL 1

202 WISCONSIN POWER AND LIGHT COMPANY
NO RECORDED EASEMENT - PARCEL 1

R/W COURSE TABLE

103-104	S	51°46'59"	E 1747.95'
105-102	N	51°46'59"	W 2287.67'
101-106	S	07°19'24"	W 698.28'
106-107	S	04°10'02"	W 345.91'
107-108	N	88°09'41"	W 9.21'
109-110	N	01°29'19"	E 252.37'
110-111	N	03°43'34"	W 774.29'

R/W STATION & OFFSET TABLE

101	46+28.04'AB'	133.04'
102	2431+70.99	153.90'
103	2428+47.48	126.11'
104	2410+99.53	126.18'
105	2408+83.32	153.81'
106	39+35.00'AB'	53.00'
107	35+90.00'AB'	37.00'
108	35+90.00'AB'	27.79'
109	35+90.00'AB'	38.22'
110	38+42.70'AB'	38.74'
111	46+15.25'AB'	99.92'

TLE STATION & OFFSET TABLE

T150	41+35.83'AB'	63.27'
T151	41+35.75'AB'	78.03'
T152	46+14.35'AB'	117.27'

EXISTING IRON PIPES

POINT#	Y	X	DESCRIPTION
IP180	462,658.097	858,862.990	16D NAIL
IP181	462,923.705	857,730.368	2" IRON PIPE
IP182	462,693.569	857,745.566	0.75" REBAR

N86°37'42"E 12.49' MON TO MON
N87°40'48"E 2499.47' MON TO R/W
IP181 IS S85°27'37"W, 0.74' FROM POINT 111
N87°40'48"E 100.05' R/W TO R/L
N87°20'30"E 129.71' MON TO R/W
N87°20'30"E 235.16' R/W TO R/L
N87°20'30"E 192.70' R/L TO R/W
S87°20'30"W 1385.71' MON TO R/W
ALUMINUM MONUMENT FOUND Y = 463,024.569 X = 859,915.400
S87°20'30"W 48.48' MON TO MON
1 1/4" REBAR SET Y = 463,022.321 X = 859,866.976
1/4 LINE
SEE TPP 1007-11-24-4.02
TOWN OF COTTAGE GROVE
TOWN OF PLEASANT SPRINGS
SECTION LINE STA. 2429+93.18
TOWN OF BLOOMING GROVE
TOWN OF DUNN
SECTION LINE STA. 46+20.40'AB'
ALUMINUM MONUMENT FOUND Y = 462,821.880 X = 855,216.319
3/4" REBAR FOUND Y = 462,927.957 X = 857,834.617
ALUMINUM MONUMENT FOUND Y = 462,821.146 X = 855,203.854
POND
LOT 2 CSM 10686 V.63 P.236-238 DOC.3661203
LOT 1 CSM 10686 V.63 P.236-238 DOC.3661203
TLE - GRADING 0.177 AC.
INGRESS/EGRESS EASEMENT PER CSM 10686
N00°38'13"E 238.27' R/L TO MON
N87°40'48"E 3.55' R/L TO MON
SEC. LINE
CTH AB R/L
ATC ACCESS EASEMENT 12' WIDE DOC.4964314
PT: 41+97.71'AB'
STA. 43+82.34'AB' Y: 461,717.282 X: 859,854.564
ALONG R/W N87°20'30"E 91.27'
I-39/90 R=N51°46'50"W EXISTING R FOR PROJECT I-90-3(29)140
2425
2420
2415
NE-NE
NW-NW
NE-NW
SE-NW
CONSERVATION EASEMENT AND DEVELOPMENT RIGHTS PER DOC. NO. 3576814
TRAV. PNT. TO R/W N01°29'19"E 792.27'
PI: 38+90.65'AB'
PI STA = 38+90.65'AB'
Y = 462,198.079
X = 857,822.878
DELTA = 1°13'07"LT
D = 0°11'54"
T = 307.09
L = 614.15
R = 28875.00
PC STA = 35+83.56'AB'
PT STA = 41+97.71'AB'
PC: 35+83.56'AB'
R=N01°53'45"E
BP: 35+00.00'AB' Y: 461,807.639 X: 859,810.086
CONCRETE MONUMENT FOUND Y = 460,206.975 X = 857,763.913
N88°08'29"W 33.00' TRAV. PNT. TO R/W
N01°29'19"E 1691.32' MON TO TRAV. PNT.
N88°08'29"W 27.79' R/W TO R/L
N88°08'29"W 5.21' R/L TO TRAV. PNT.
1/16 LINE STA. 2426+66.87
1/16 LINE
1/4 LINE STA. 2410+02.09
POT STA. 2410+02.09 Y: 461,717.282 X: 859,854.565
N00°32'42"E 1178.61' MON TO R/W
3/4" REBAR FOUND Y = 460,344.407 X = 859,841.508
R/W TO R/L S00°32'42"W 1145.68'
R/W TO R/L S00°32'42"W 159.42'
R/W TO R/L S00°32'42"W 194.33'
SEE TPP 1007-10-23-4.27
SIGN
ANT.
1-1
1-2
T 06 N R 10 E
T 06 N R 11 E
GN
0 100 200
SCALE, FEET

LOCATION SKETCH NOT TO SCALE
END PROJECT
BLOOMING GROVE
COTTAGE GROVE
Madison
Lake Waubesa
McFarland
DUNN
PLEASANT SPRINGS
Lake Kegonsa
BEGIN PROJECT
SHEET LOCATION
T-7-N
T-6-N
R-10-E
R-11-E

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD 83 (2007) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

EXISTING ACCESS CONTROL ALONG I-39/90 HAS BEEN ESTABLISHED FROM PREVIOUS CONTROL PROJECT I-90-3(29)140.

FOR THE LATEST ACCESS CONTROL INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON.

EXISTING ACCESS CONTROL ALONG CTH AB HAS BEEN ESTABLISHED FROM COUNTY TRUNK HIGHWAY ACCESS CONTROL REGULATIONS - CHAPTER 79 OF DANE COUNTY ORDINANCES, AND PREVIOUS PROJECT I-90-3(29)140.

FOR THE LATEST ACCESS CONTROL INFORMATION ON CTH AB, CONTACT DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY AND TRANSPORTATION.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR I-39/90 ESTABLISHED FROM PREVIOUS PROJECT I-90-3(29)140

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH AB ESTABLISHED FROM DANE COUNTY HIGHWAY REGISTRY, COTTAGE GROVE BOOK, VOLUME 1, PAGE 21, FREEWAY MANOR SUBDIVISION PLAT, CSM 8262 AND PREVIOUS PROJECT I-90-3(29)140.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, AS DOCUMENT NO. 5200115 FOR ADDITIONAL INFORMATION.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

I, JAMES R. CAPPEART, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 1007-11-24-4.01 AMENDMENT NO. 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

JAMES R. CAPPEART — 03/04/2016 DATE
REGISTRATION NUMBER: S-3044

AYRES ASSOCIATES

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION, SOUTHWEST REGION.

DAVID R. MILLER — 3/04/2016 DATE

FILE NAME : V:\SURVEY\MD\45-0361.04 IH 39 CORRIDOR\RW PLATS\CADD FILES\10071024\10071124-040101_RP_AMEND_1.DWG
APPRAISAL PLAT DATE : 03/04/2016
PLOT DATE : 3/4/2016 12:26 PM PLOT BY : BADTKE, CHRISTOPHER PLOT NAME :
PLOT SCALE : 1:100
1007-10-81 1007-11-24-4.01 AMENDMENT NO. 1

COMPOSITE DRAWING, ORIGINAL IS ON FILE AT THE DANE COUNTY REGISTER OF DEEDS OFFICE

TRANSPORTATION PROJECT PLAT NO: 1007-11-24 - 4.02 AMENDMENT NO. 1

AMENDS PARCEL 7 OF TPP 1007-11-24-4.02 RECORDED AS DOCUMENT NO. 5201669
THAT PART OF LOTS 1 AND 2 FREEWAY MANOR SUBDIVISION PLAT, LOCATED IN THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4. ALSO THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4. ALL IN SECTION 36, T7N, R10E TOWN OF BLOOMING GROVE. ALSO THAT PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 IN SECTION 31, T7N, R11E, TOWN OF COTTAGE GROVE, ALL IN DANE COUNTY, WISCONSIN.

RELOCATION ORDER I-39/90 ILLINOIS STATE LINE-MADISON (CTH AB BRIDGE/APPRS B-13-0726)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD 83 (2007) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

EXISTING ACCESS CONTROL ALONG I-39/90 HAS BEEN ESTABLISHED FROM PREVIOUS CONTROL PROJECT I-90-3(29)140.

FOR THE LATEST ACCESS CONTROL INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON.

EXISTING ACCESS CONTROL ALONG CTH AB HAS BEEN ESTABLISHED FROM COUNTY TRUNK HIGHWAY ACCESS CONTROL REGULATIONS - CHAPTER 79 OF DANE COUNTY ORDINANCES, PREVIOUS PROJECT I-90-3(29)140, AND FREEWAY MANOR SUBDIVISION PLAT

FOR THE LATEST ACCESS CONTROL INFORMATION ON CTH AB, CONTACT DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY AND TRANSPORTATION.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR I-39/90 ESTABLISHED FROM PREVIOUS PROJECT I-90-3(29)140.
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH AB ESTABLISHED FROM DANE COUNTY HIGHWAY REGISTRY, COTTAGE GROVE BOOK, VOLUME 1, PAGE 21, FREEWAY MANOR SUBDIVISION PLAT, CSM 8262 AND PREVIOUS PROJECT I-90-3(29)140.
EXISTING RIGHT-OF-WAY FOR FREEWAY COURT ESTABLISHED FROM FREEWAY MANOR SUBDIVISION PLAT.
EXISTING RIGHT-OF-WAY FOR BRANDT ROAD ESTABLISHED FROM DANE COUNTY HIGHWAY REGISTRY, COTTAGE GROVE BOOK VOLUME 1, PAGE 89.

KRISTI CHLEBOWSKI
DANE COUNTY
REGISTER OF DEEDS

DOCUMENT #
5211269
01/26/2016 9:28 AM
Trans. Fee:
Exempt #:
Rec. Fee: 25.00
Pages: 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1007-11-24 4.02
AMENDMENT NO. 1

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
4	T. WESLEY & LOIS SKAAR	FEE	0.066	---	0.066	---	---
6	GRYFFINDOR, LLC	FEE & TLE	0.263	0.986	1.249	0.080	---
	THE LAMAR COMPANY, LLC DBA LAMAR ADVERTISING OF JANESVILLE						
7	MICHELLE M. ELDRIDGE	FEE & TLE	0.062	---	0.062	0.080	---
8	ROBERT D. BAILEY	FEE & TLE	0.055	---	0.055	0.077	---

ALL AREAS SHOWN IN ACRES UNLESS OTHERWISE NOTED

UTILITY SCHEDULE & INTERESTS REQUIRED

PARCEL NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
200	ATC MANAGEMENT, INC	RELEASE OF RIGHTS
202	WISCONSIN POWER AND LIGHT COMPANY	RELEASE OF RIGHTS
221	FRONTIER COMMUNICATIONS OF WI LLC	RELEASE OF RIGHTS

200 AMERICAN TRANSMISSION COMPANY, LLC.
DOC. 4764139 - PARCEL 4

202 WISCONSIN POWER AND LIGHT COMPANY
DOC.1193308 V.469, P.473 - PARCEL 6
NO RECORDED EASEMENT - PARCEL 7

221 FRONTIER COMMUNICATIONS OF WI LLC
NO RECORDED EASEMENT - PARCEL 4 & 7
DOC.1371614 V.455, P.267 - PARCEL 6

TLE STATION & OFFSET TABLE

T251	2438+30.00	206.08'
T252	54+25.00'AB'	70.13'
T253	54+25.00'AB'	60.12'
T254	55+25.00'AB'	59.30'
T255	55+25.00'AB'	69.30'
T256	56+09.85'AB'	71.51'
T257	56+40.13'AB'	170.89'
T258	57+28.03'AB'	143.72'
T259	57+25.00'AB'	69.00'
T260	58+70.00'AB'	69.00'
T261	58+70.00'AB'	59.86'
T262	58+70.00'AB'	69.86'
T263	54+77.51'AB'	72.90'

R/W STATION & OFFSET TABLE

201	46+14.35'AB'	117.27'
202	2436+30.00	158.91'
203	2443+99.95	160.21'
204	2451+24.31	171.79'
205	2451+32.22	163.55'
206	2447+84.69	189.13'
207	2444+06.58	204.73'
208	2438+12.91	206.08'
209	54+75.00'AB'	58.00'
210	56+28.82'AB'	62.00'
IP283	56+30.82'AB'	70.22'
211	56+49.26'AB'	168.07'
212	57+12.31'AB'	148.57'
213	56+99.18'AB'	89.97'
214	57+10.00'AB'	59.00'
215	58+70.00'AB'	59.00'
216	58+70.00'AB'	46.15'
217	59+33.44'AB'	46.64'
218	59+45.85'AB'	169.17'
IP287	59+06.27'AB'	59.58'
219	55+65.00'AB'	62.22'
220	2435+35.00	147.76'
221	2428+47.48	126.11'
222	2431+70.99	153.90'
223	2432+40.00'	213.63'

RR SPIKE FOUND
Y = 465,557.681
X = 857,843.460

S00°11'34"W 1314.87'
MON TO TRAV. PNT.

STA. 50+77.37'AB'

SEC. LINE

BRANDT ROAD

STA. 59+35.81'AB'

1/16 LINE

N87°14'29"E 169.47'
R TO R/W

N87°48'05"E 40.03'
R/W TO TRAV. PNT.

N87°14'29"E 6.66'
TRAV. PNT. TO R

CTH AB R
SEC. LINE

N87°48'05"E 187.30'
R/W TO TAN.

TAN. TO R/W

SEE TPP PROJECT 1007-10-25 4.03

STA. 2449+76.75

LOT 27

LOT 13

LOT 14

LOT 2

LOT 1

LOT 3

EP: 59+50.00'AB'
Y = 464,257.327
X = 857,845.853

FREEWAY COURT

OL 5

FREEWAY MANOR SUBDIVISION PLAT
DOC.1351066

OL 2

TRAV. PNT. TO PI
N41°34'41"W 38.29
PI STA. 2449+68.13

LEASED PARCEL
US CELLULAR
DOC.4672016

I-39/90

TOWN

CURVE 1

PI STA. = 2449+68.13
Y = 464,170.954
X = 856,738.649
DELTA = 10°12'10"
D = 0°43'20"
T = 708.28'
L = 1412.83'
R = 7934.00'
PC STA. = 2442+59.84
PT STA. = 2456+72.67
D.A. = N41°34'41"W

R=N51°46'50"W

SE-SE

PC: 2442+59.84

B-13-139
B-13-726 REQ'D

EXISTING R FOR PROJECT I-90-3(29)140

OF

TLE - SLOPES
0.077 AC.

TLE - SLOPES
0.080 AC.

TLE - SLOPES
0.026 AC.

TLE - SLOPES
0.077 AC.

TLE - SLOPES
0.054 AC.

N17°49'04"E 66.00'
R/W TO R/W

CURVE 2
CURVE 3
CURVE 4

CTH AB
SEC. LINE

N00°11'34"E 77.84'
R TO R

R=N00°38'13"E

STA. 2435+72.28
=STA. 50+00.00'AB'
Y = 463,307.463
X = 857,835.294

139.90' R

SW-SW

SE-SW

1/16 LINE

1/4 LINE

TOWN OF BLOOMING GROVE
TOWN OF DUNN

BLOOMING GROVE

TOWN OF COTTAGE GROVE
TOWN OF BLOOMING GROVE

COTTAGE GROVE

TOWN OF COTTAGE GROVE
TOWN OF PLEASANT SPRINGS

SECTION LINE
STA. 46+20.40'AB'

SECTION LINE
STA. 2429+93.18

MON TO R/W
N87°40'48"E 2499.47'

N86°37'42"E 12.49'
MON TO MON

R TO R/W
S87°40'48"W 117.43'

R/W TO MON
S87°20'30"W 129.71'

ALONG R/W AND SEC. LINE
S87°20'30"W 91.27'

R TO R/W
S87°20'30"W 235.16'

R/W TO R
S87°20'30"W 192.70'

S87°20'30"W 1385.71'
MON TO R/W

S87°20'30"W 48.48'
MON TO MON

SEE TPP 1007-11-24-4.01

N00°11'34"E 378.96'
MON TO R

SIGN

6-1

SIGN NUMBER	SIGN OWNER	OASIS NO.
6-1	THE LAMAR COMPANY, LLC DBA LAMAR ADVERTISING OF JANESVILLE GRYFFINDOR, LLC	14443

EXISTING IRON PIPES

POINT #	Y	X	DESCRIPTION
IP280	464,223.894	857,799.100	1.25" IRON PIPE
IP281	464,030.253	857,798.480	2" IRON PIPE
IP282	464,005.300	857,770.920	2" IRON PIPE
IP283	463,939.045	857,772.246	2" IRON PIPE
IP284	463,912.263	857,796.024	2" IRON PIPE
IP285	463,850.804	857,788.430	2" IRON PIPE
IP286	463,609.840	857,785.167	2" IRON PIPE
IP287	464,212.817	857,904.958	1.25" IRON PIPE
IP288	464,265.377	857,905.104	1.25" IRON PIPE
IP289	462,923.705	857,730.368	2" IRON PIPE

R/W COURSE TABLE

201-202	N	04°17'01"	W 296.01'
202-203	N	51°46'59"	W 772.77'
203-204	SEE CURVE 1 IN TABLE		
204-205	N	00°01'35"	E 11.54'
206-207	S	51°46'44"	E 369.02'
207-208	S	51°46'59"	E 589.87'
208-209	N	03°04'02"	E 165.08'
209-210	N	00°51'10"	W 153.87'
210-IP283	SEE CURVE 2 IN TABLE		
IP283-211	SEE CURVE 3 IN TABLE		
212-213	SEE CURVE 4 IN TABLE		
213-214	N	71°23'06"	E 32.81'
214-215	N	00°38'13"	E 160.00'
215-216	S	89°21'47"	E 12.85'
216-217	N	00°11'34"	E 63.44'
218-IP287	S	70°46'46"	W 116.52'
IP287-219	S	00°11'34"	W 341.28'
219-220	S	06°19'19"	E 474.14'
220-221	S	49°58'39"	E 687.86'

R/W CURVE TABLE

ARC	COURSE	LENGTH	RADIUS	LCB	LC
CURVE 1	203-204	739.63'	7754.50'	N 49°03'02" W	739.35'
CURVE 2	210-IP283	8.50'	25.00'	N 75°38'33" W	8.46'
CURVE 3	IP283-211	99.80'	427.23'	N 78°41'43" W	99.57'
CURVE 4	212-213	60.12'	361.23'	S 76°44'20" E	60.06'

END PROJECT
BEGIN PROJECT
LOCATION SKETCH NOT TO SCALE
SHEET LOCATION
Madison
McFarland
DUNN
BLOOMING GROVE
COTTAGE GROVE
PLEASANT SPRINGS
Lake Waubesa
Lake Kegonsa

ALUMINUM MONUMENT FOUND
Y = 462,821.146
X = 855,203.854

ALUMINUM MONUMENT FOUND
Y = 462,821.880
X = 855,216.319

3/4" REBAR FOUND
Y = 462,927.957
X = 857,834.617

ALUMINUM MONUMENT FOUND
Y = 463,024.569
X = 859,915.400

1 1/4" REBAR SET
Y = 463,022.321
X = 859,866.976

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, AS DOCUMENT NO. 5200115 FOR ADDITIONAL INFORMATION.

0 100 200
SCALE, FEET

I, JAMES R. CAPPEART, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 1007-11-24-4.02 AMENDMENT NO. 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN James R. Cappeart S-3044 Green Bay Wis. LAND SURVEYOR

JAMES R. CAPPEART — 01/20/2016 DATE
REGISTRATION NUMBER: S-3044

AYRES ASSOCIATES

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION, SOUTHWEST REGION.

DAVID R. MILLER — 1/21/2016 DATE

FILE NAME : V:\SURVEY\MD\45-0361.04 IH 39 CORRIDOR\RW PLATS\CADD FILES\10071024\10071124-040102_RP_AMEND_1.DWG
APPRAISAL PLAT DATE : 1/20/2016
PLOT DATE : 1/21/2016 9:45 AM
PLOT BY : BADTKE, CHRISTOPHER PLOT NAME :
PLOT SCALE : 1:100

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM1	STA. 51+63'AB'	375.9' LT	CUT "X" ON THE NE SIGN BOLT OF EXISTING SIGN LEG	871.15'

DUANE P & CANDICE J SWALHEIM

GERALD L & PAMELA JZ GERSTL

T. WESLEY & LOIS SKAAR

MICHELLE M. ELDRIDGE

ROBERT D. BAILEY

DOWNING 3094 CR MN LLC

GRYFFINDOR, LLC

P.L.

BP: 35+00.00'AB'

PC: 35+83.56'AB'

PT: 41+97.71'AB'

EP: 59+50.00'AB'

DELINEATED WETLANDS (TYP.)

POND

SLOPE INTERCEPT (TYP.)

STA 41+50'AB', LT. RECONSTRUCT ASPHALT P.E. SEE CONSTRUCTION AND PLAN DETAILS

TLE (TYP)

R/W

CTH AB

35'AB'

40'AB'

45'AB'

50'AB'

55'AB'

STA. 48+62.23'AB' BACK OF ABUTMENT

R-13-262

R-13-263

STA. 50+97.39'AB' BACK OF ABUTMENT

MG&E (UG GAS)

FRONTIER (UG TELEPHONE)

ALLIANT ENERGY (OH ELECTRIC)

ATC ELECTRIC (345kV OH)

CAUTION

STA 44+43'AB' REMOVE EXISTING 24" CMP

STA 53+42'AB' REMOVE EXISTING 36" CMP

STA 56+62'AB', LT. REMOVE EXISTING 18" CMP

1040'XSB'

1040'XNB'

IH 39 SB

IH 39 NB

1035'XSB

1035'XNB

R/L "XSB"

R/L "XNB"

REMOVE STRUCTURE B-13-139
4-SPAN STEEL GIRDER BRIDGE
LENGTH = 272.5', WIDTH = 24'

BEGIN PROJECT
STA 36+00'AB'
MATCH EXISTING PAVEMENT
X = 461907.59
Y = 857813.38

END PROJECT
STA 58+60'AB'
MATCH EXISTING PAVEMENT

PROPOSED STRUCTURE: B-13-726
2-SPAN (54W INCH PRESTRESSED CONCRETE GIRDER)
52' CLEAR WIDTH
SKEW 37°35' RHF
SEE STRUCTURE PLANS

VCL=930.00
K=211.80

STA. 44+43.00'AB'
1 - 30 INCH CPRC REQ'D
2 APRON ENDWALLS
& 2 MARKERS CULVERT END REQD.
INV = 862.2' LT
INV = 862.2' RT

PROPOSED PROFILE

EXISTING PROFILE

SPECIAL DITCH, RT

SPECIAL DITCH, LT

SB NB

+/- 16'-1 3/4" *

* SEE STRUCTURE PLANS FOR ADDITIONAL VERTICAL CLEARANCE INFORMATION

VCL=650.00
K=176.59

VCL=180.00
K=203.95

STA. 53+42.00'AB'
1 - 29x45 INCH CPRCHE
2 - APRON ENDWALLS AND 2 MARKERS CULVERT END REQ'D
INV = 897.4' LT
INV = 896.4' RT

EXISTING PROFILE ELEVATION

FINISHED PROFILE ELEVATION

VPC STA 36+00.00'AB' VPC EL 859.02

VPC STA 36+10.00'AB' VPC EL 859.05

0.35%

STA 40+00.00'AB' EL 860.02

VPI STA 40+75.00'AB' VPI EL 860.70

2.46%

STA 42+00.00'AB' EL 864.95

VPT STA 45+40.00'AB' VPT EL 882.77

VPC STA 45+55.00'AB' VPC EL 883.48

4.15%

VPI STA 48+80.00'AB' VPI EL 898.90

VPC STA 52+05.00'AB' VPT EL 902.36

1.06%

STA 53+20.00'AB' EL 898.73

STA 53+40.00'AB' EL 897.50

2.96%

VPC STA 54+10.00'AB' VPC EL 904.54

STA 54+75.00'AB' EL 901.50

VPI STA 55+00.00'AB' VPI EL 905.50

1.13%

STA 56+08.15'AB' EL 903.00

VPT STA 55+90.00'AB' VPT EL 907.25

1.95%

STA 57+40.91'AB' EL 906.50

2.56%

STA 58+15.00'AB' EL 908.40

5.32%

STA 58+60.00'AB' EL 911.06

STA 58+60.00'AB' EL 912.51

930 920 910 900 890 880 870 860 850

858.85 859.02 859.02 859.17 859.56 859.23 860.58 859.64 862.07 860.90 864.02 863.08 866.46 866.46 869.36 870.67 872.74 875.22 876.59 879.99 880.91 884.40 885.56 888.11 889.76 891.35 893.40 873.72 896.48 874.77 898.99 887.25 900.93 899.96 902.31 901.85 903.37 903.77 904.44 905.33 905.70 907.30 907.45 909.43 909.39 911.42 911.34 913.56

32'AB' 35'AB' 40'AB' 45'AB' 50'AB' 55'AB' 60'AB' 62'AB'

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: CTH AB	SHEET 93

END PROJECT
STA 58+60'AB'
MATCH EXISTING PAVEMENT

STA 9+20'FW', LT.
REMOVE P.E.
REMOVE EXISTING 12" CPCM

ROBERT D.
BAILEY

GRYFFINDOR LLC

FREEWAY COURT

8'FW'

TLE

R/W

CTH AB

STA. 56+61.55'AB' =
STA. 10+00.00'FW'
TYPE C INTERSECTION (MODIFIED)

STA 9+24'FW', RT.
REMOVE EXISTING 12" CPCM
18" CPCM WITH 2 ENDWALLS REQ'D

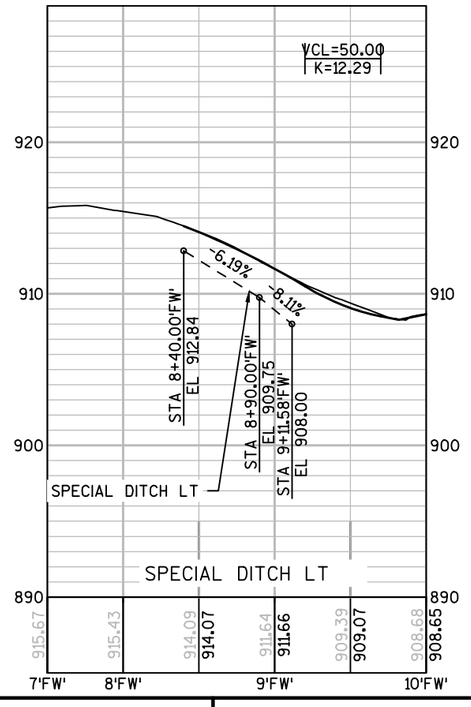
STA 9+25'FW', RT.
RECONSTRUCT CONCRETE P.E.
SEE CONSTRUCTION DETAIL

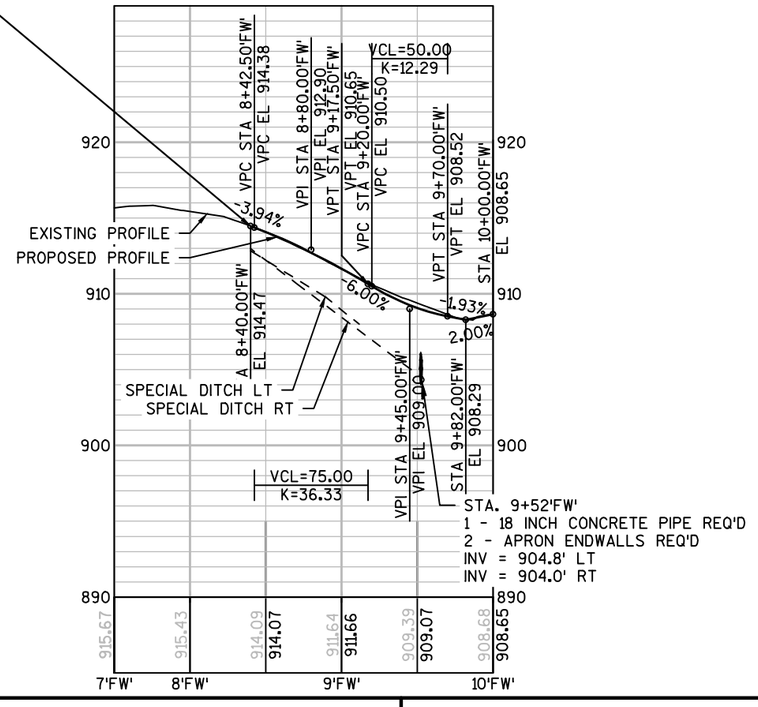
SLOPE INTERCEPT (TYP.)

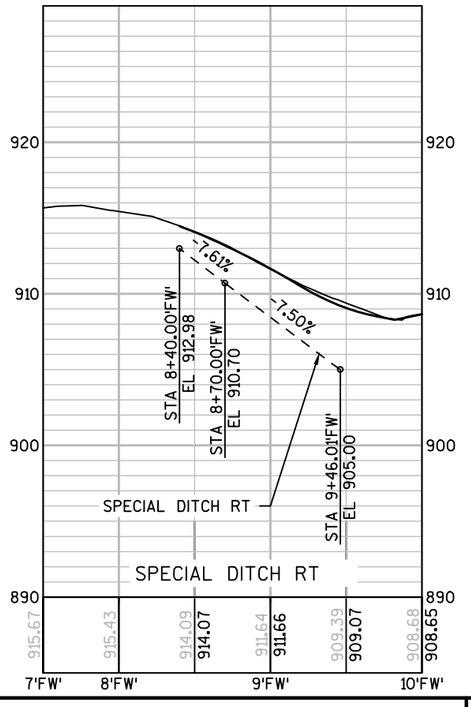
MICHELLE M. ELDRIDGE

BEGIN CONSTRUCTION
STA 8+40.00'FW'
MATCH EXISTING PAVEMENT

N







PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	PLAN AND PROFILE: FREEWAY COURT	SHEET 94

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\050101_PP_AB-FW - THREE PROFILES.DWG
LAYOUT NAME - 05020 - (3)
PLOT DATE : 7/21/2016 8:39 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

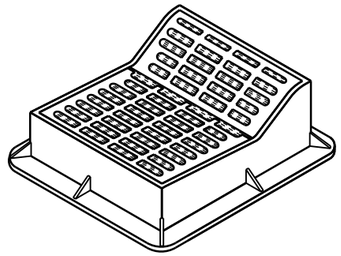
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09B02-09	CONDUIT
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-16	URBAN NON-DOWELED CONCRETE PAVEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B22-06A	CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)
14B22-06B	CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-02	FLEXIBLE DELINEATOR POST
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES

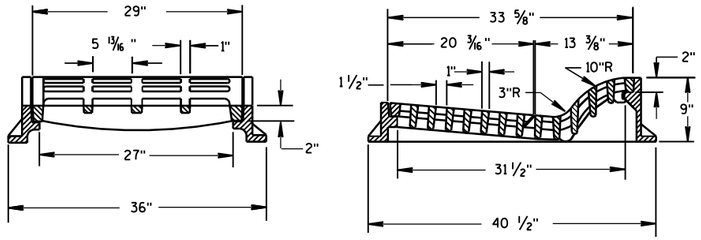
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Standard Detail Drawing List

15C08-16A	PAVEMENT MARKING (MAINLINE)
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

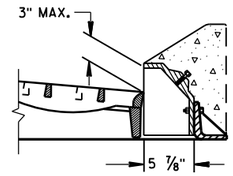
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TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

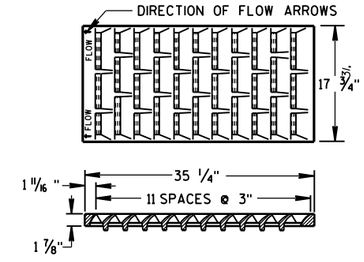
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

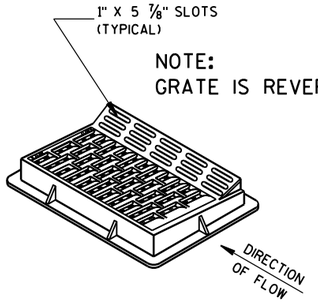
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

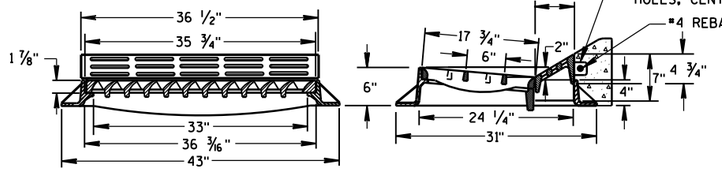
GENERAL NOTES

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.



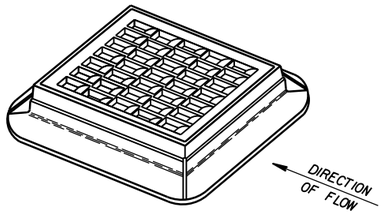


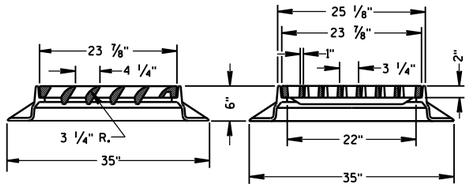


TYPE "HM"

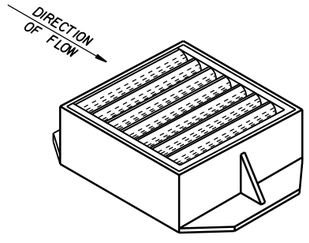
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

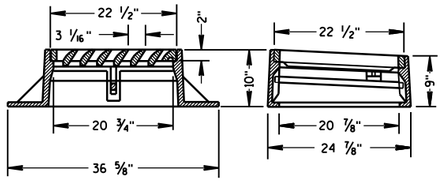
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



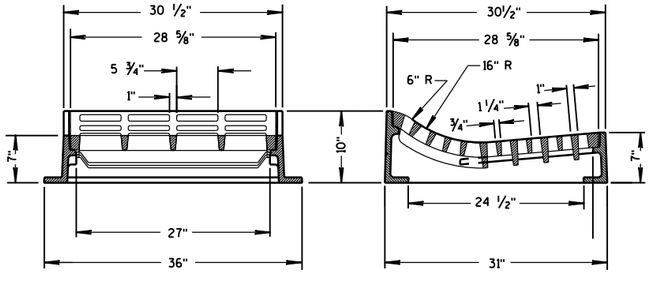


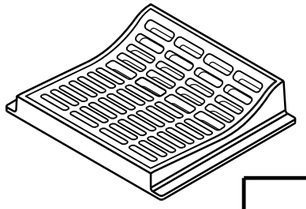
TYPE "S"





TYPE "V"





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

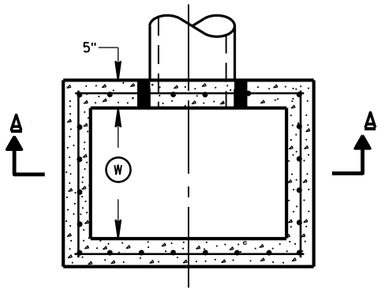
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

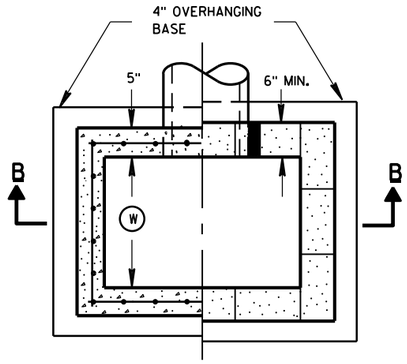
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

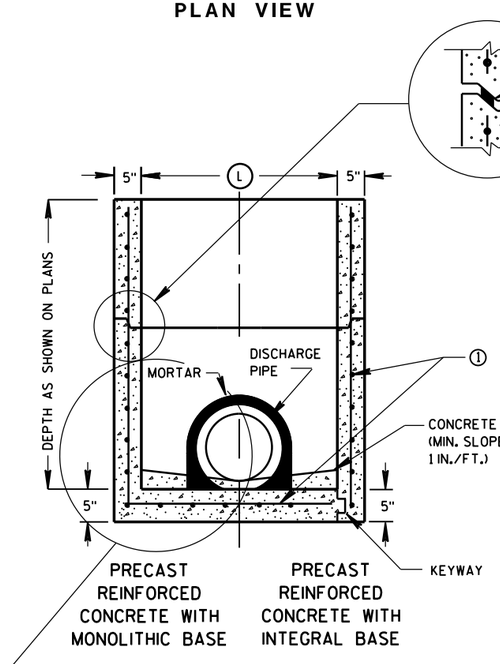
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S.D.D. 8 A 5-19c



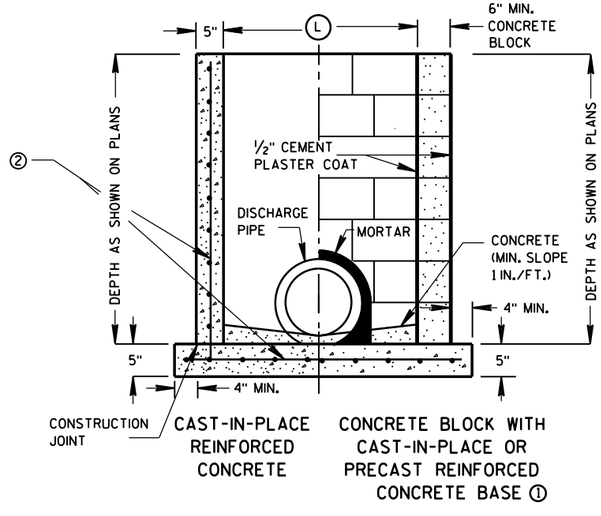
PLAN VIEW



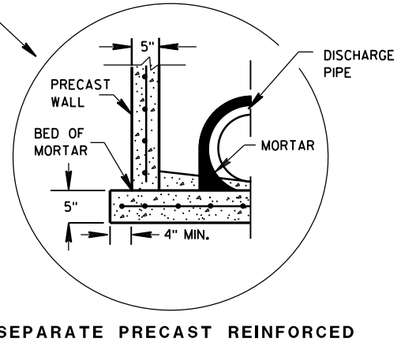
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 GRANULAR 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.

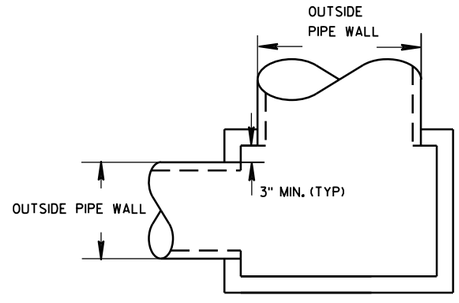
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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"

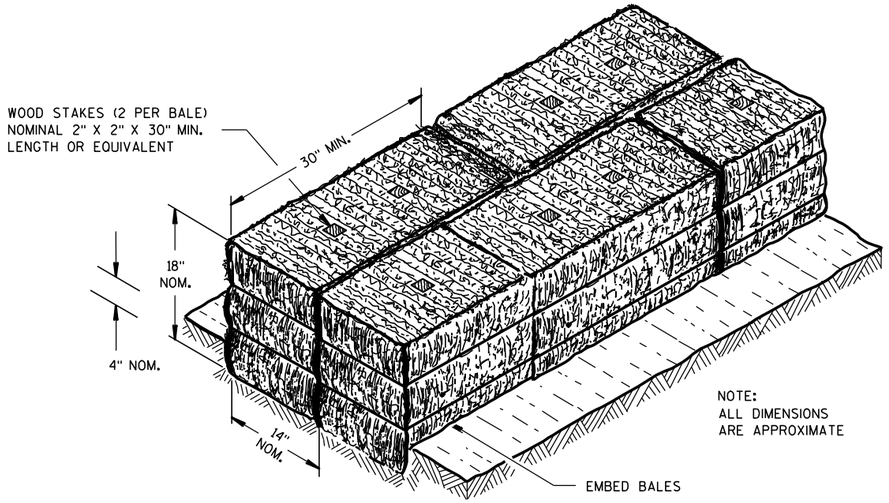
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

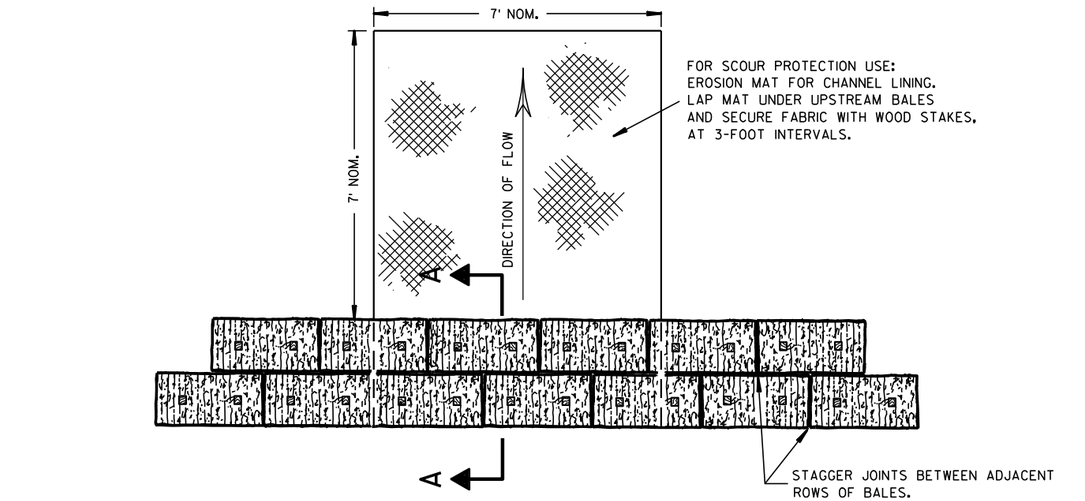
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

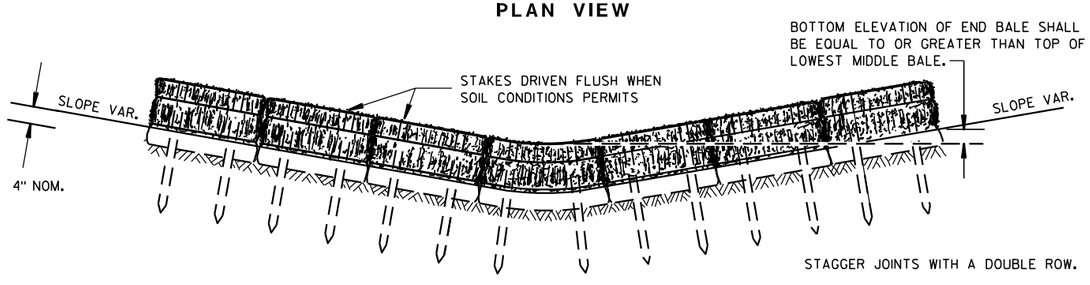
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SECTION A-A



PLAN VIEW



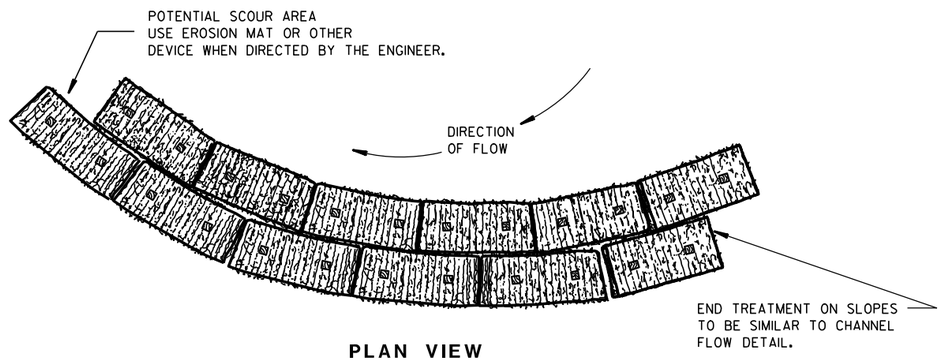
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

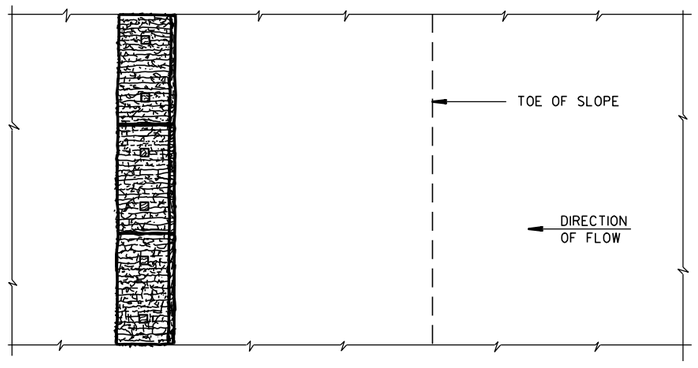
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

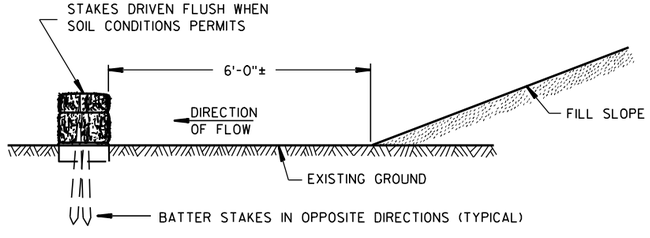


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

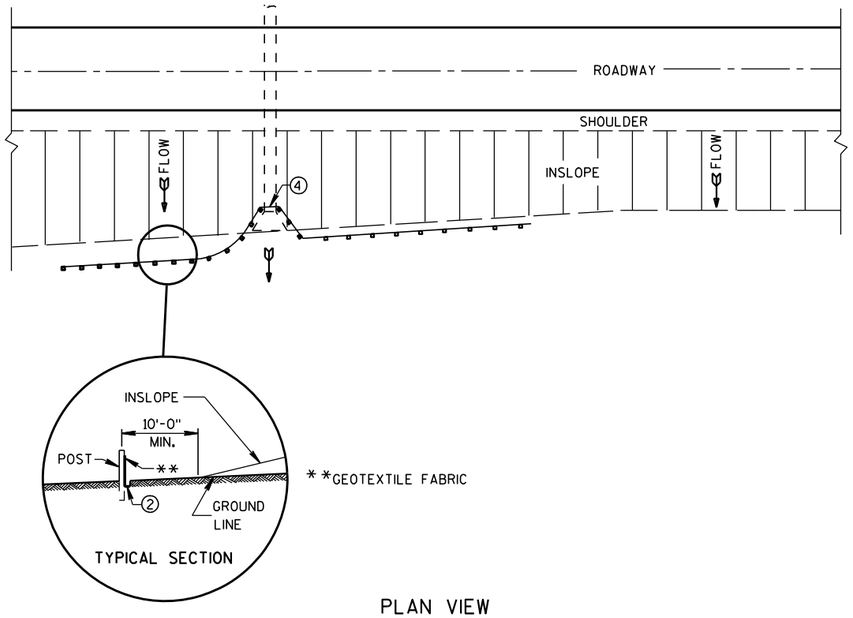
FHWA

6

S.D.D. 8 E 8-3

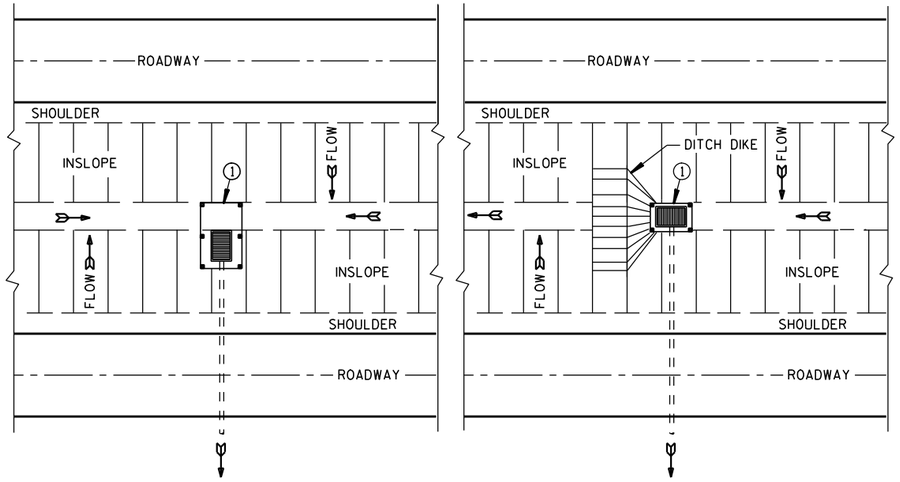
6

S.D.D. 8 E 8-3



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.

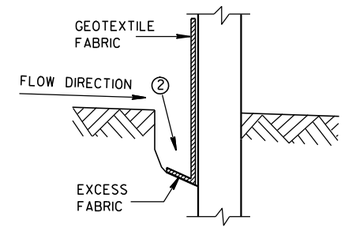
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

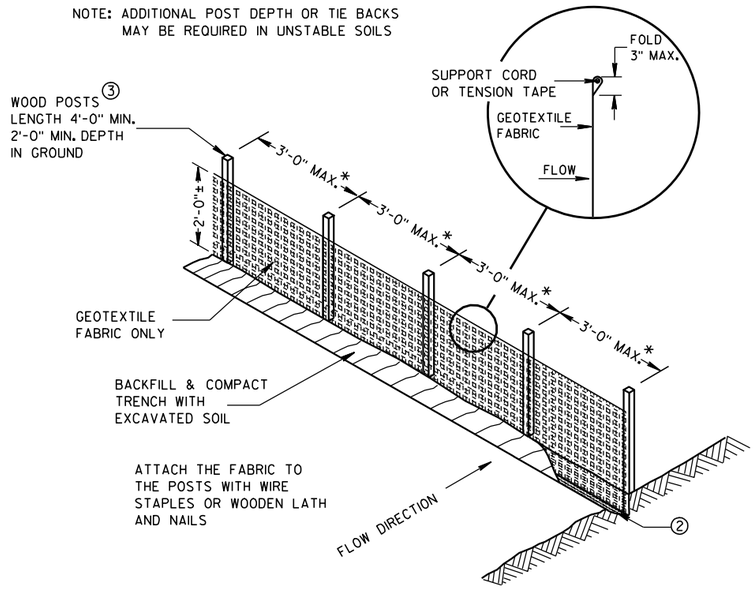
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

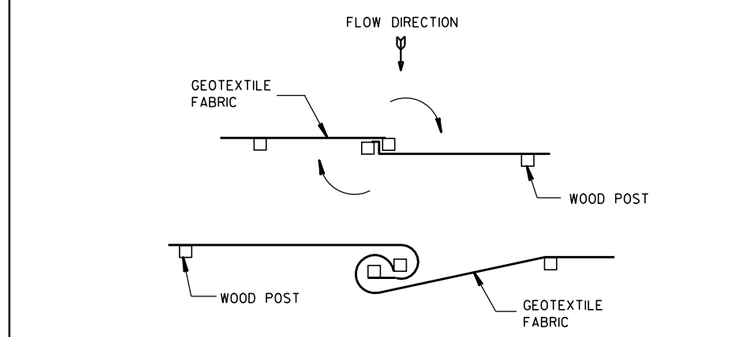


TRENCH DETAIL

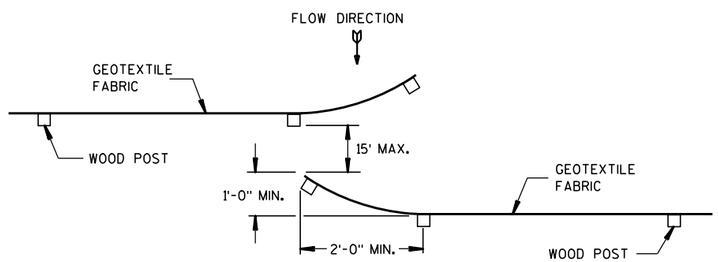


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

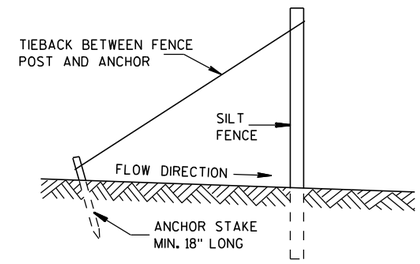


TWIST METHOD



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

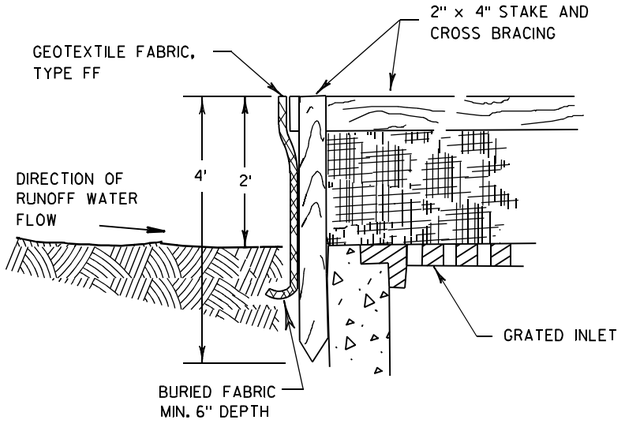
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

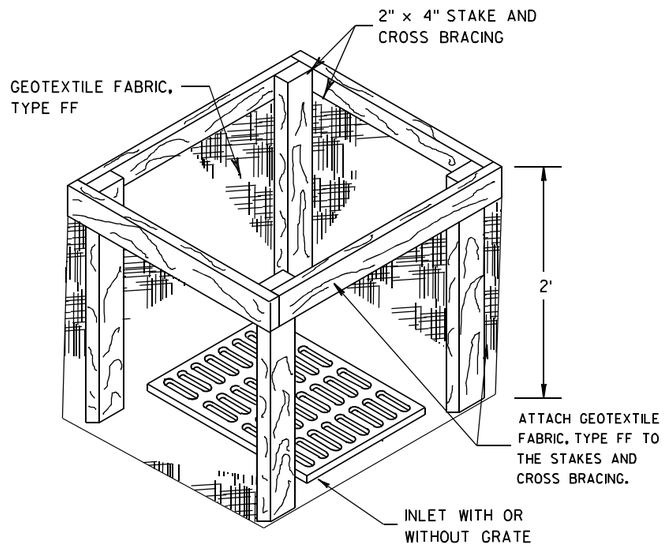
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S.D.D. 8 E 9-6

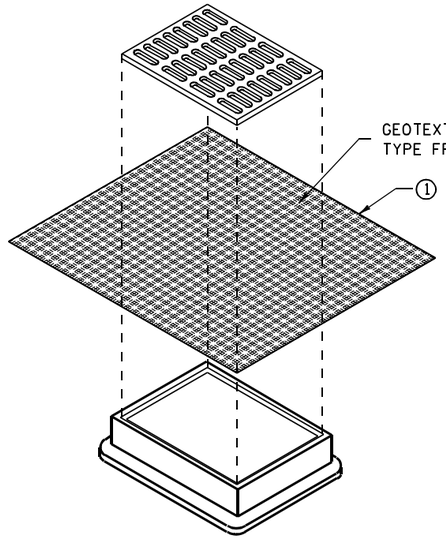
6

S.D.D. 8 E 9-6



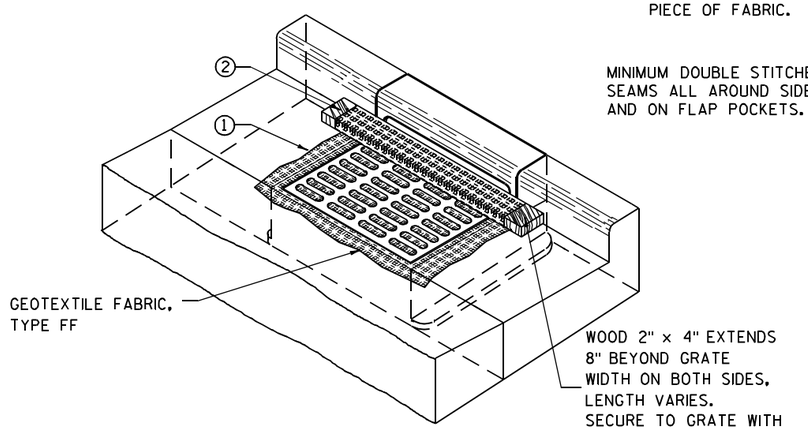


INLET PROTECTION, TYPE A

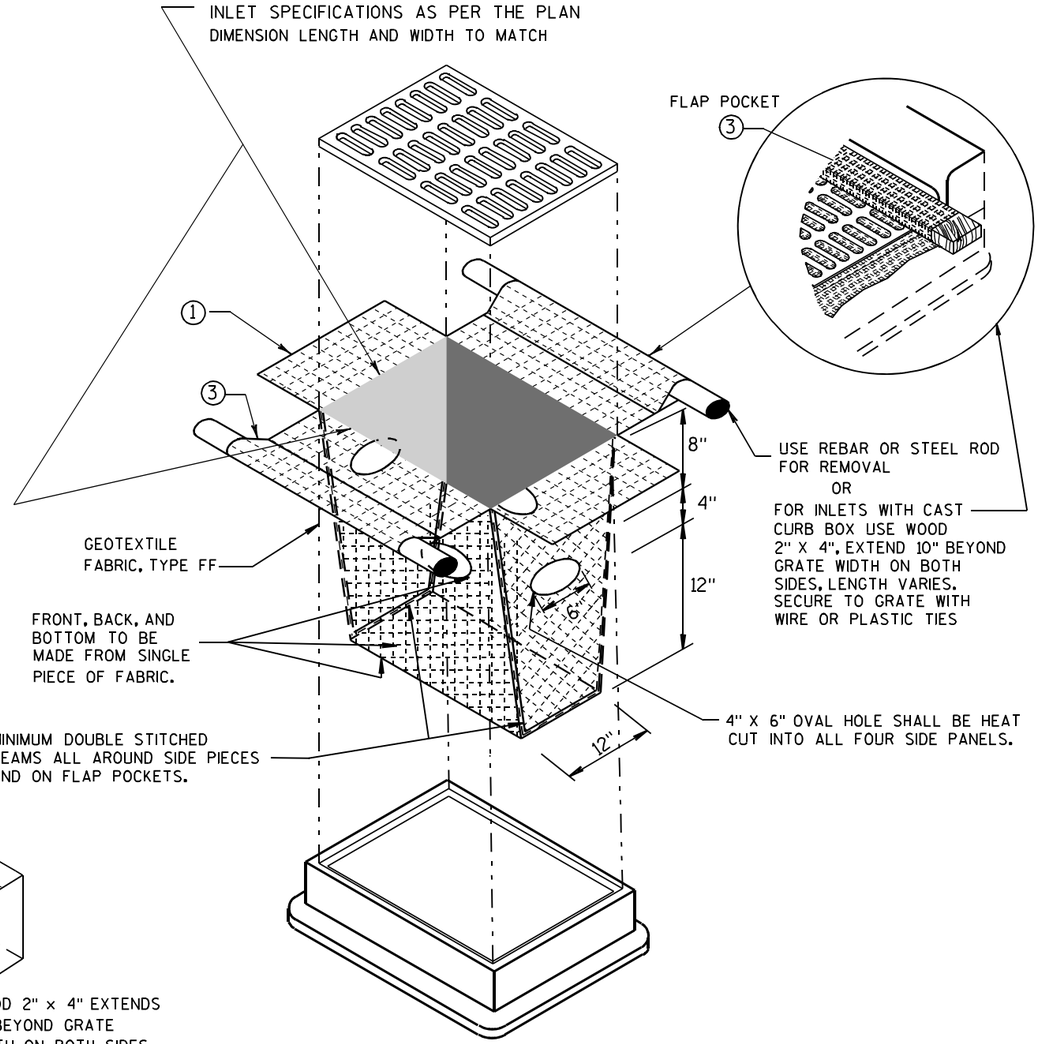


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

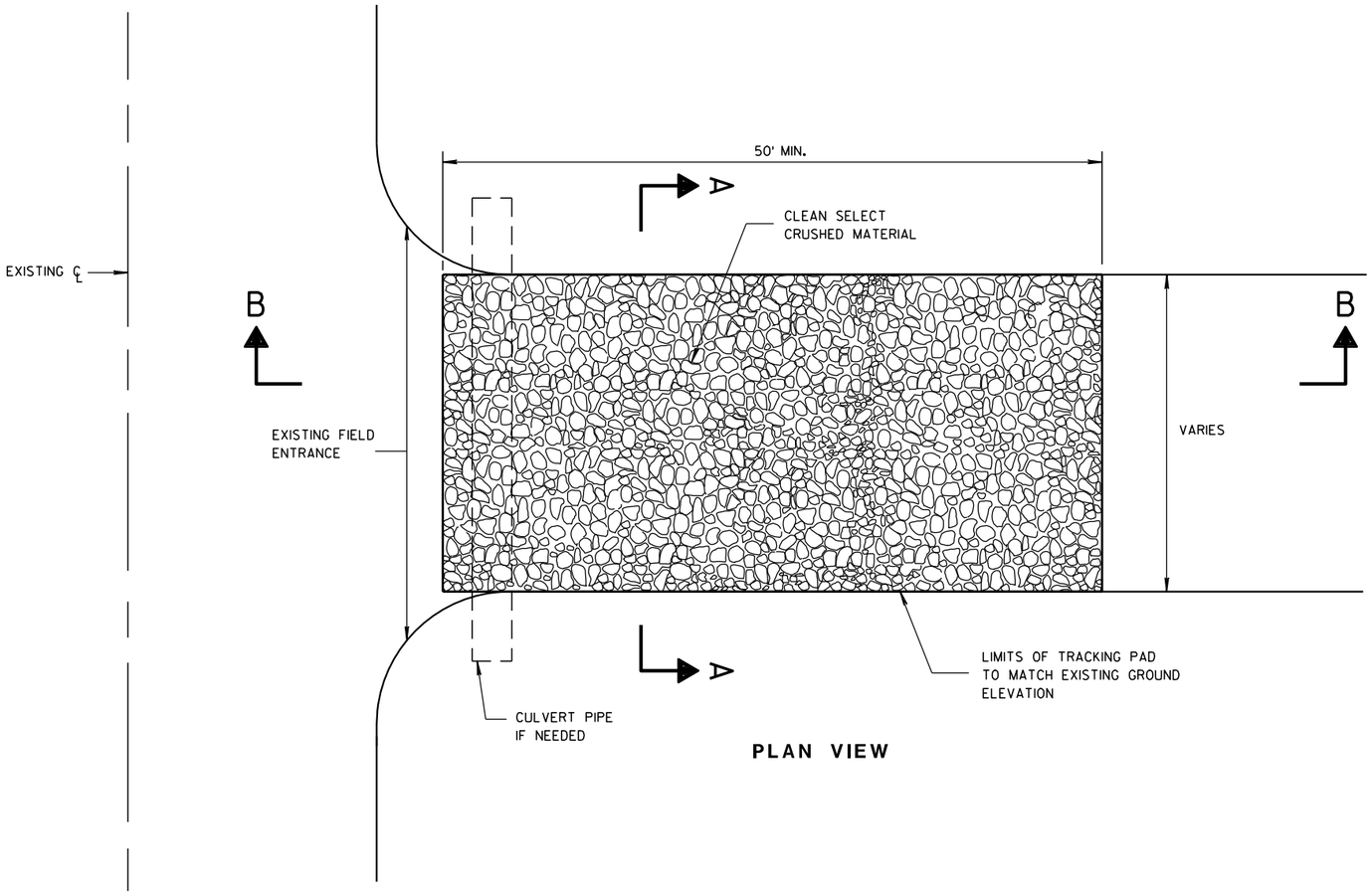
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

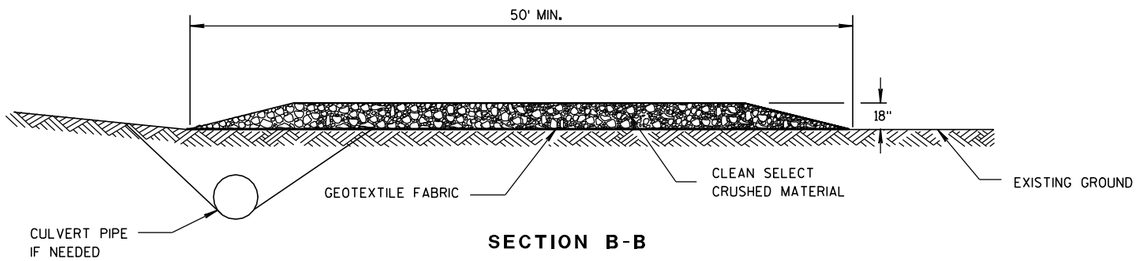
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



PLAN VIEW



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.

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

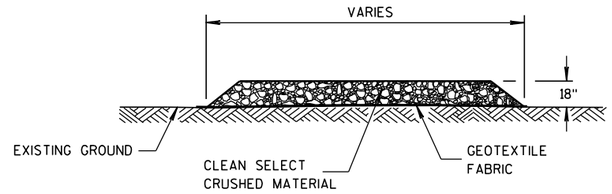
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011	/S/ Jerry H. Zoda	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

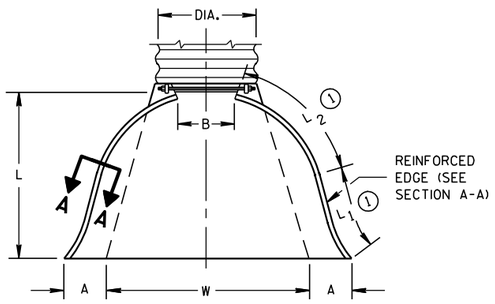
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

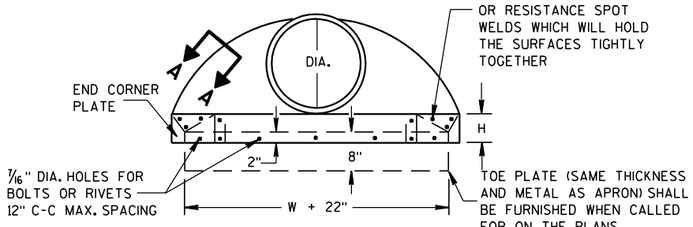
REINFORCED CONCRETE APRON ENDWALLS

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

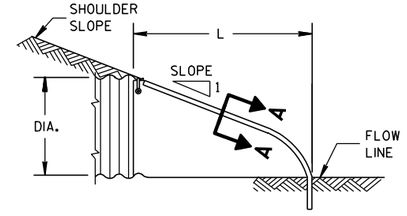
* MINIMUM
** MAXIMUM



PLAN VIEW

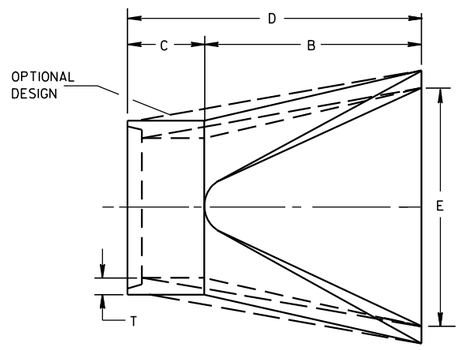


END VIEW

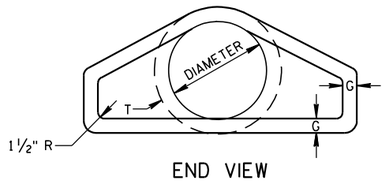


SIDE ELEVATION

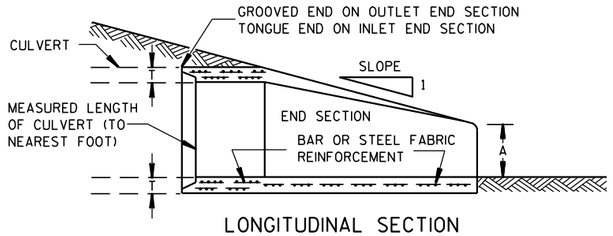
METAL ENDWALLS



PLAN

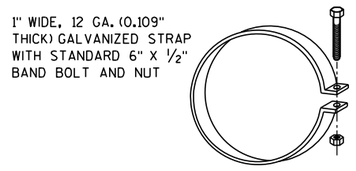


END VIEW



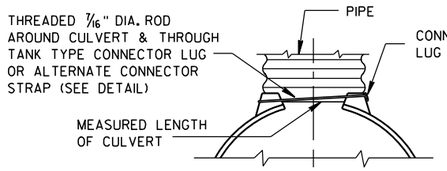
LONGITUDINAL SECTION

CONCRETE ENDWALLS

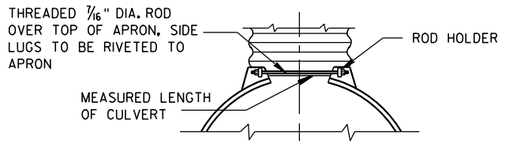


ALTERNATE FOR TYPE 1 CONNECTION

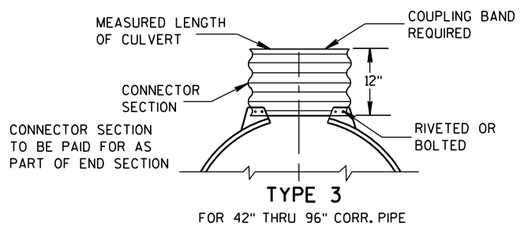
END SECTION CONNECTOR STRAP



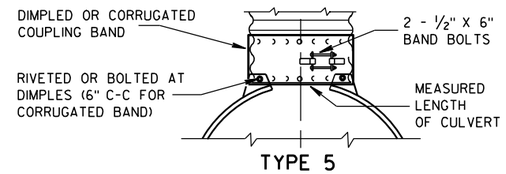
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

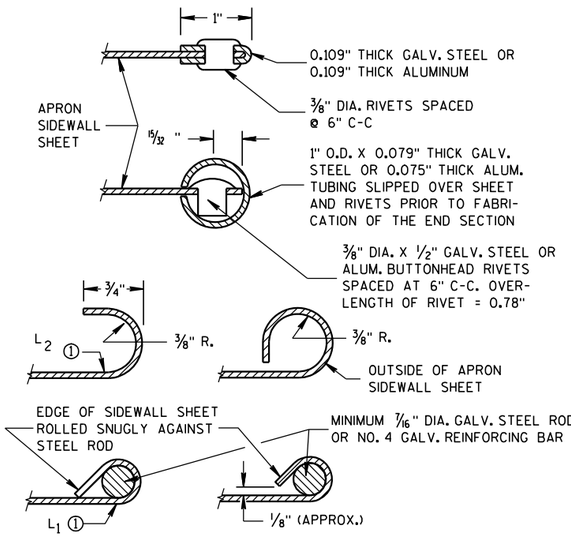
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

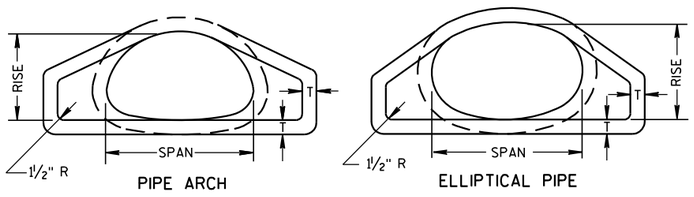
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

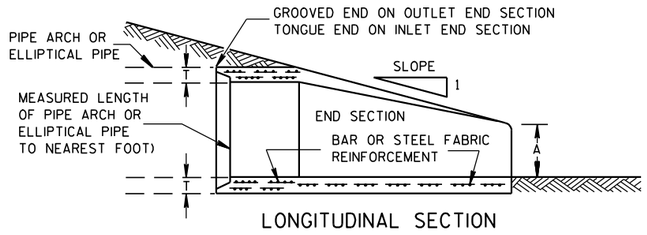
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

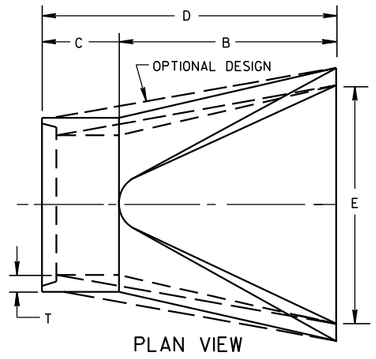
6
S.D.D. 8 F 1-11



END VIEW

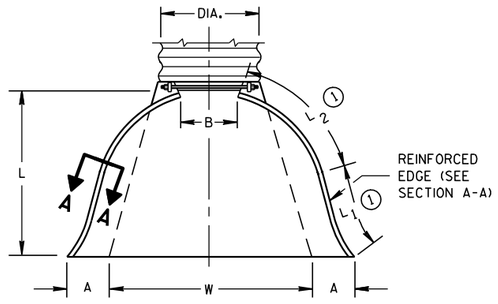


LONGITUDINAL SECTION

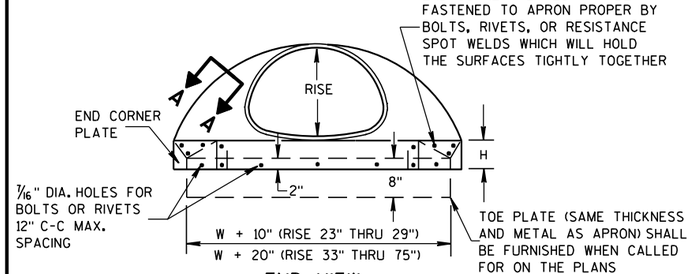


PLAN VIEW

CONCRETE ENDWALLS

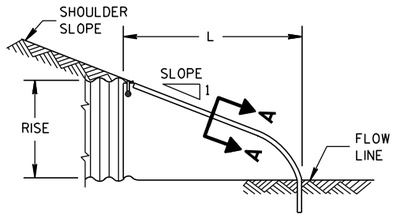


PLAN VIEW



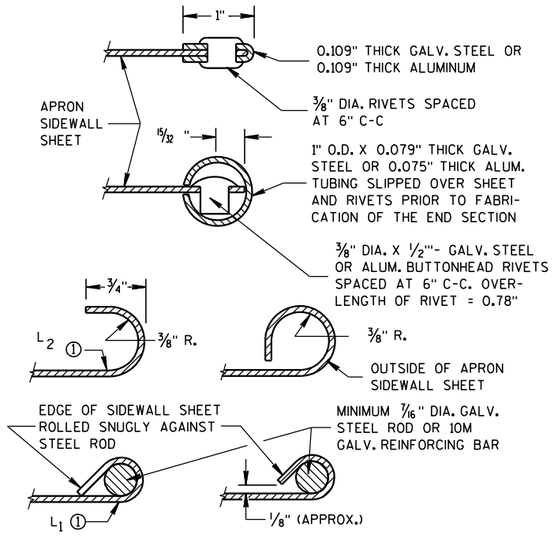
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

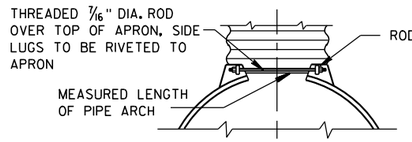
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

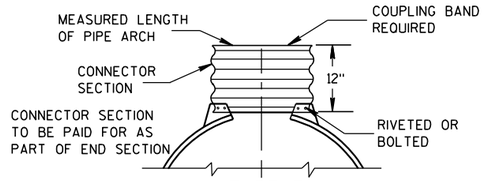
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



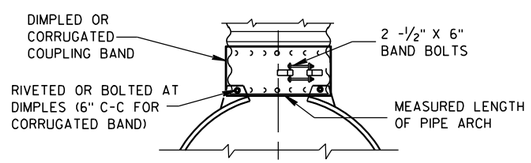
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

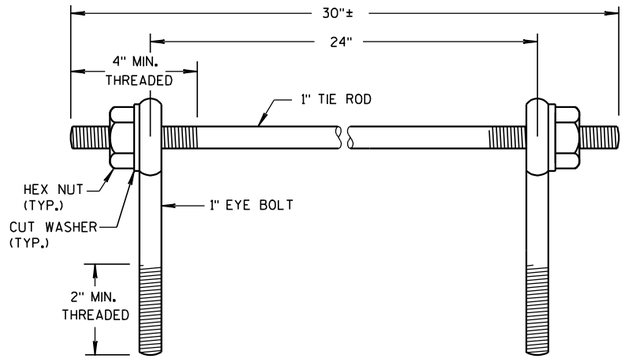
FHWA

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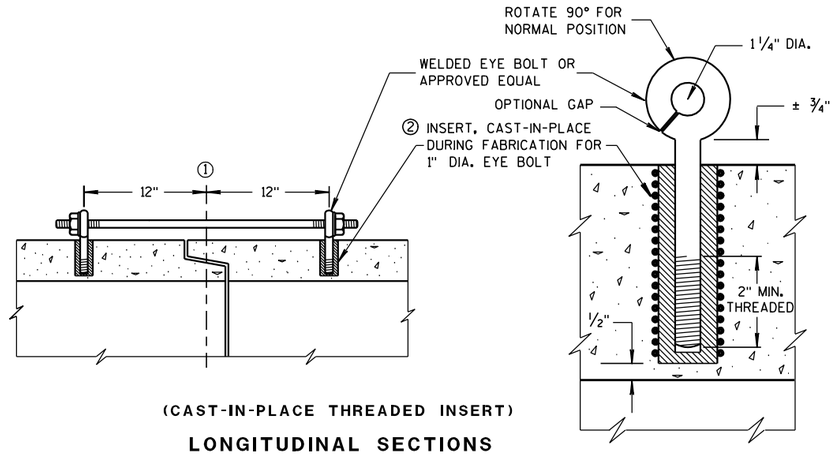
S.D.D. 8 F 2-1

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S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

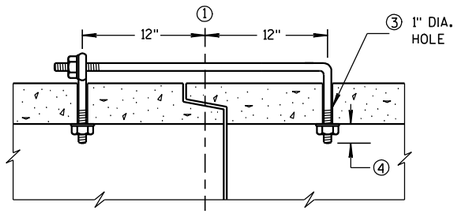
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

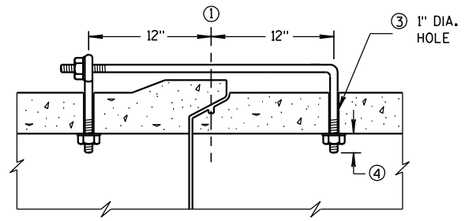
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

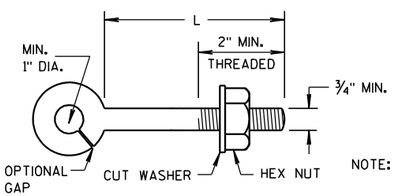


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

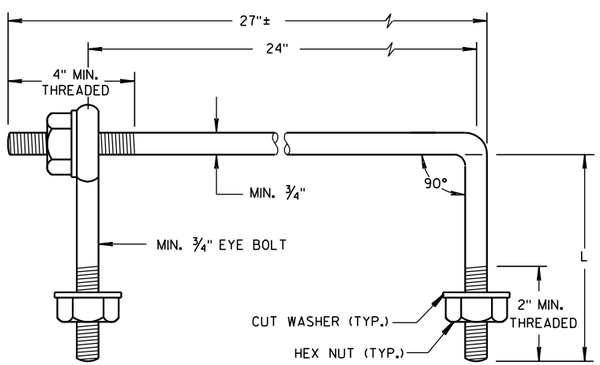
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

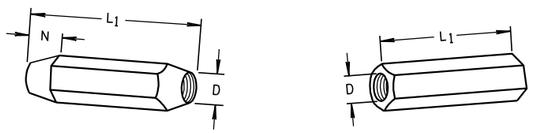
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

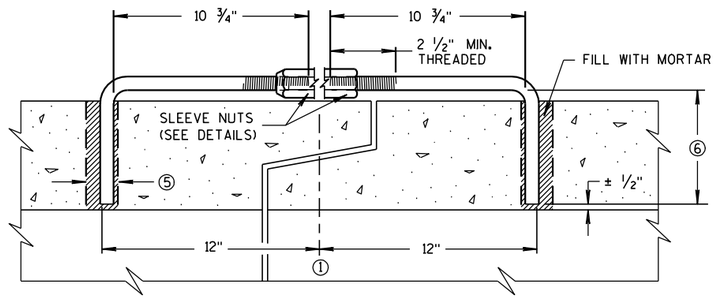
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

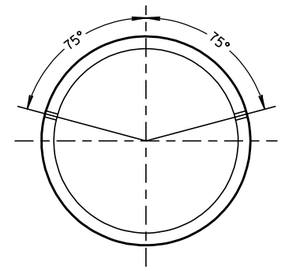
SLEEVE NUTS



LONGITUDINAL SECTION

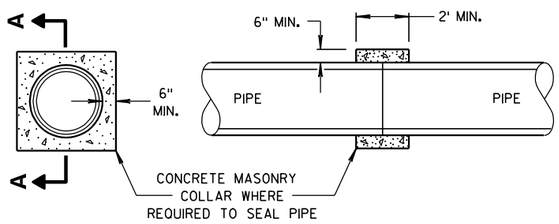
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

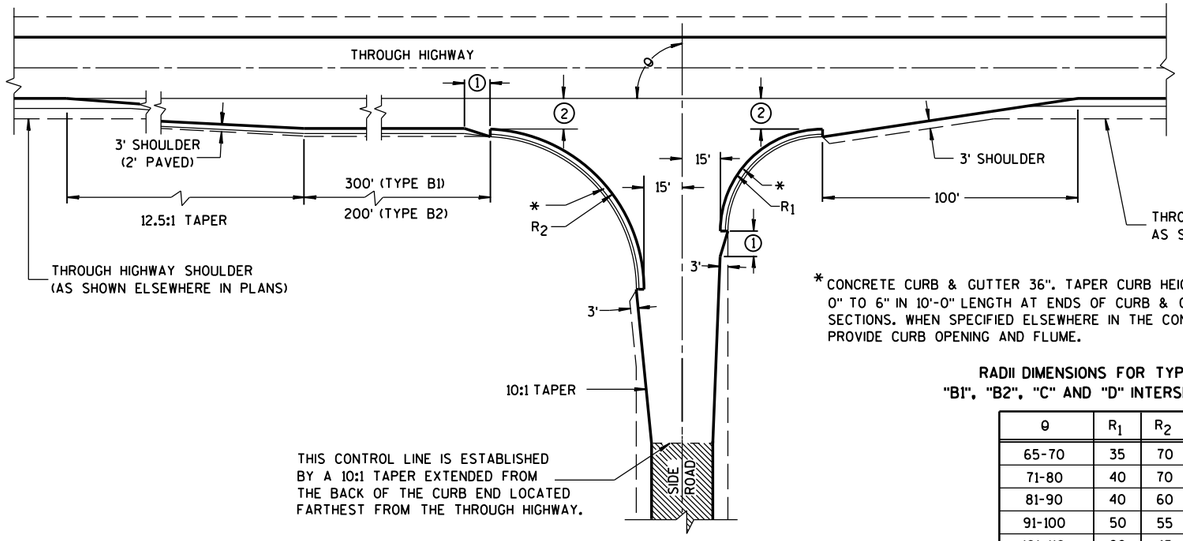
FHWA

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S.D.D. 8 F 4-7

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S.D.D. 8 F 4-7

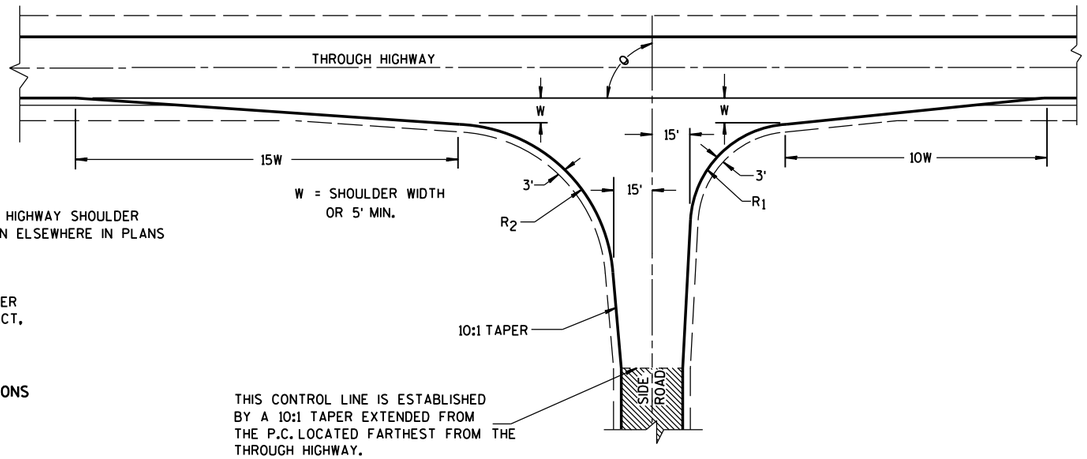


TYPE "B1" AND "B2"

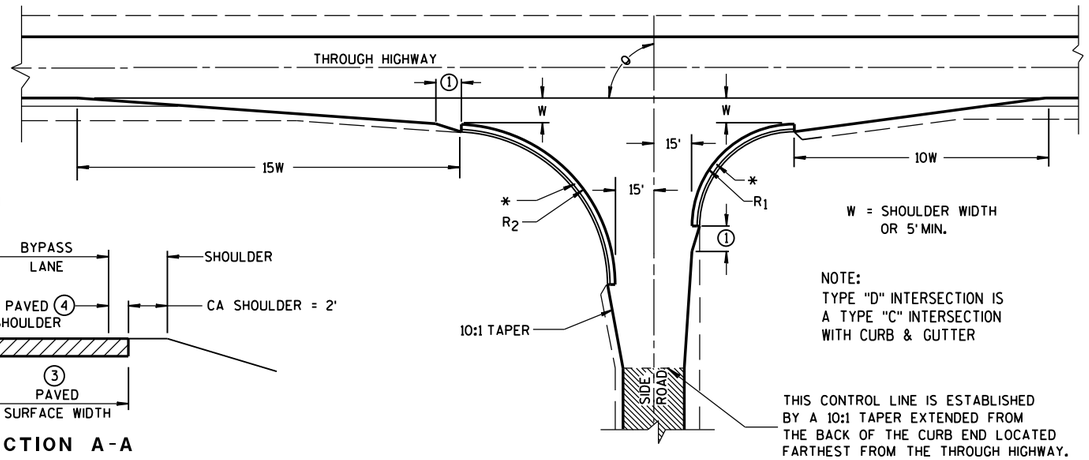
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

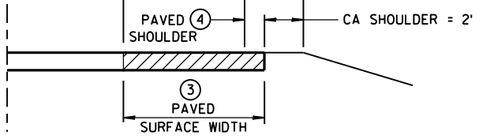
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

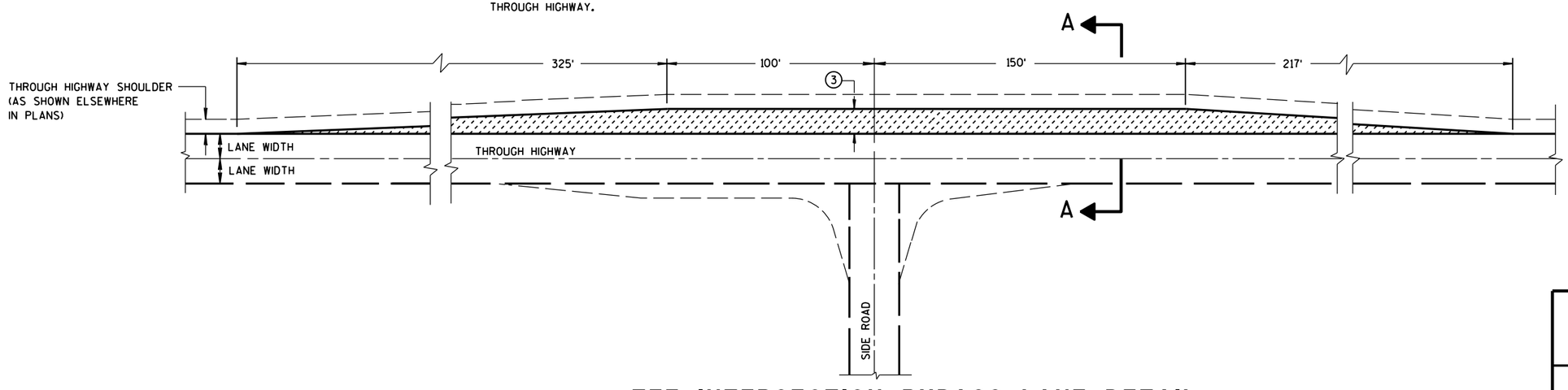
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



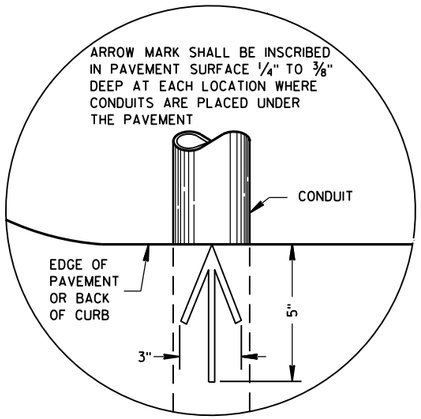
TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

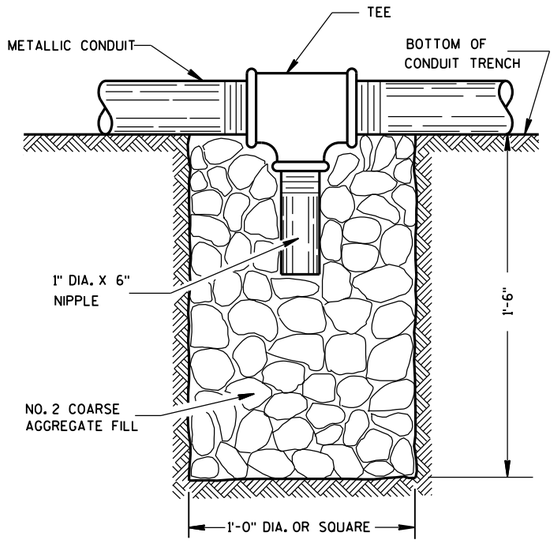
6

S.D.D. 9 A 1-13a



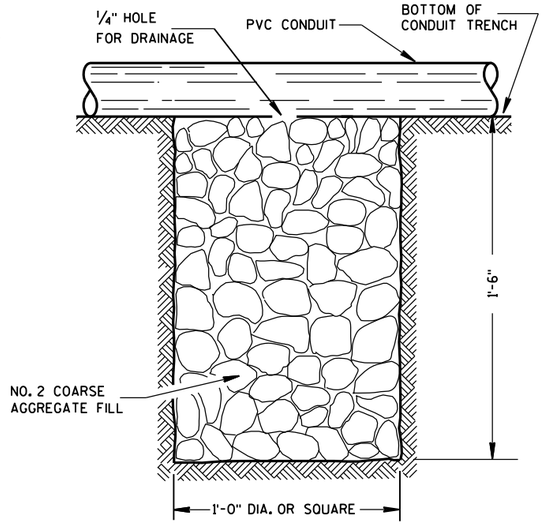
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

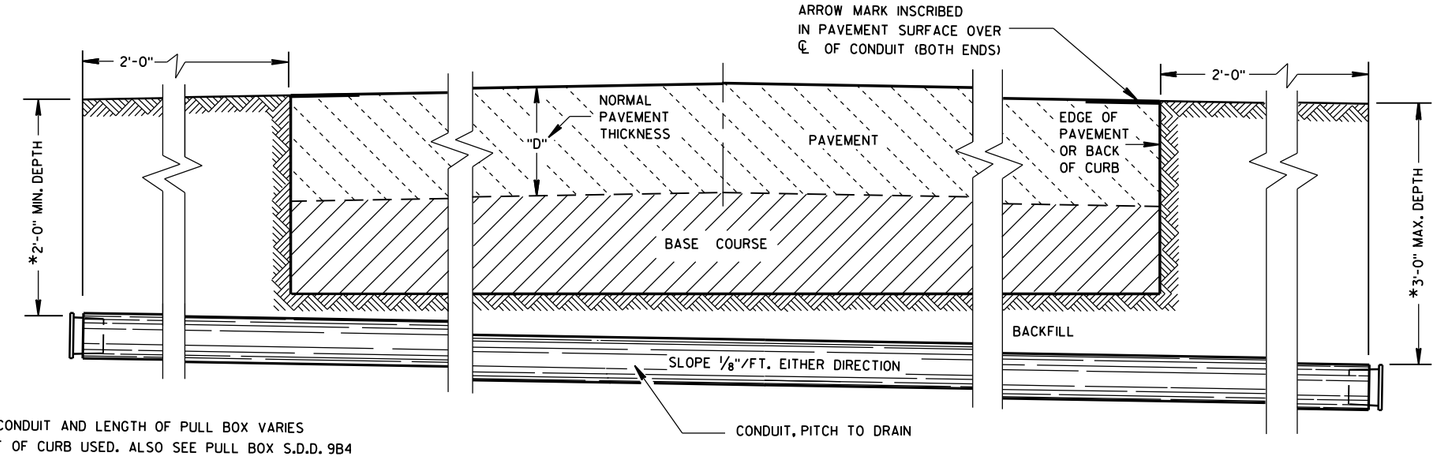
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

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

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



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

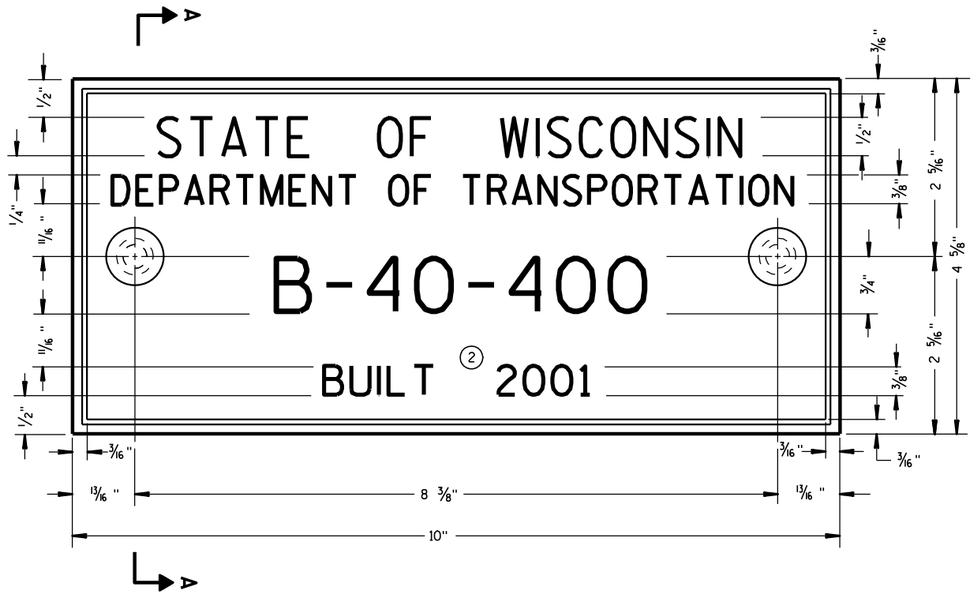
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 2-9



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

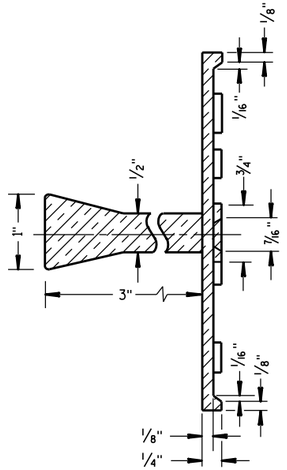
GENERAL NOTES

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.

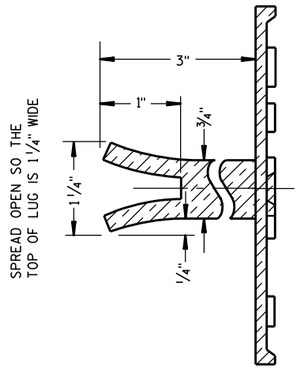
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

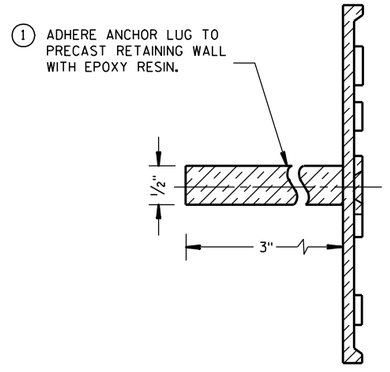
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

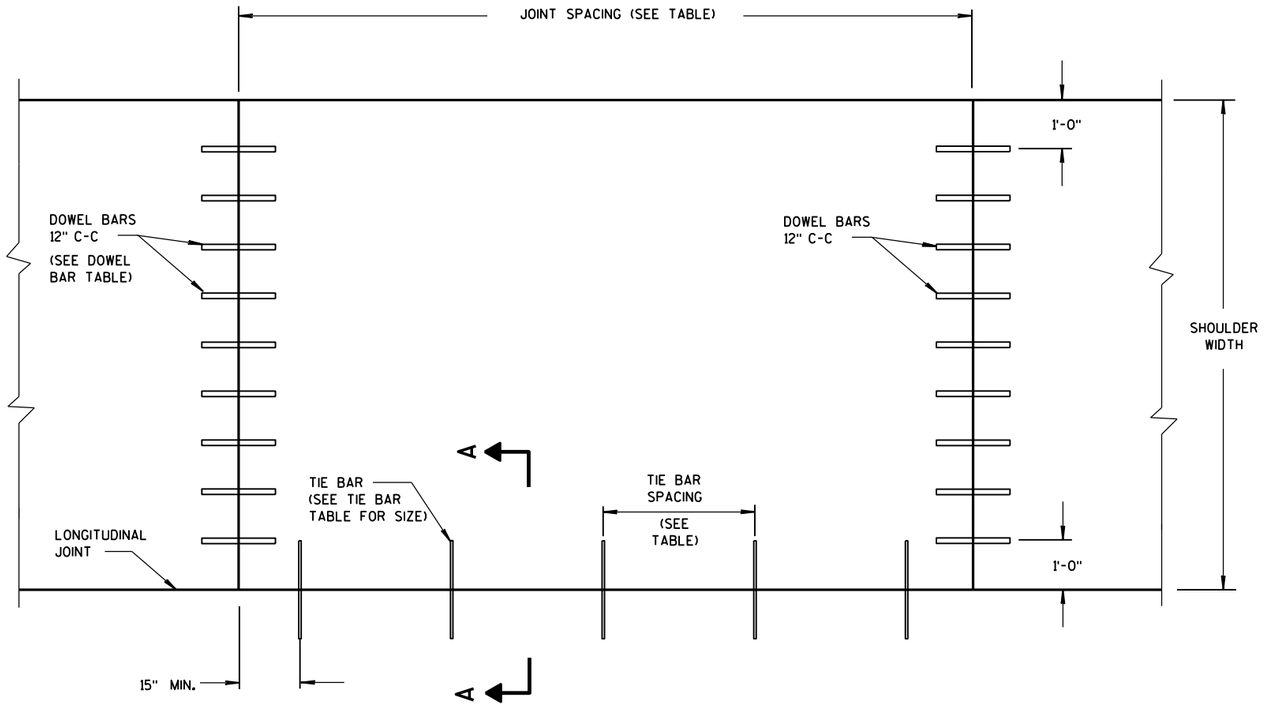
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

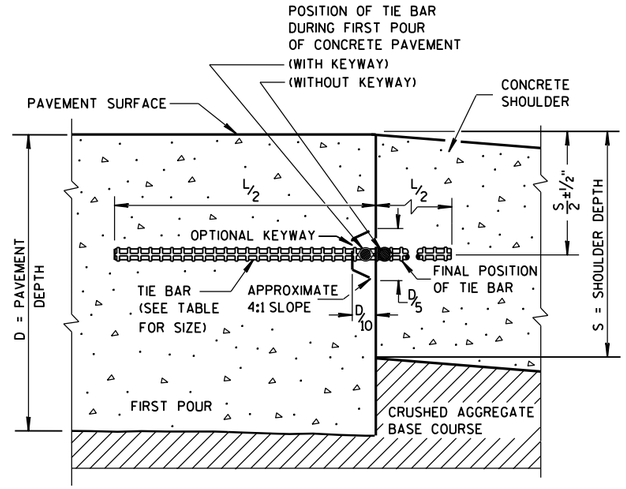
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

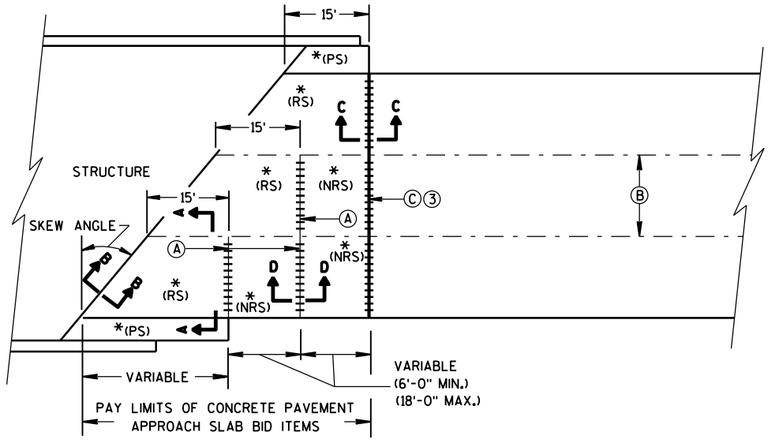
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

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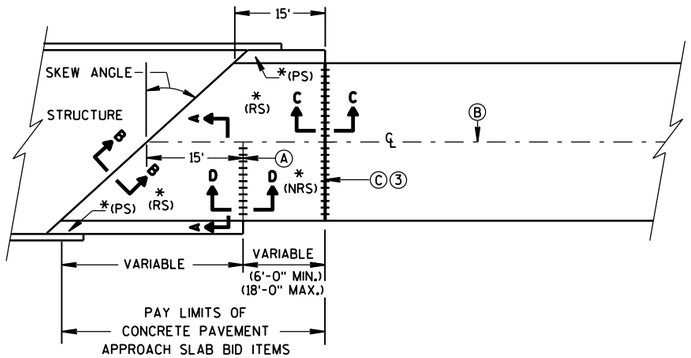
S.D.D. 13 A 3-6

6

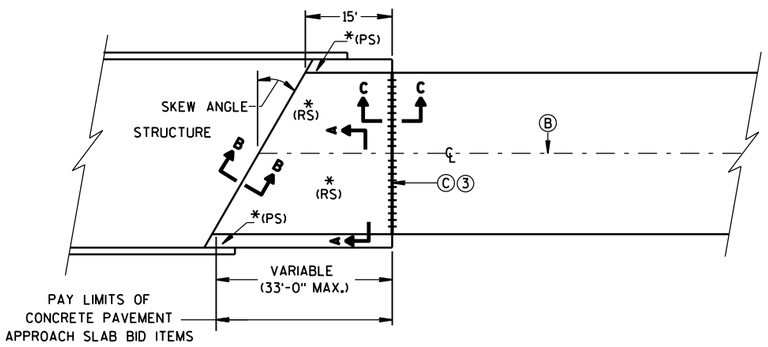
S.D.D. 13 A 3-6



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

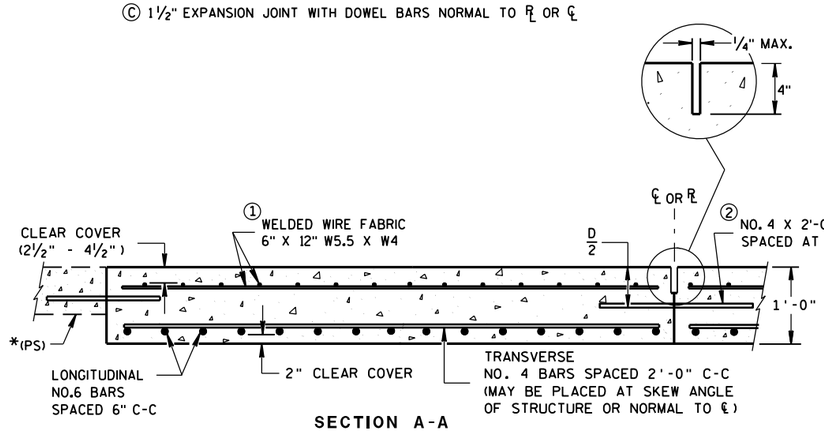
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

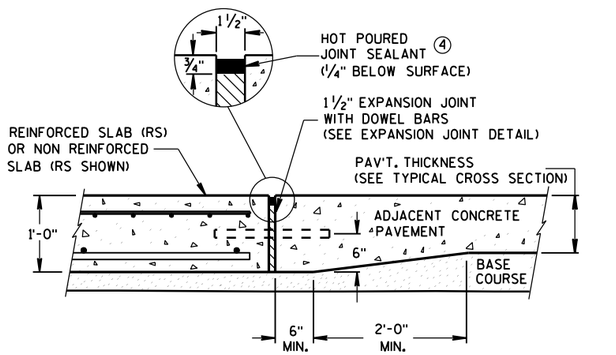
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

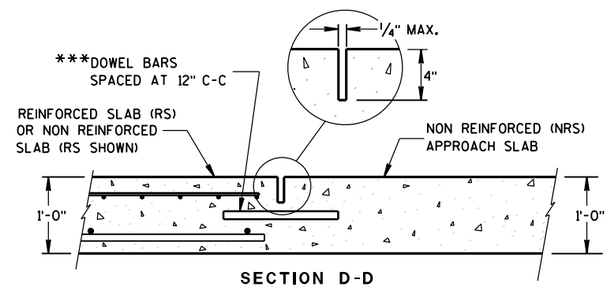
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

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.

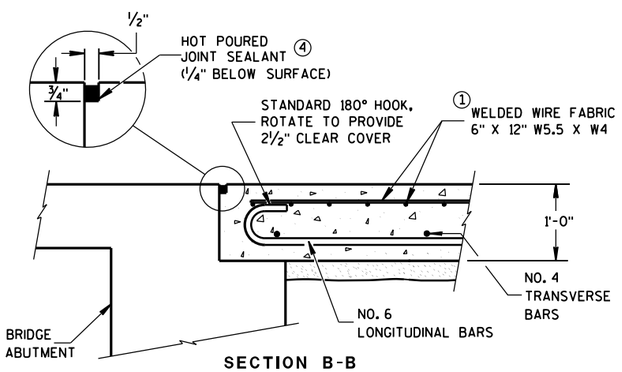
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

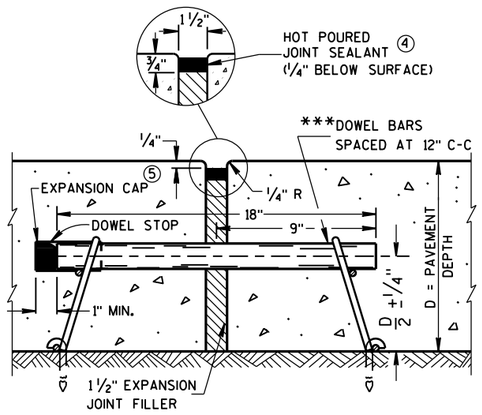
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

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.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

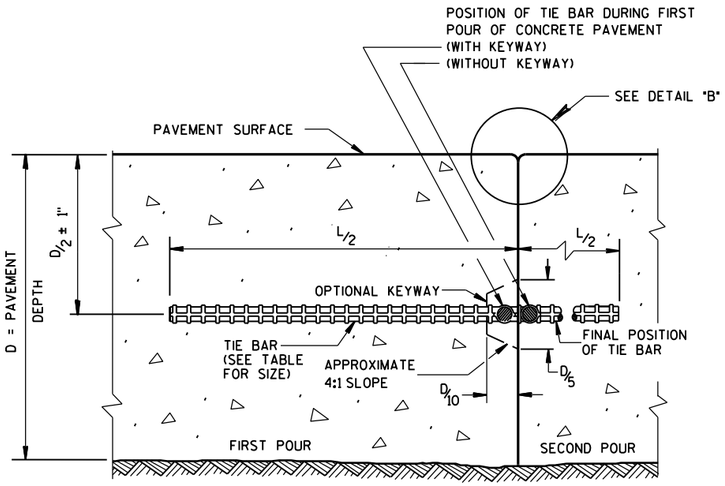
APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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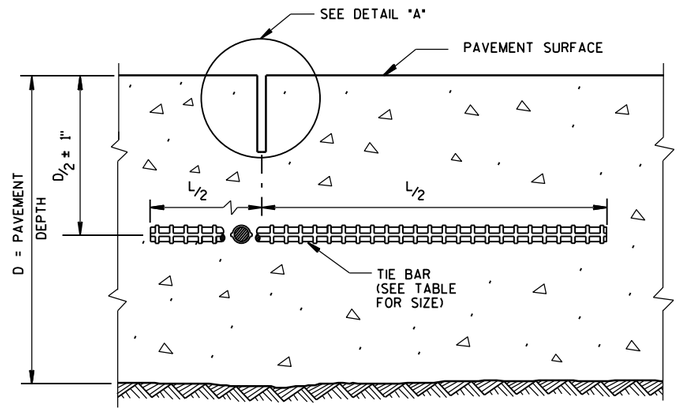
S.D.D. 13 B 2-8a

6

S.D.D. 13 B 2-8a



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

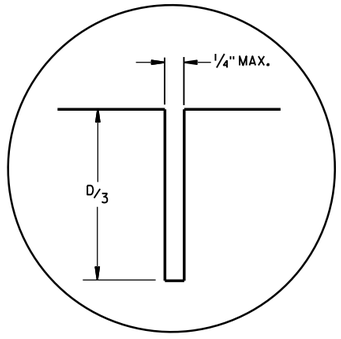
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

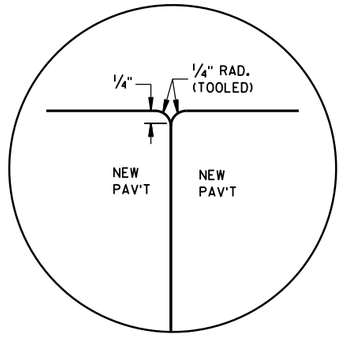
PLAN VIEW

SECTION A-A

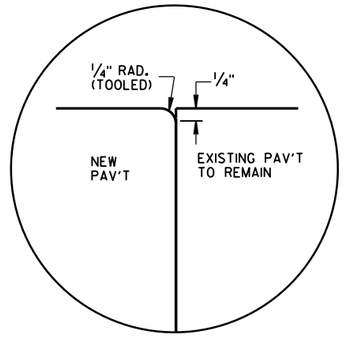
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



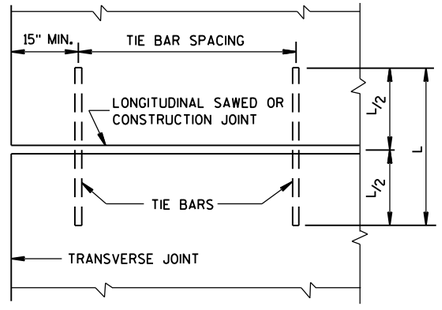
DETAIL "C"

TIE BAR TABLE

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

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

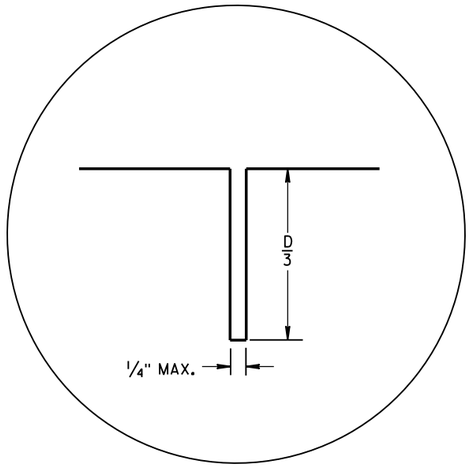
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

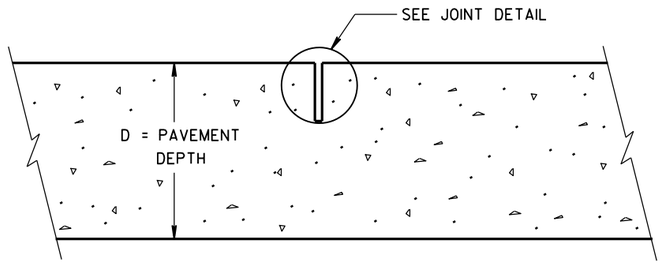
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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S.D.D. 13 C 1-18



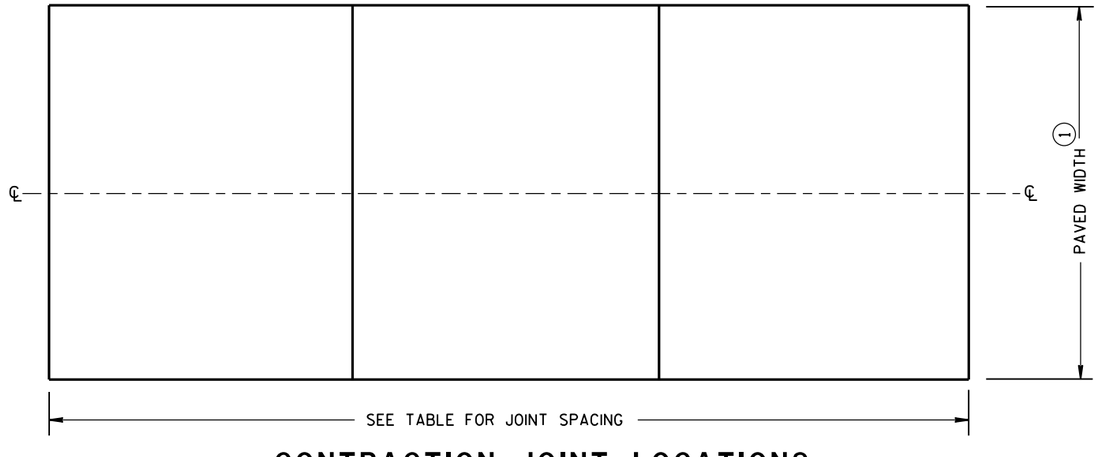
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

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



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

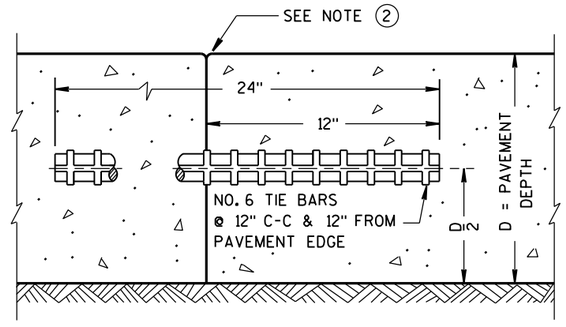
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

6

6

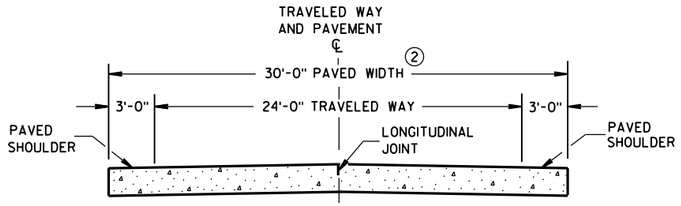
S.D.D. 13 C 4-16

S.D.D. 13 C 4-16

URBAN NON-DOWELED CONCRETE PAVEMENT

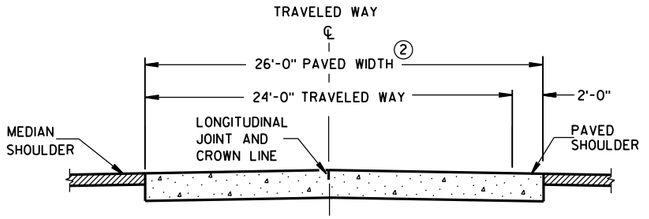
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-3-2013 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
FHWA
IEER

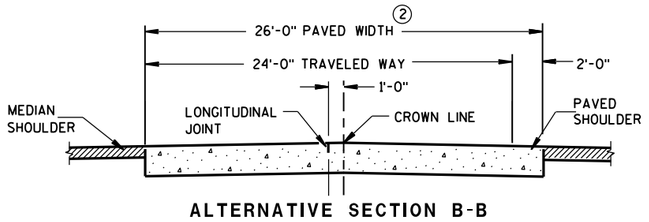


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

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

CONSTRUCTION JOINTS

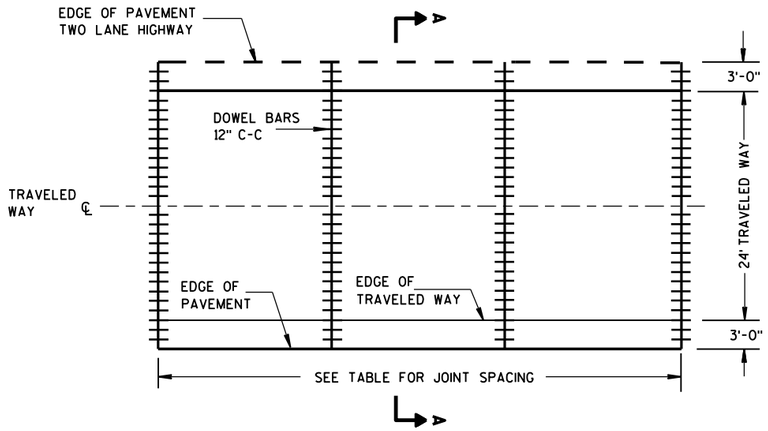
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

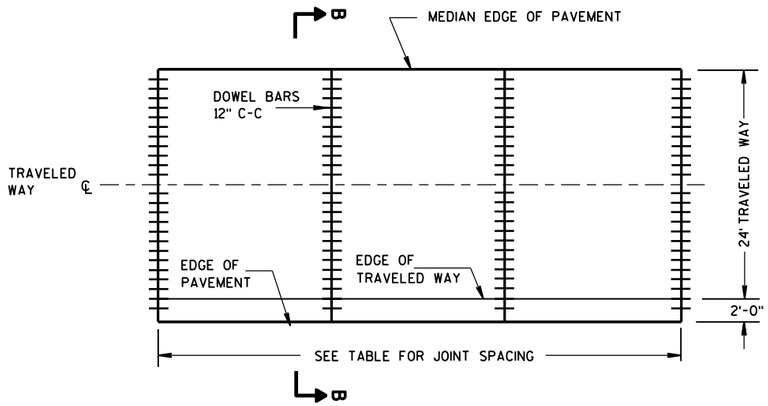
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



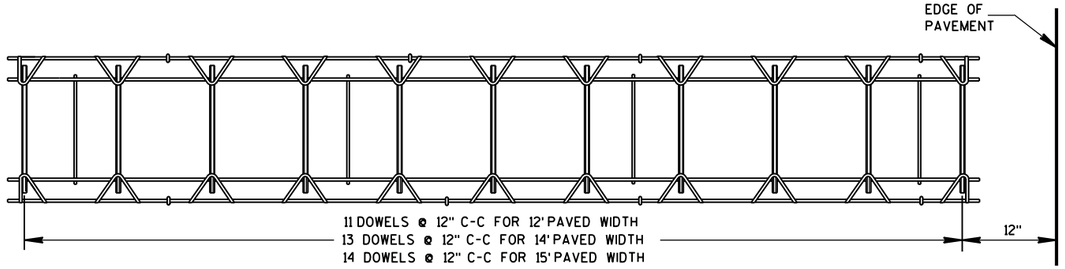
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

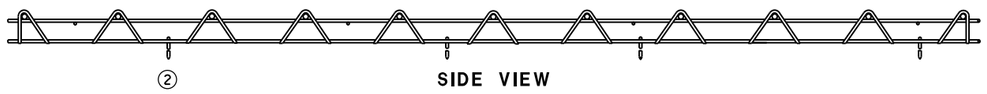
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 C 11-11a



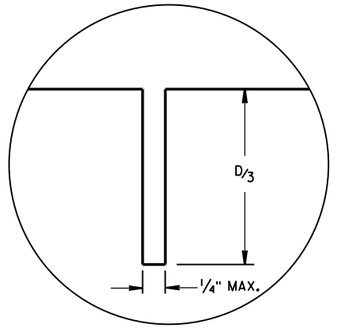
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

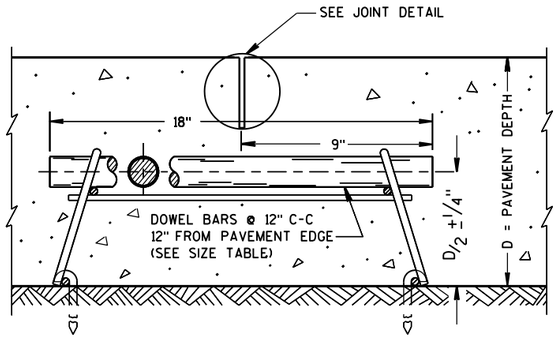
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

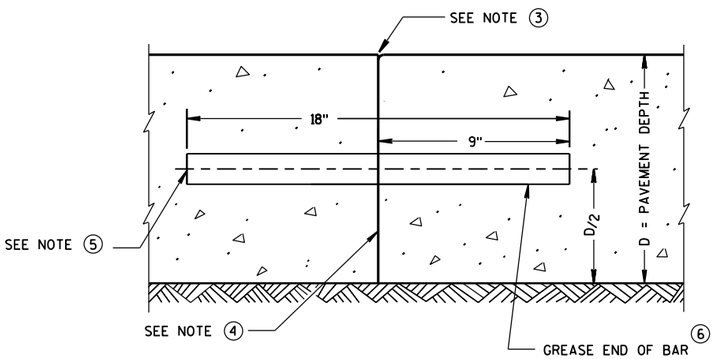
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

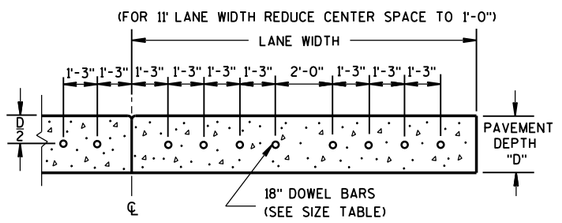
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

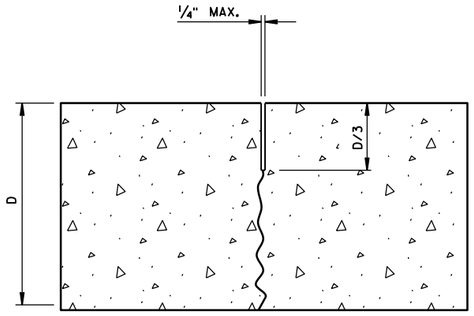
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE ENGINEER
FHWA

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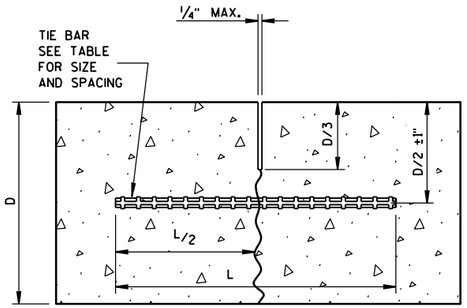
S.D.D. 13 C 11-11b

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S.D.D. 13 C 11-11b



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

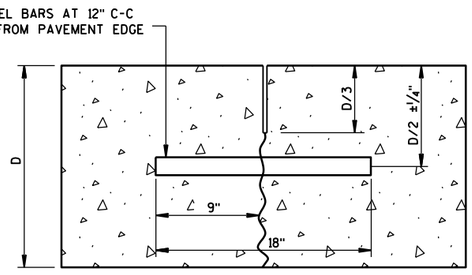
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

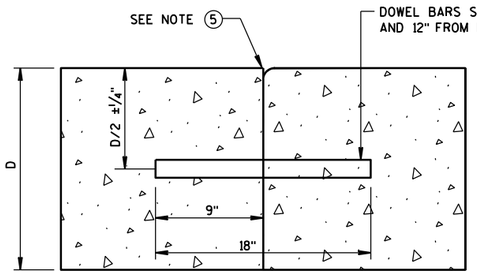
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF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



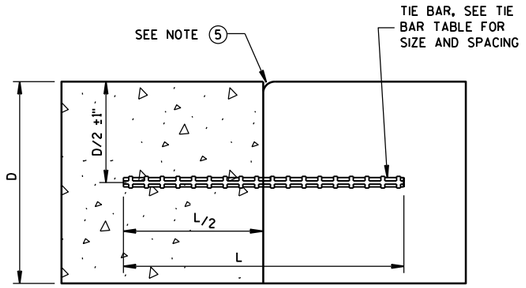
DOWELED-TRANSVERSE

CONTRACTION JOINTS

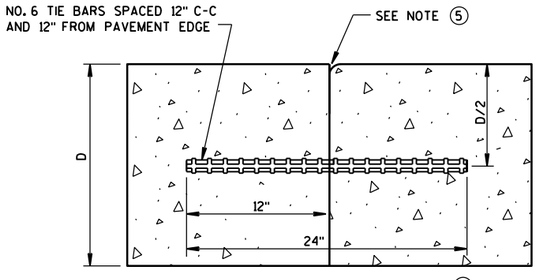
SEE NOTE (2)



DOWELED TRANSVERSE (3)

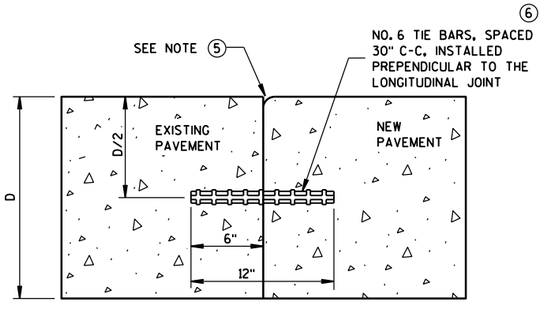


TIED LONGITUDINAL



TIED TRANSVERSE (3)

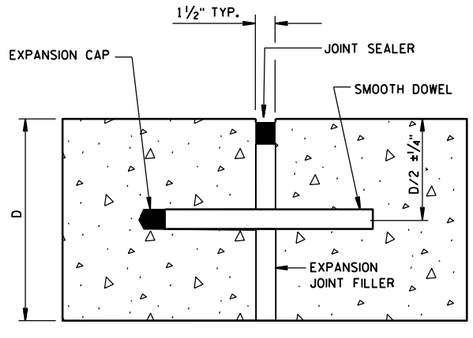
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

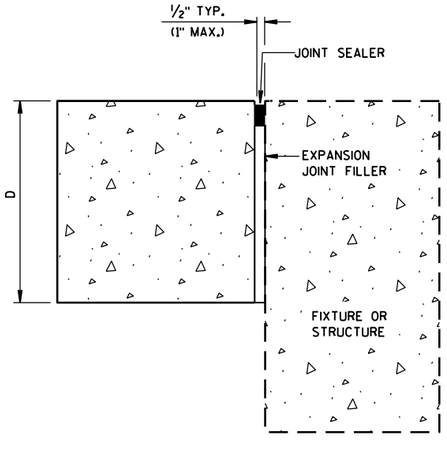
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

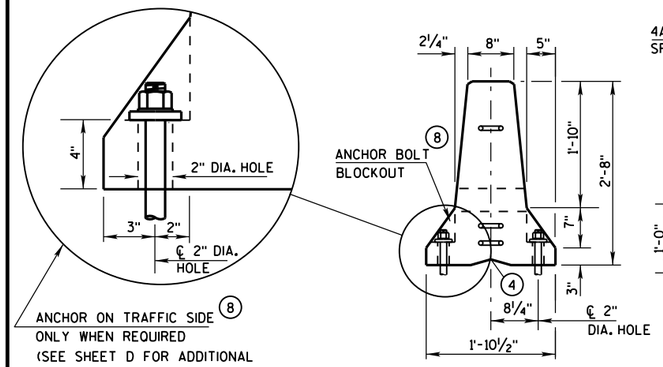
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

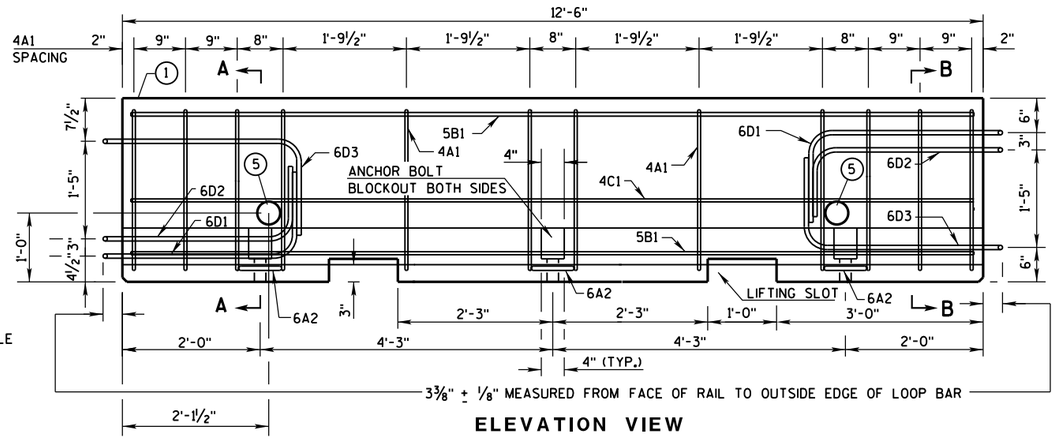
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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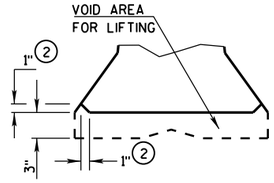
S.D.D. 13 C 18-3c



END VIEW



ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

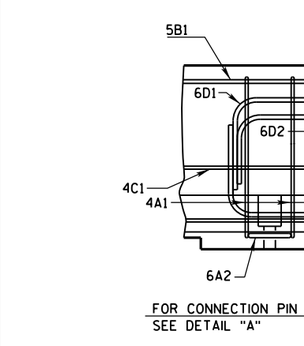
(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

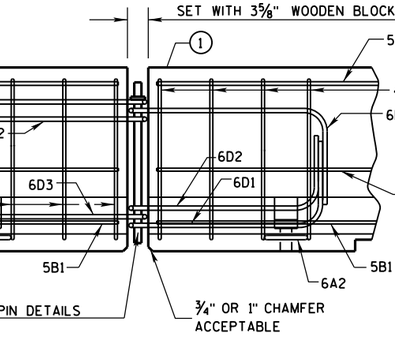
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

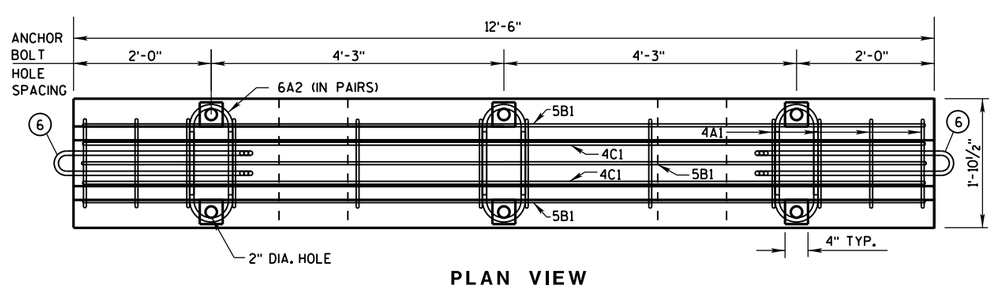
(9) 1" CHAMFER OPTIONAL.



SECTION A-A
(STIRRUP PLACEMENT)



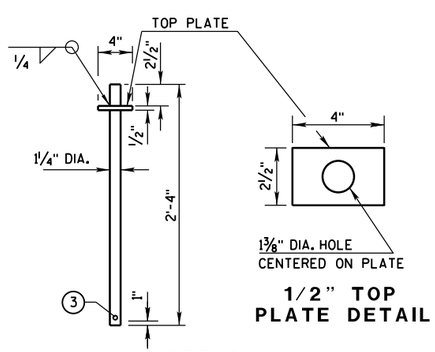
SECTION B-B
(STIRRUP PLACEMENT)



PLAN VIEW

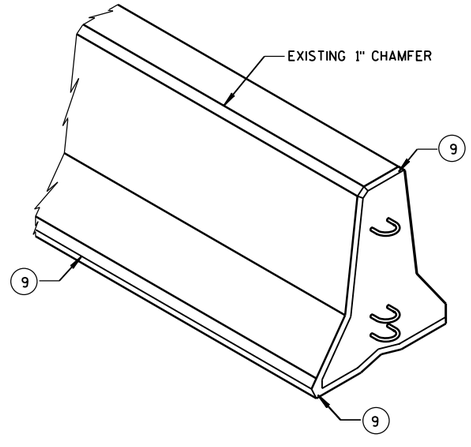
DETAILS OF BARRIER SECTION

DETAILS OF BARRIER CONNECTION



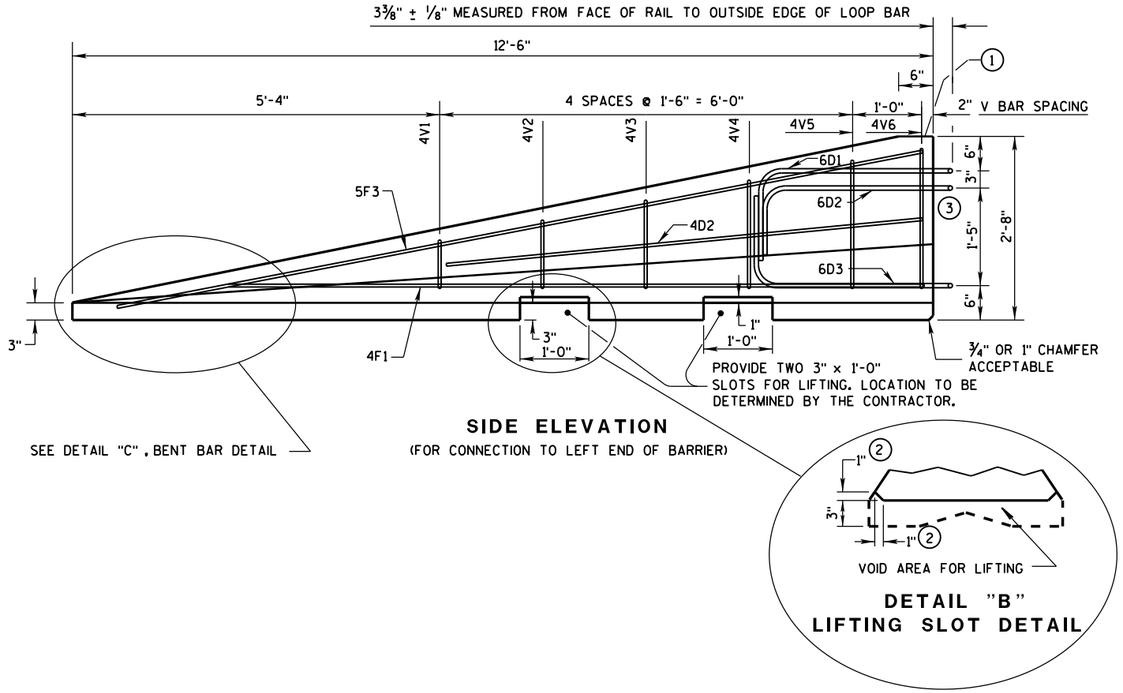
1/2" TOP
PLATE DETAIL

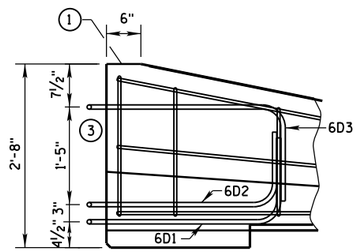
DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

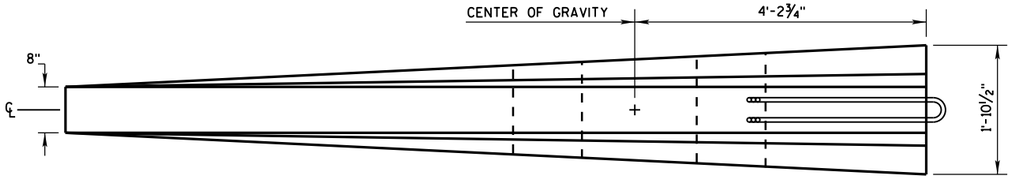
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

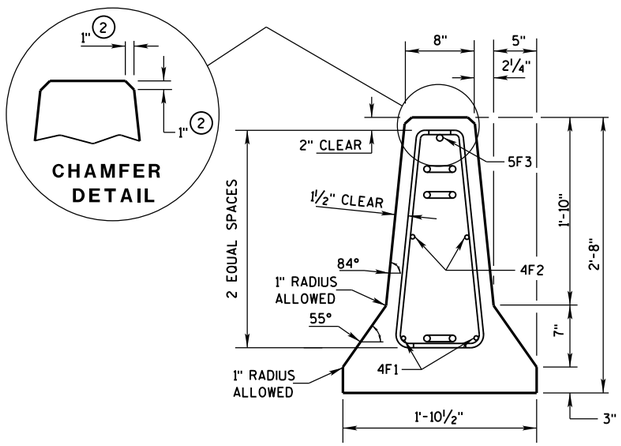


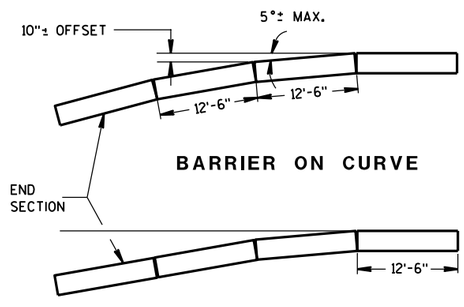


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

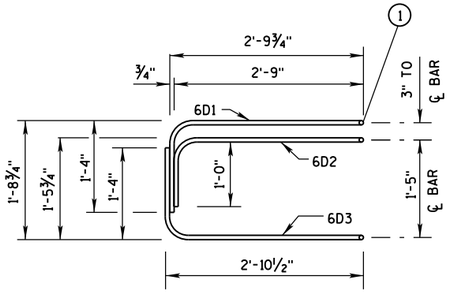
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14b

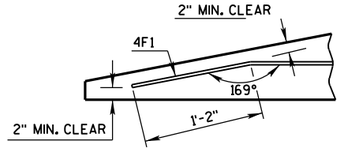
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

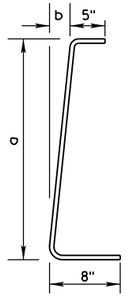
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

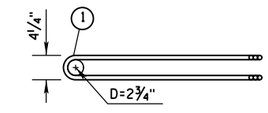
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

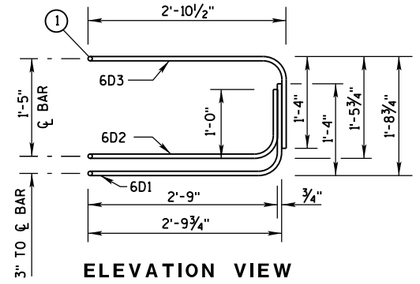
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

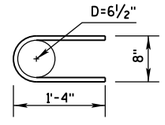
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



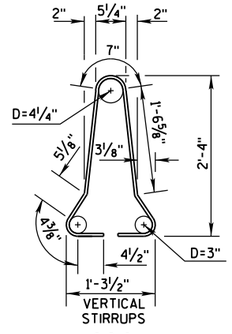
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

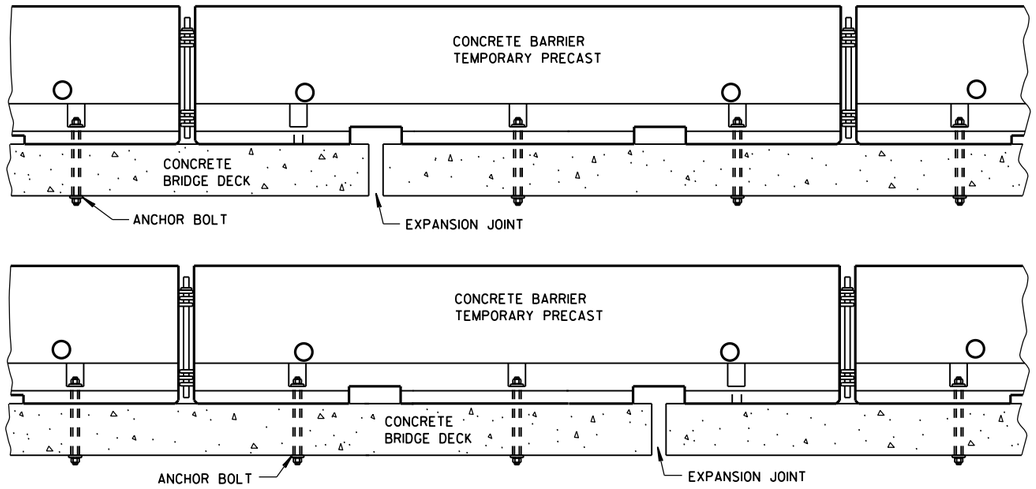
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

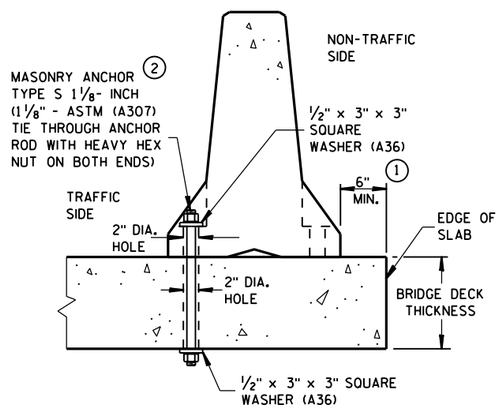
6

S.D.D. 14 B 7-14c



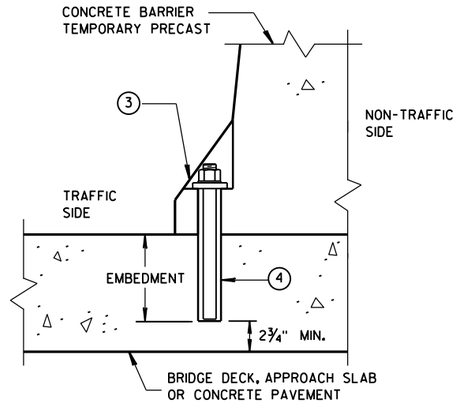
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

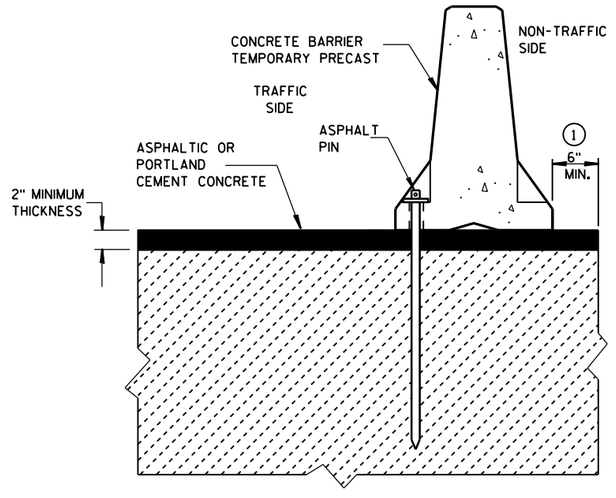
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

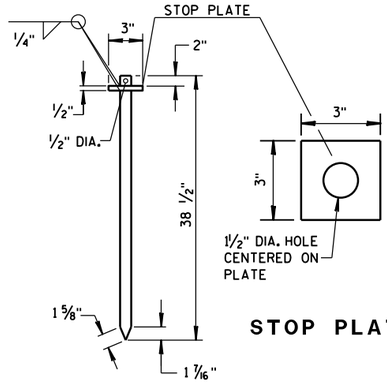
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

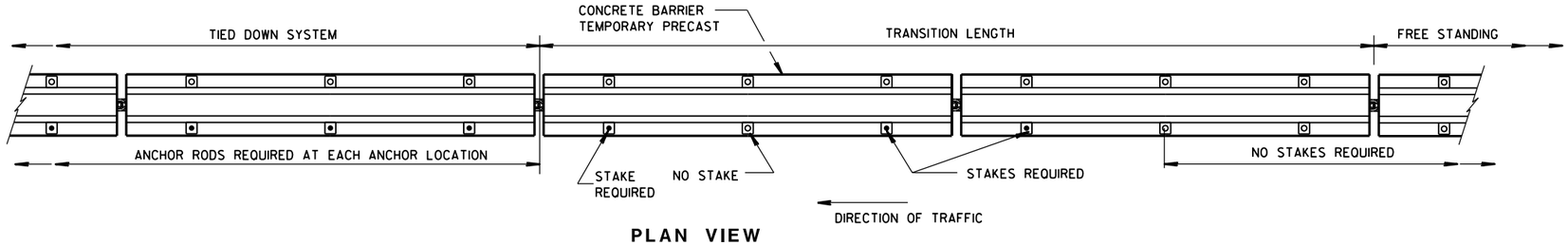
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

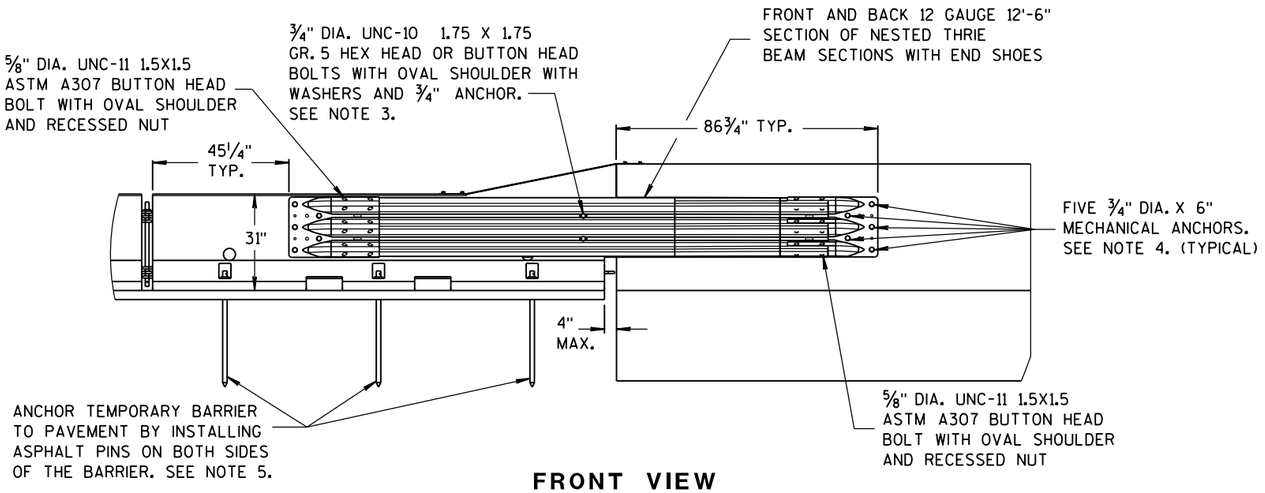
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

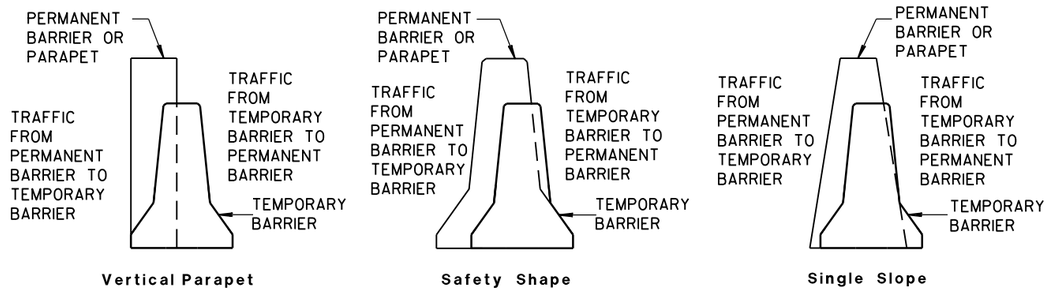
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14d



FRONT VIEW

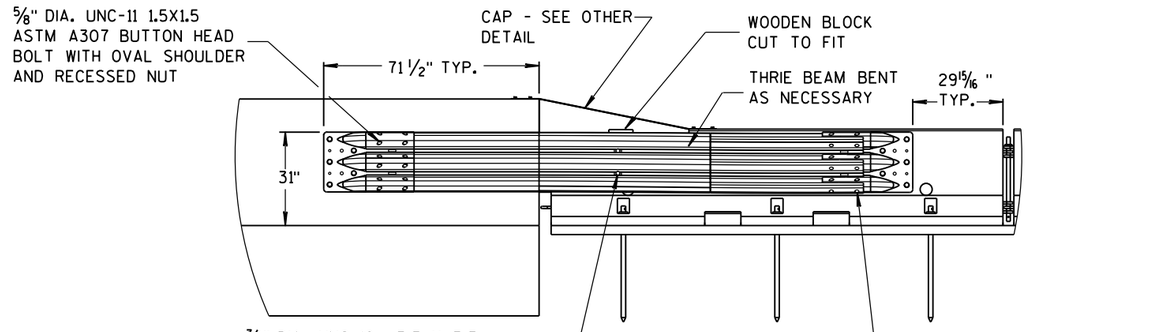


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

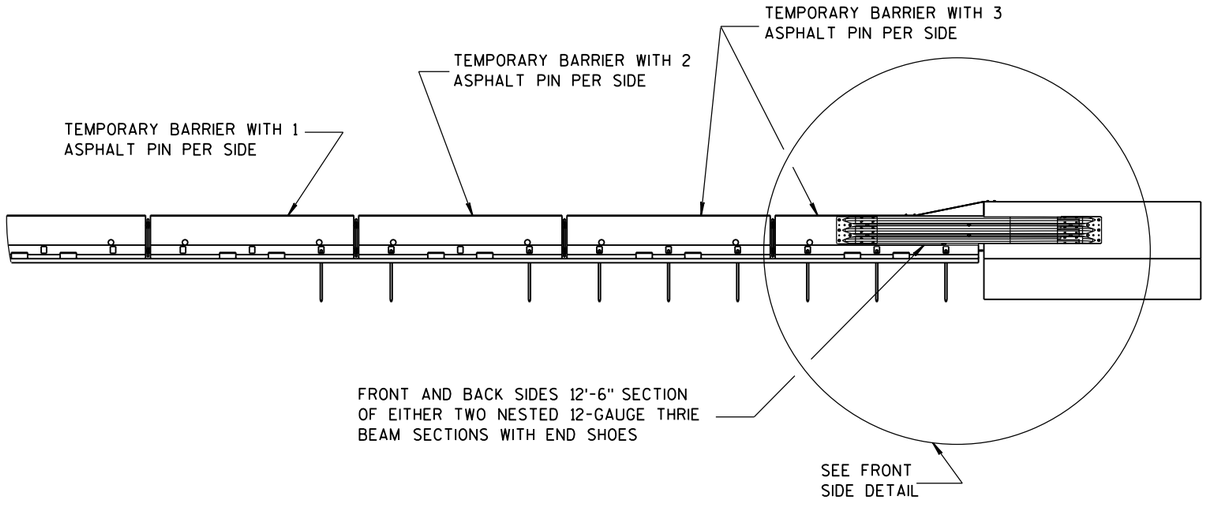
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

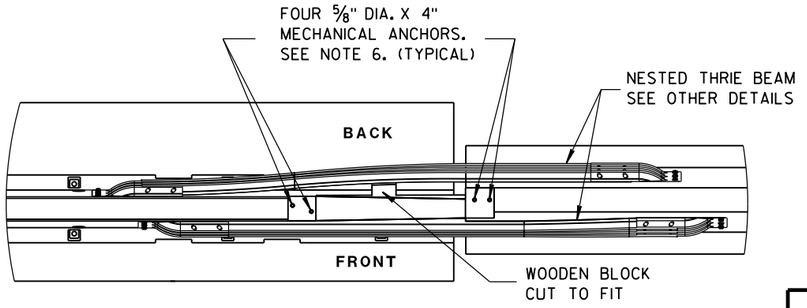
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



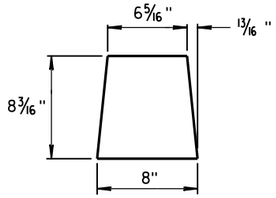
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

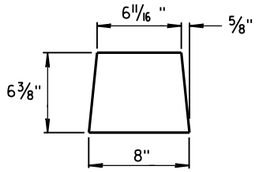
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

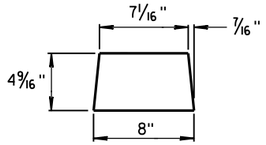
6
S.D.D. 14 B 7-14e



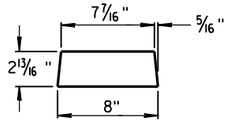
GUSSET 1



GUSSET 2

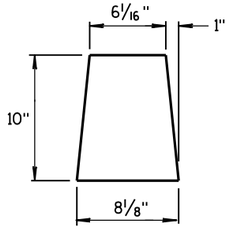


GUSSET 3

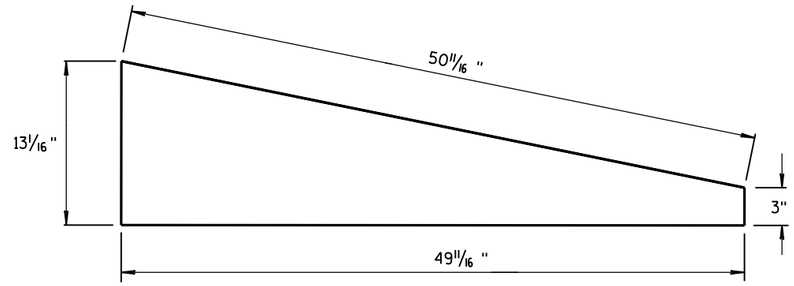


GUSSET 4

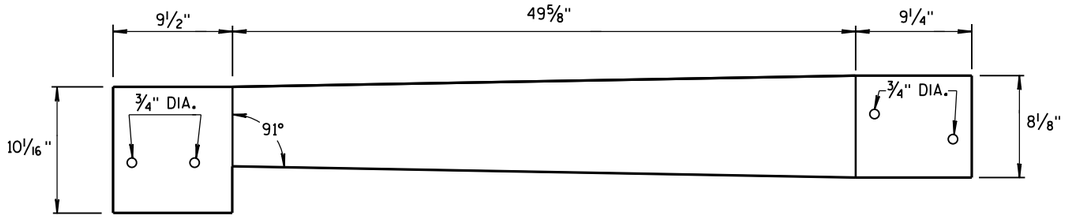
GUSSETS

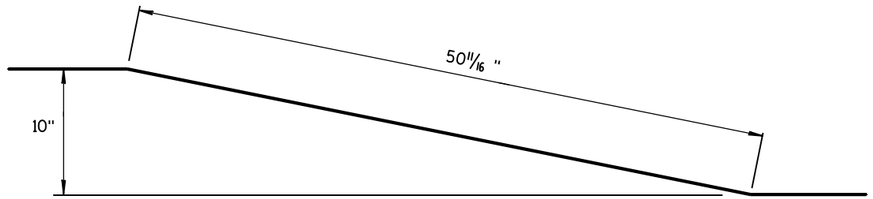


END PLATE



SIDE PLATE

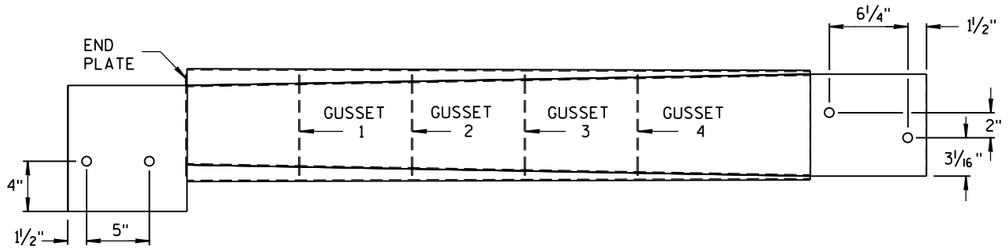


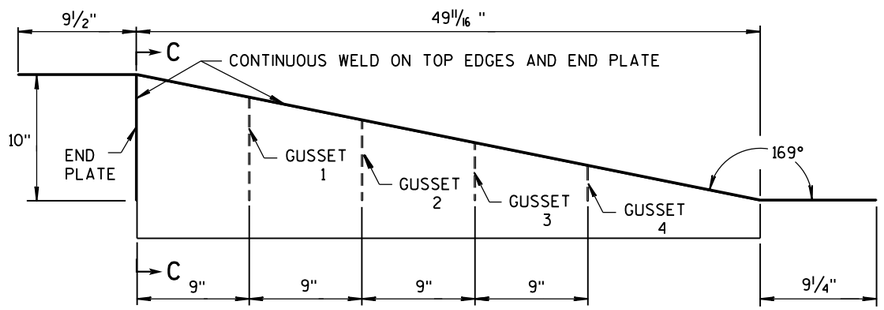


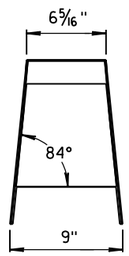
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

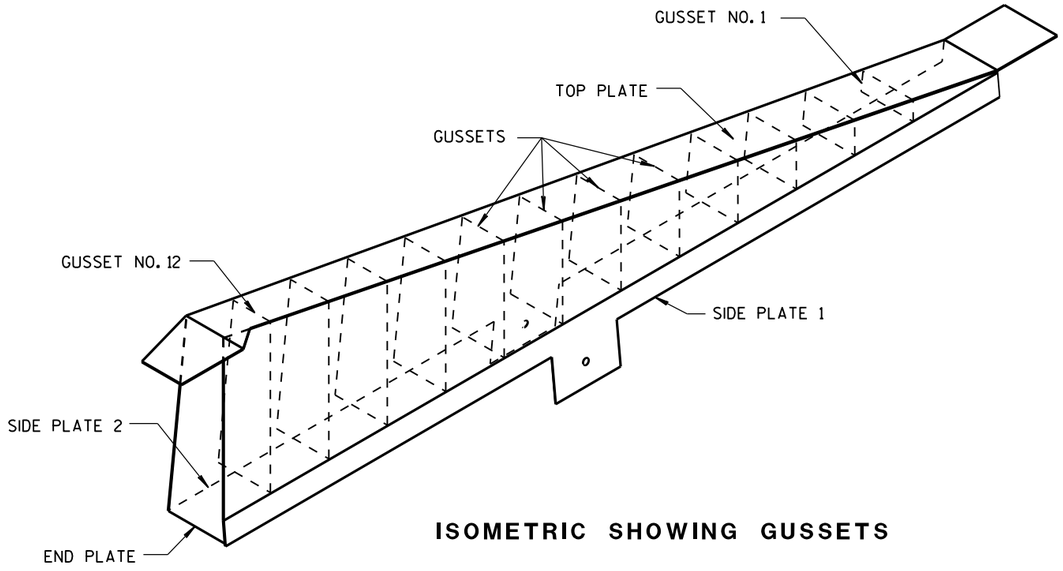
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

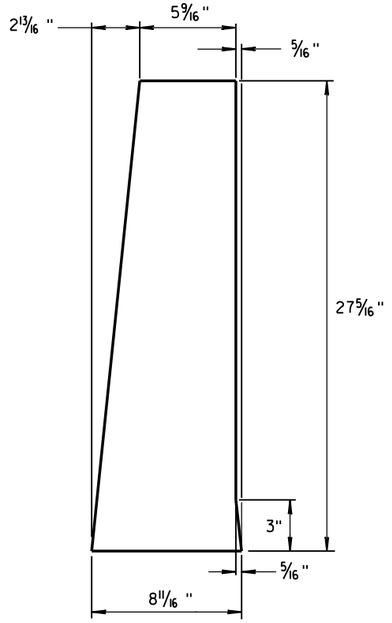
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 7-14f

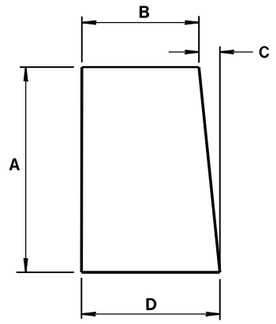


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



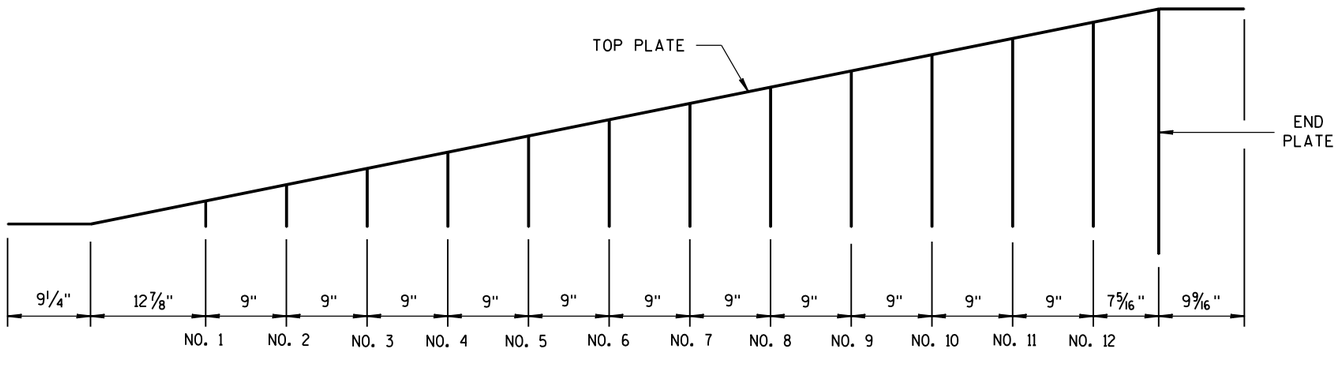
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

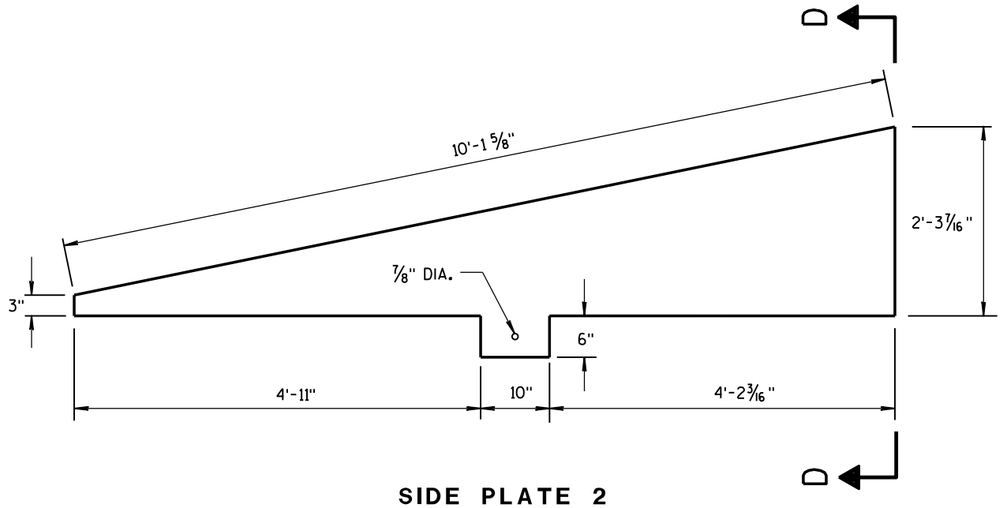
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

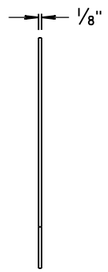
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

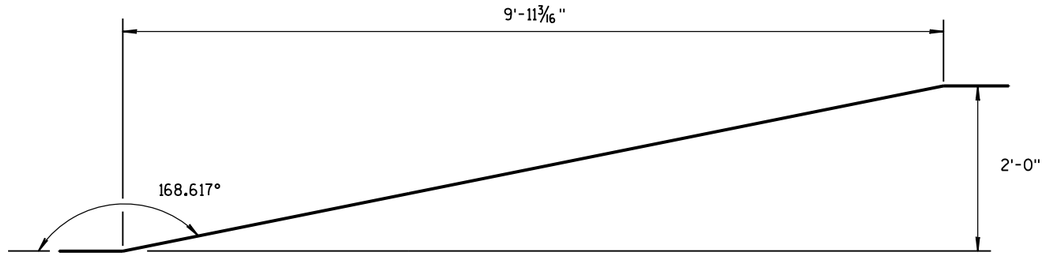
S.D.D. 14 B 7-14g



SIDE PLATE 2

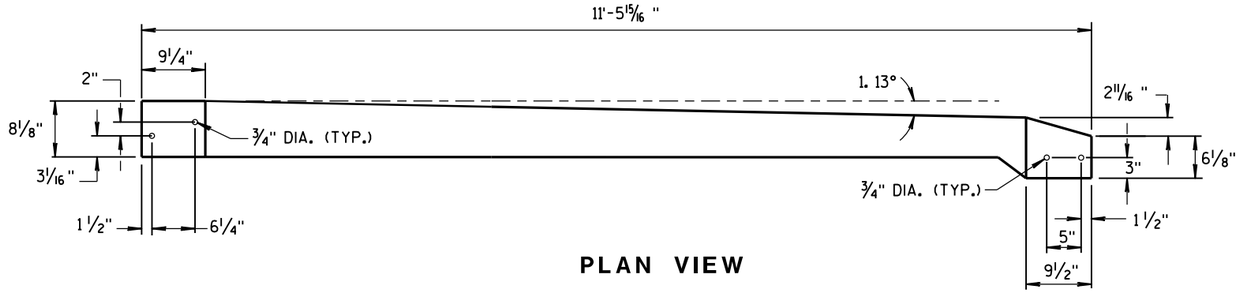


END VIEW



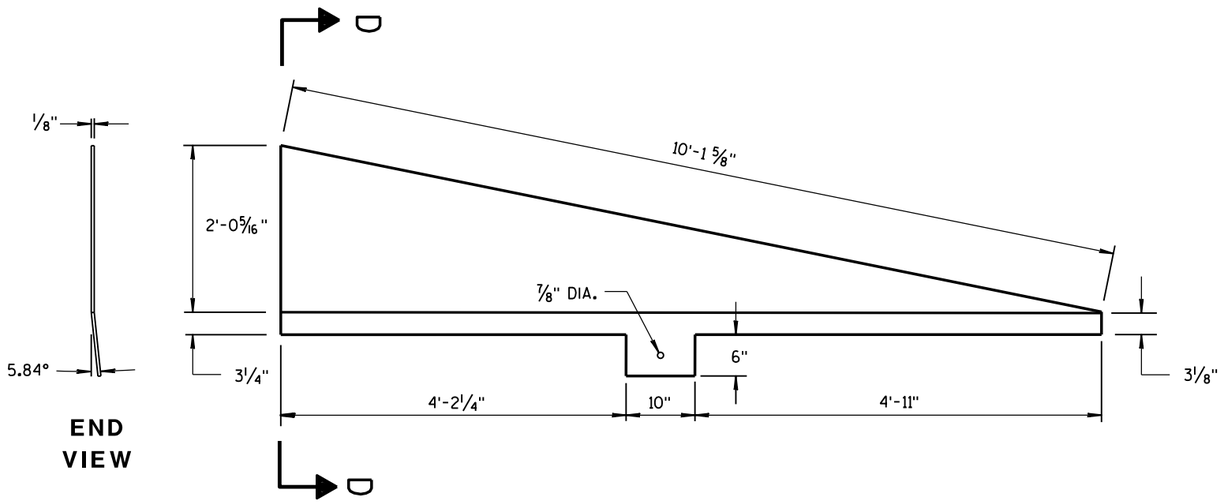
SIDE VIEW

TOP PLATE



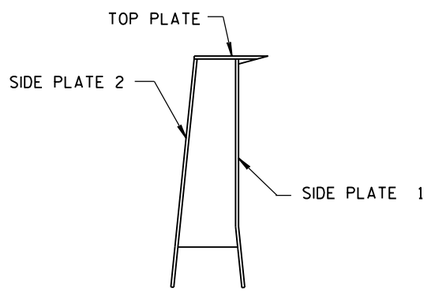
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

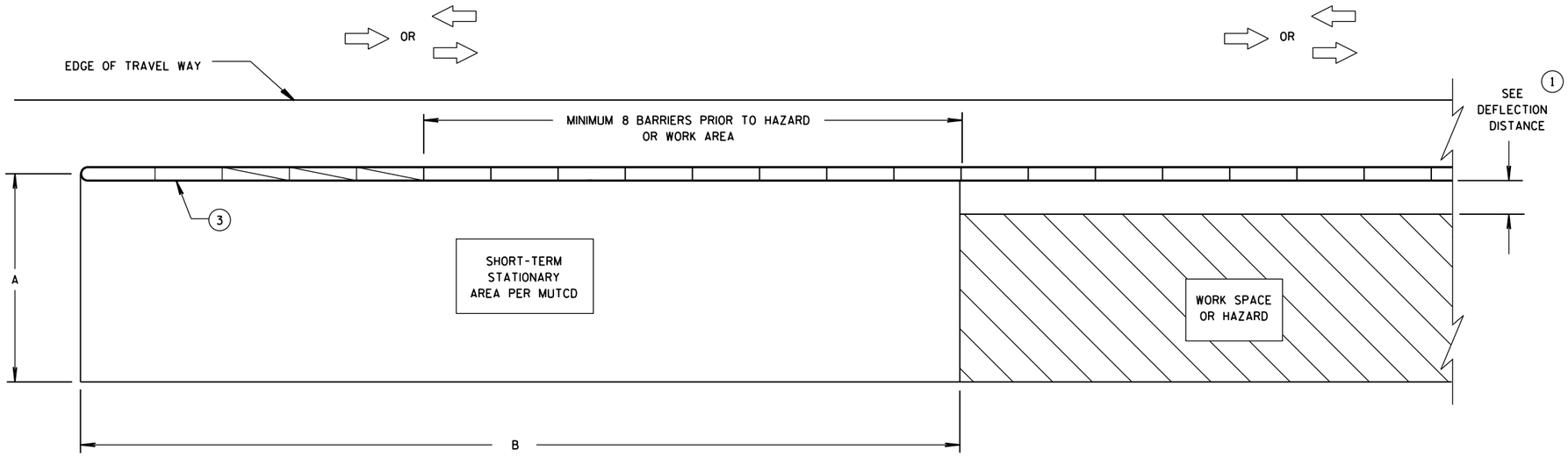
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 7-14h

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S.D.D. 14 B 7-14h



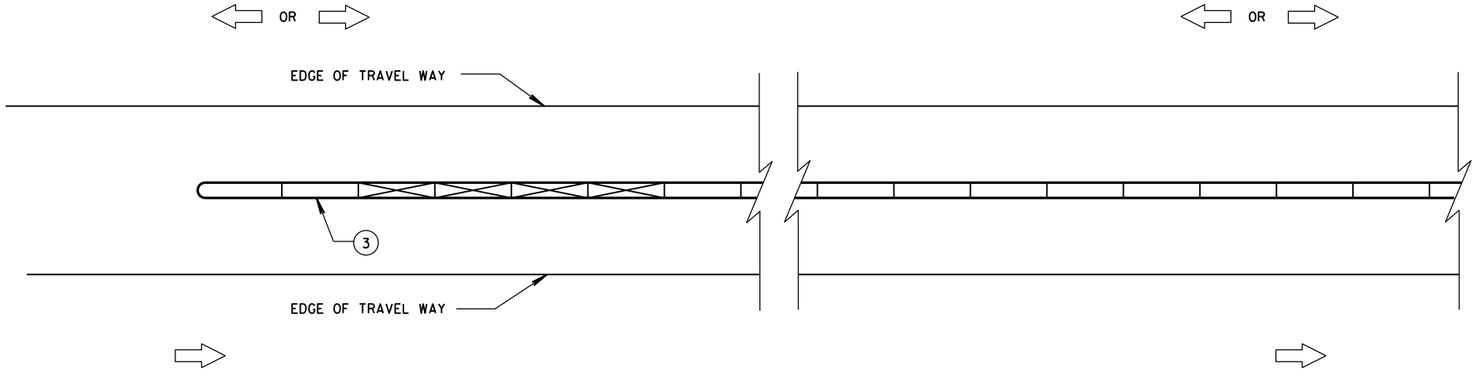
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

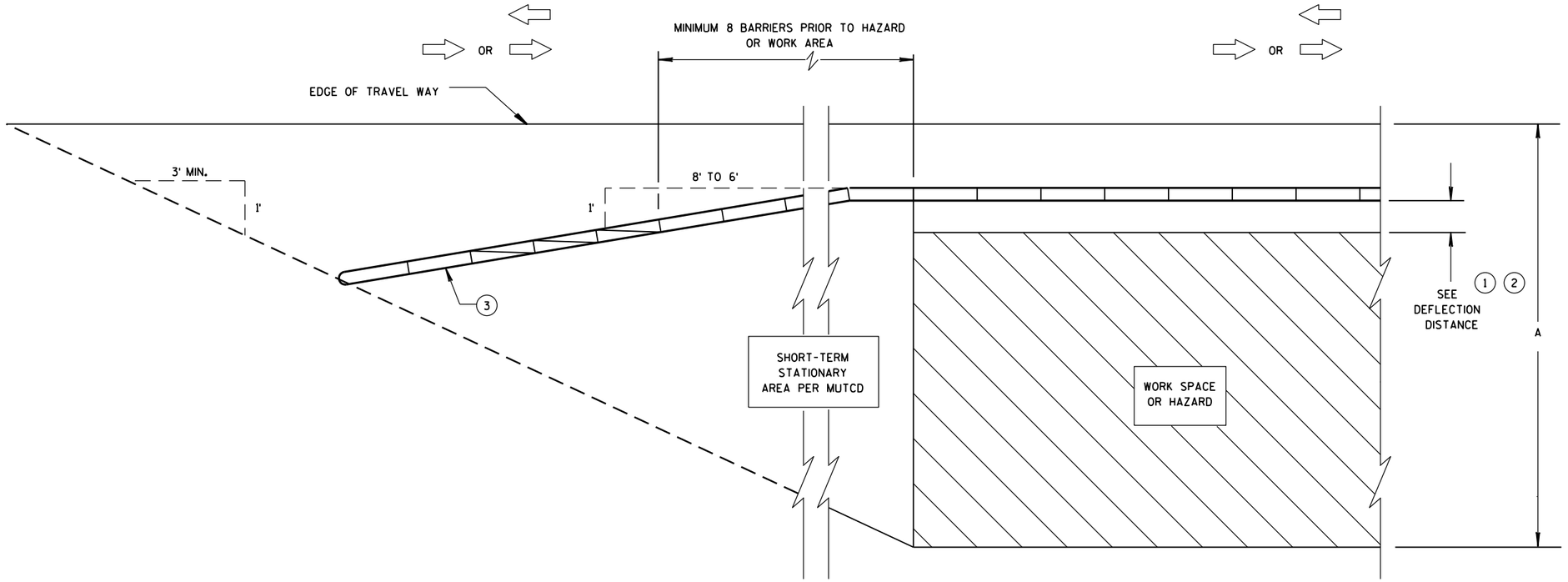
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

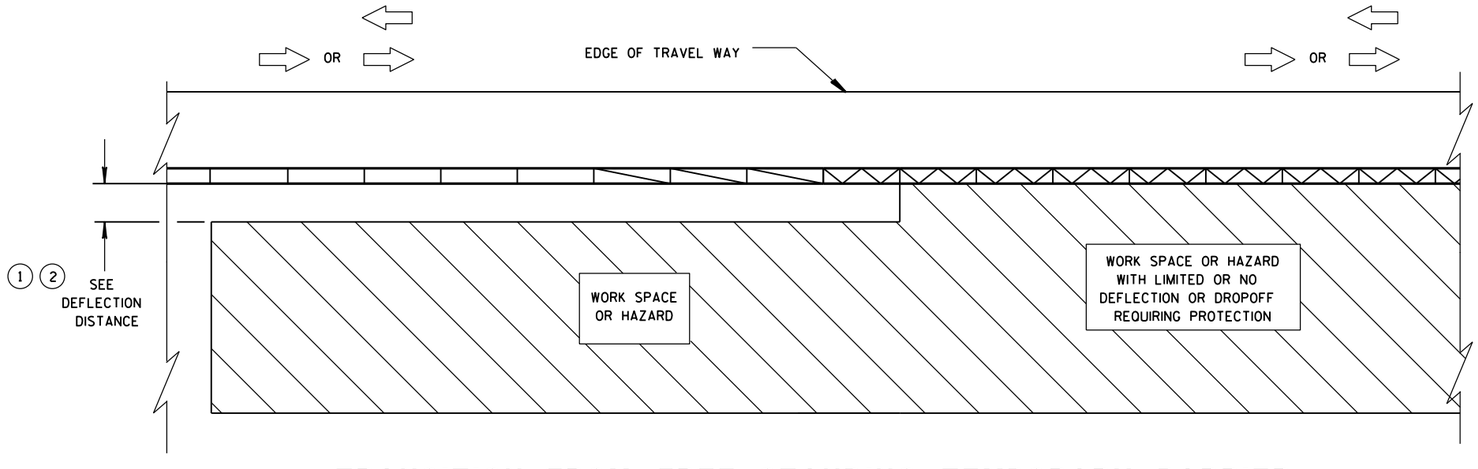
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

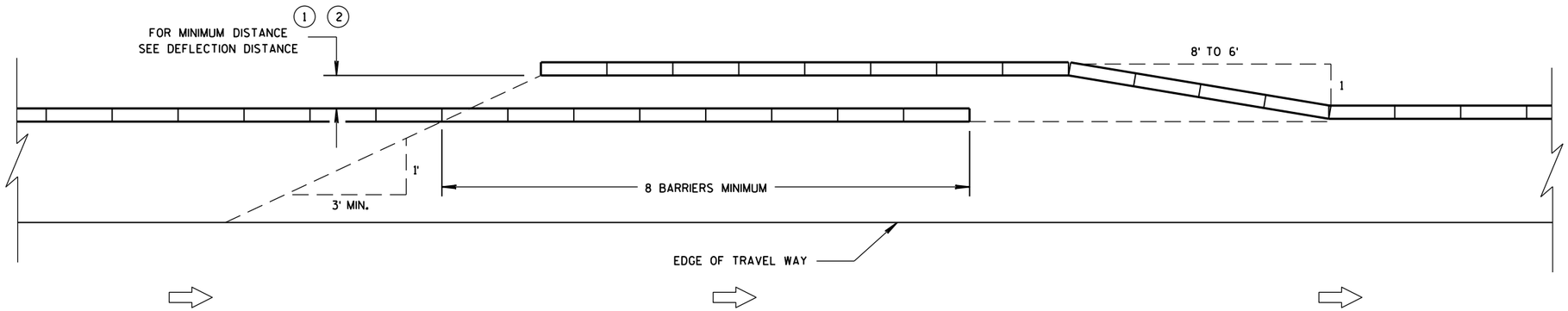
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

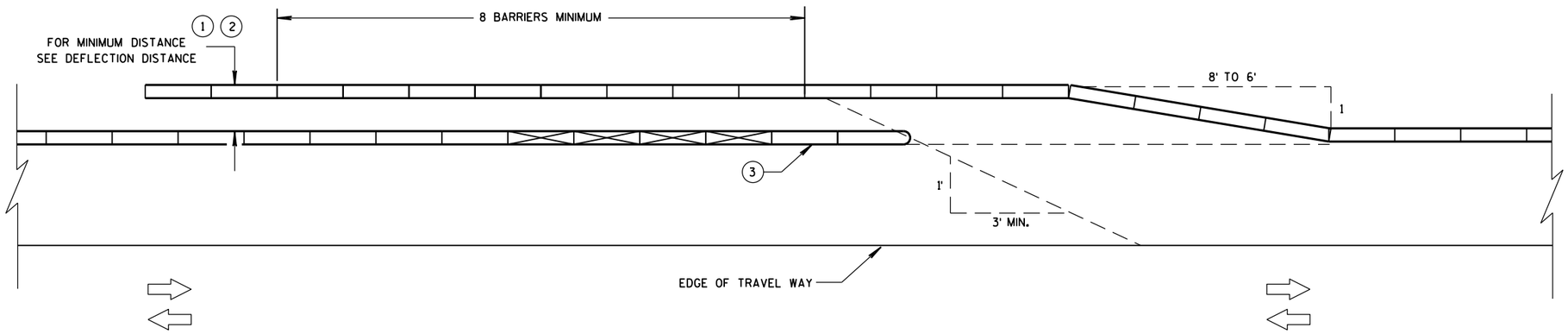
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

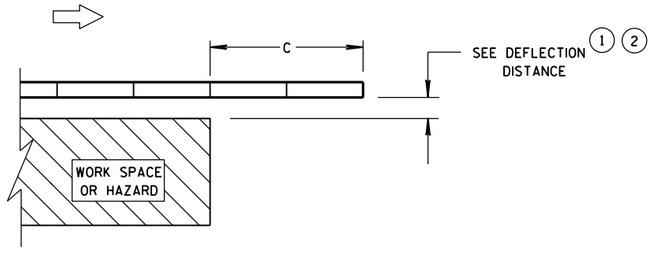
S.D.D. 14 B 8-2b



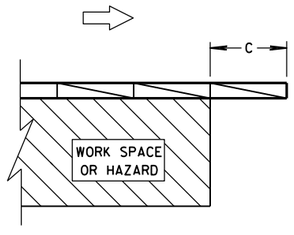
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

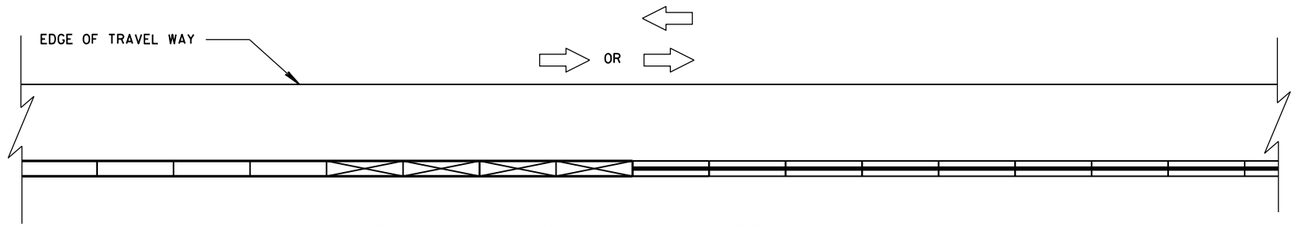
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

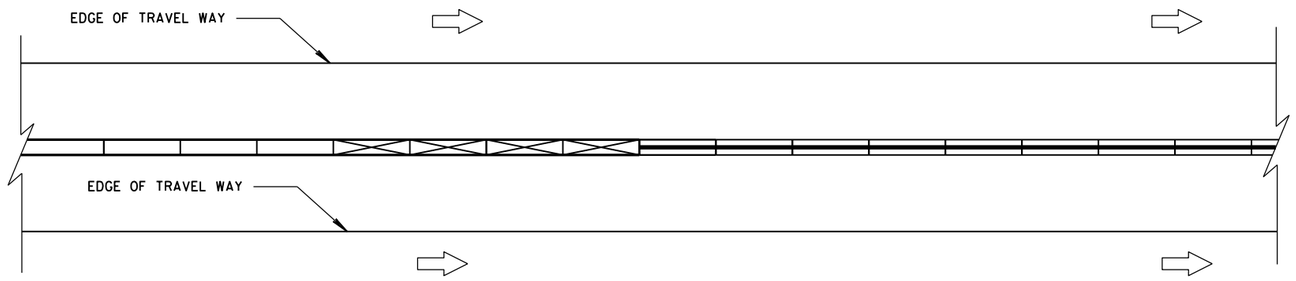
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

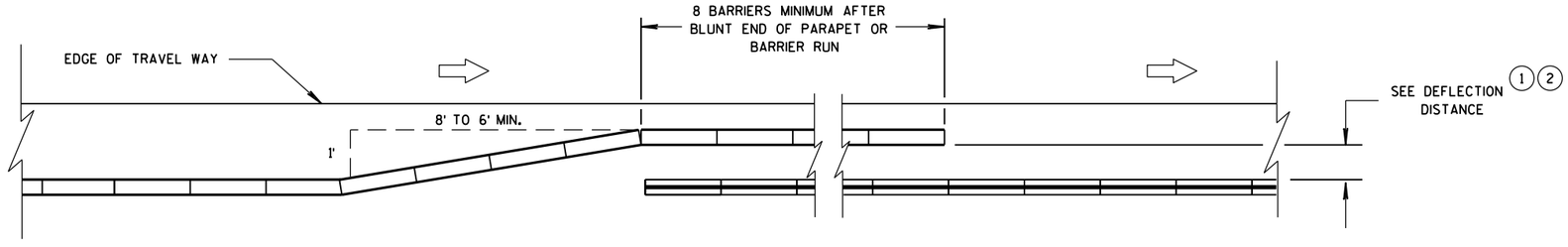
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

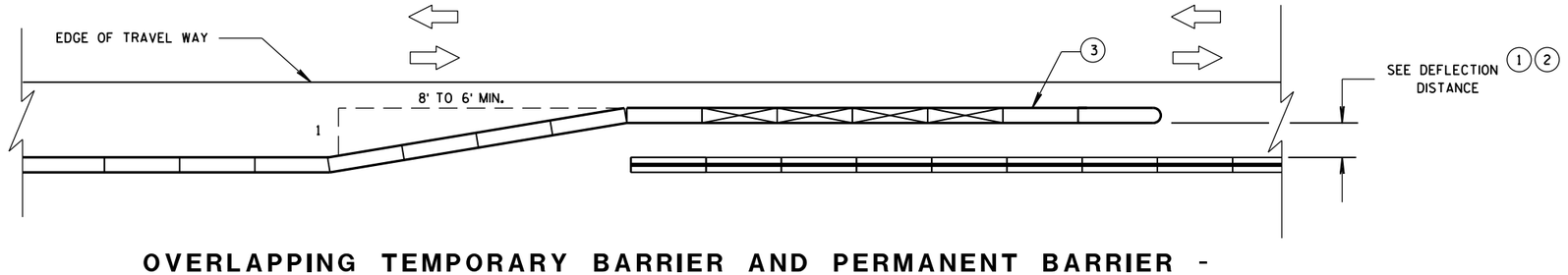
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

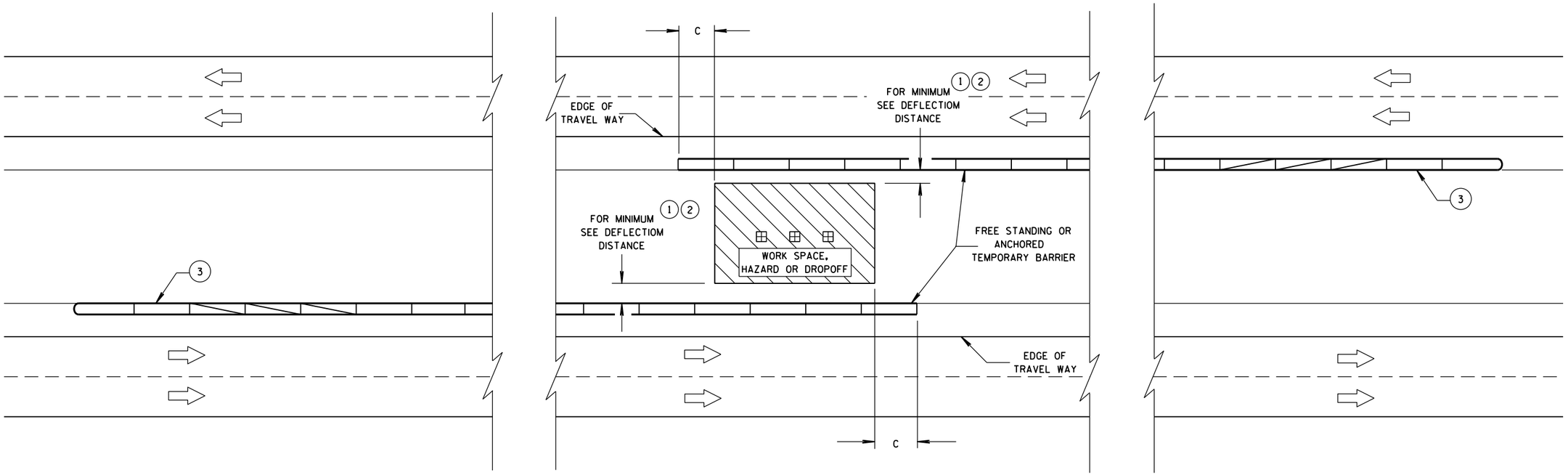
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



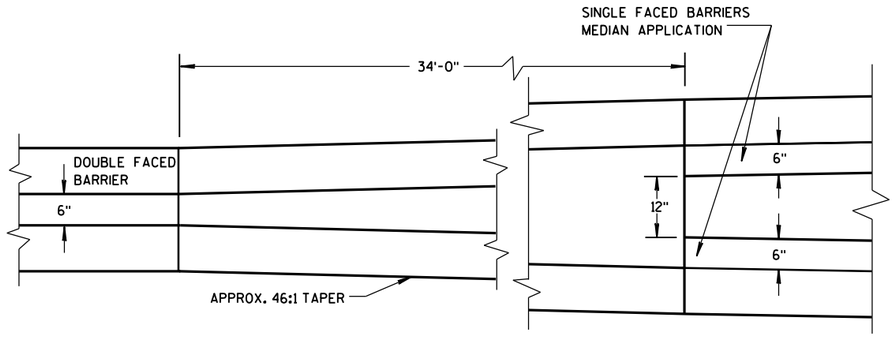
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

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S.D.D. 14 B 8-2e



PLAN VIEW

TRANSITION DETAILS OF DOUBLE FACED TO SINGLE FACED CONCRETE MEDIAN BARRIER

(FOOTINGS ARE NOT SHOWN)

GENERAL NOTES

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH BARS LAPPED AT LEAST 18-INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

ALL BAR STEEL REINFORCEMENT SHALL CONFORM TO REQUIREMENTS OF AASHTO M31, GRADE 60.

(1) BARRIER SHALL BE INSTALLED ON A CONCRETE SHOULDER INSTEAD OF THE CONCRETE FOOTING WHEN SPECIFIED OR SHOWN ELSEWHERE IN CONTRACT.

(2) OPENINGS FOR DRAINAGE SHALL BE PLACED AT LOW POINTS OF VERTICAL CURVES OR WHERE DIRECTED BY THE ENGINEER.

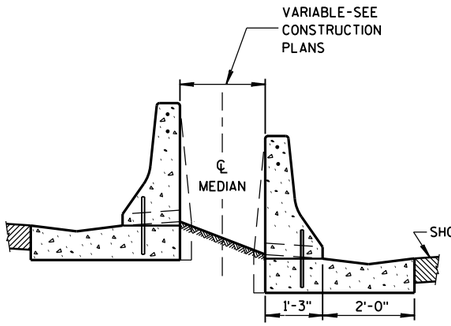
(3) 3/4-INCH BEVEL OR 1-INCH RADIUS (TYPICAL).

(4) NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.

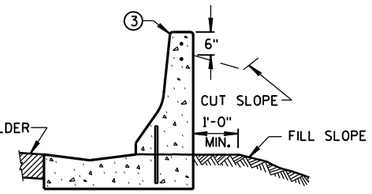
(5) EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES. SEE REINFORCEMENT AT BARRIER END DETAIL.

(6) SAWED CONTRACTION JOINTS SHALL BE PROVIDED ACROSS THE FULL WIDTH OF THE BARRIER FOOTING, AND IN FRONT, TOP AND BACK FACE OF THE BARRIER AT EXISTING PAVEMENT JOINTS AND AT UNIFORM INTERVALS BETWEEN WITH A MAXIMUM SPACING OF 25 FEET.

HIGH SIDE
CONCRETE BARRIER DETAIL

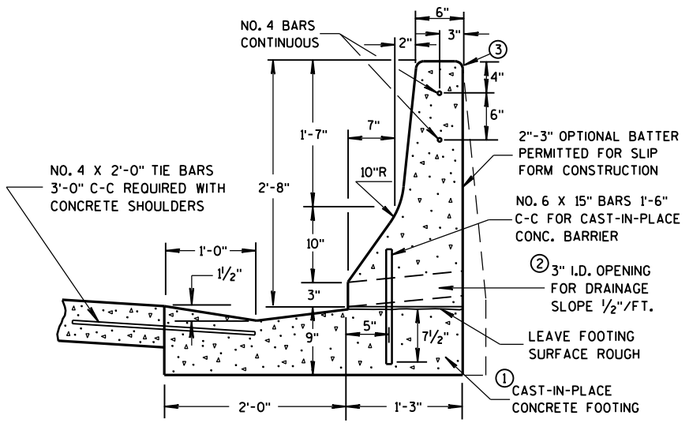


MEDIAN

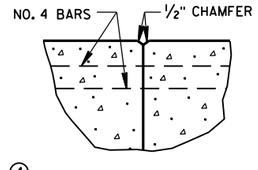


SHOULDER

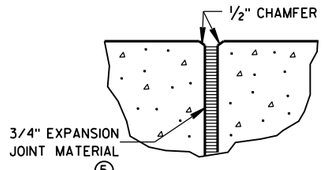
TYPICAL APPLICATIONS



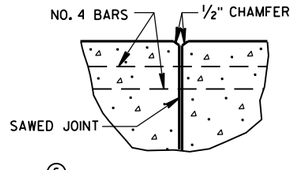
SECTION VIEW



4 CONSTRUCTION JOINT



5 EXPANSION JOINT



6 CONTRACTION JOINT

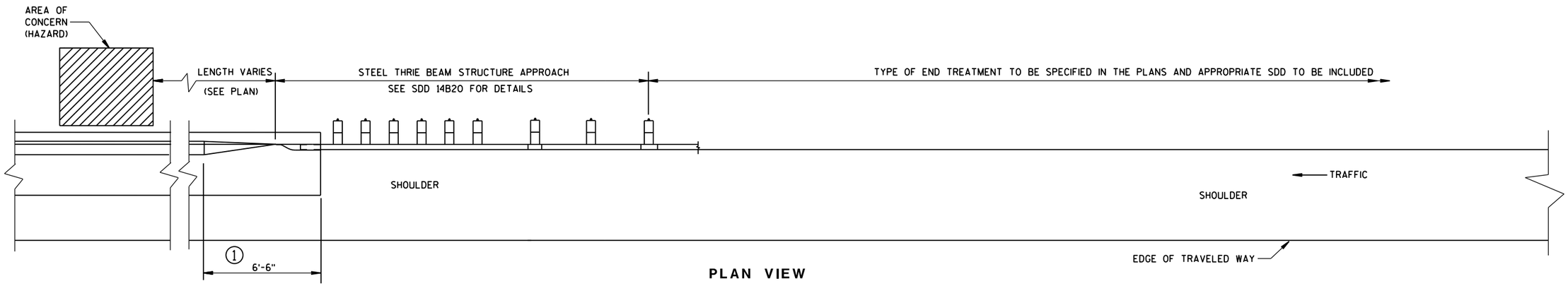
JOINT DETAILS

CONCRETE BARRIER,
SINGLE-FACED
(WITH ANCHORAGE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

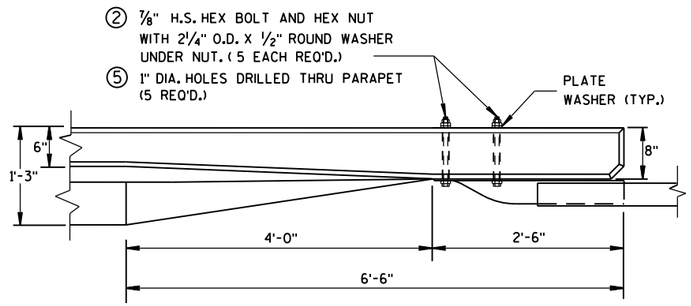
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S.D.D. 14 B 22-6a



PLAN VIEW

TRANSITION TO STEEL PLATE BEAM GUARD AND END TERMINAL



PLAN VIEW

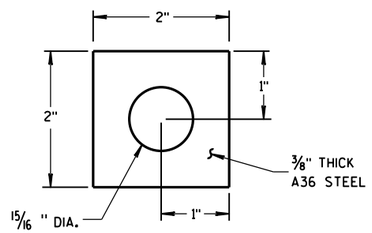
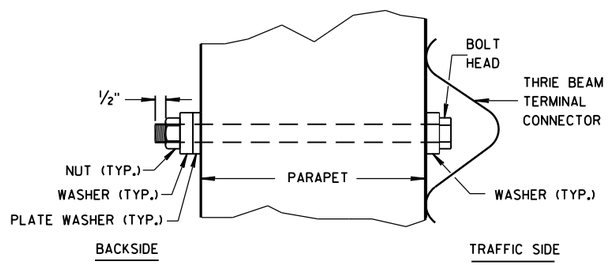


PLATE WASHER DETAIL



THRIE BEAM BOLT DETAIL

GENERAL NOTES

① A SPECIAL END IS REQUIRED ON THE CONCRETE BARRIER TO TRANSITION TO A CONNECTION WITH THE STEEL THRIE BEAM STRUCTURE APPROACH. SEE THE DETAILS ON THIS SHEET.

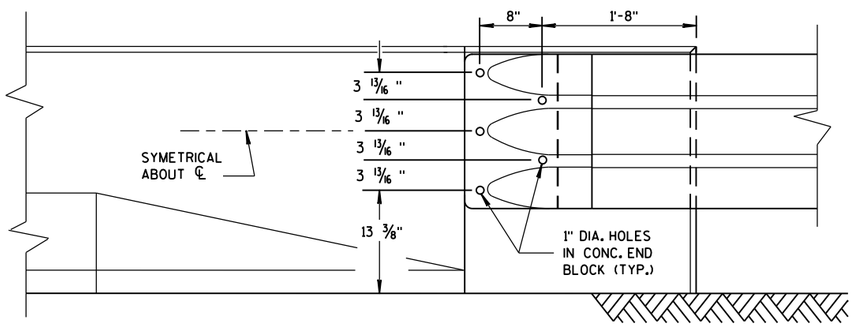
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ REINFORCEMENT REQUIRED AT EXPANSION JOINTS AND WHERE CONCRETE BARRIER IS TERMINATED.

④ PLACE REINFORCEMENT SUCH THAT IT WILL NOT CONFLICT WITH THE BOLT HOLES IN THE THRIE BEAM TERMINAL CONNECTOR.

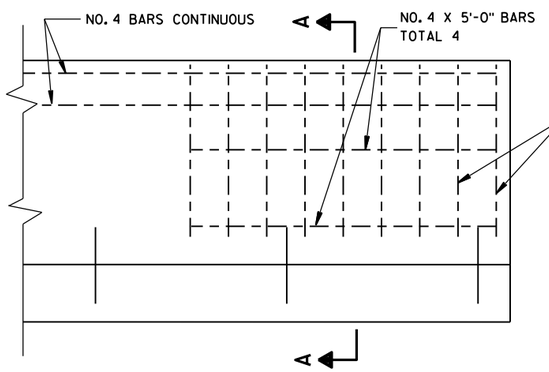
⑤ INCLUDE THE PAYMENT FOR DRILLING BOLT HOLES THROUGH THE PARAPET, AND ALL BOLTS, NUTS AND WASHERS IN THE ITEM "STEEL THRIE BEAM STRUCTURAL APPROACH".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

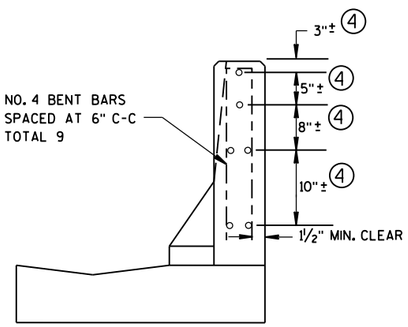


FRONT VIEW

CONCRETE BARRIER TRANSITION TO THRIE BEAM

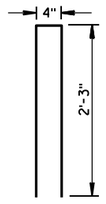


FRONT VIEW



SECTION A-A

③ REINFORCEMENT AT BARRIER END



BENT BAR DETAIL

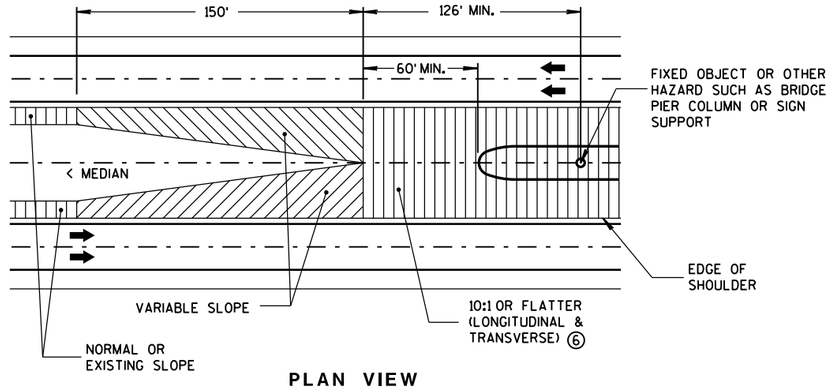
CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

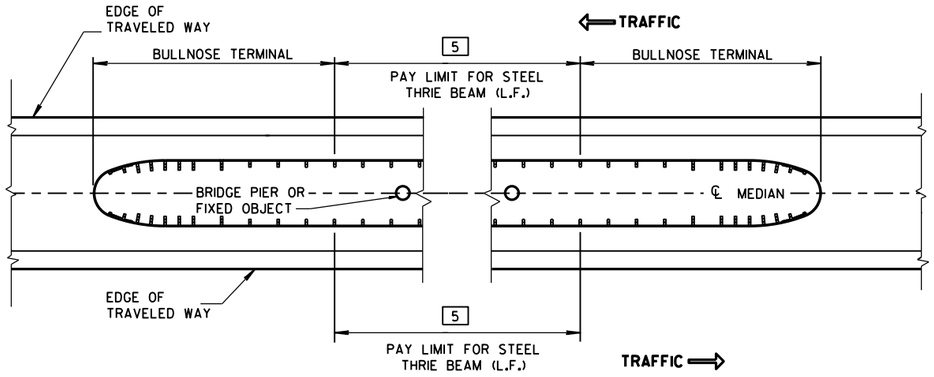
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S.D.D. 14 B 22-6b

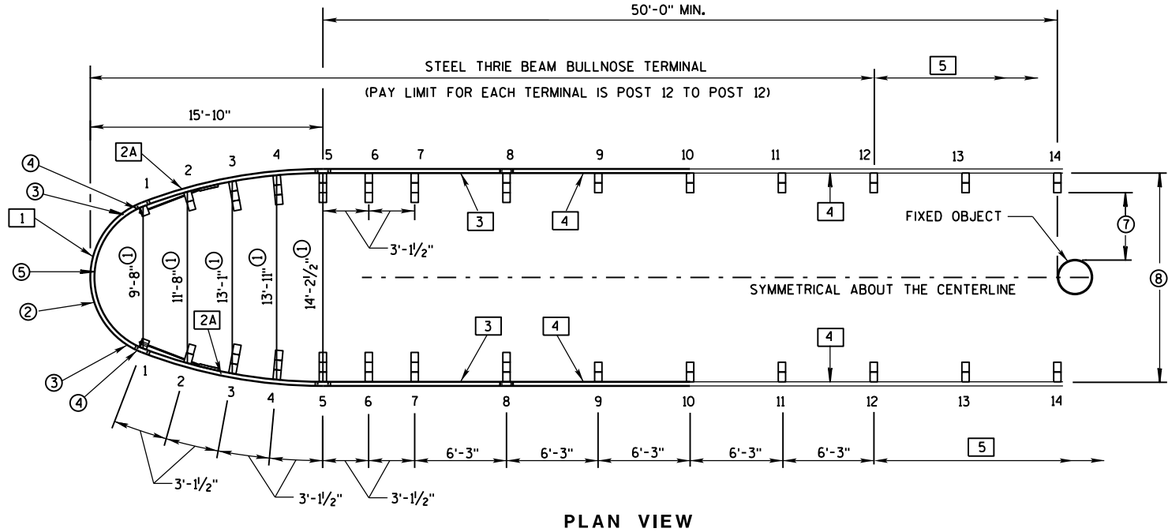


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

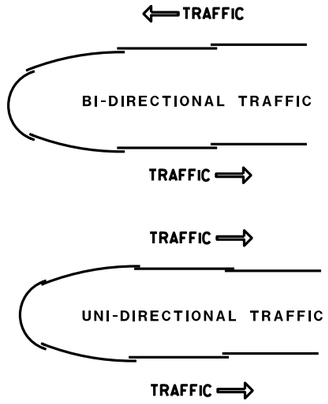


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

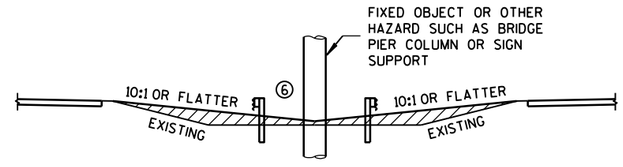
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

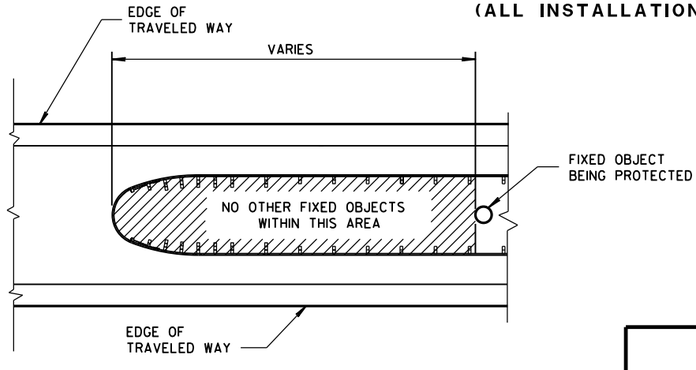
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

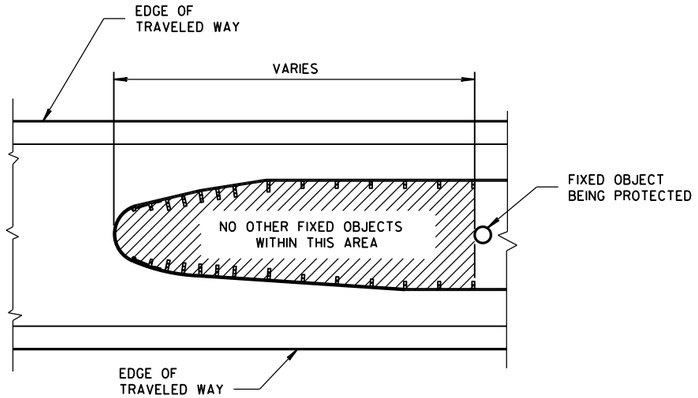


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

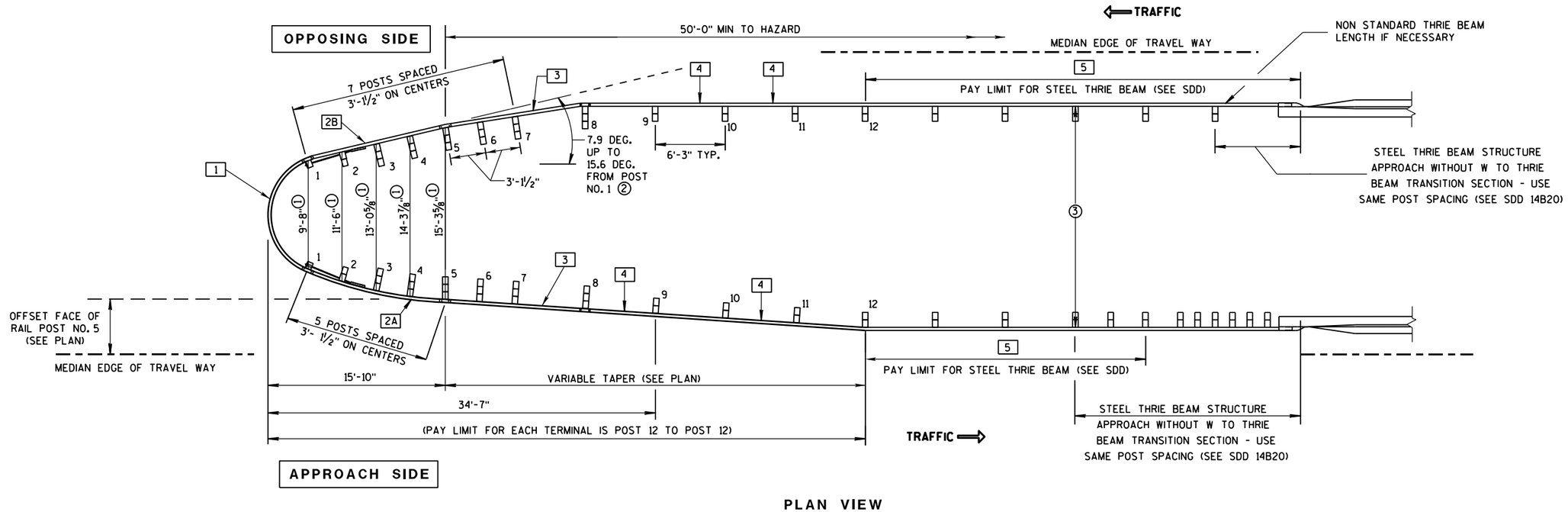
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

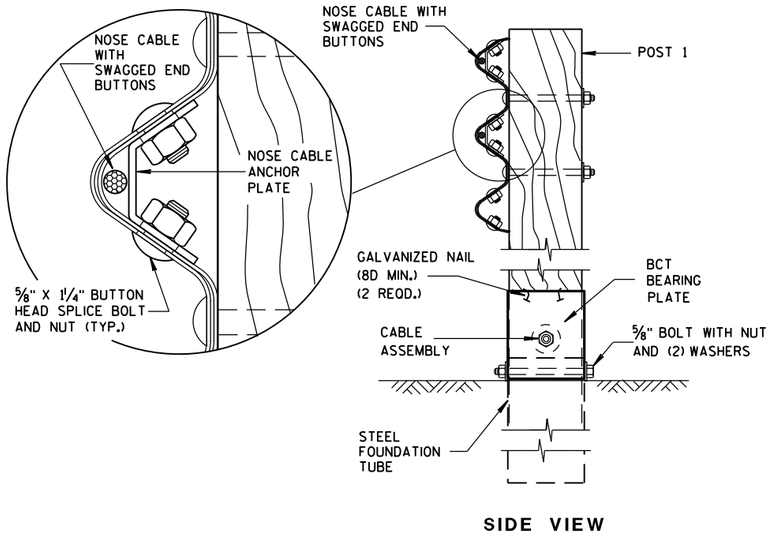
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

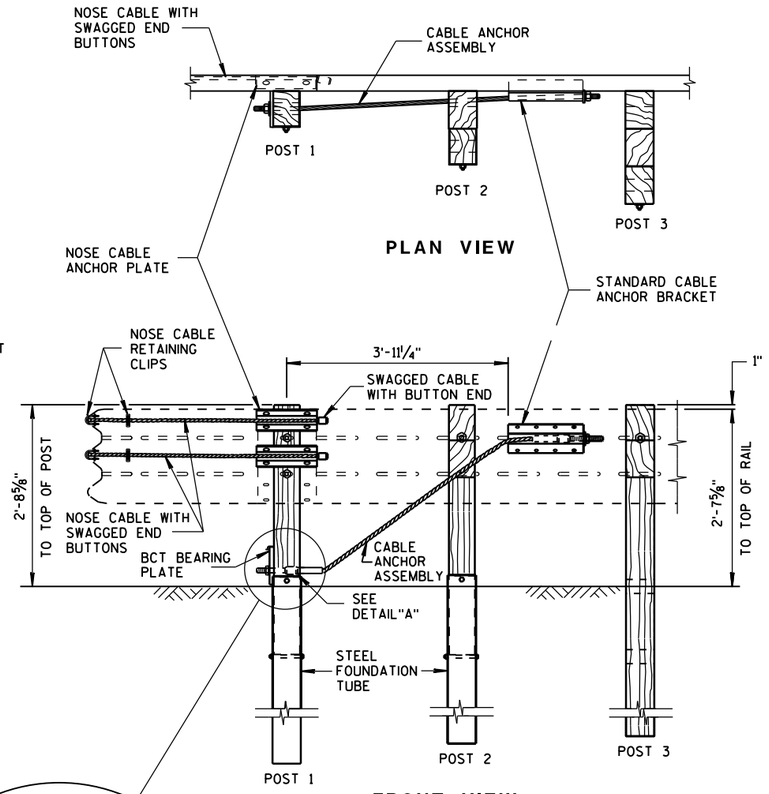
6

S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



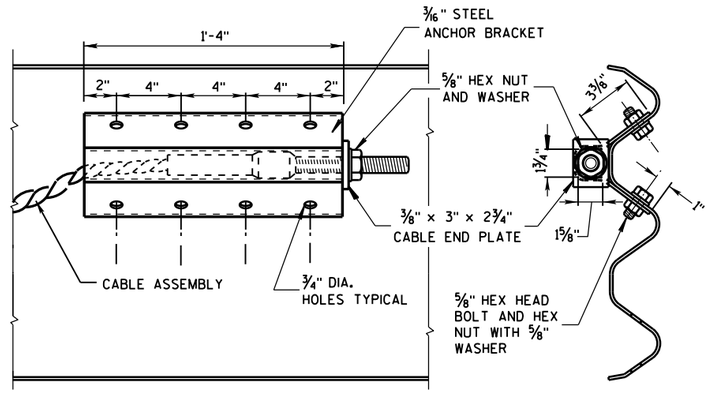
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

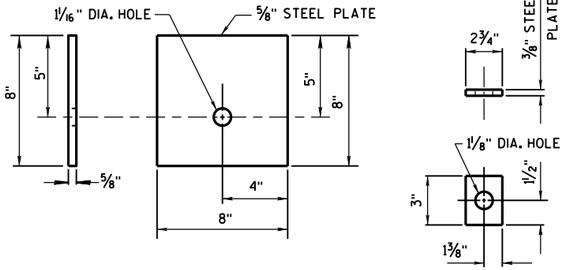
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



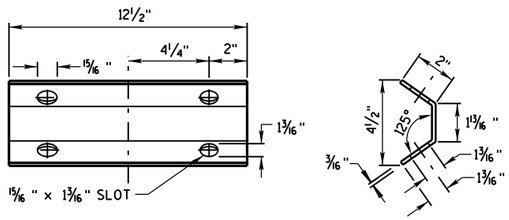
FRONT VIEW END VIEW

DETAILS OF CABLE ANCHOR BRACKET



BCT BEARING PLATE

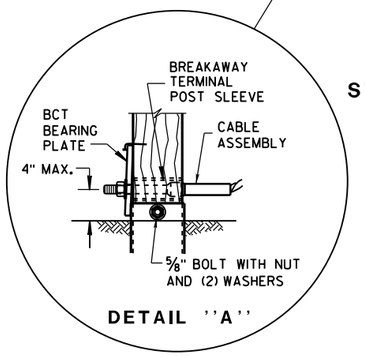
CABLE END PLATE



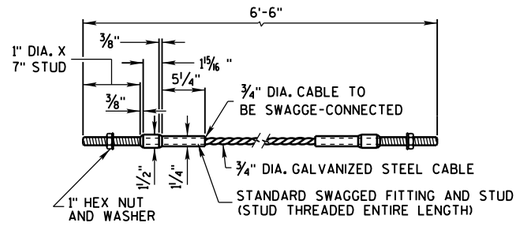
ELEVATION VIEW END VIEW

NOSE CABLE ANCHOR PLATE

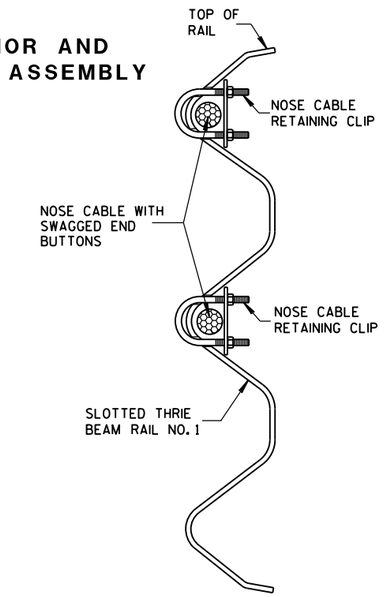
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



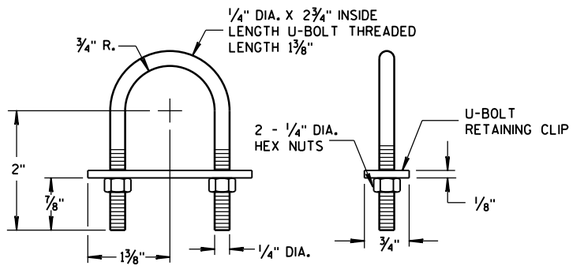
DETAIL ''A''



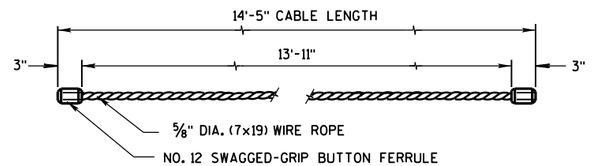
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

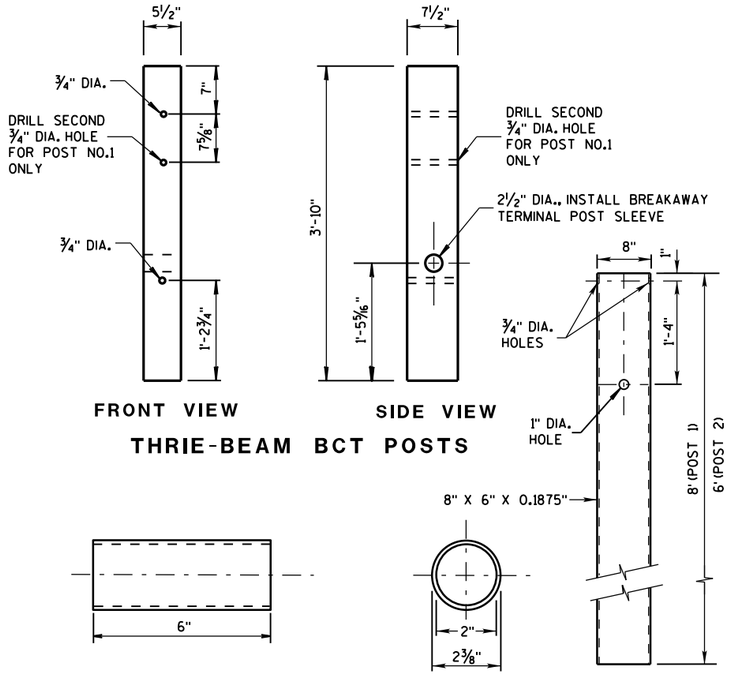
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
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S.D.D. 14 B 26-3c

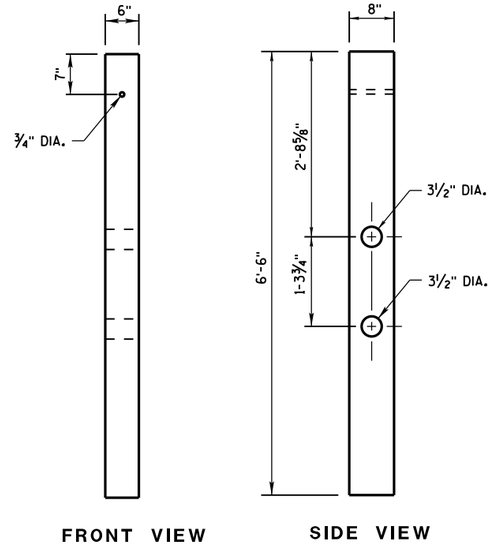


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

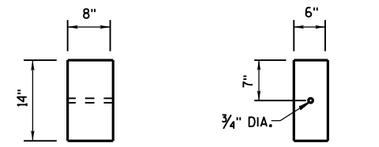


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

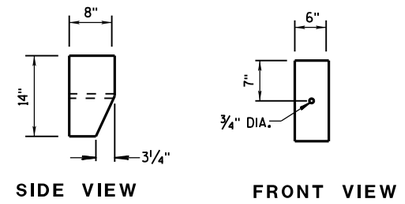
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



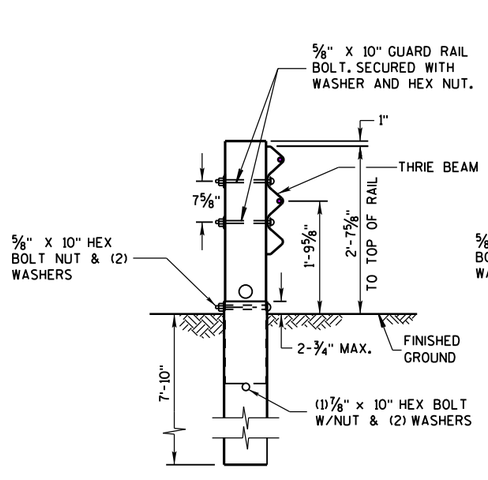
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



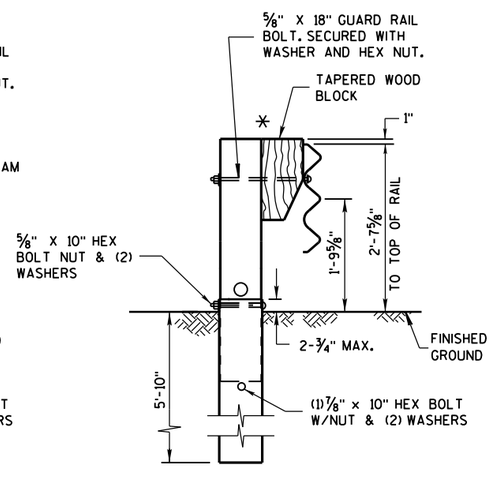
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



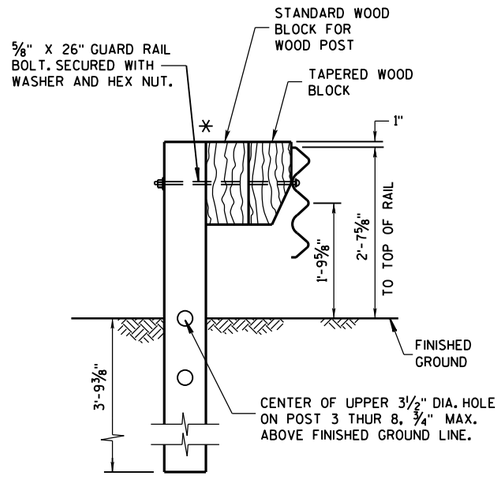
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



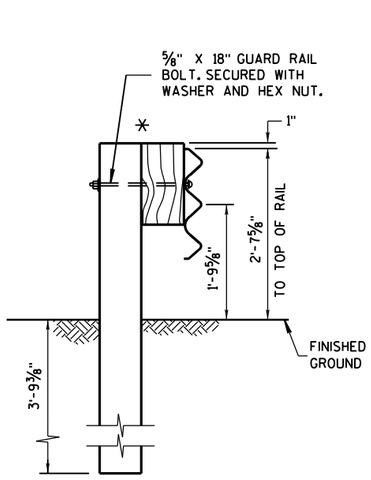
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

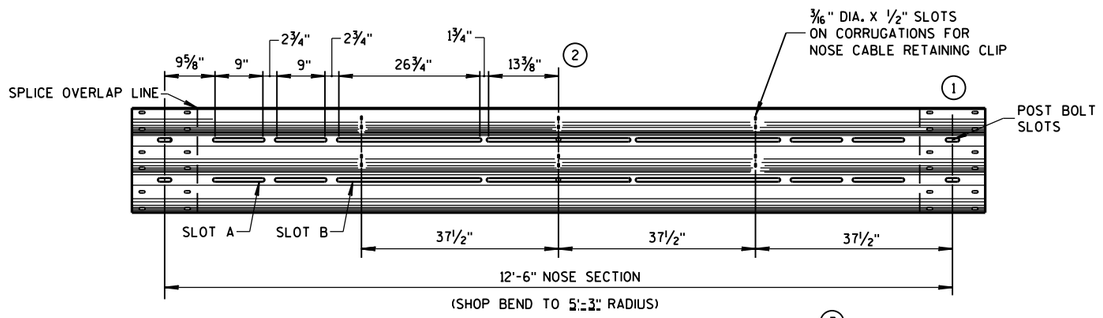
* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

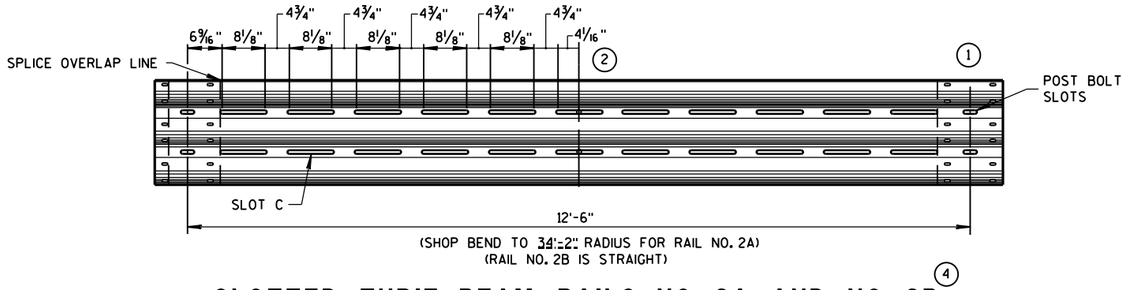
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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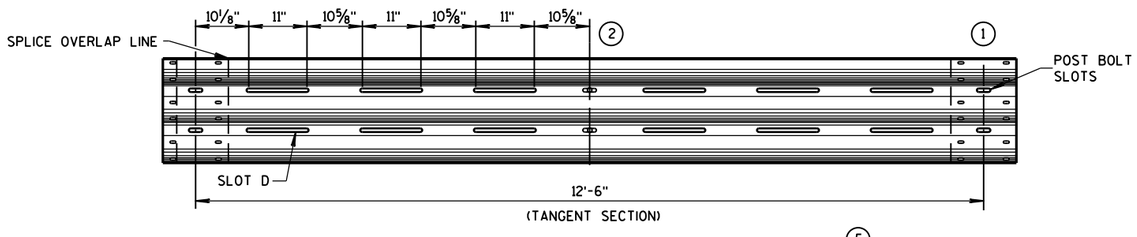
S.D.D. 14 B 26-3d



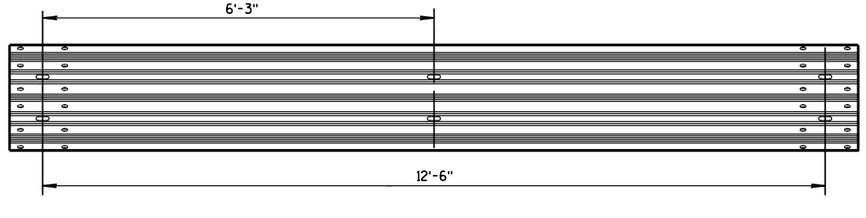
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

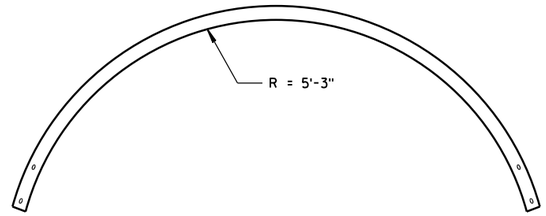
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

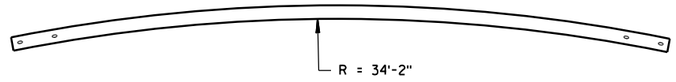
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



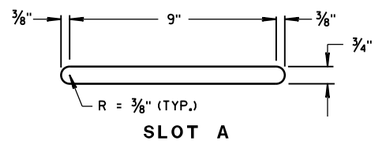
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

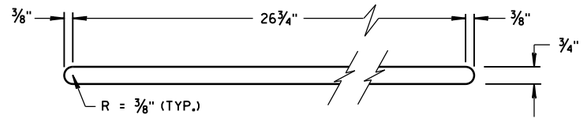


PLAN VIEW

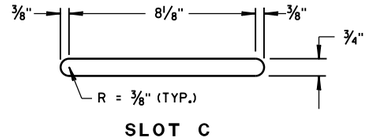
SLOTTED THRIE BEAM RAIL NO. 2A



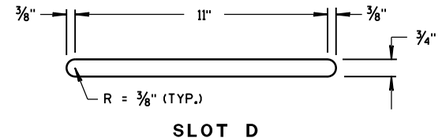
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

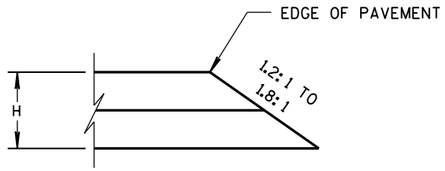
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S.D.D. 14 B 26-3e

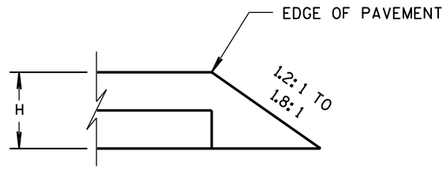
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S.D.D. 14 B 26-3e



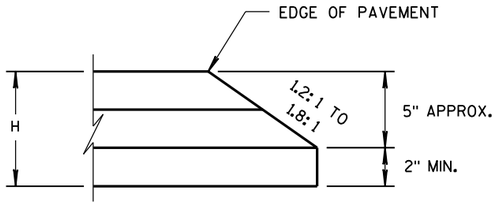
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



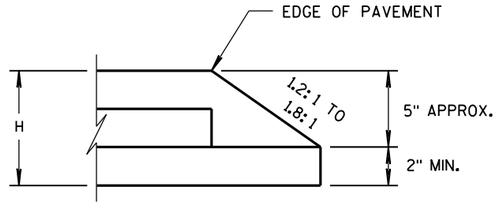
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

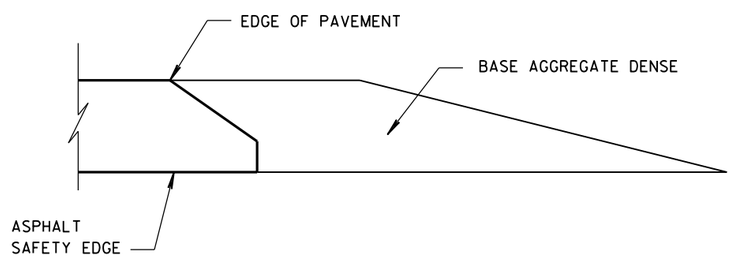
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

GENERAL NOTES

(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.

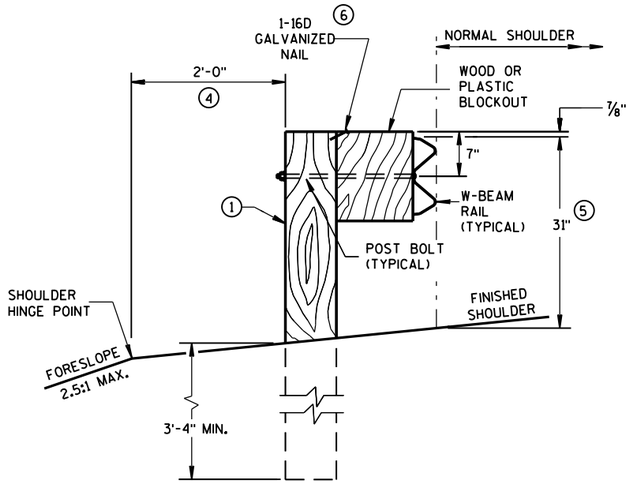
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

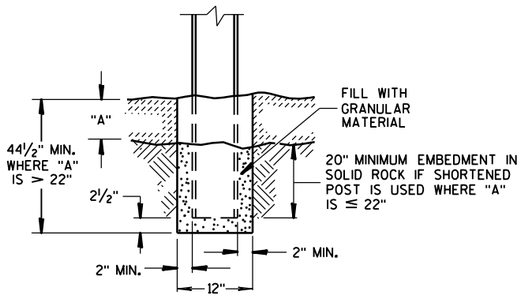
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



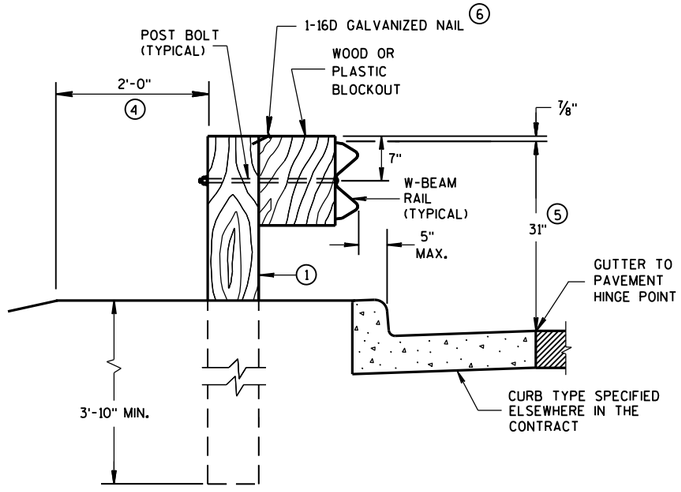
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



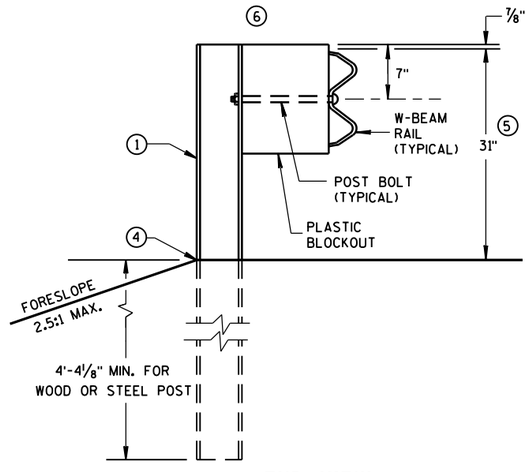
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



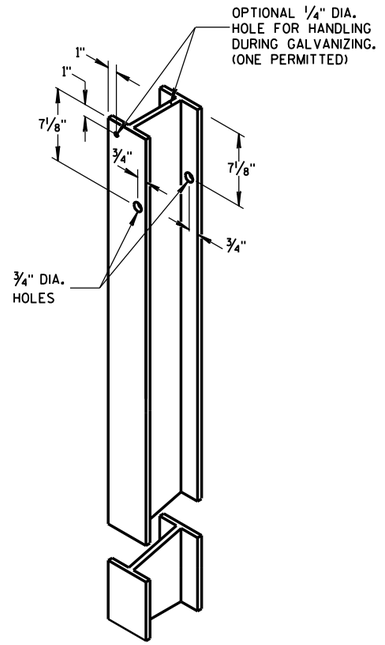
END VIEW

LOCATED ALONG A CURBED ROADWAY

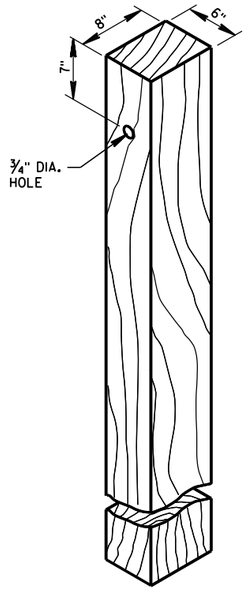


END VIEW

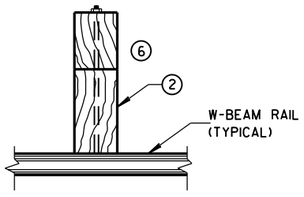
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



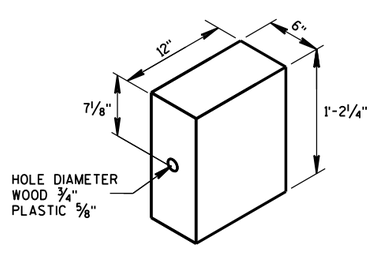
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



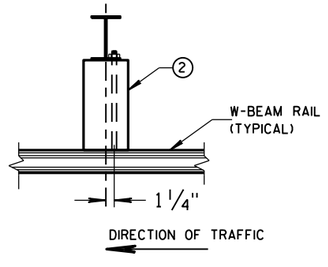
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

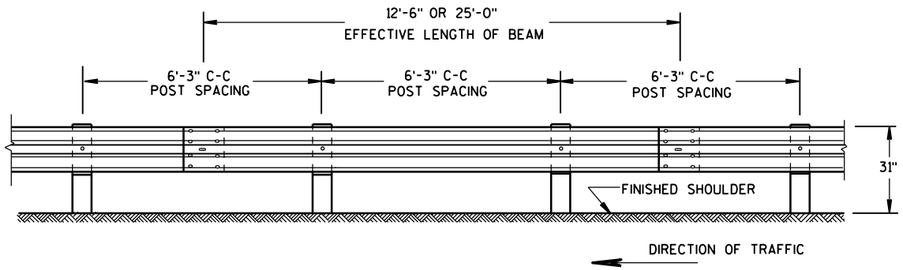


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

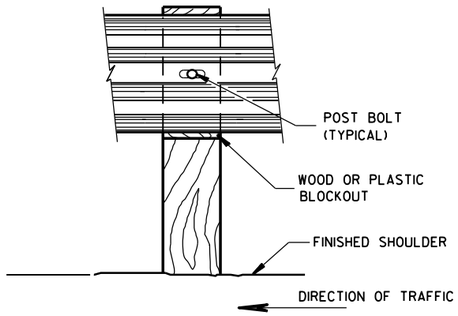
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-3a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

GENERAL NOTES

(7) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

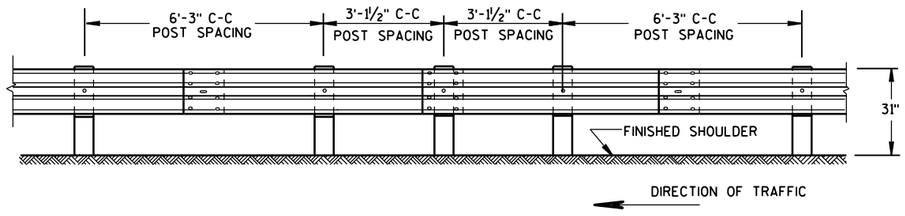
(9) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(10) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

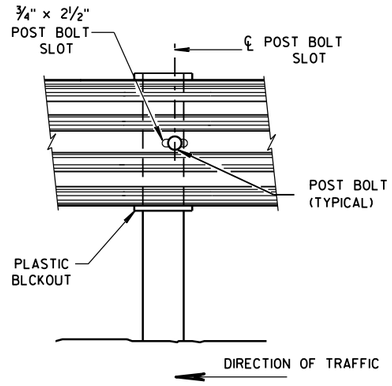
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

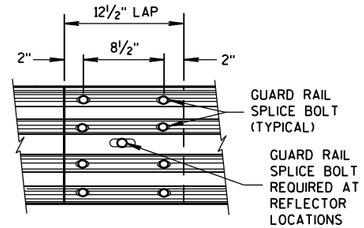


FRONT VIEW

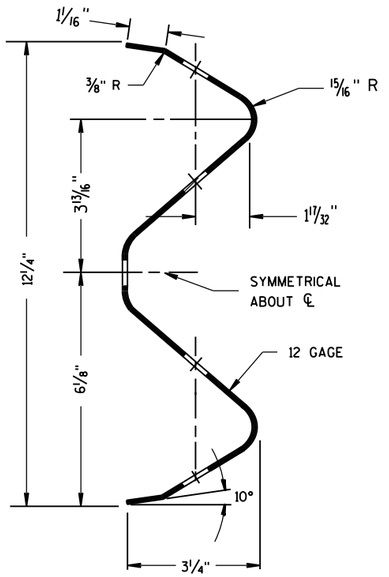
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



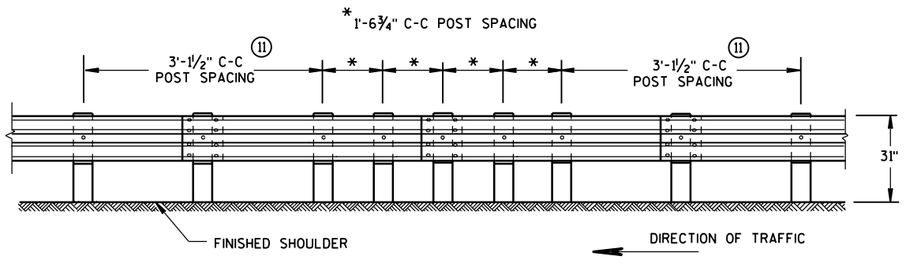
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

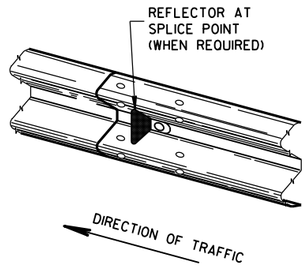


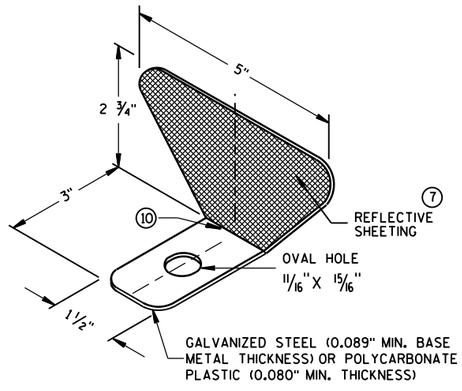
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

REFLECTOR SPACING (8)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (9)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (10)	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

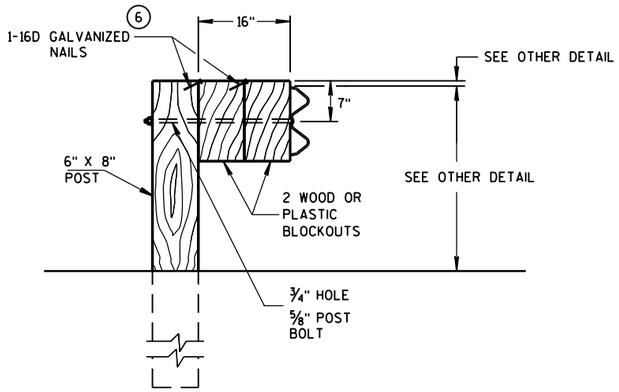
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 42-3b

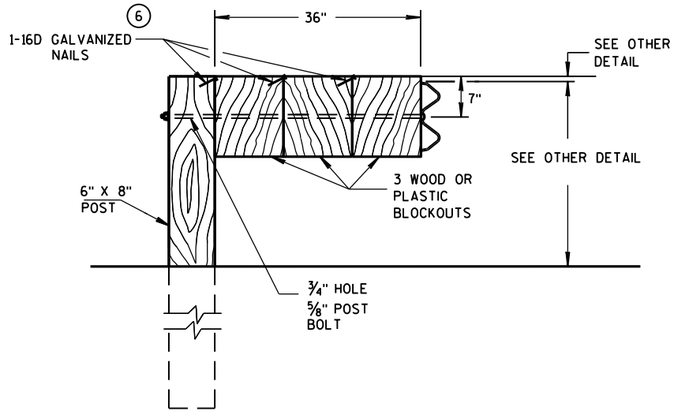
6

S.D.D. 14 B 42-3b



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.

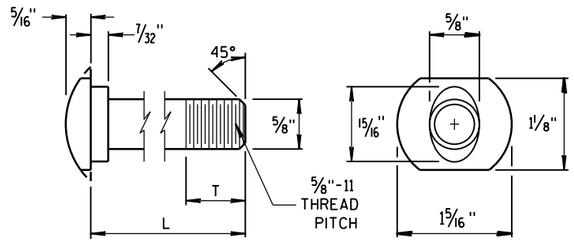


DETAIL FOR 36" BLOCKOUT DEPTH

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

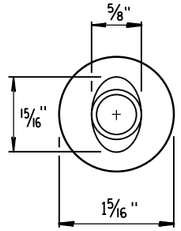
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

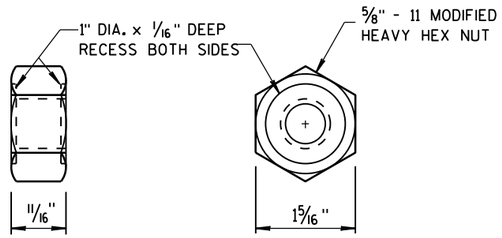


POST BOLT TABLE

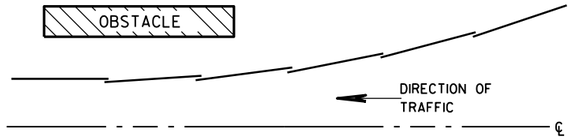
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

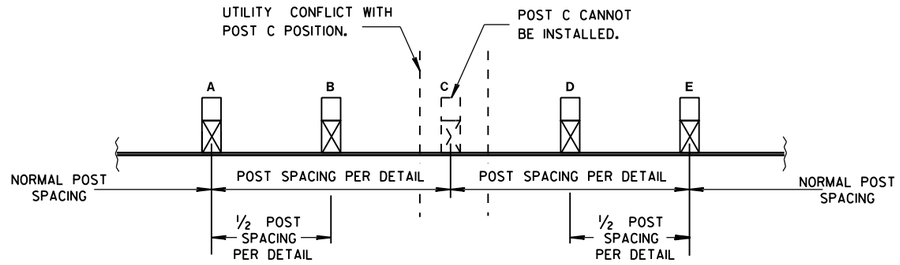


POST BOLT AND RECESS NUT

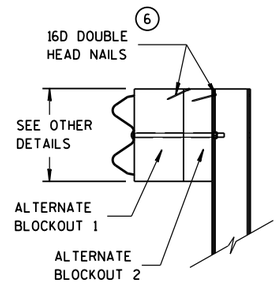


PLAN VIEW

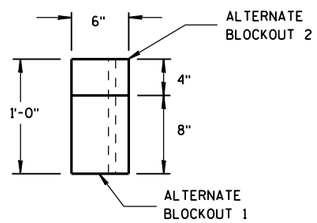
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

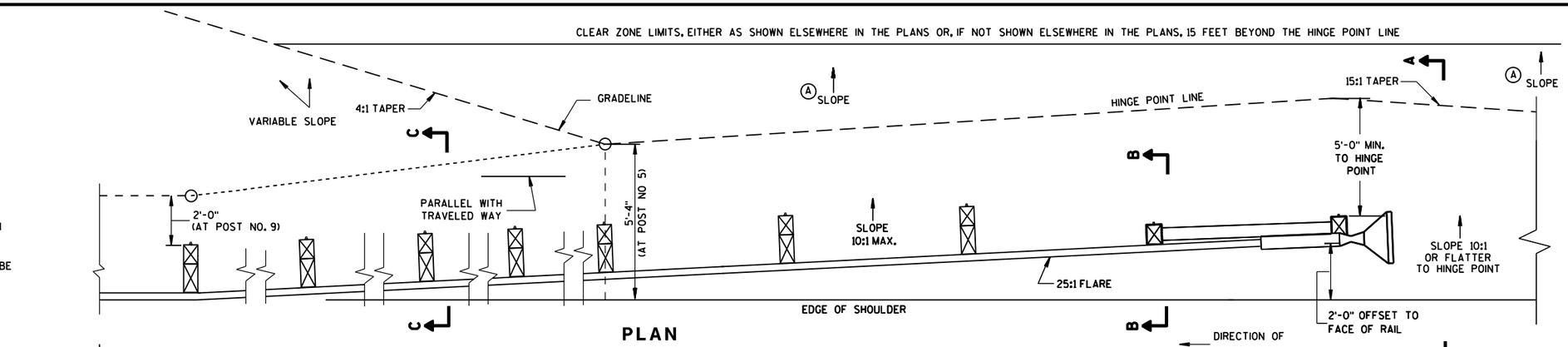
SEE SDD 14B42 FOR MORE INFORMATION.

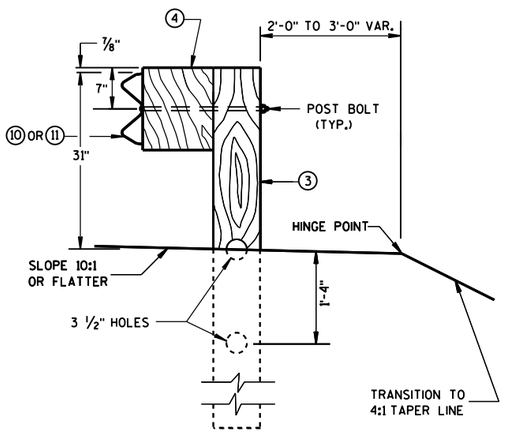
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

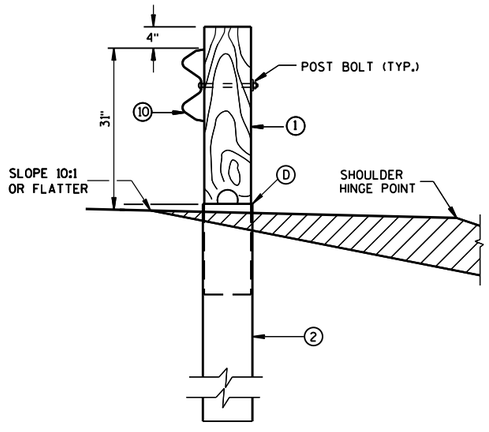
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

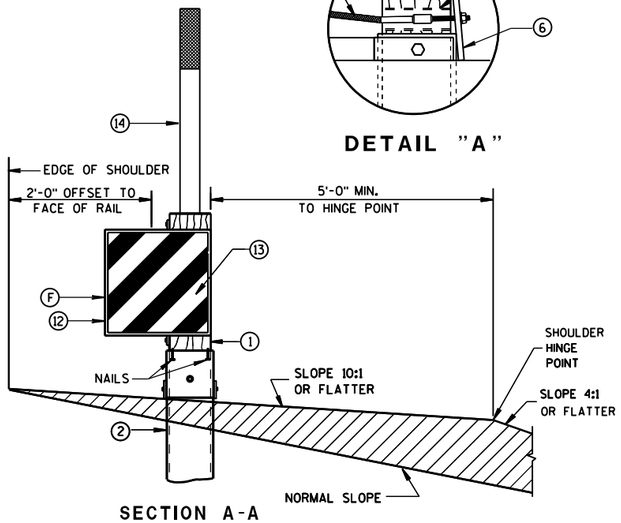




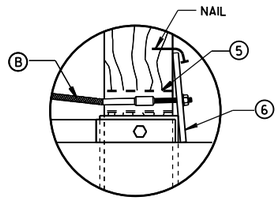
SECTION C-C
TYPICAL AT POST NOS. 3-9



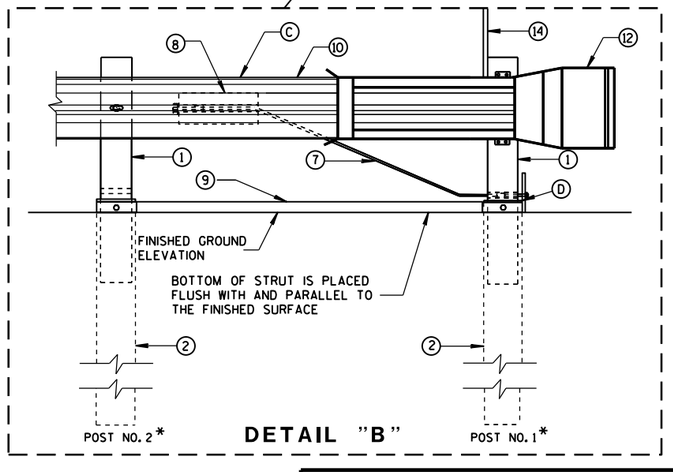
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

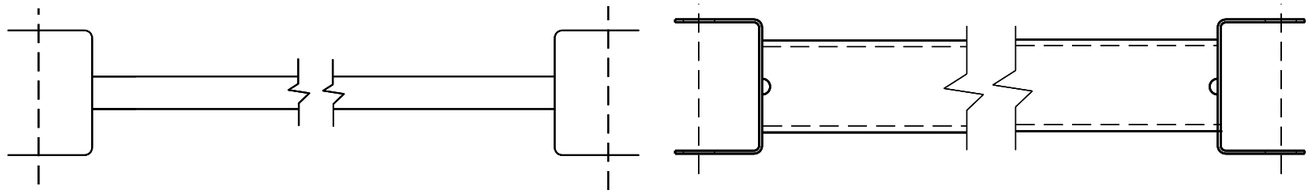


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

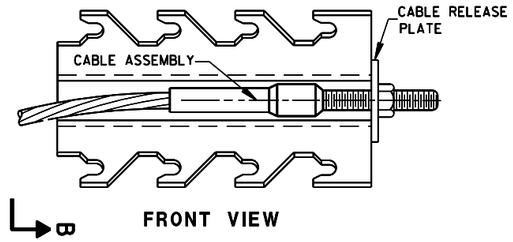
S.D.D. 14 B 44-2a



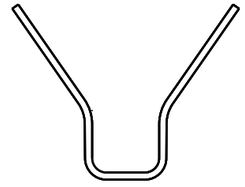
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

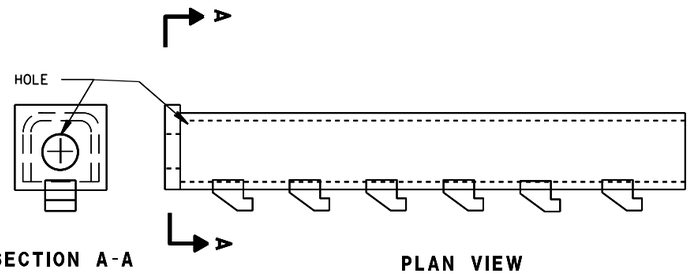
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



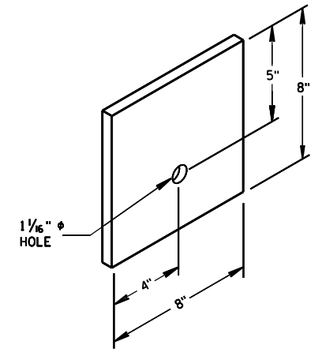
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



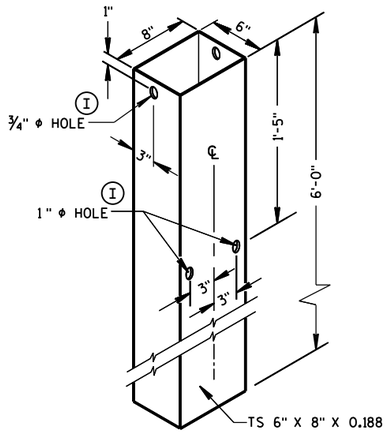
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

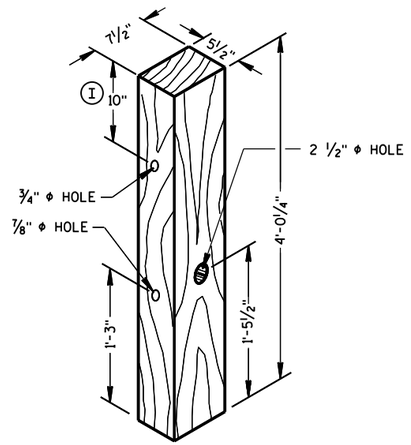
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

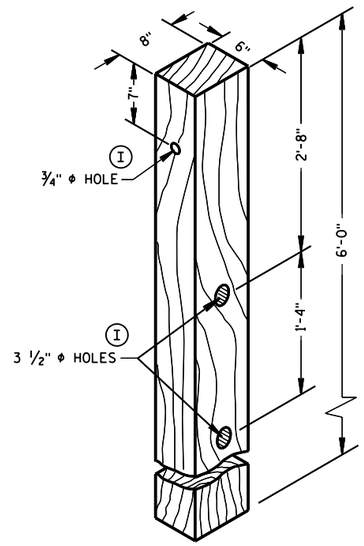


FOUNDATION TUBE (2)



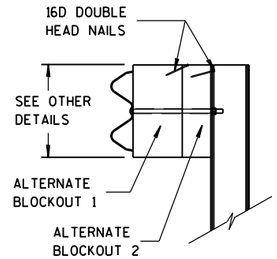
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

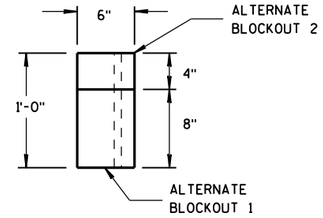


POSTS NUMBER 3-9

WOOD CRT POST (3)

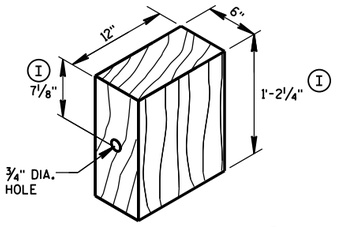


SIDE VIEW



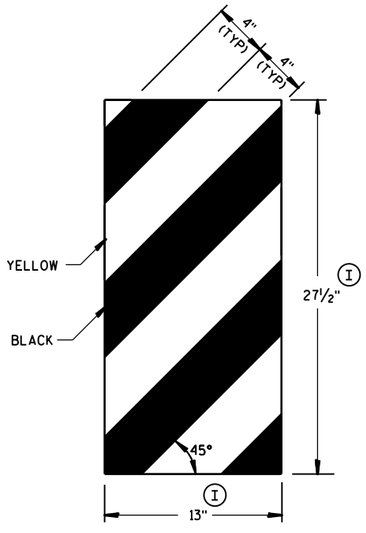
TOP VIEW

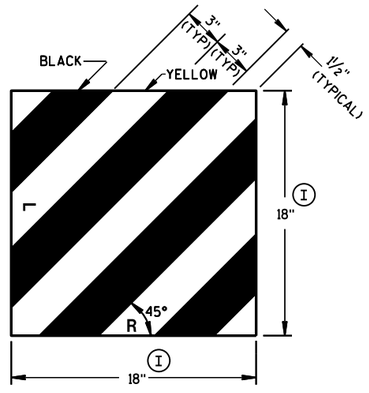
ALTERNATE WOOD BLOCKOUT DETAIL



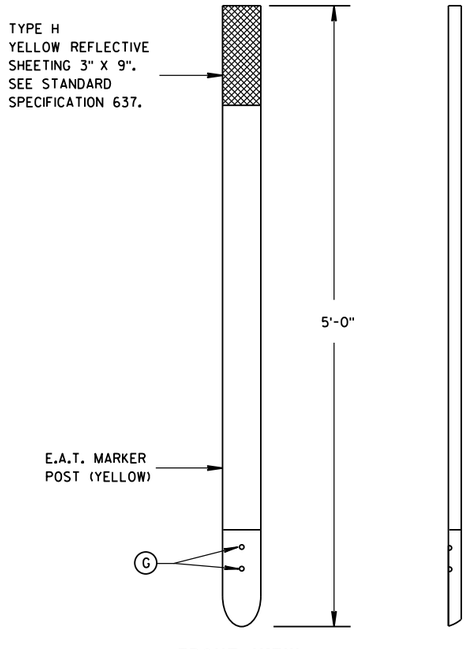
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





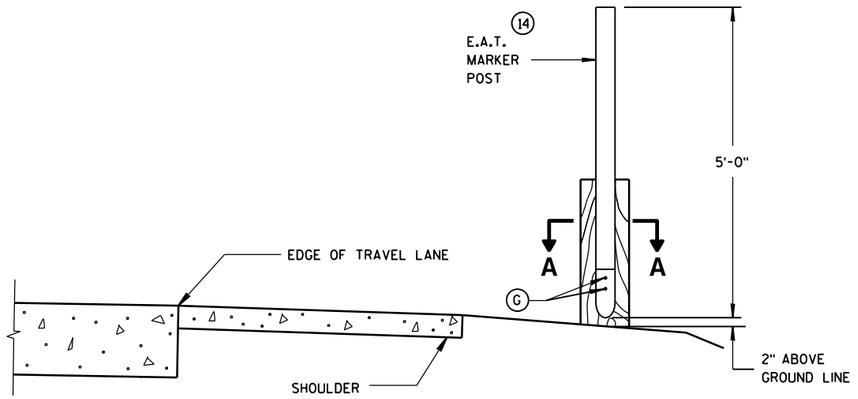
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

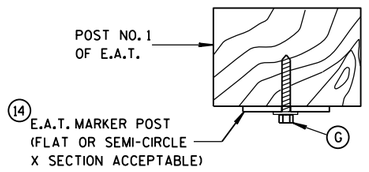
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

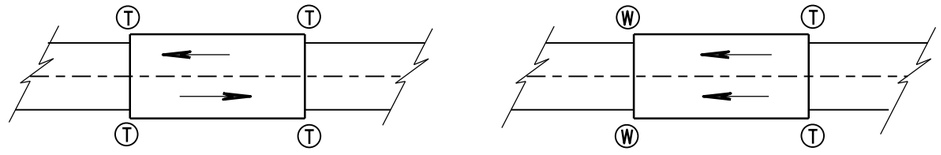
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

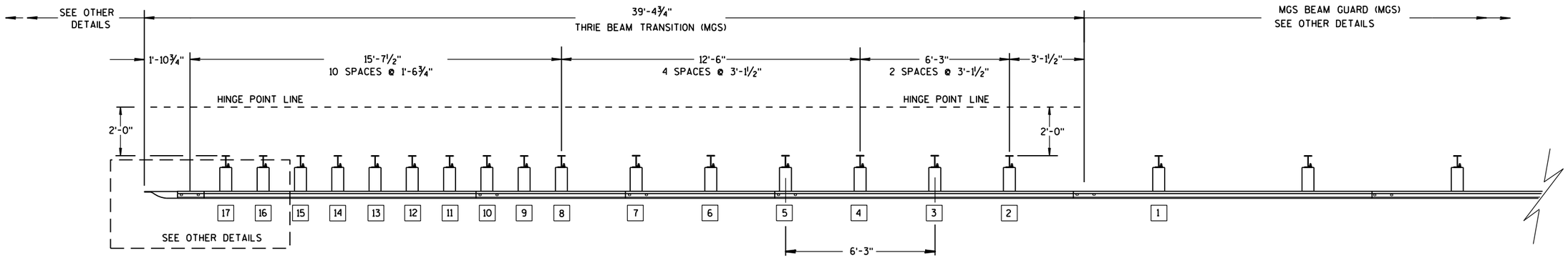
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

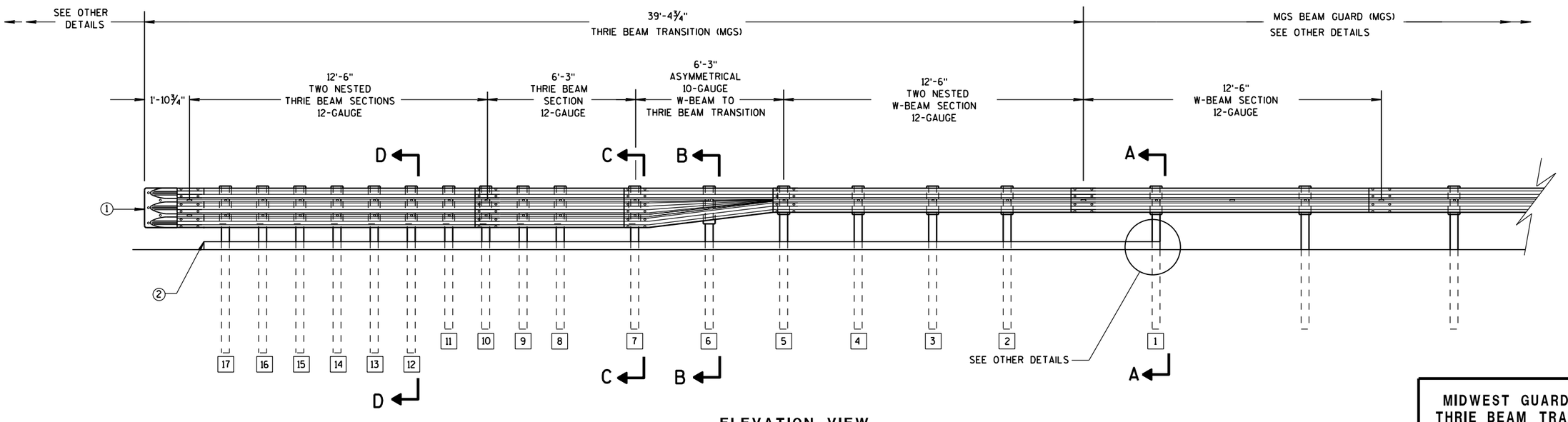
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

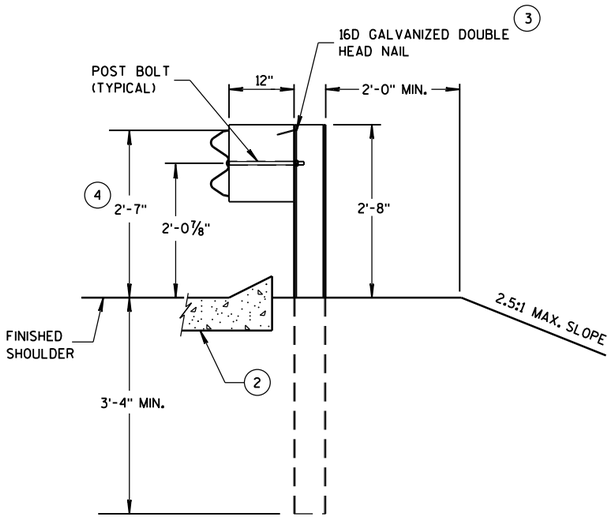
S.D.D. 14 B 45-4a

GENERAL NOTES

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

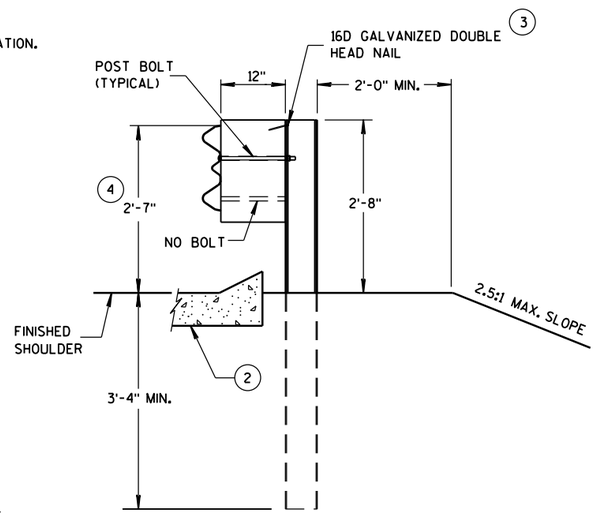
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



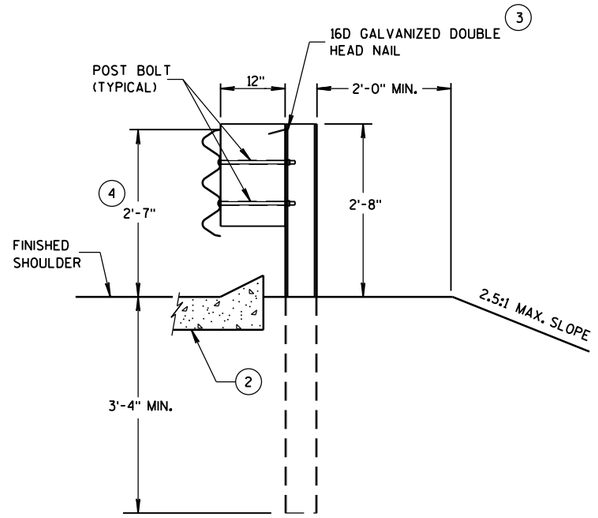
SECTION A-A

POSTS 1-5



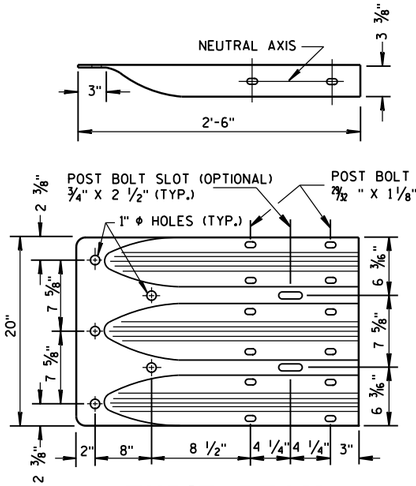
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

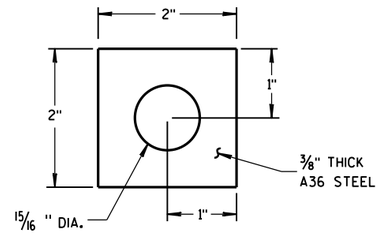
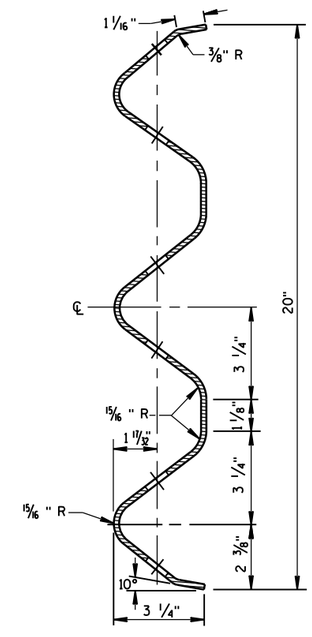
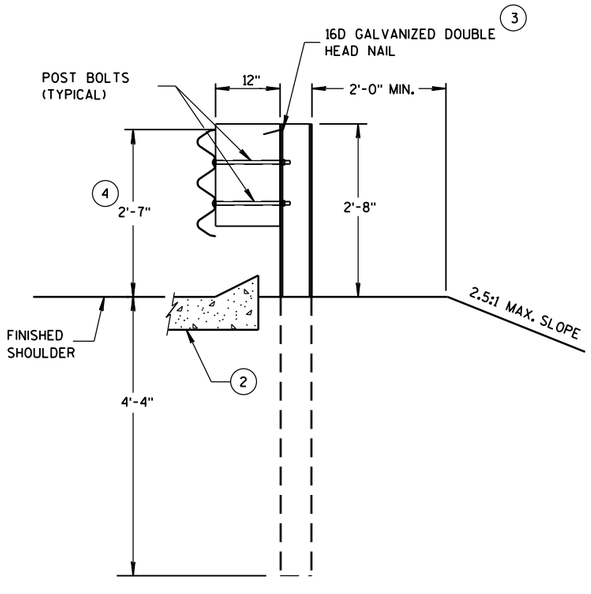


PLATE WASHER DETAIL

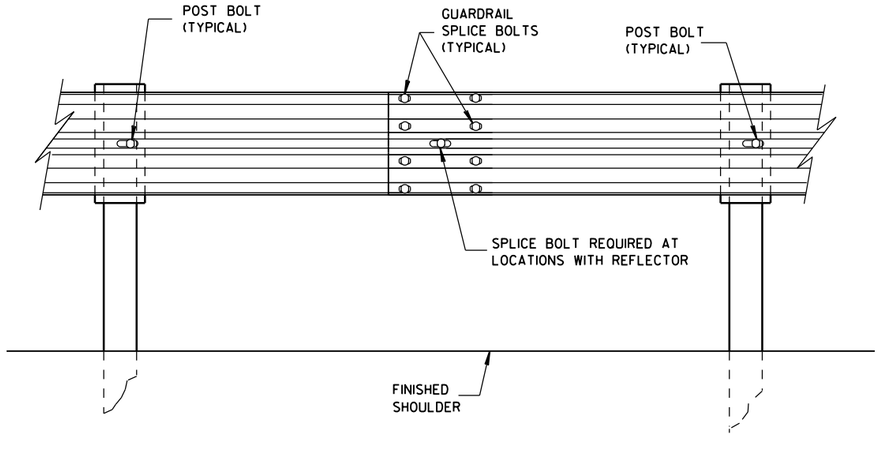


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



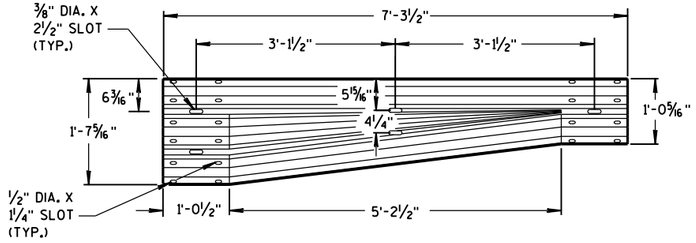
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

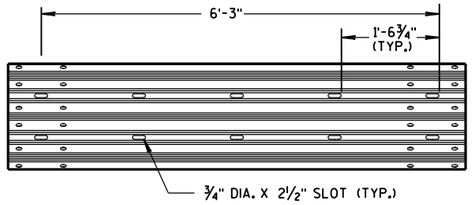
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

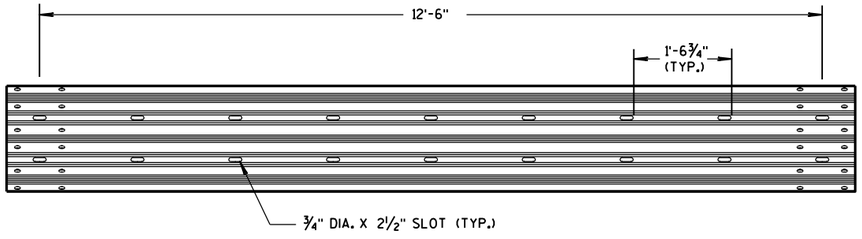
S.D.D. 14 B 45-4b



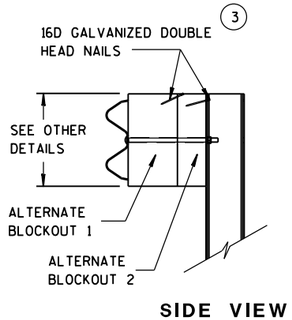
W-BEAM TO THRIE BEAM TRANSITION SECTION



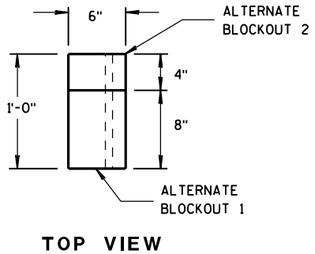
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

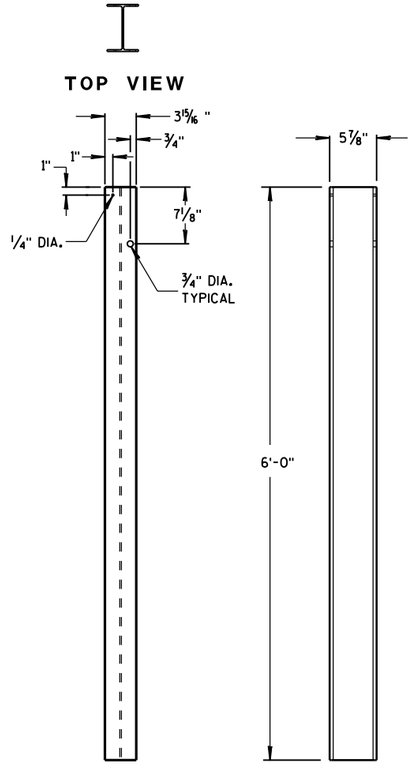


SIDE VIEW

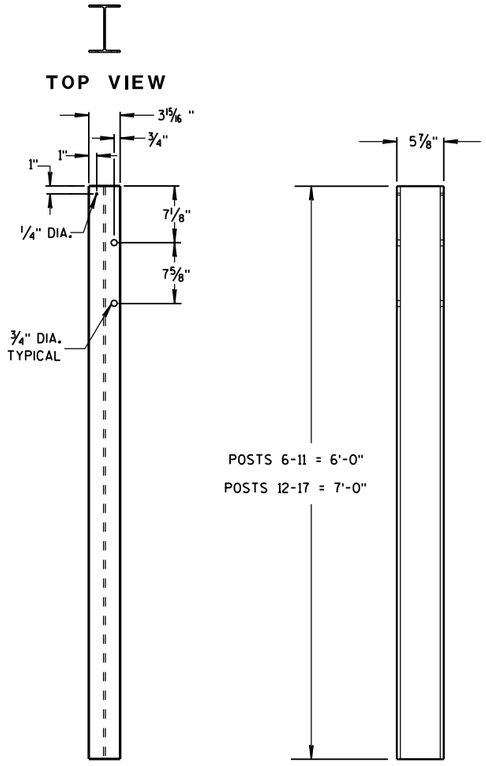


TOP VIEW

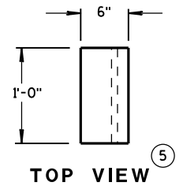
ALTERNATE WOOD BLOCKOUT DETAIL



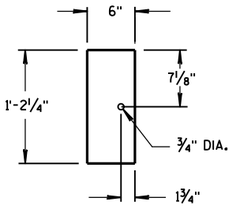
STEEL POSTS 1-5



STEEL POSTS 6-17

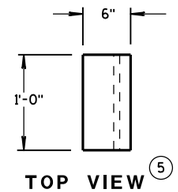


TOP VIEW (5)

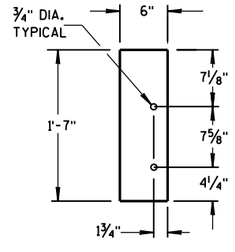


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (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.

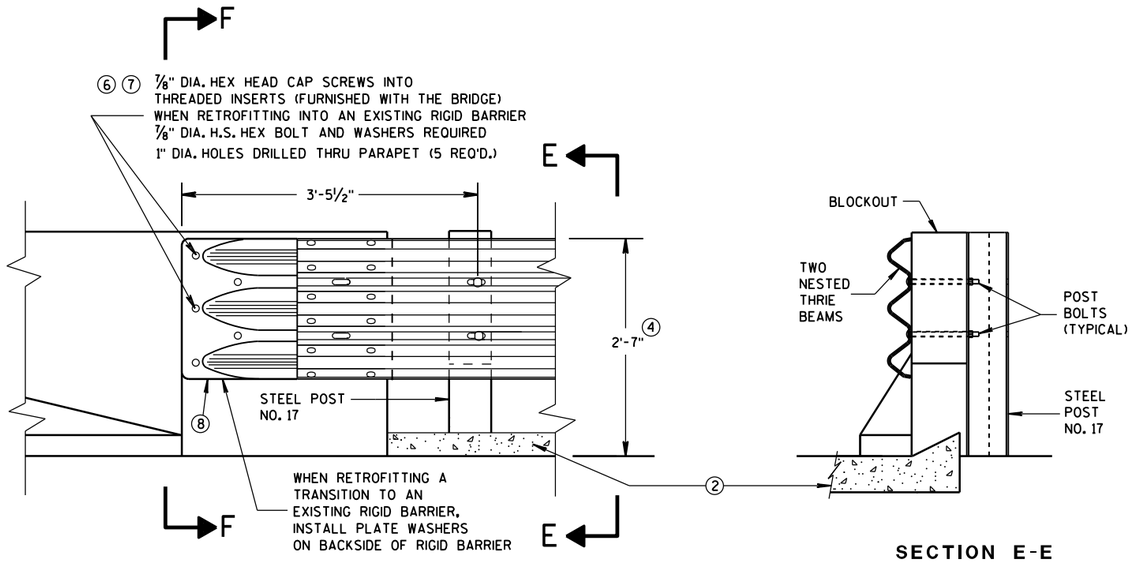
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c



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.

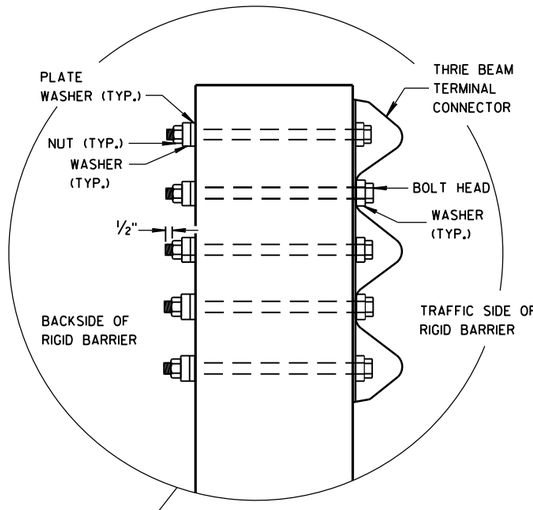
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

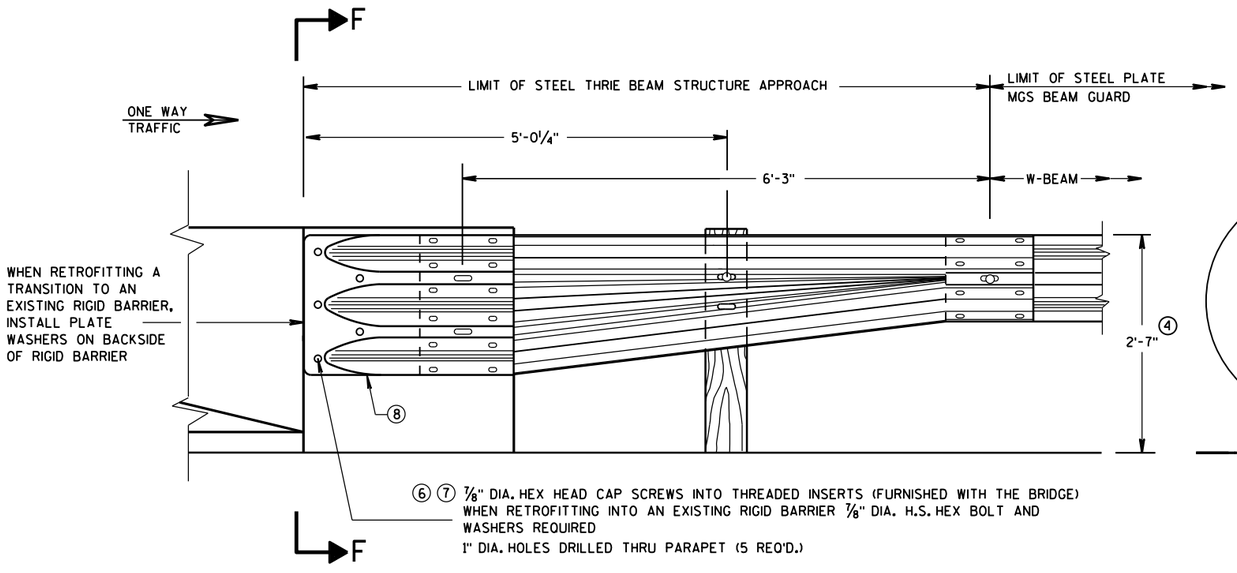
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

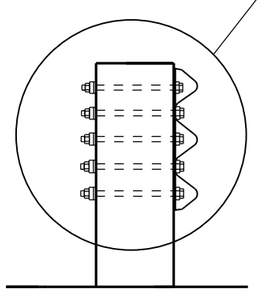
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" 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".

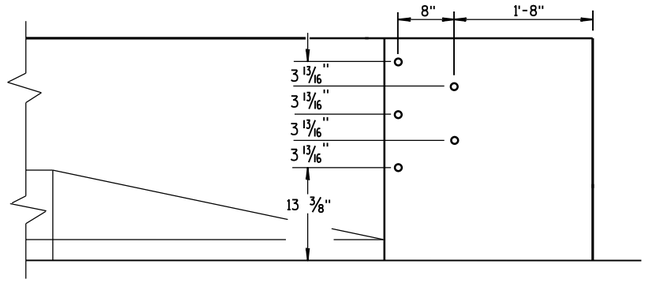




FRONT VIEW



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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
NT

6

S.D.D. 14 B 45-4d

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.

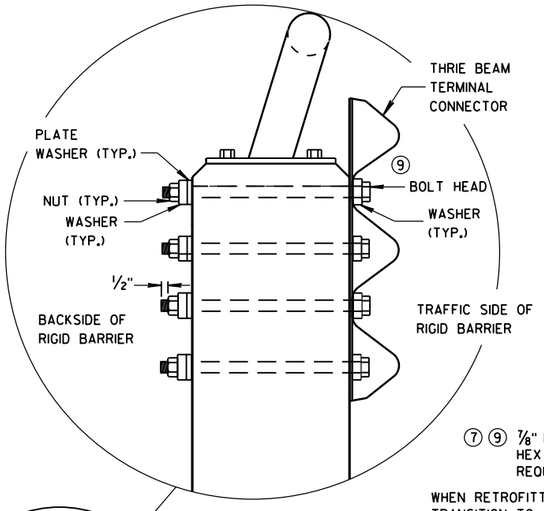
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

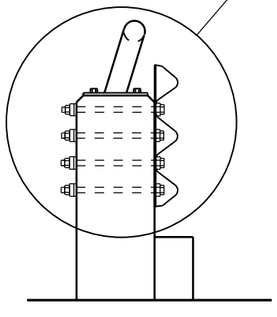
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

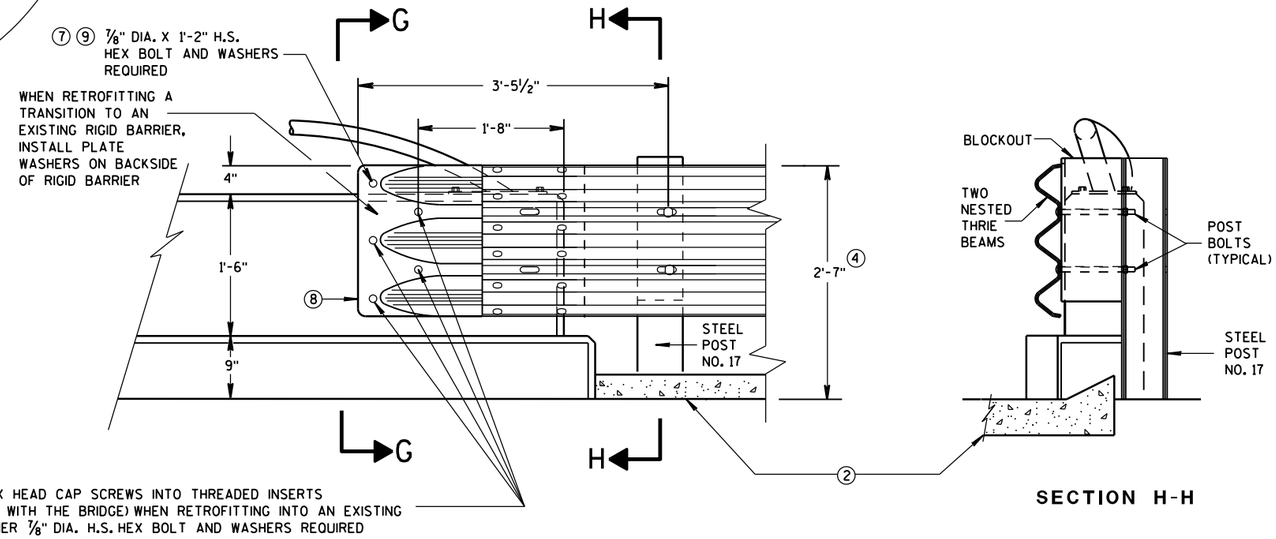
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





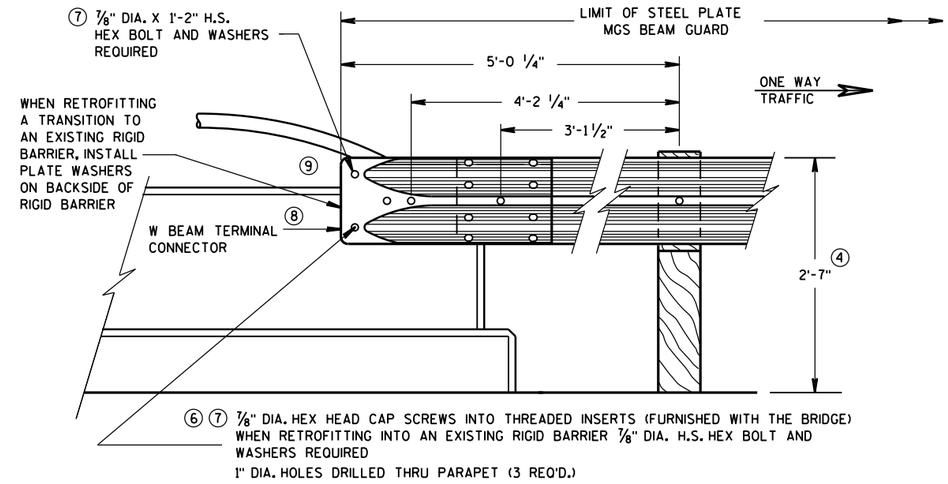
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

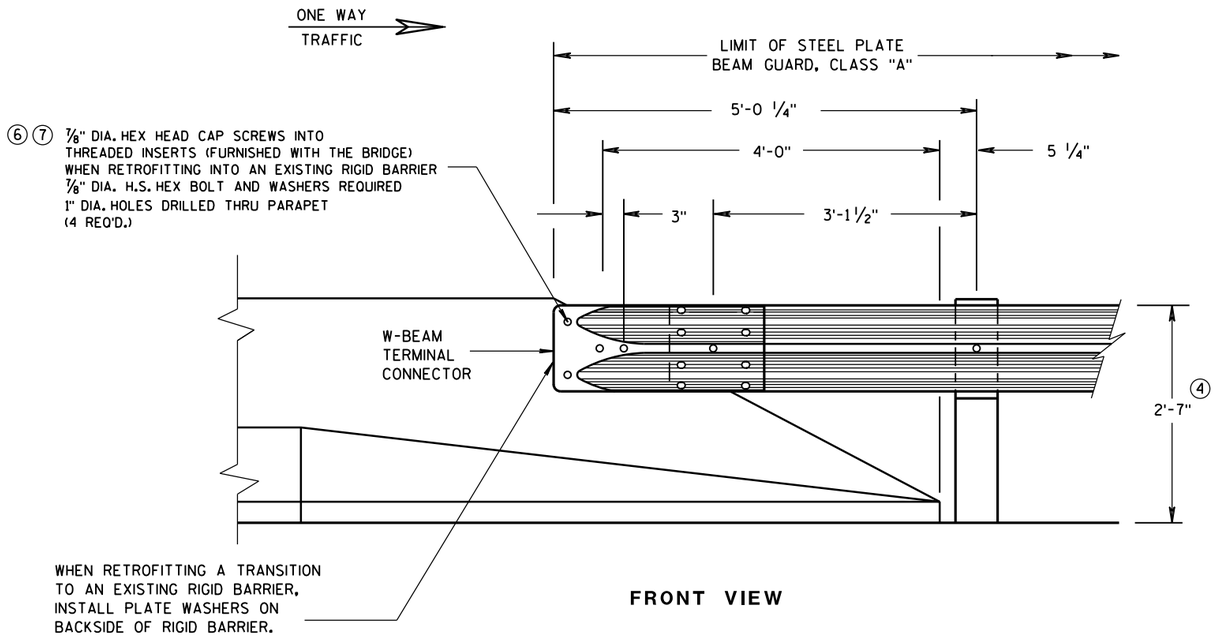
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June, 2015 — DATE
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S.D.D. 14 B 45-4e

6

S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

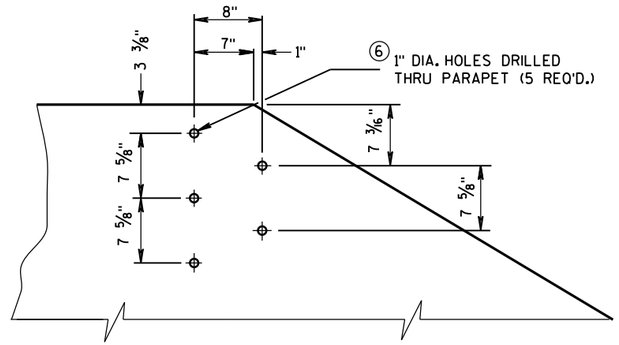
GENERAL NOTES

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

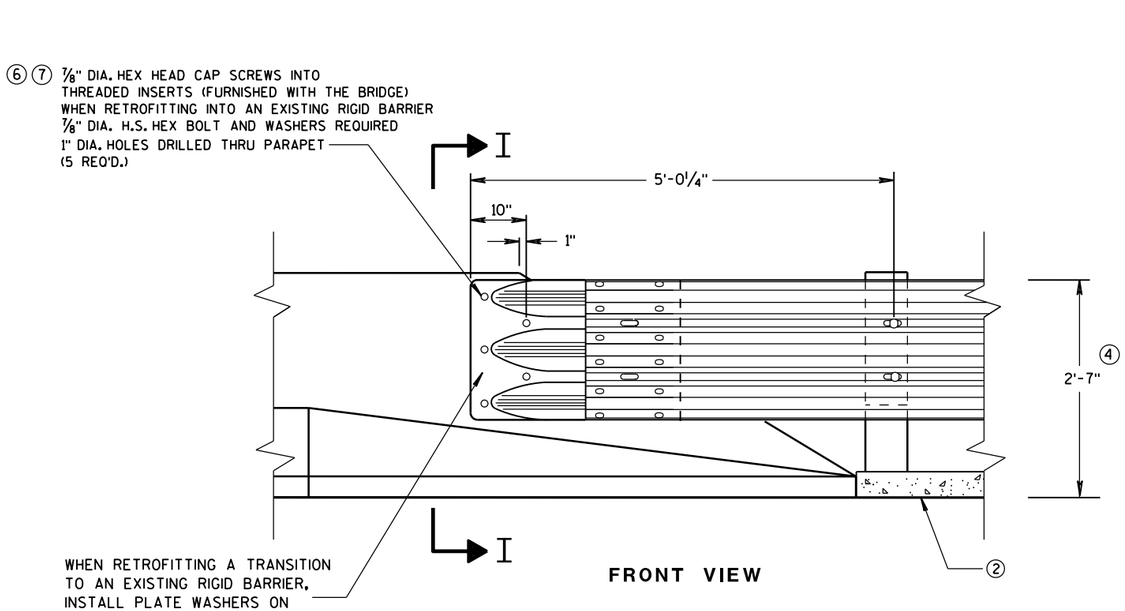
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

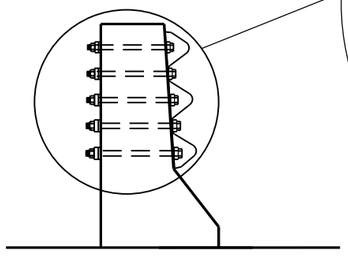
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



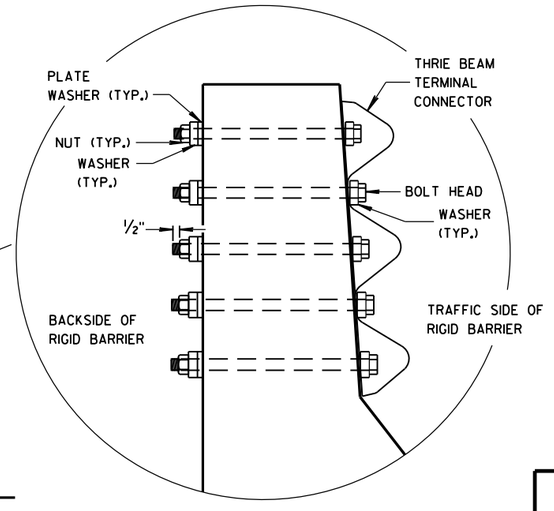
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

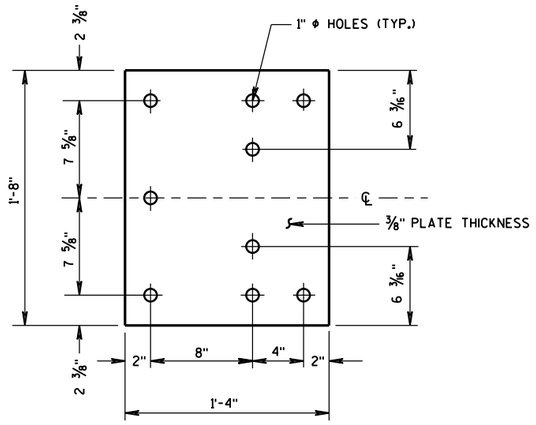
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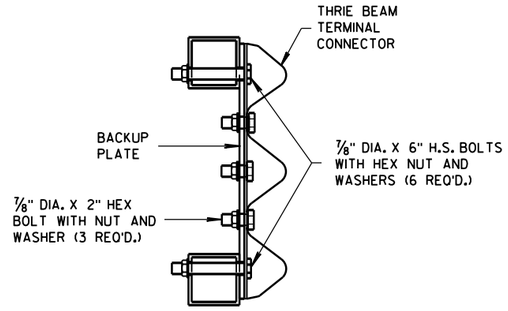
S.D.D. 14 B 45-4f

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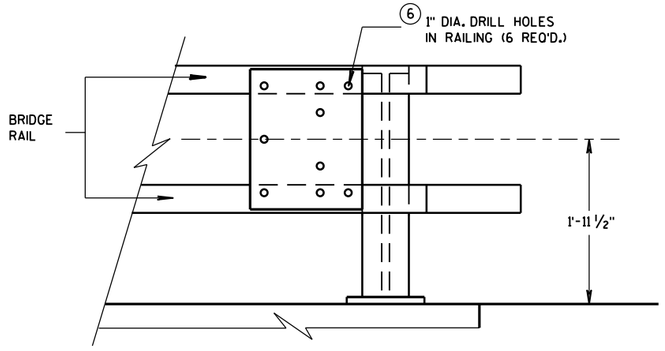
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

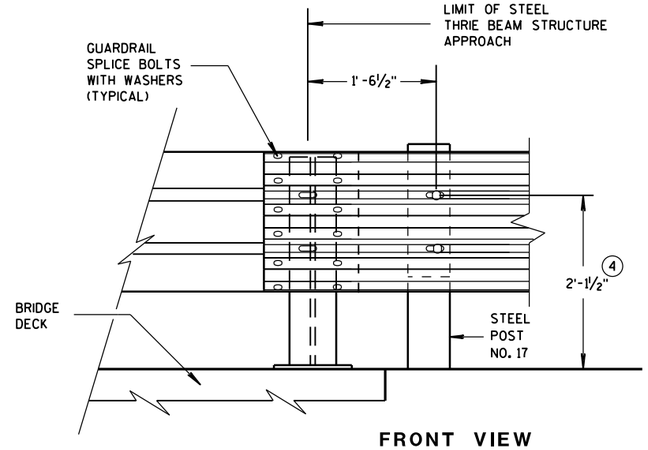


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

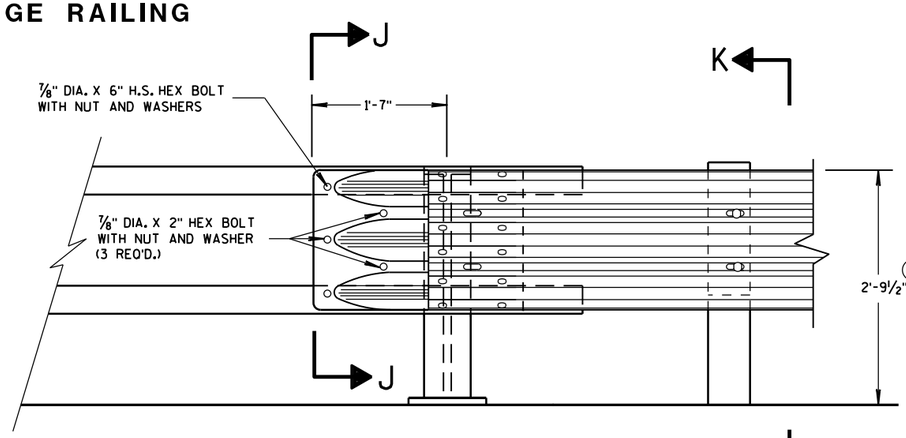
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

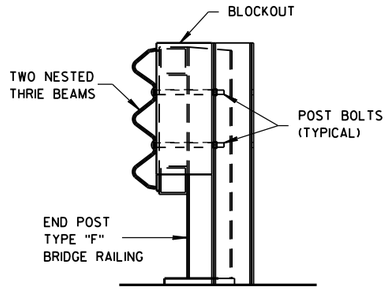


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

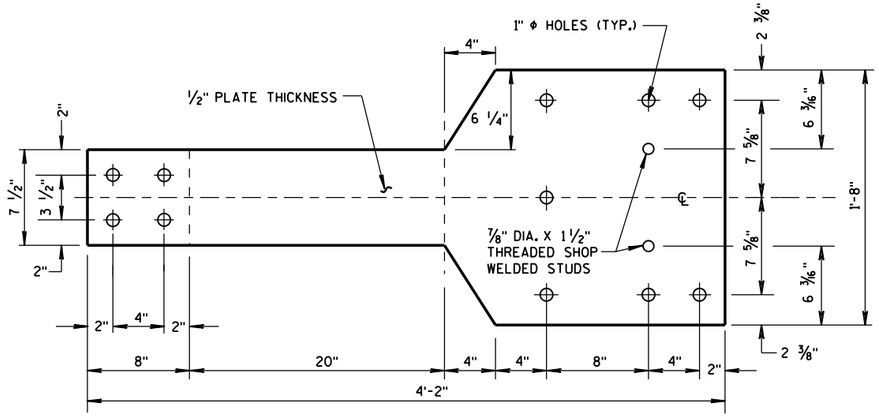
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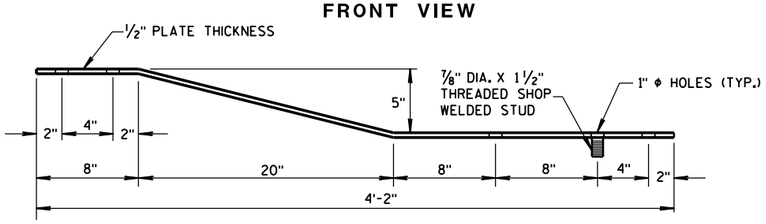
S.D.D. 14 B 45-4g

GENERAL NOTES

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

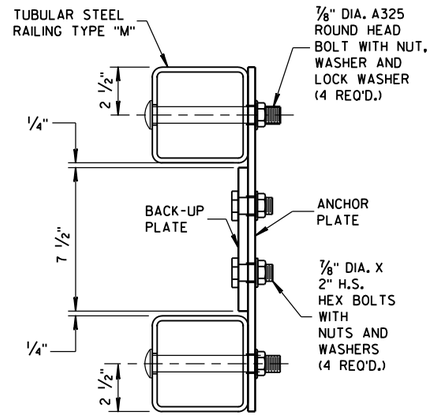


FRONT VIEW

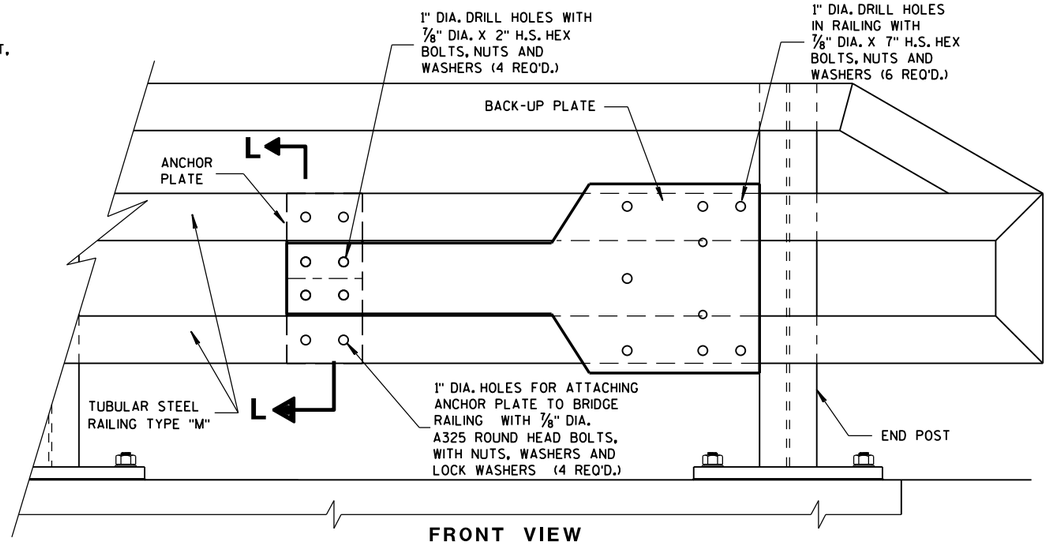


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

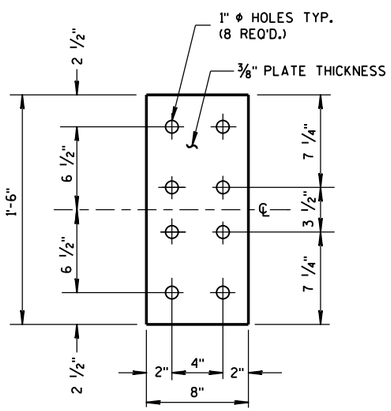


SECTION L-L



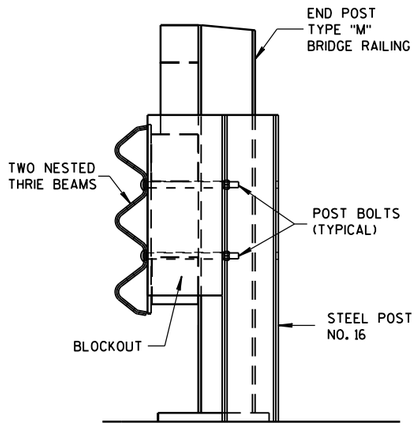
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

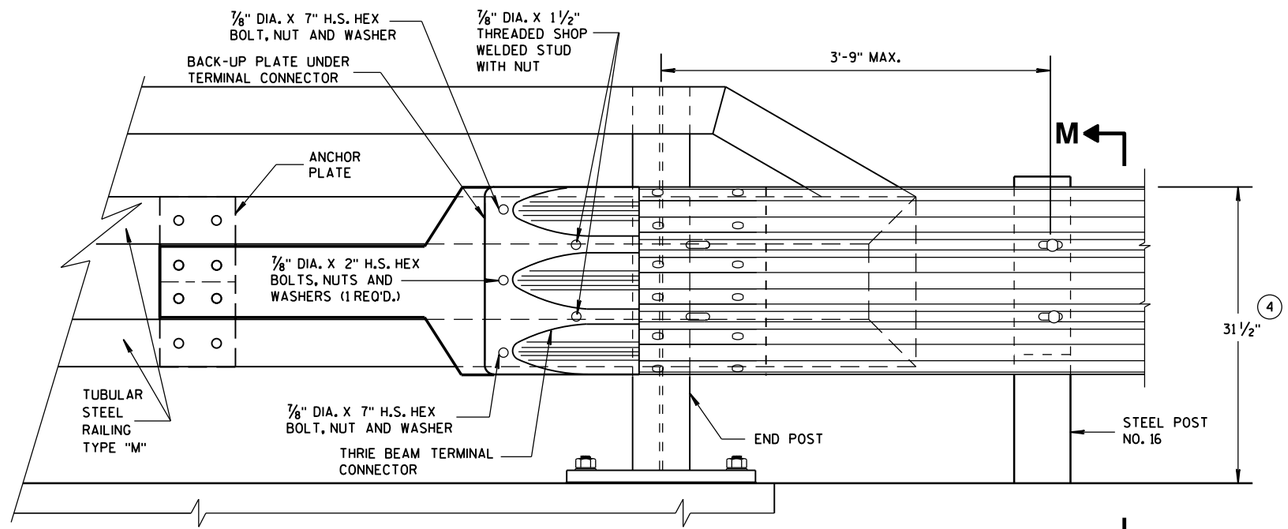


FRONT VIEW

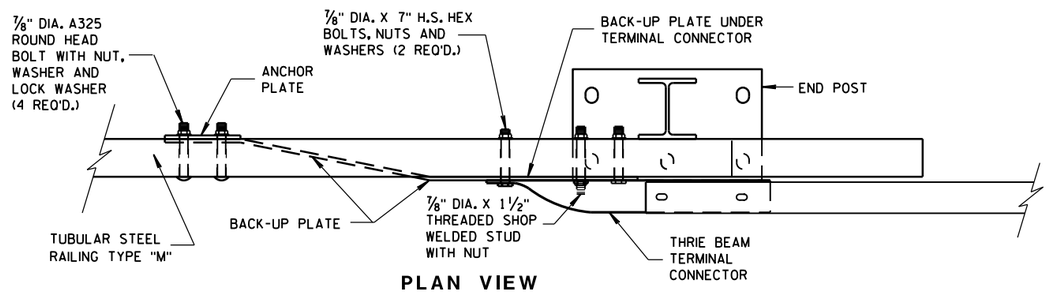
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



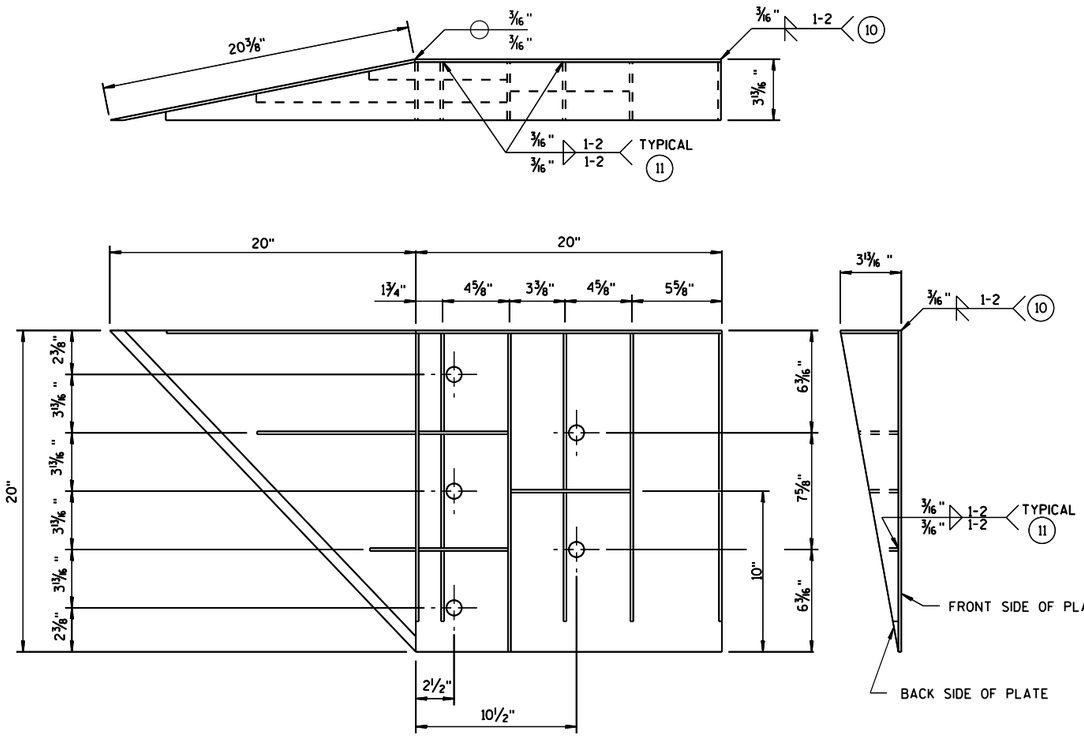
PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
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DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

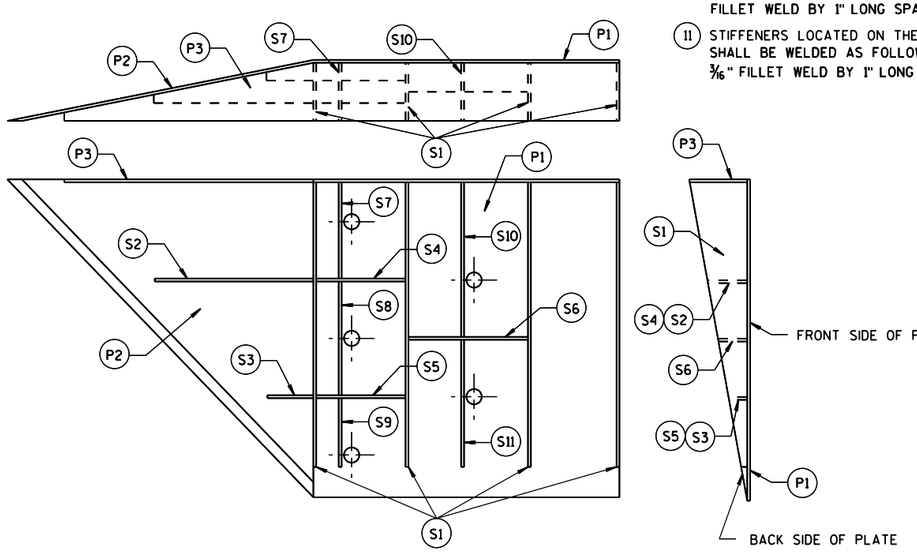


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

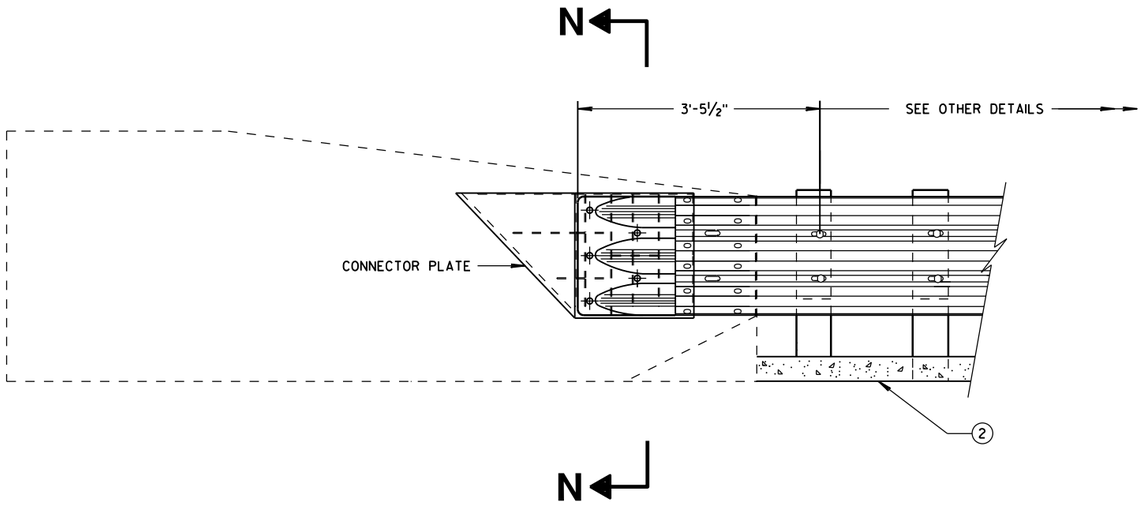
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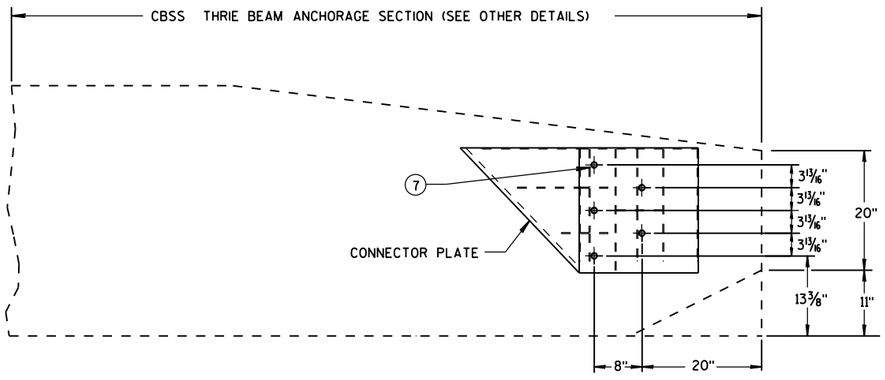
S.D.D. 14 B 45-4i

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S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



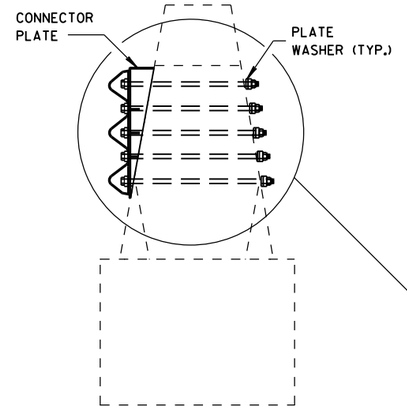
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

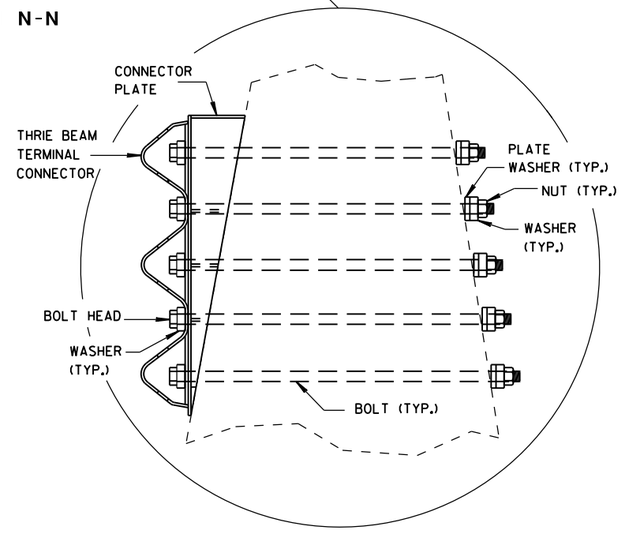
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

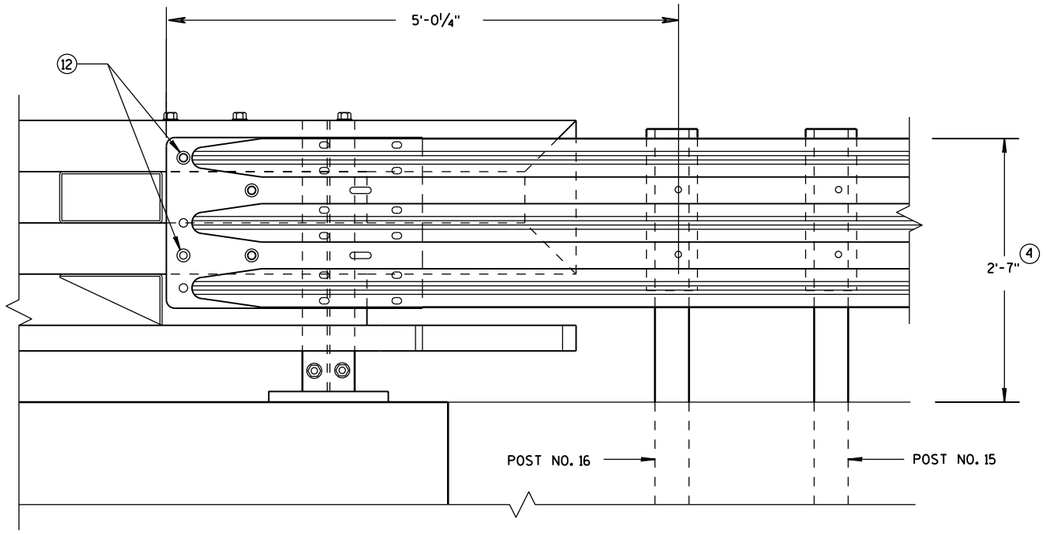
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S.D.D. 14 B 45-4j

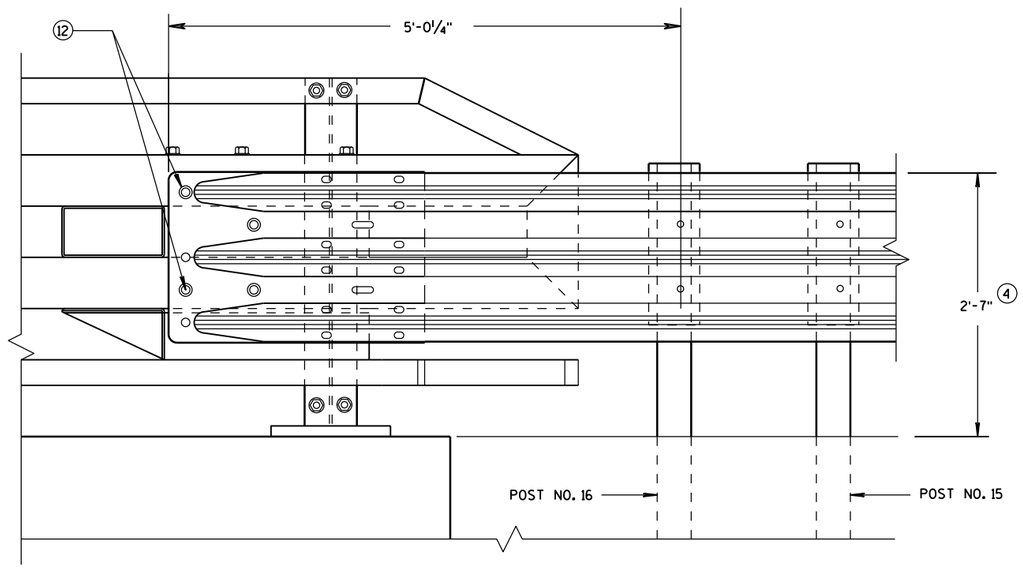
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S.D.D. 14 B 45-4j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

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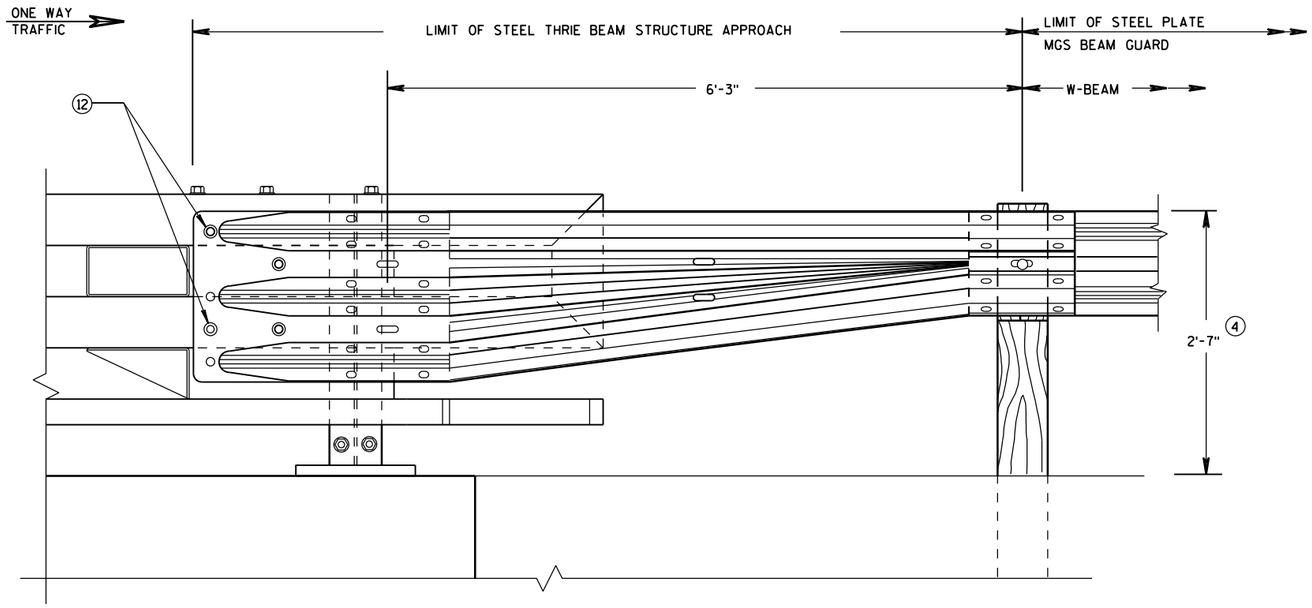
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S.D.D. 14 B 45-4k

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S.D.D. 14 B 45-4k



FRONT VIEW

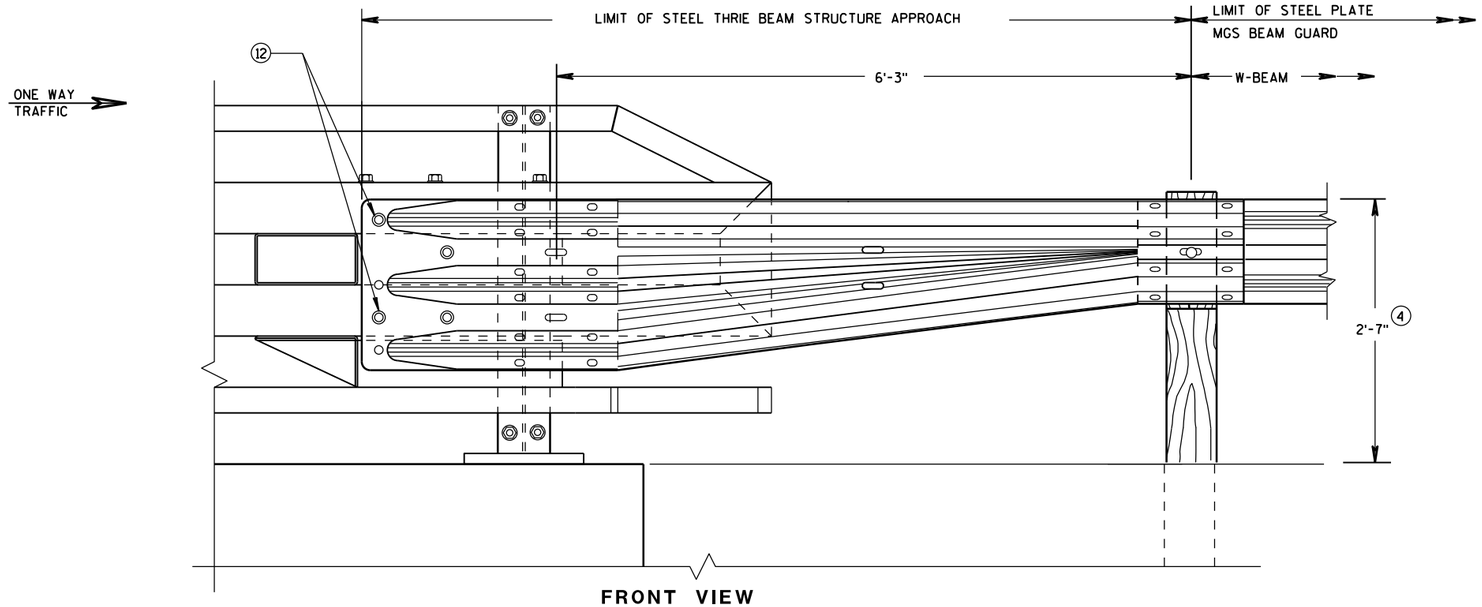
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

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FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

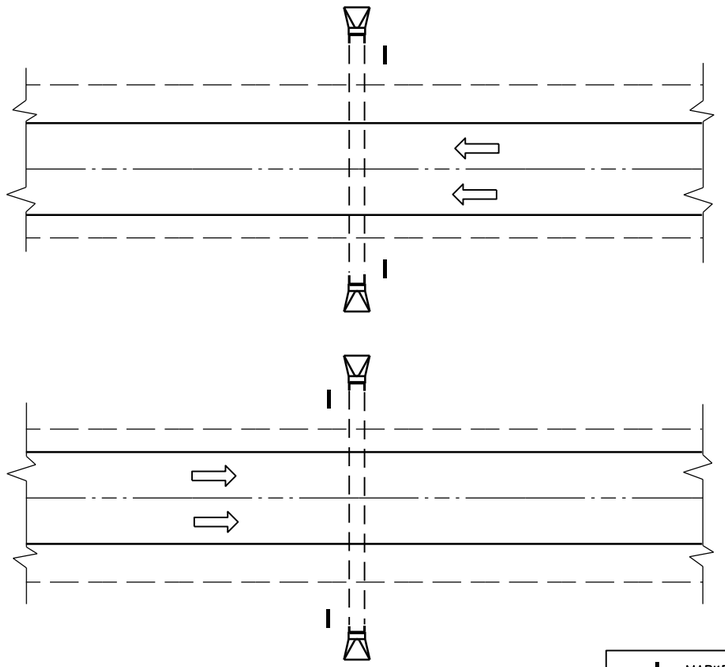
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

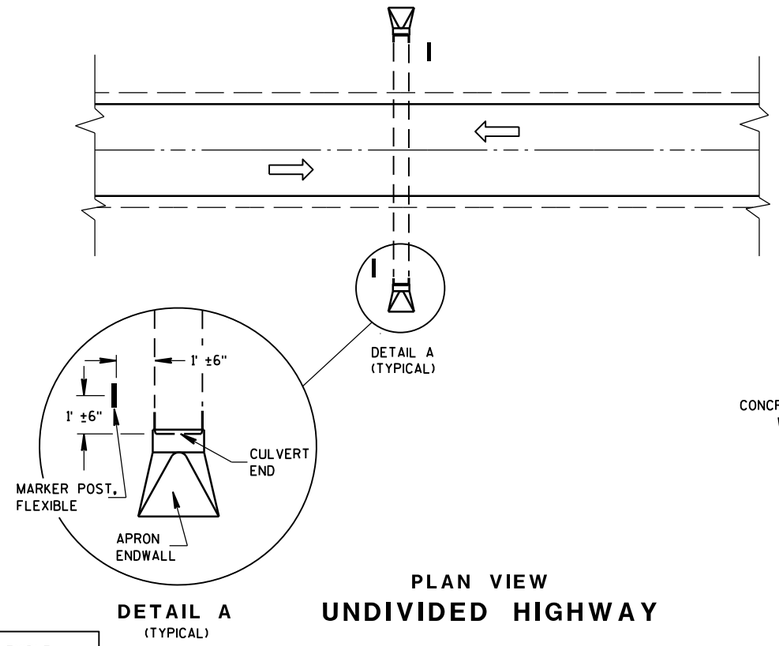
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 45-4L



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

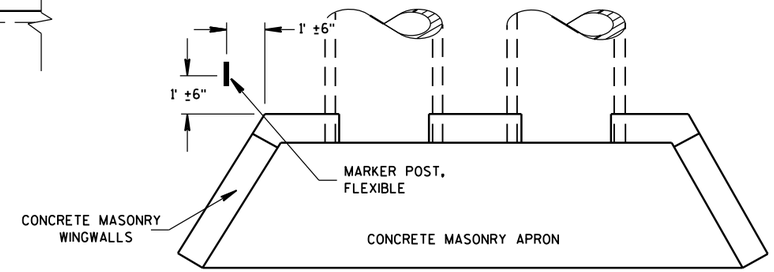
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

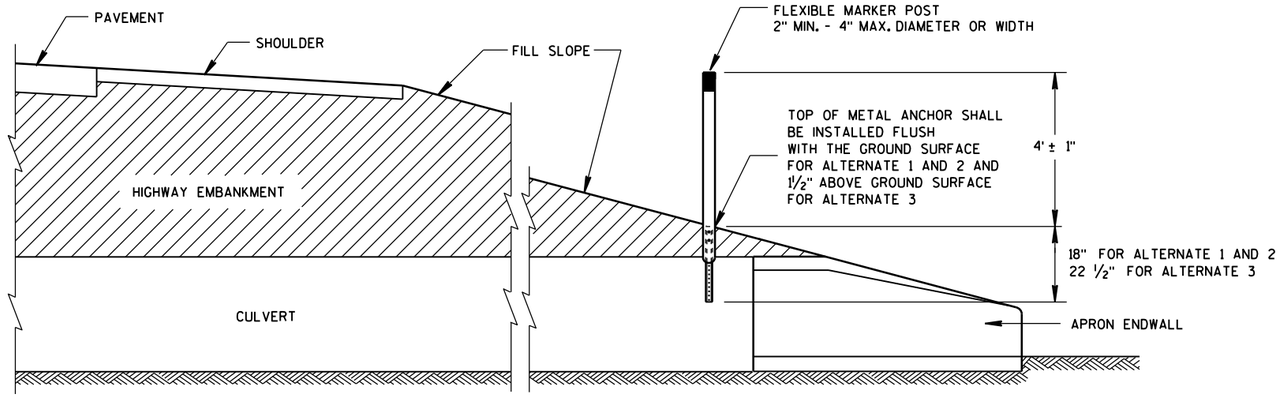
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

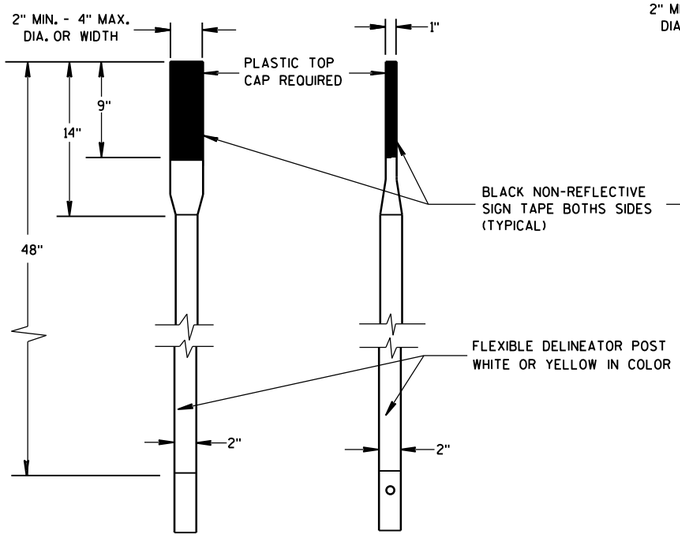
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

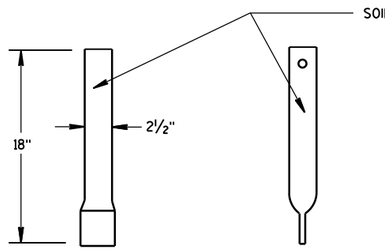
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S.D.D. 15 A 3-2a

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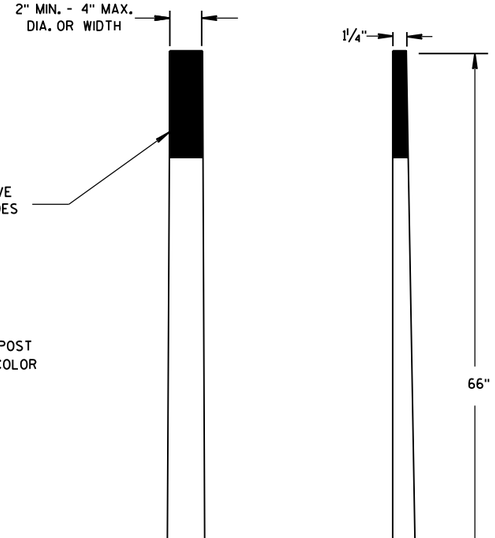
S.D.D. 15 A 3-2a





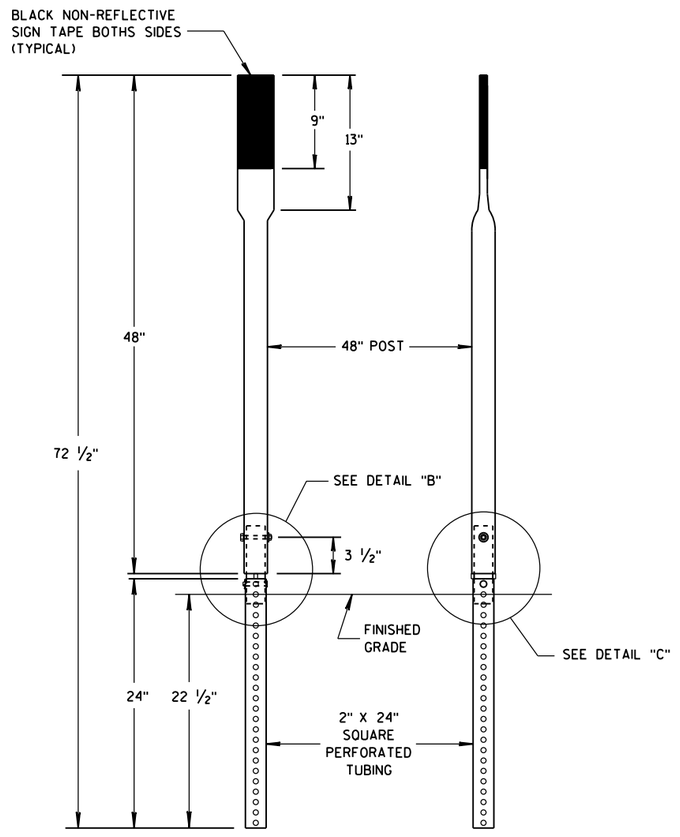
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

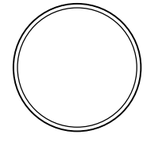
ALTERNATE 2



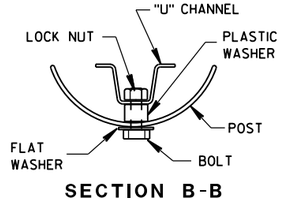
FRONT VIEW SIDE VIEW

ALTERNATE 3

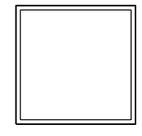
FLEXIBLE MARKER POSTS



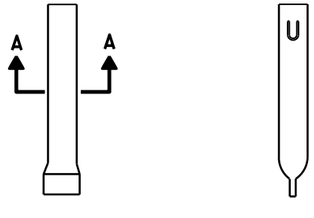
SECTION A-A



SECTION B-B

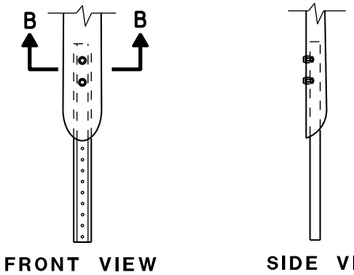


SECTION C-C



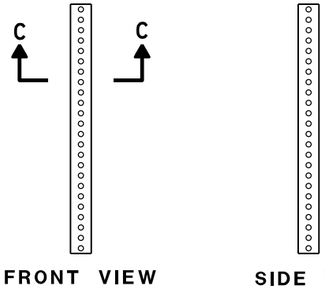
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

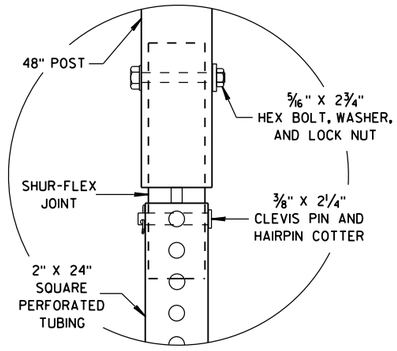
ALTERNATE 2



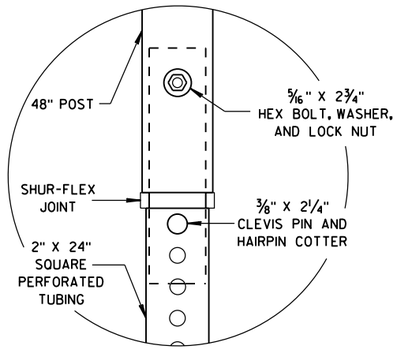
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

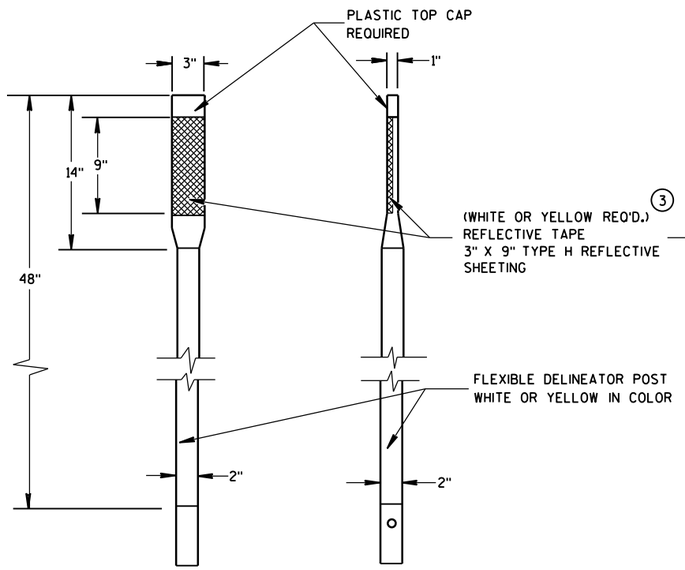
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

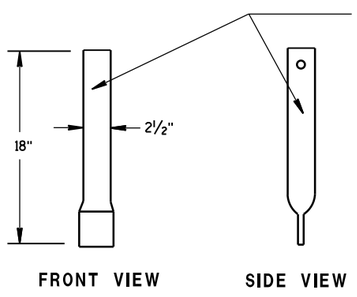
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S.D.D. 15 A 3-2b

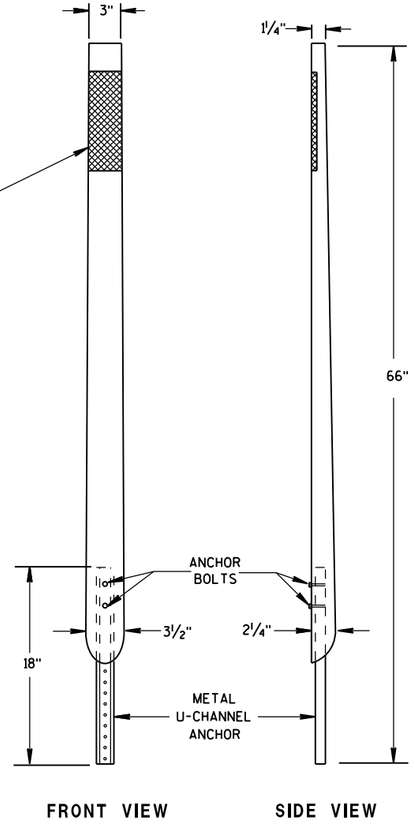
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S.D.D. 15 A 3-2b

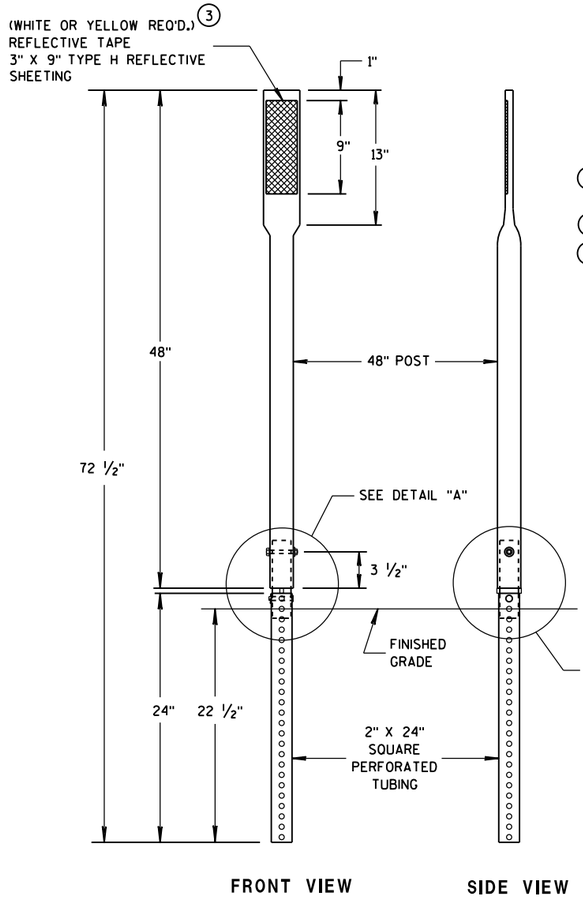




ALTERNATE 1



ALTERNATE 2



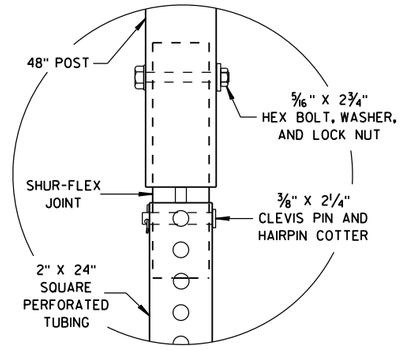
ALTERNATE 3

FLEXIBLE DELINEATOR POSTS

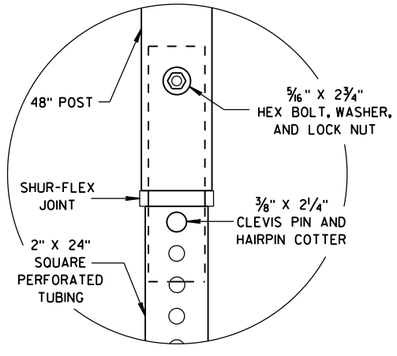
GENERAL NOTES

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

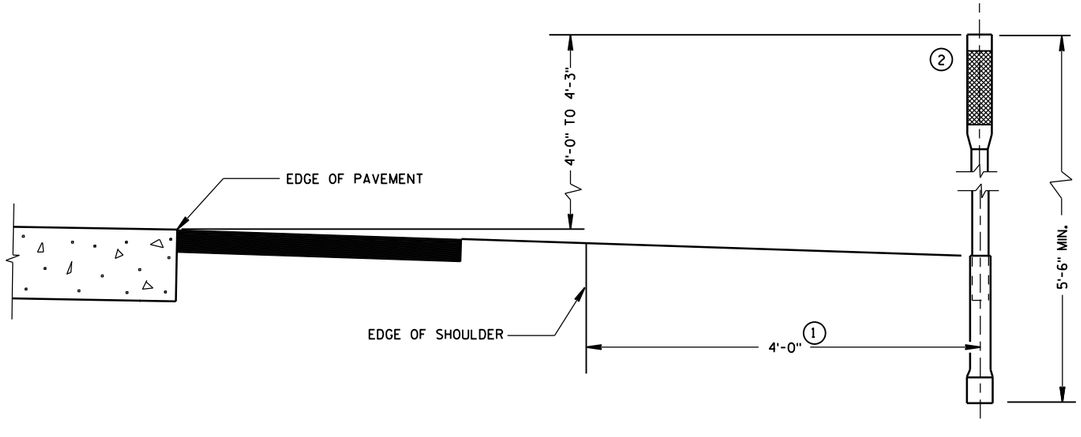
1. DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
2. EITHER ALTERNATE NO. 1, NO. 2 OR NO. 3 MAY BE FURNISHED.
3. AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

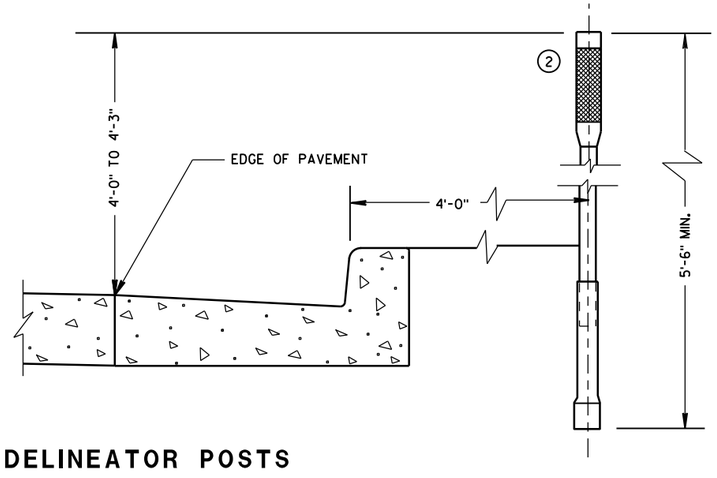


DETAIL A



DETAIL B





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-26-2012 DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

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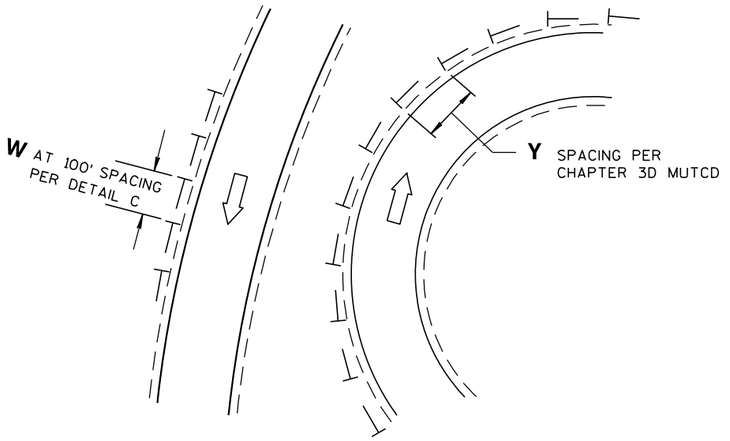
S.D.D. 15 A 4-2

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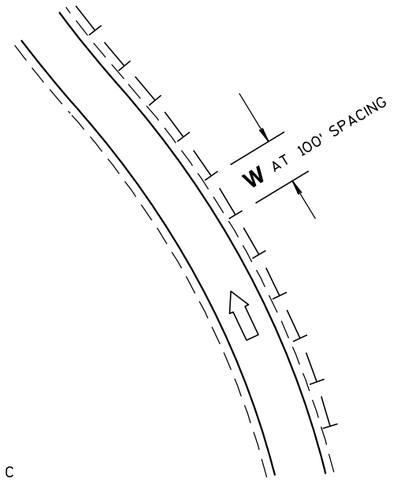
S.D.D. 15 A 4-2

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



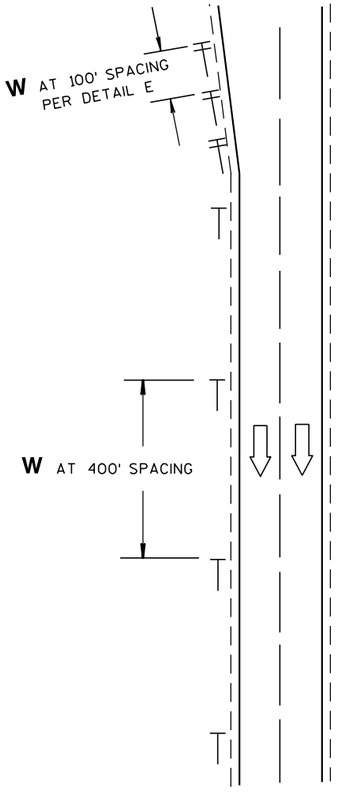
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



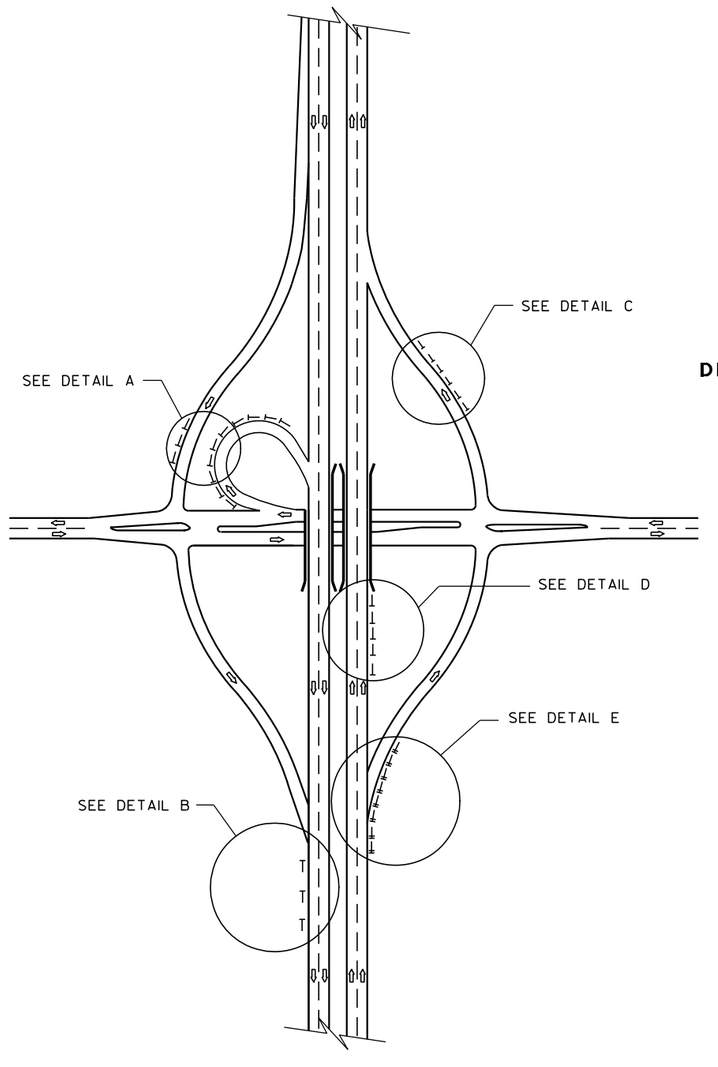
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

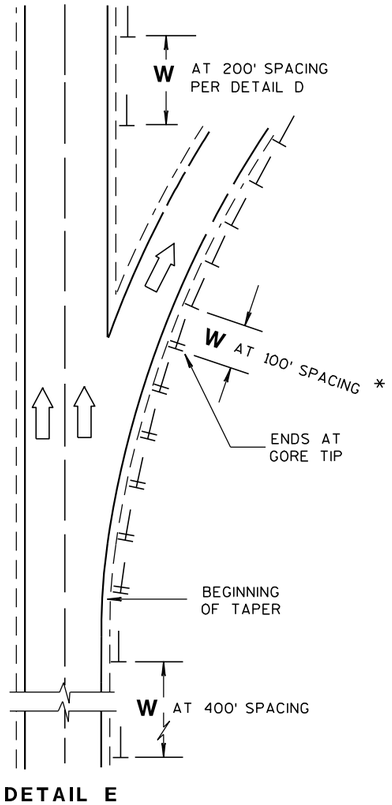
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



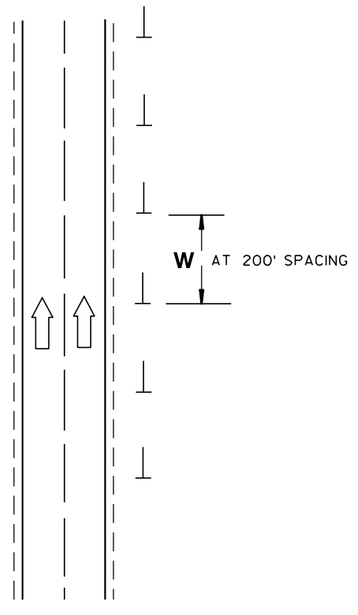
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

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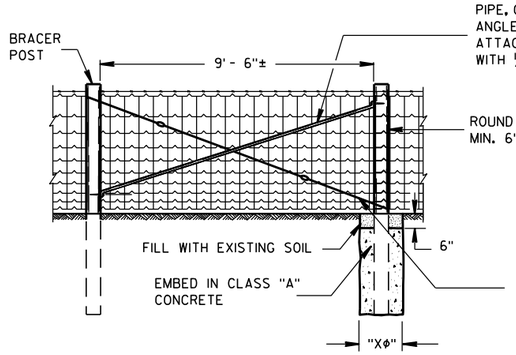
S.D.D. 15 A 6-2

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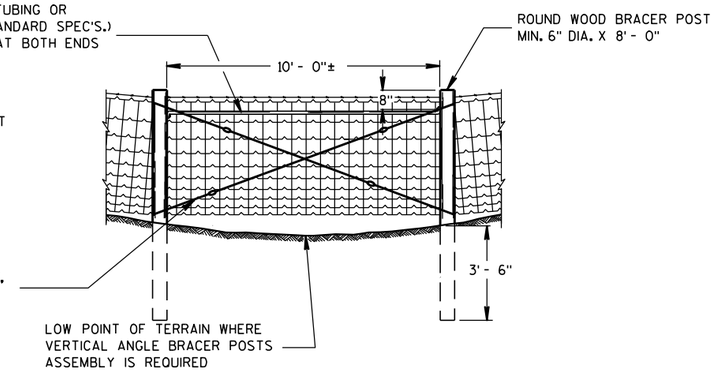
S.D.D. 15 A 6-2

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

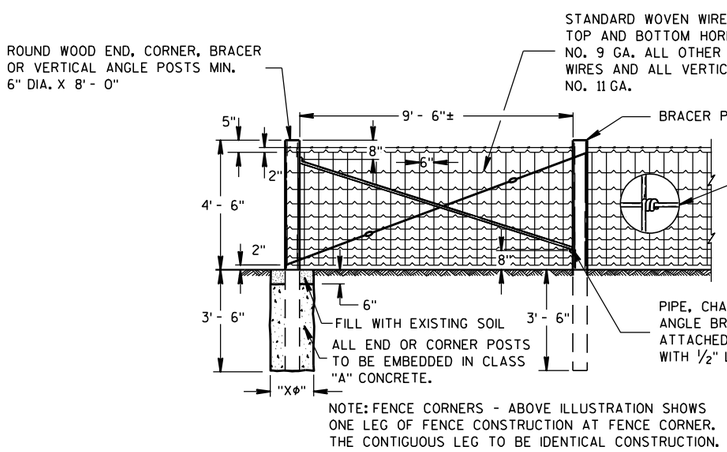
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

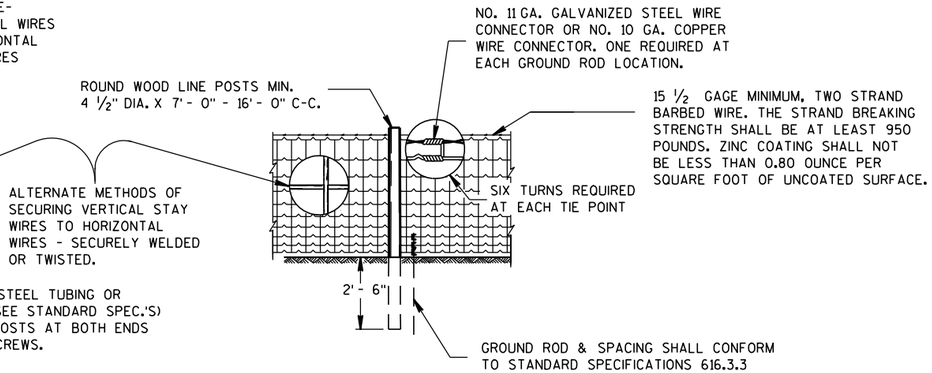
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



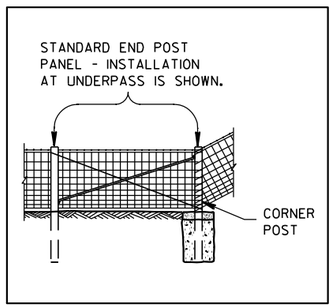
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

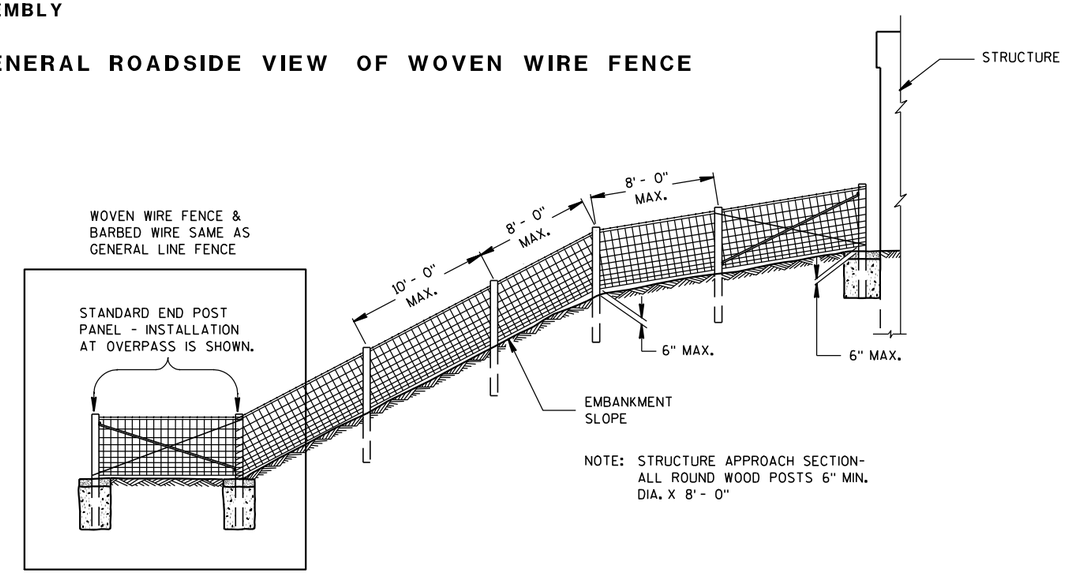


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

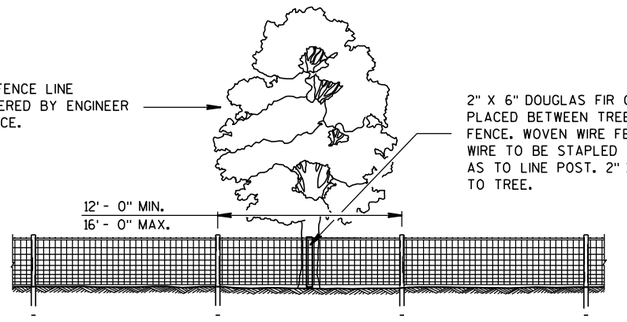
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

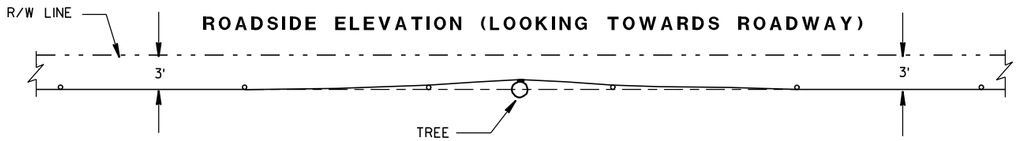
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

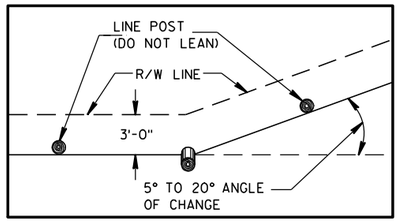


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

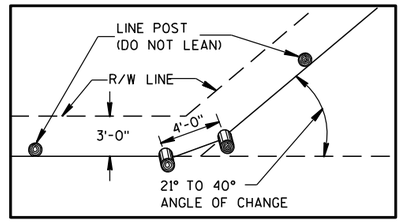


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

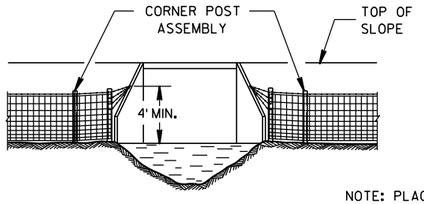


PLAN VIEW
DOUBLE POST CORNER

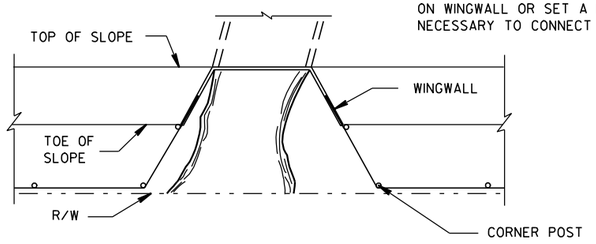
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

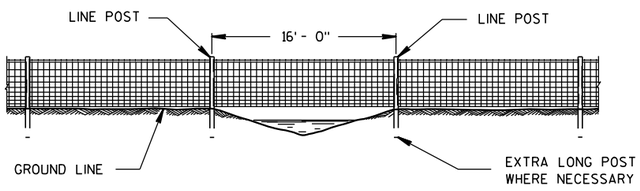
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



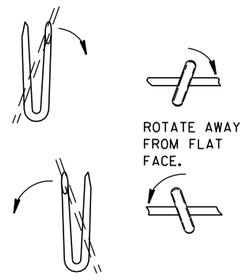
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

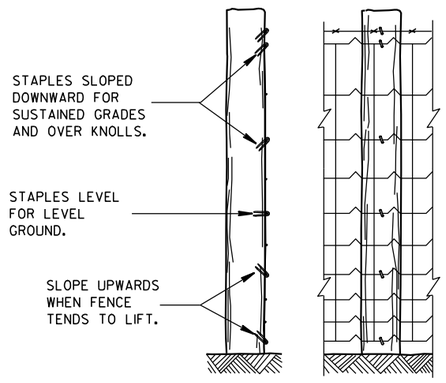


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

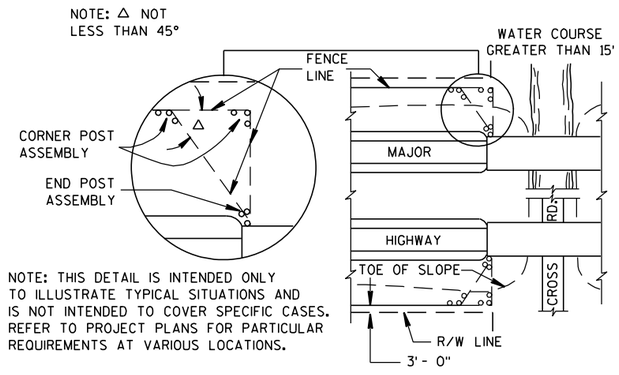


END ELEVATION

FARM SIDE ELEVATION

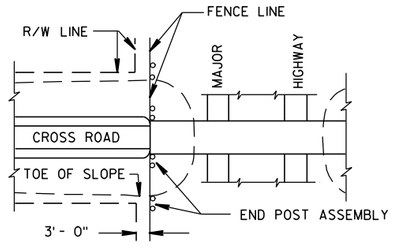
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

FENCE LOCATION AT STRUCTURES

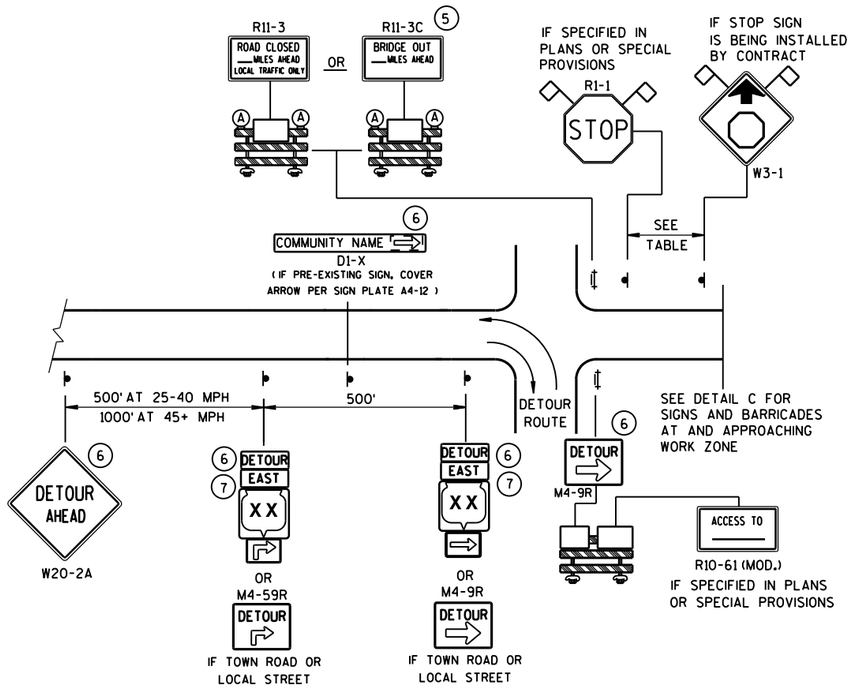
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

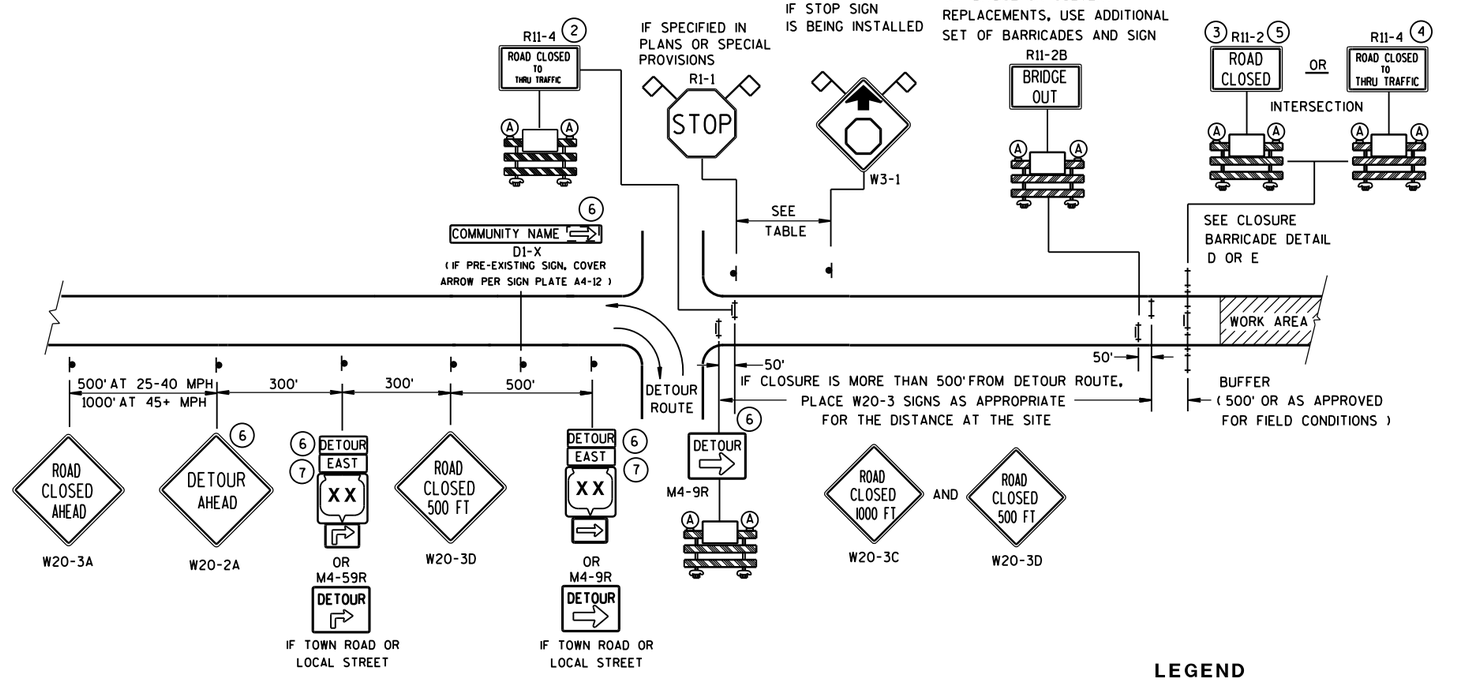
6

S.D.D. 15 B 1-8b



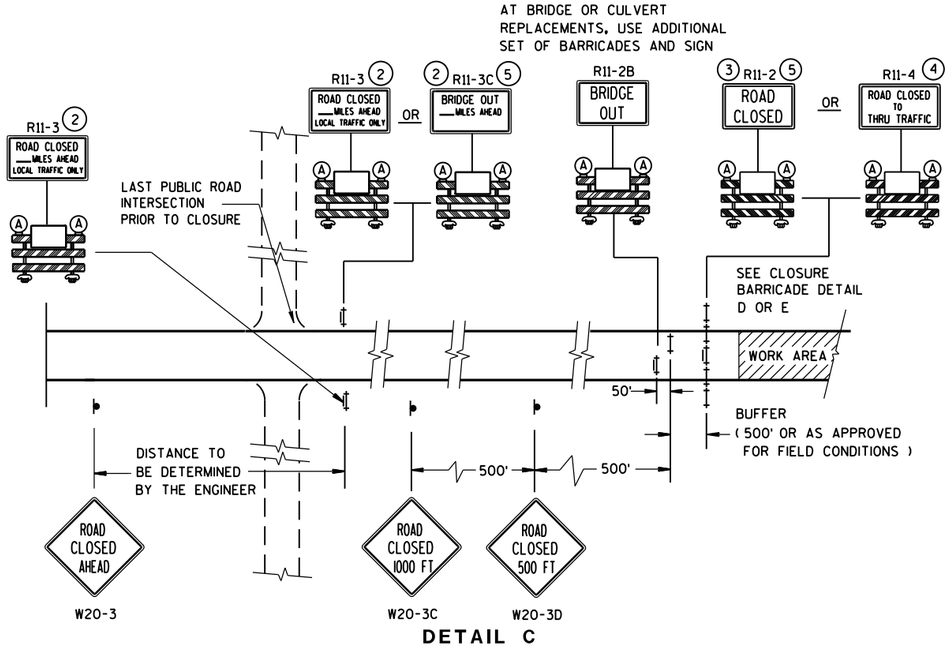
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

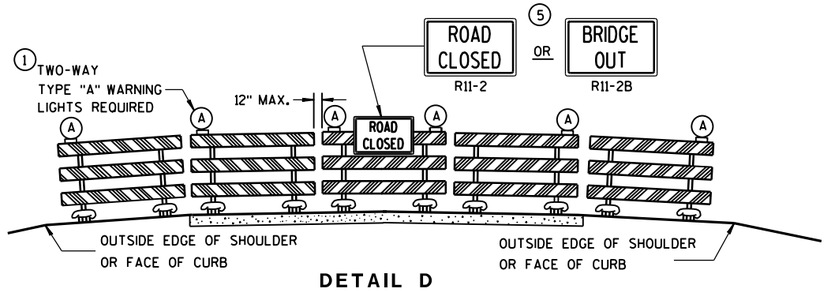
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

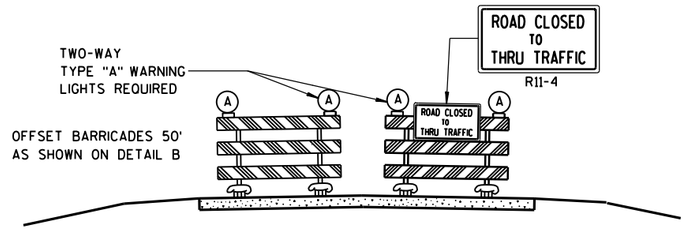
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

FHWA

6

S.D.D. 15 C 2-6b

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

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.

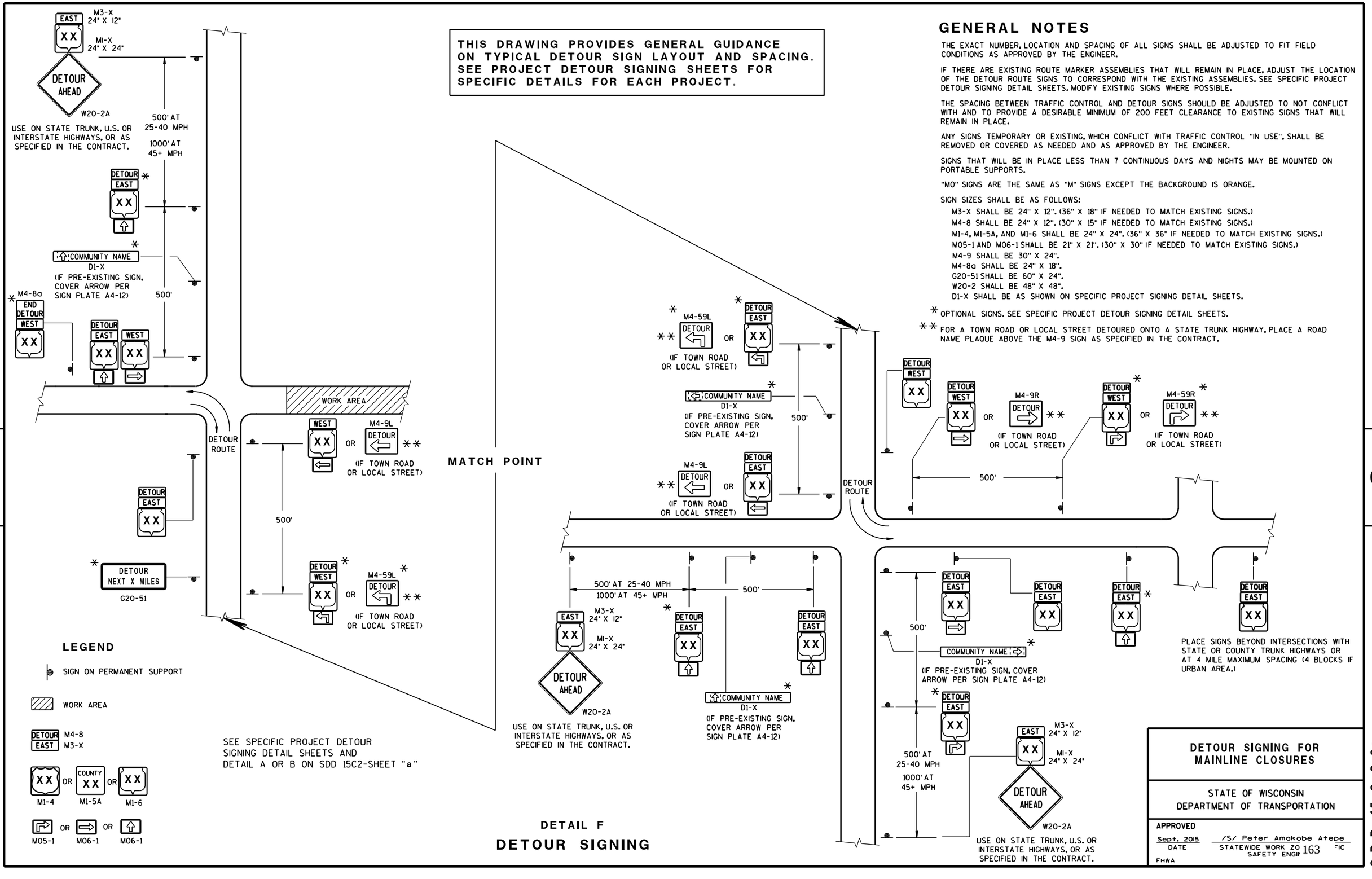
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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". (30" X 15" 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.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 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.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

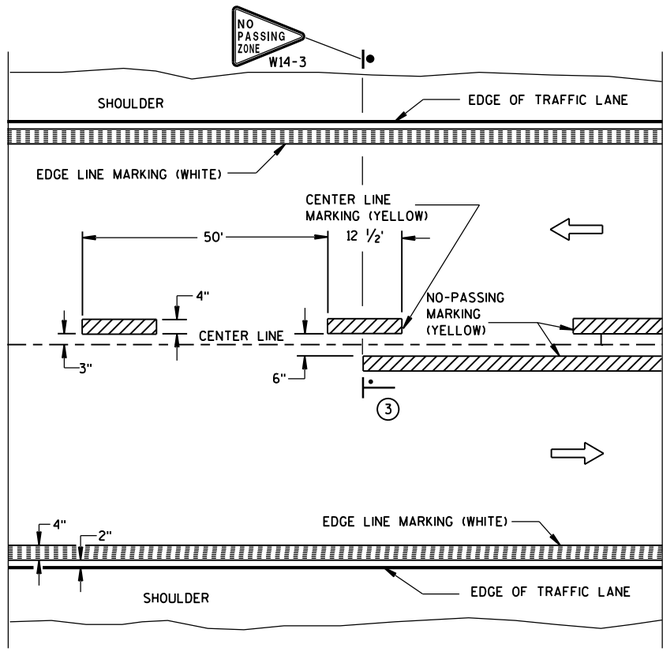
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC

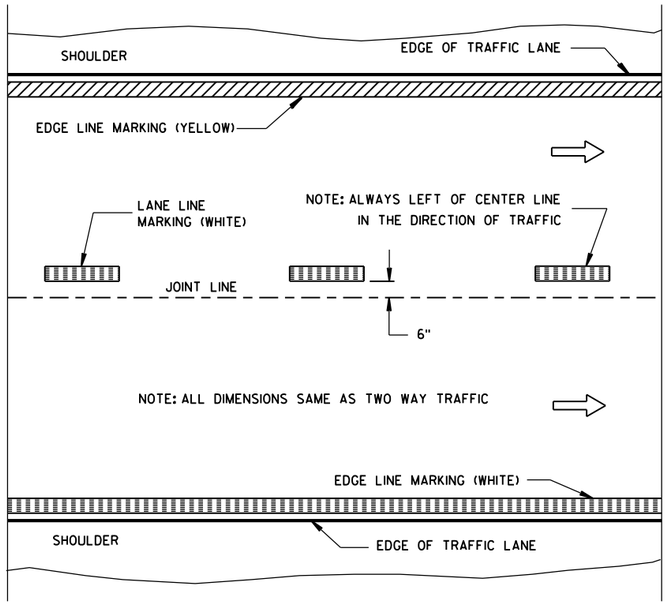
FHWA

S.D.D. 15 C 2-6c

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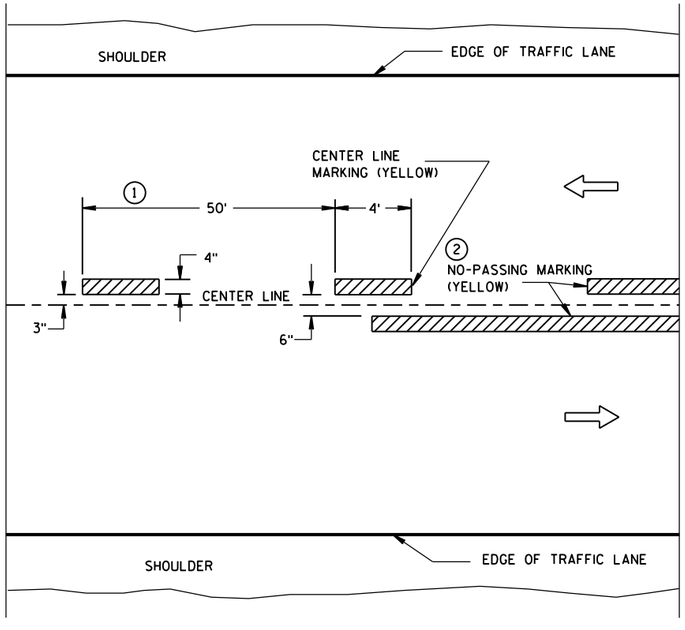


TWO WAY TRAFFIC

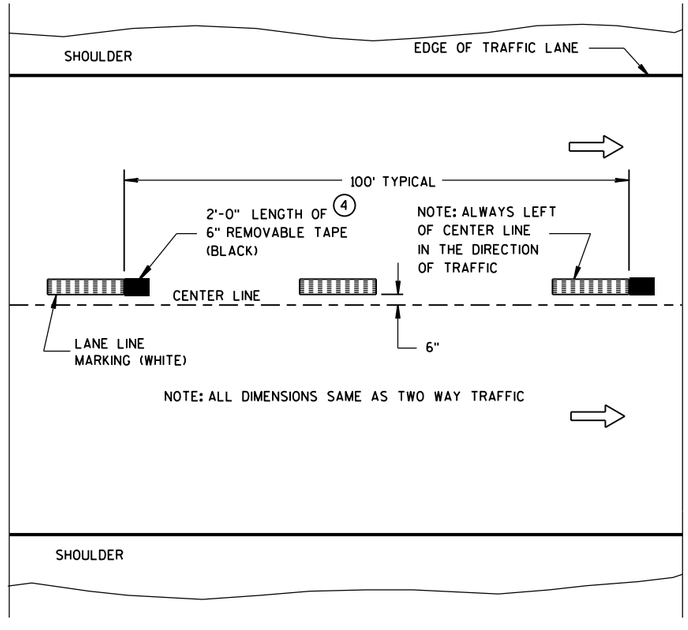


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

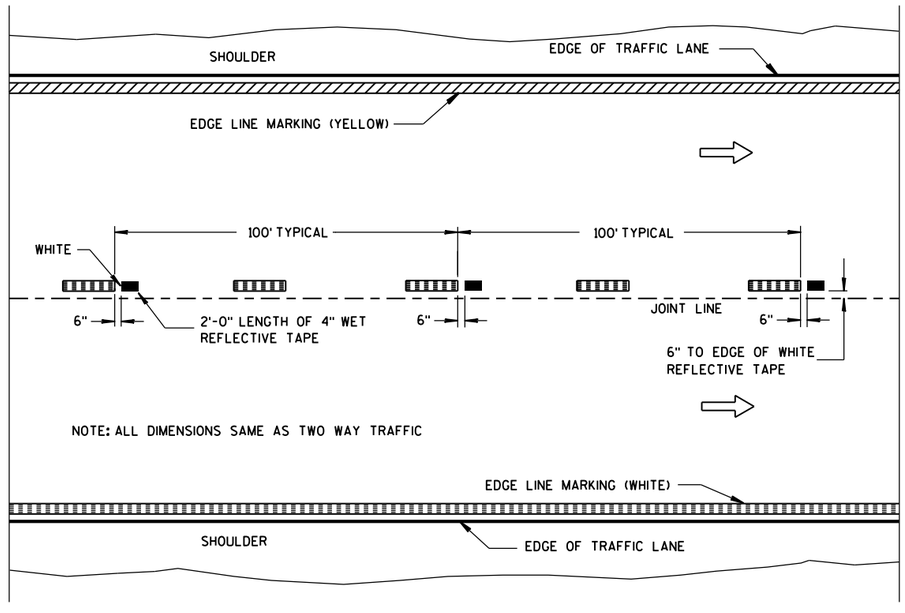
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

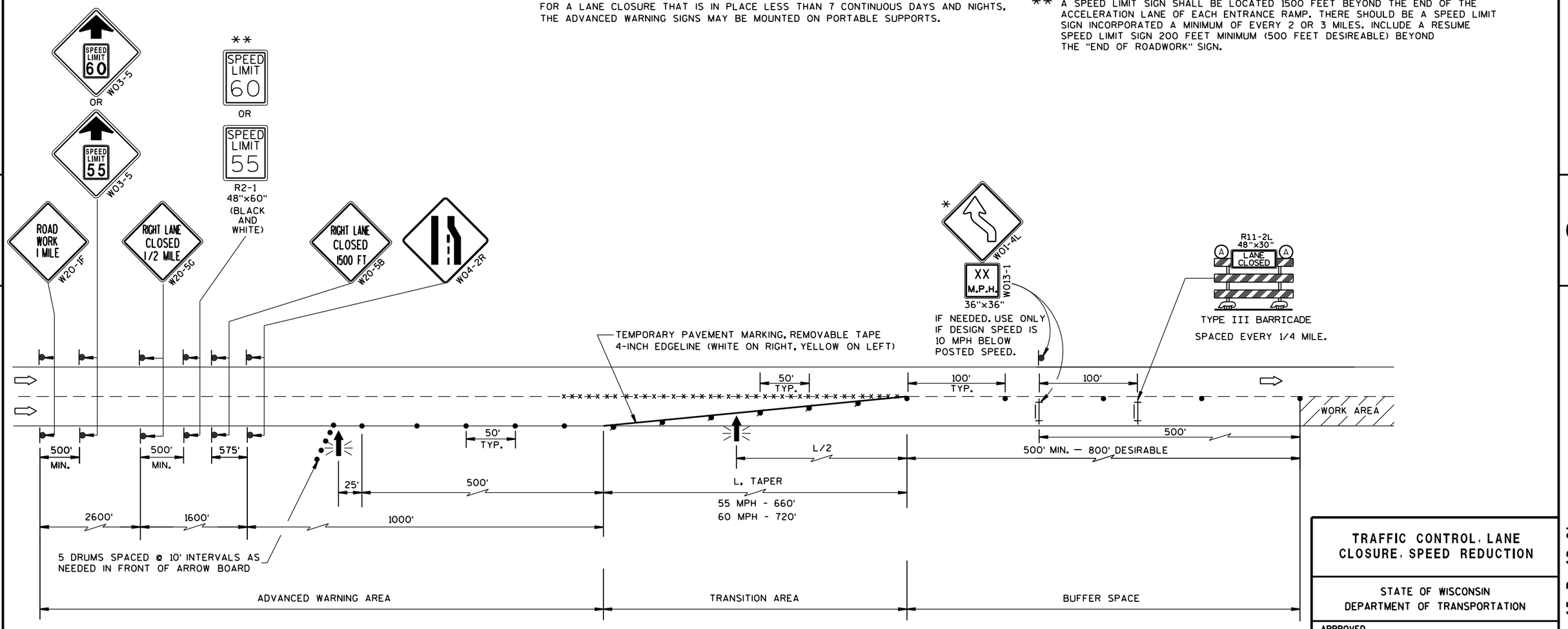
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 12-6b

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

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

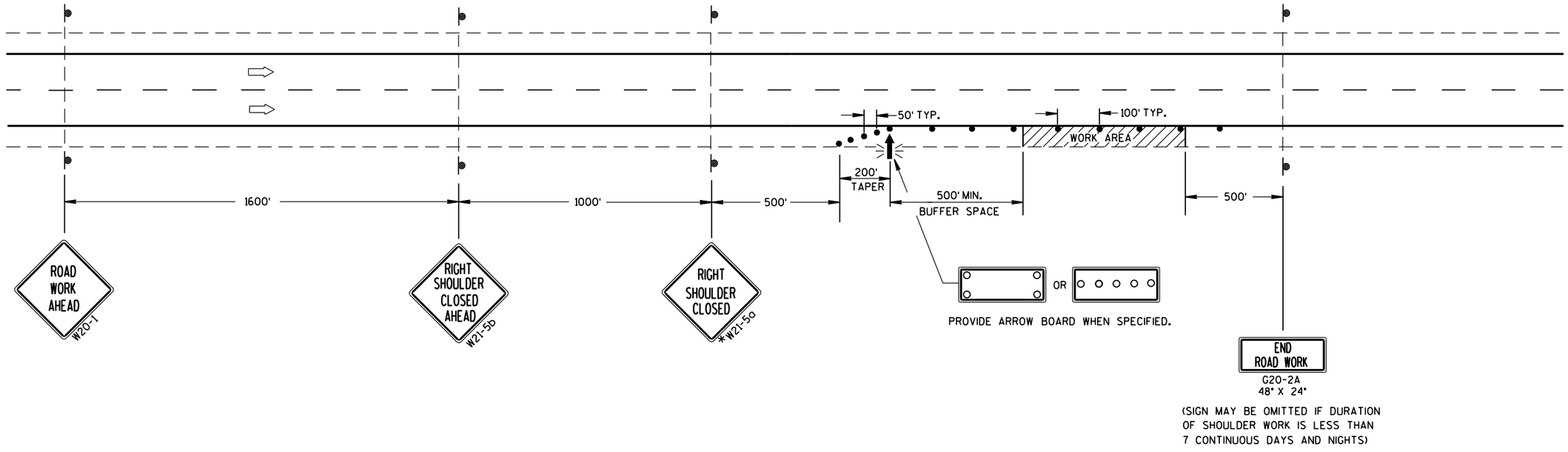
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

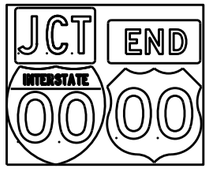
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S.D.D. 15 D 27-2

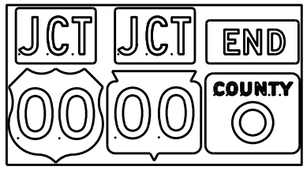
TYPICAL ASSEMBLIES



J1-1



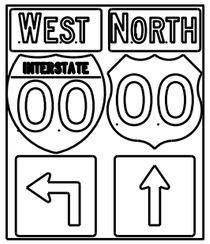
J1-2



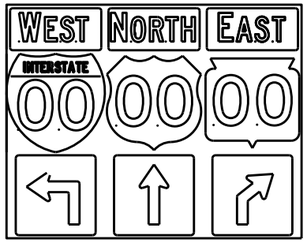
J1-3



J2-1



J2-2

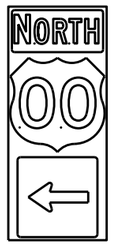


J2-3

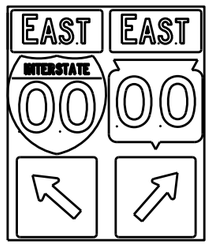


JV

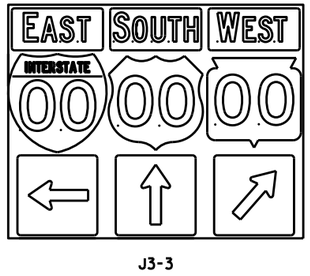
(Typical Vertical J-Assembly
See Note 10 and 11)



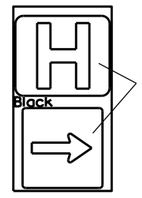
J3-1



J3-2



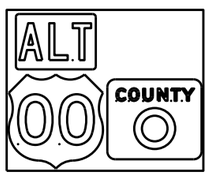
J3-3



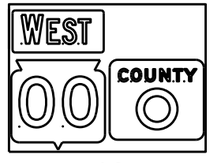
JH-1



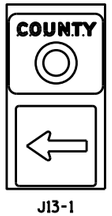
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

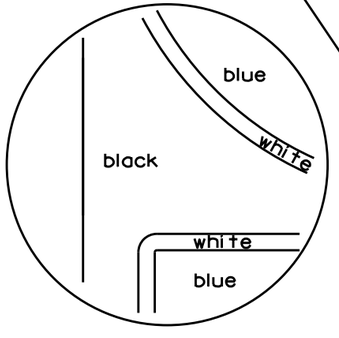


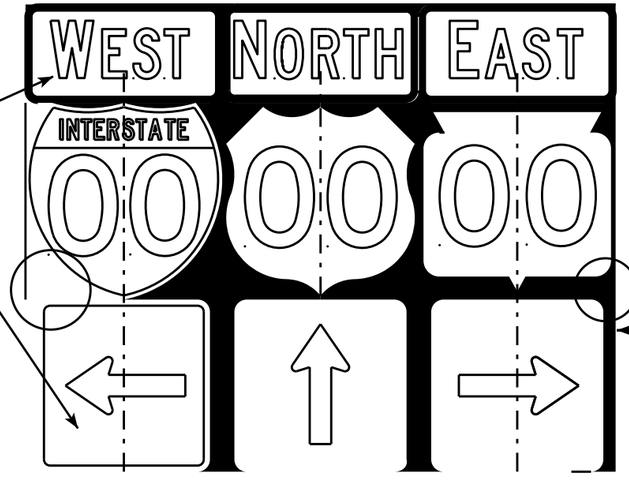
J23-1

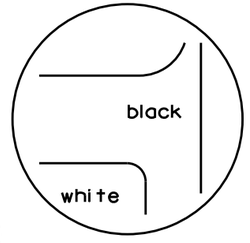


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

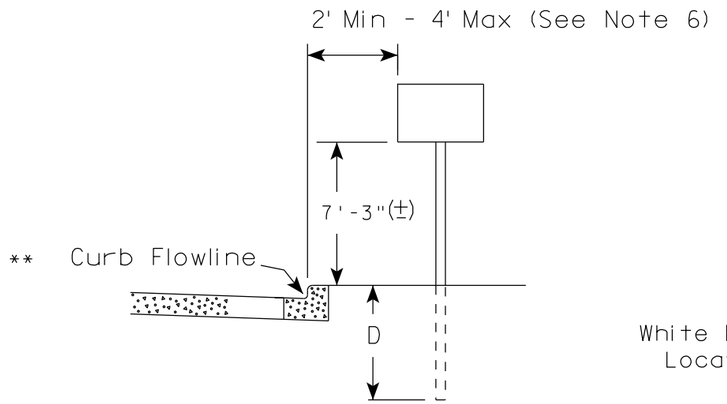
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

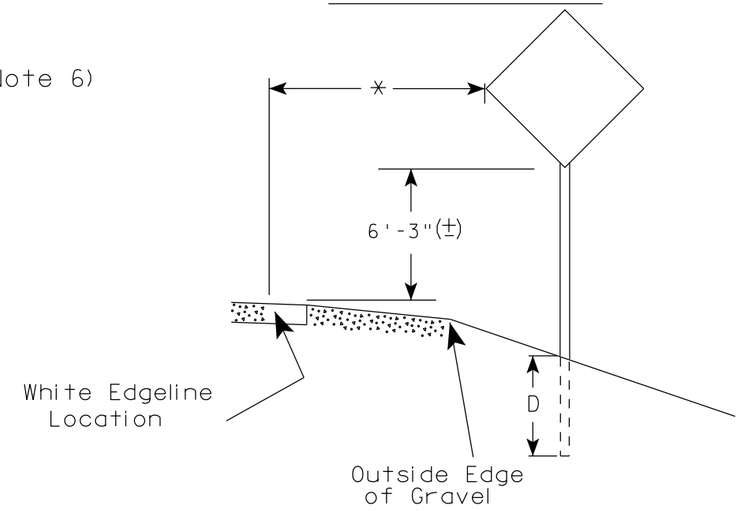
PROJECT NO: SHEET NO: E

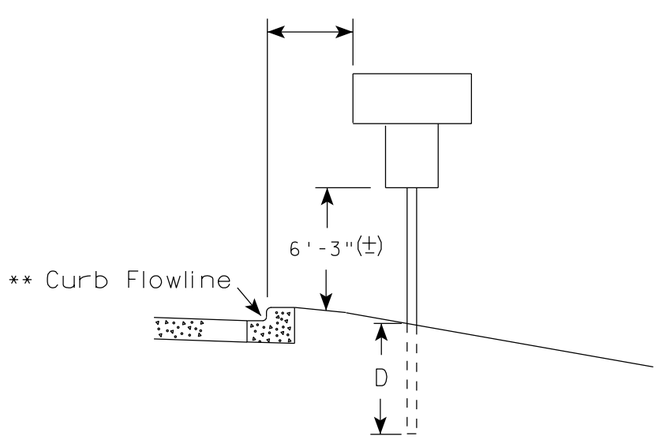
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

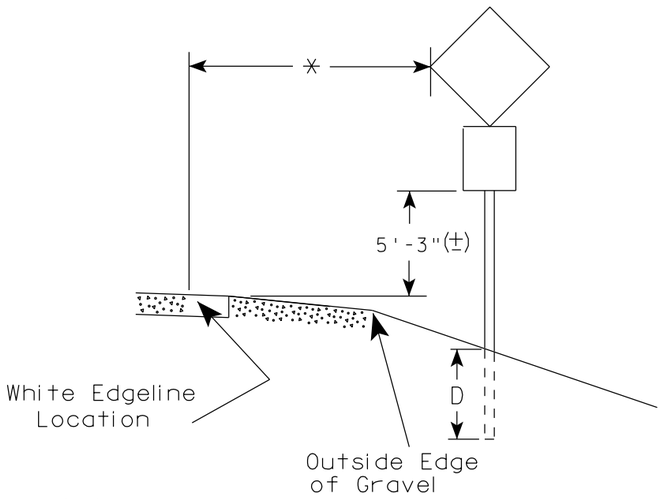
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

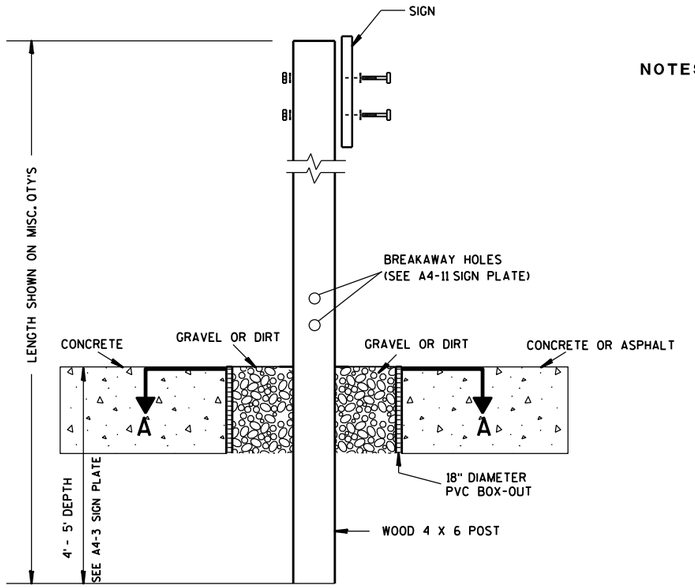
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

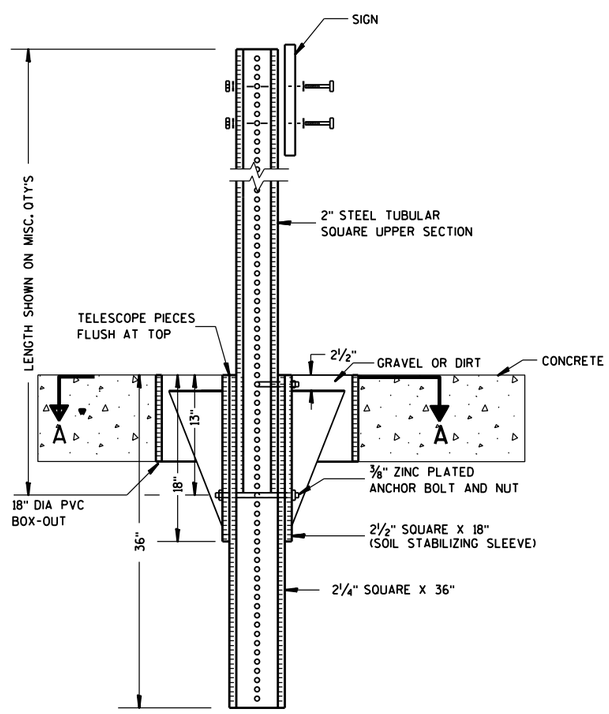
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

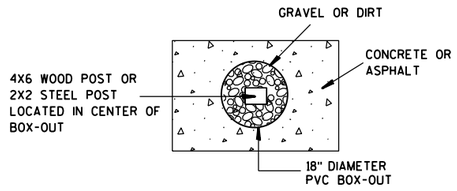
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

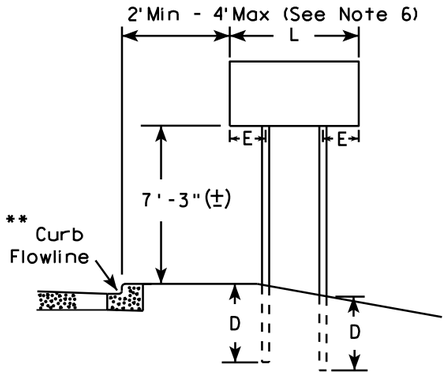
APPROVED Matthew R Rauch
for State Traffic Engineer

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

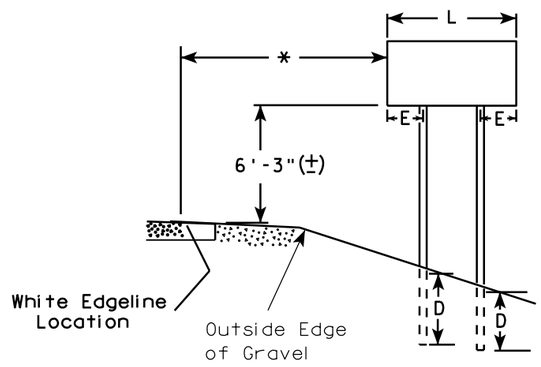
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

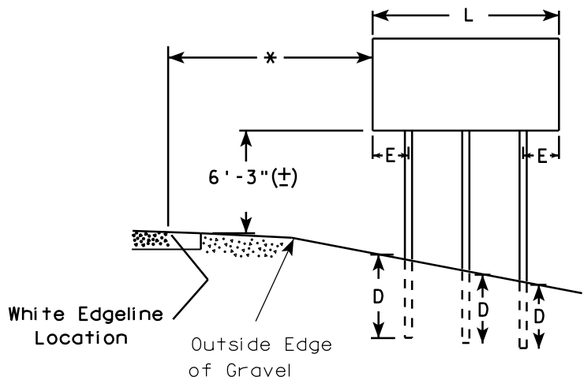
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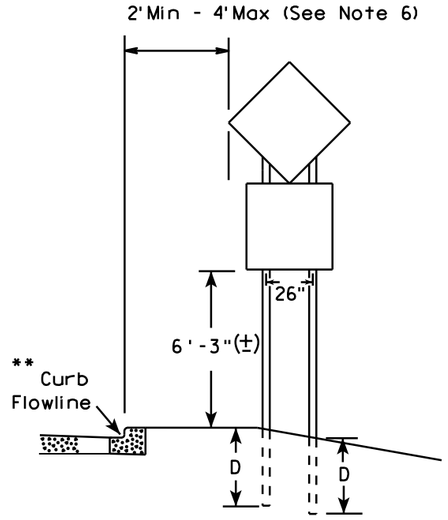
URBAN AREA



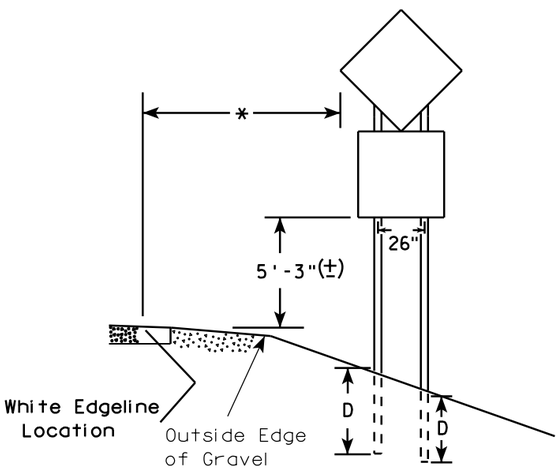
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

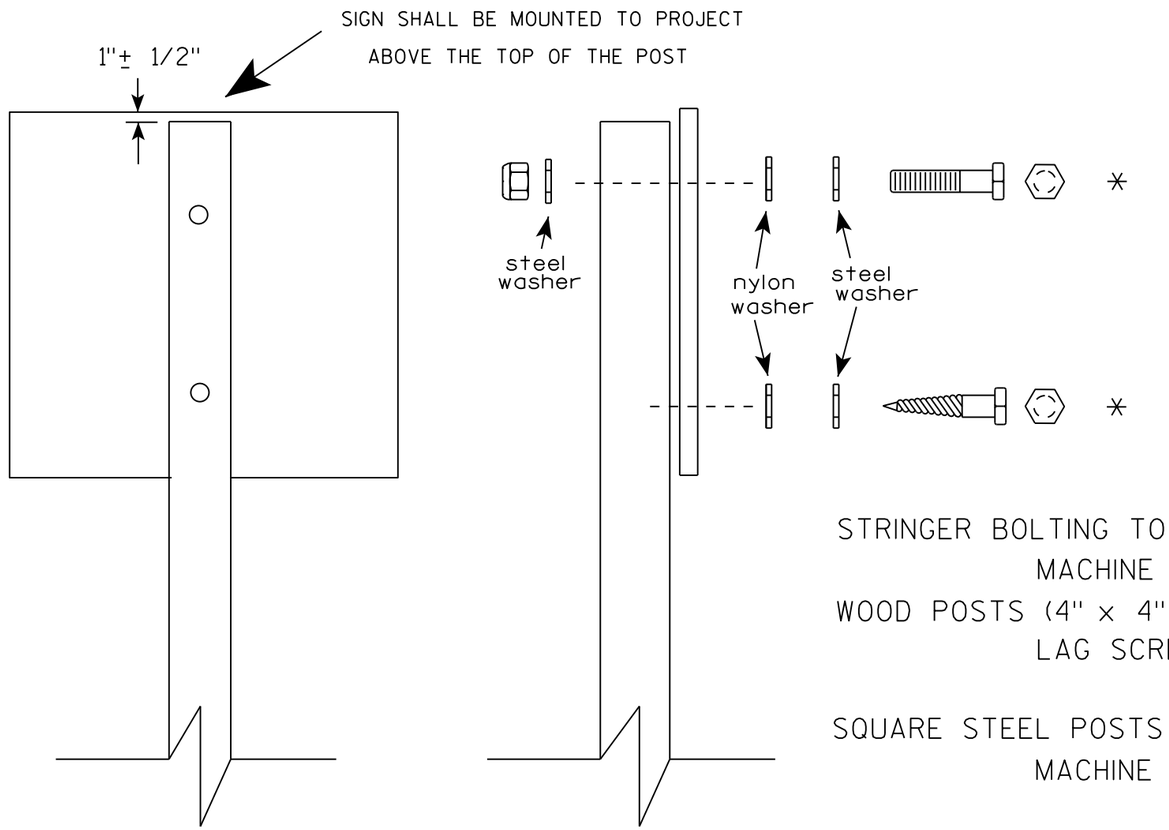
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14 170

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

7

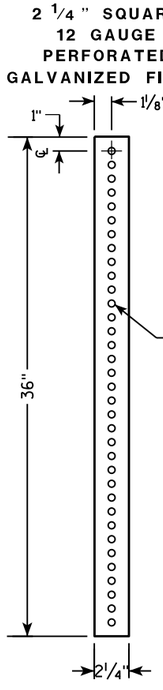
PROJECT NO:

SHEET NO: E

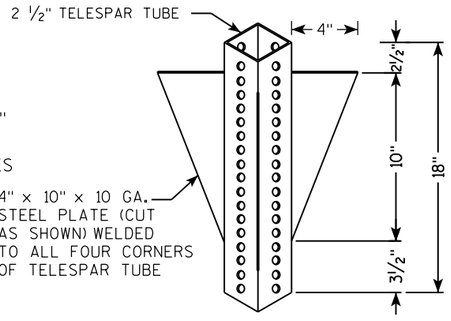
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

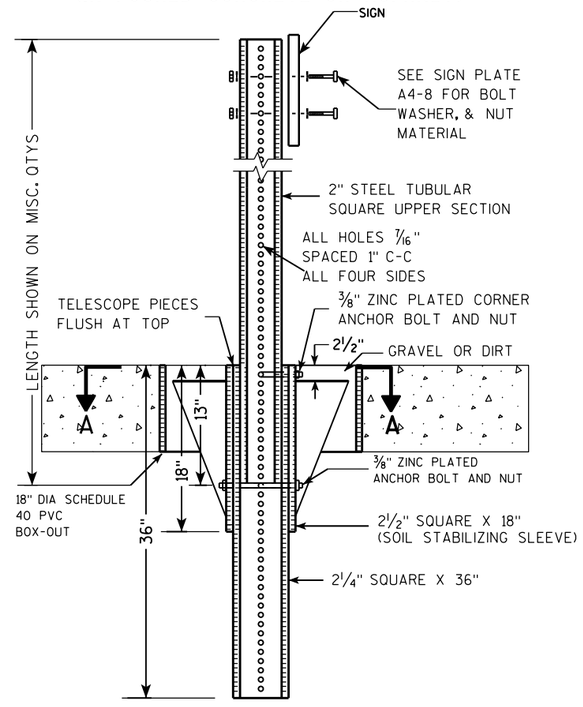
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



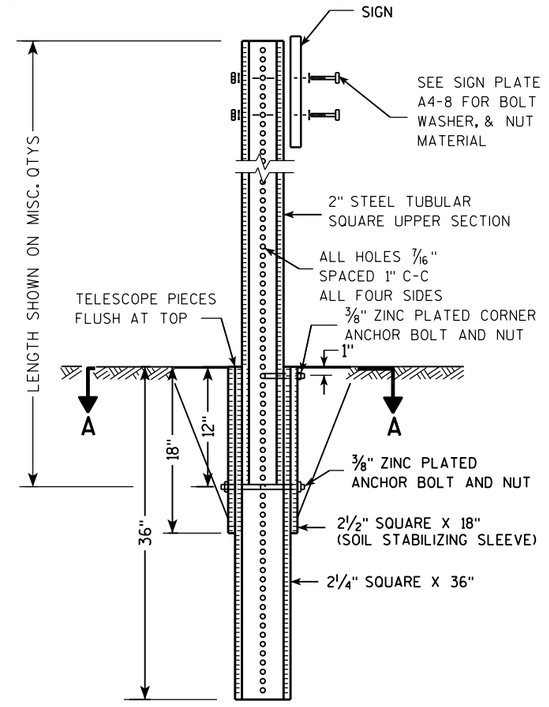
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

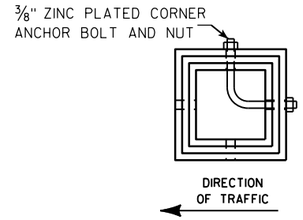


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

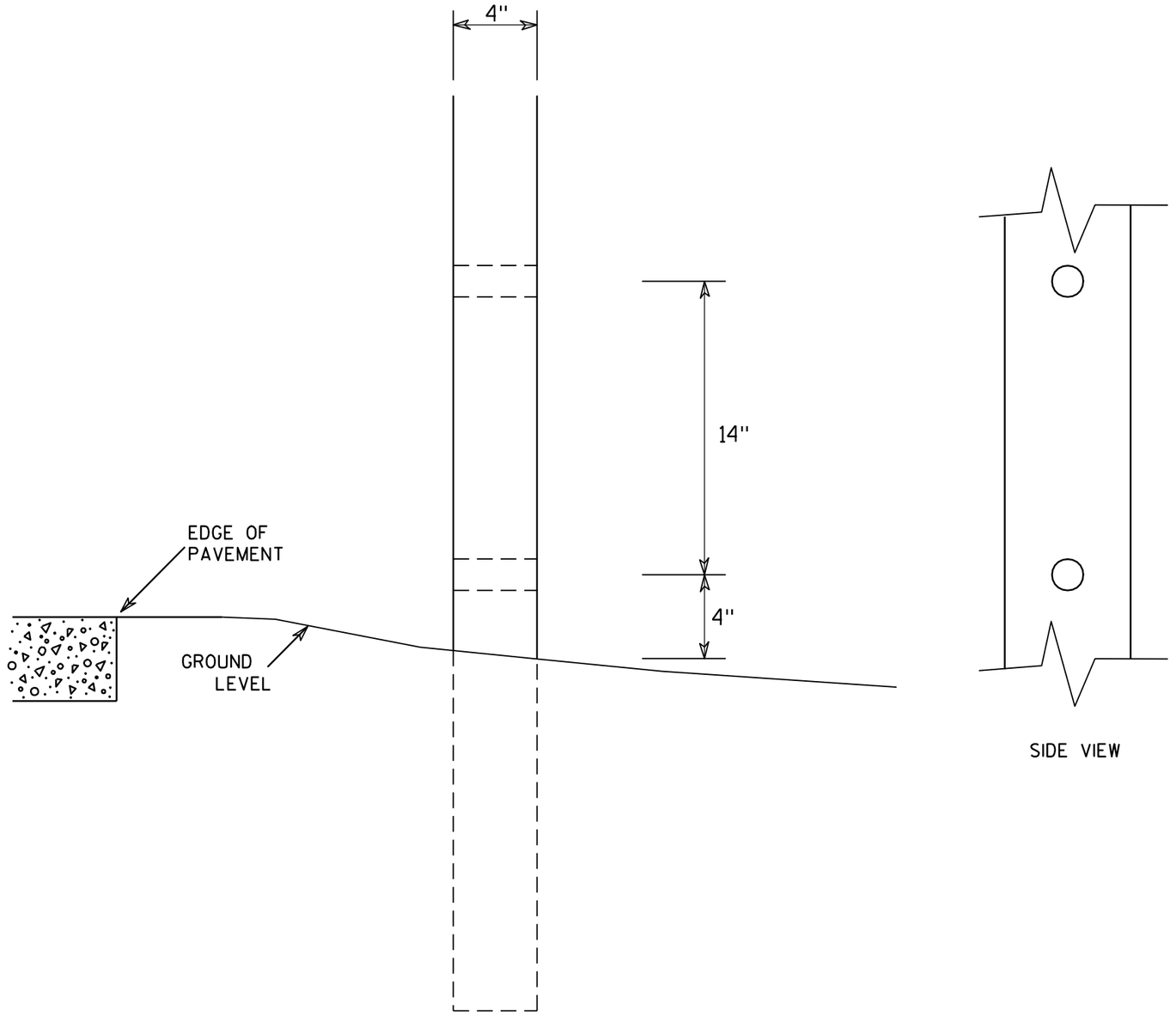
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

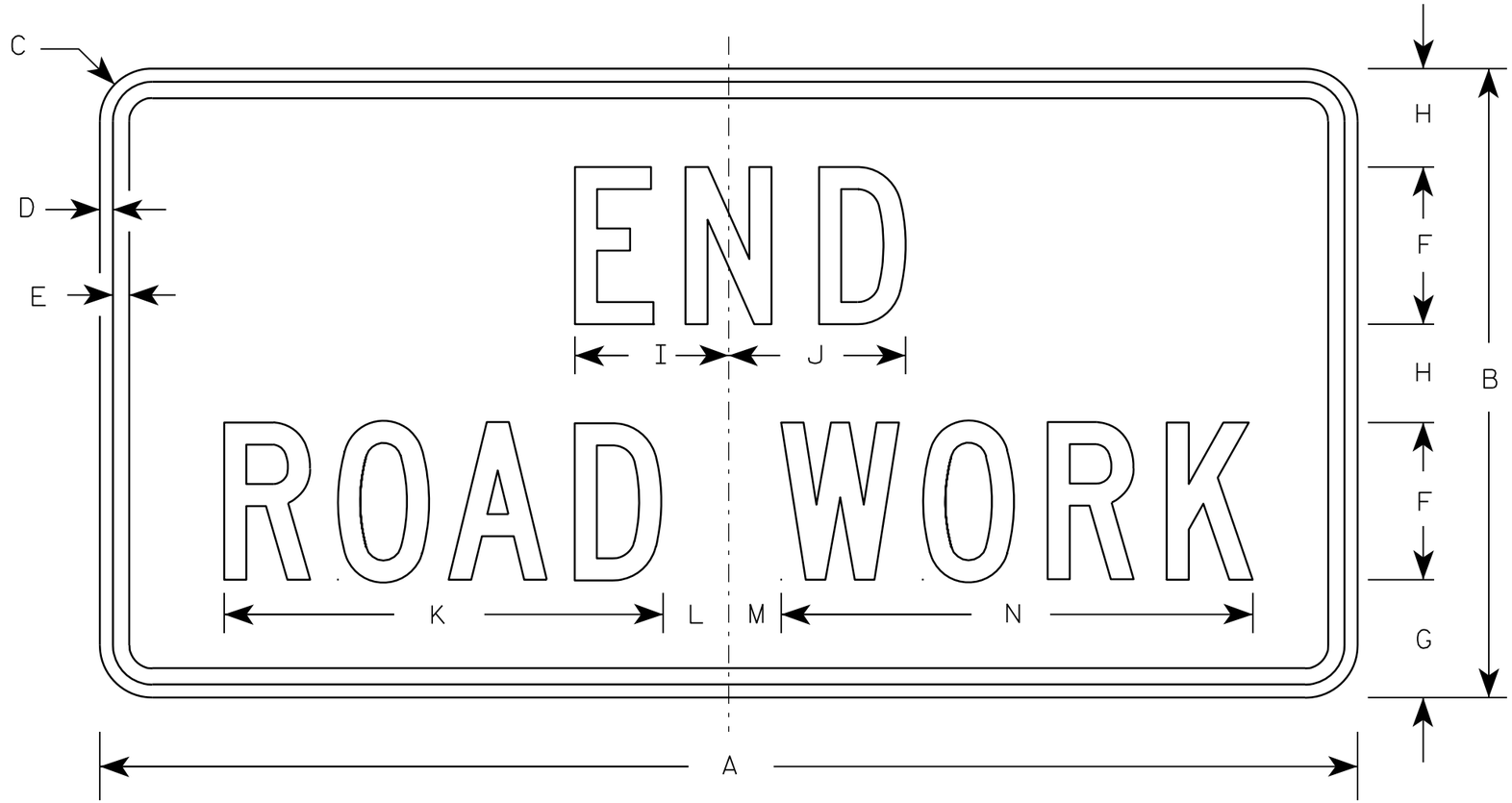
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 173	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

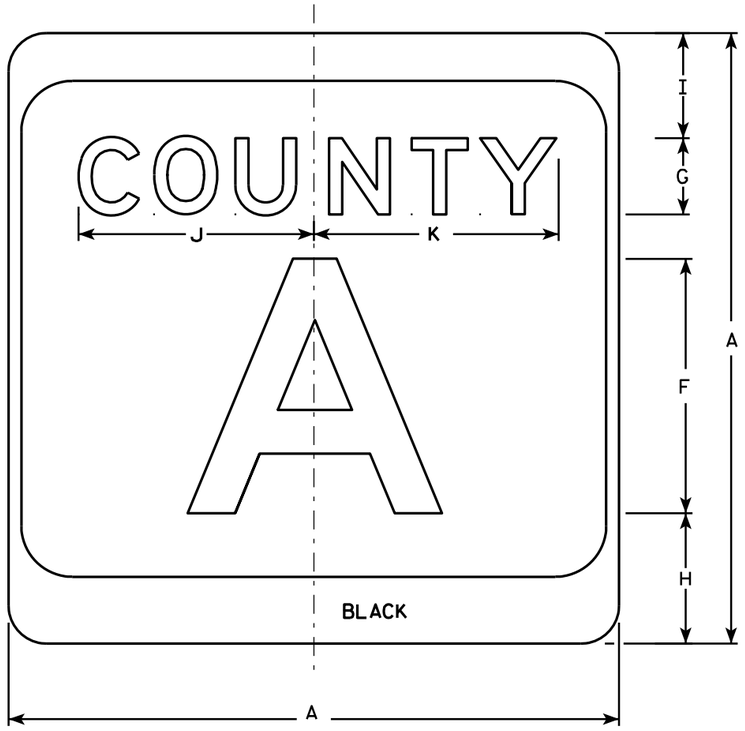
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

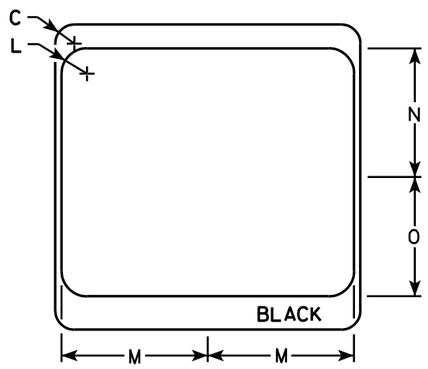
APPROVED Matthew R Rauch
for State Traffic Engineer

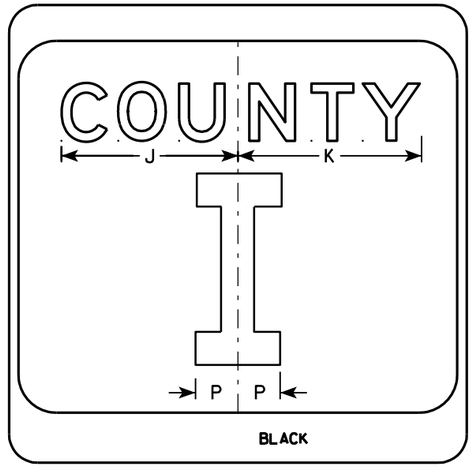
DATE 9/30/09 PLATE NO. G20-2A.8

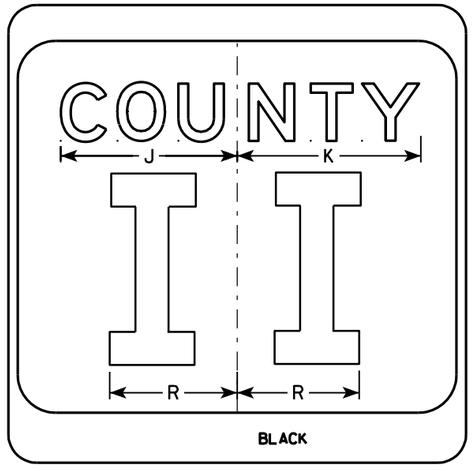
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 174	E



M1-5A







NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

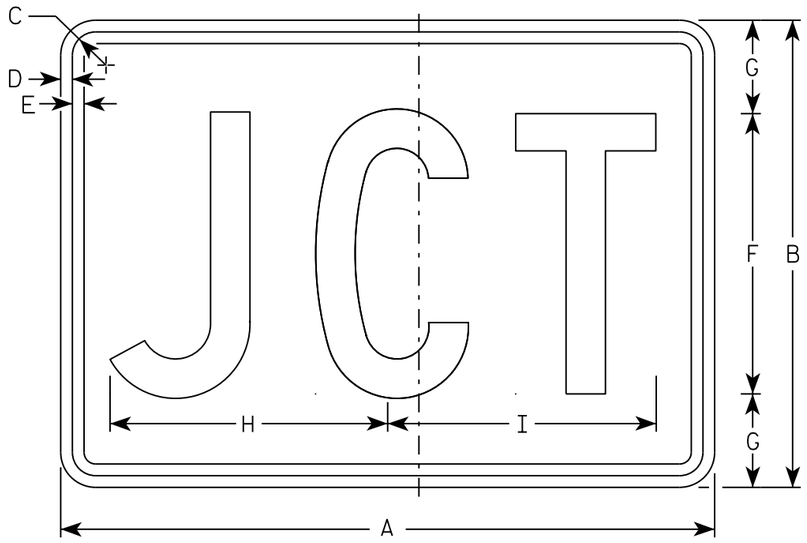
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

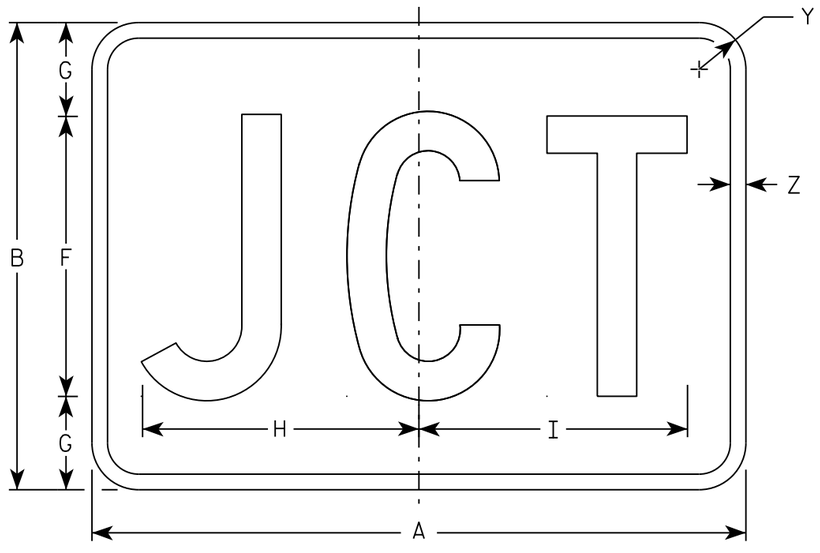
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 175	E



M2-1
MM2-1
MP2-1



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

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

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

STANDARD SIGN
M2-1

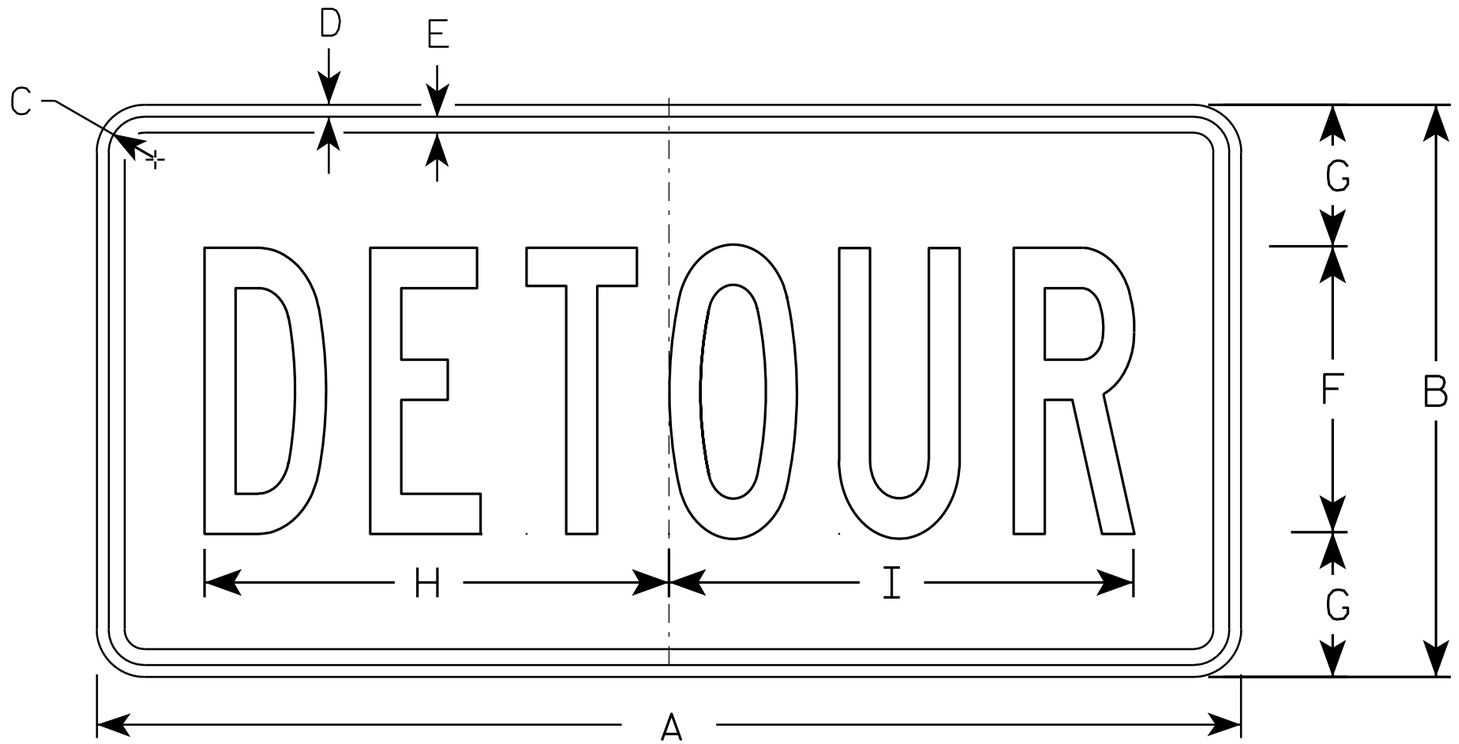
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 176 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

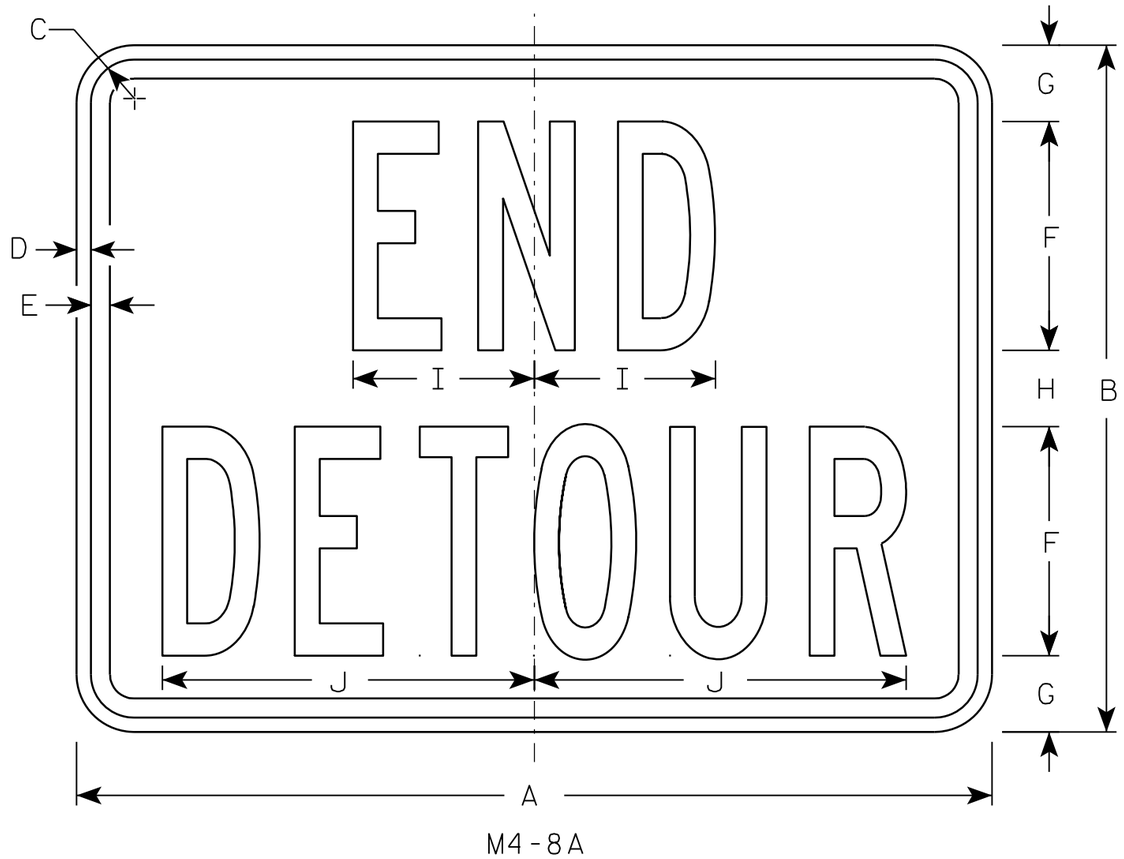
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

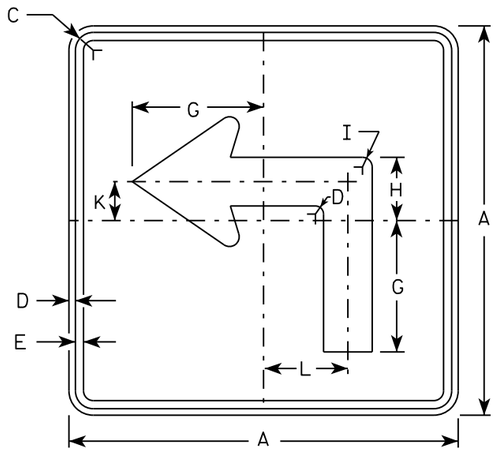
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

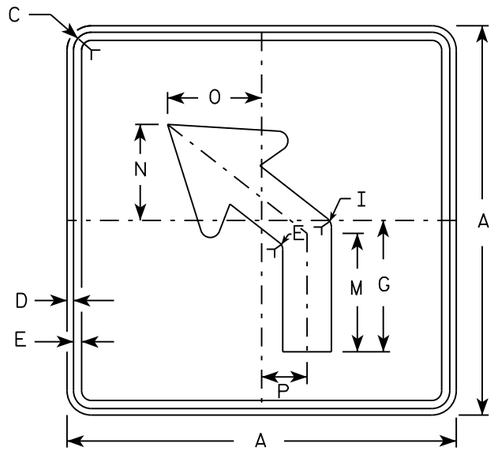
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

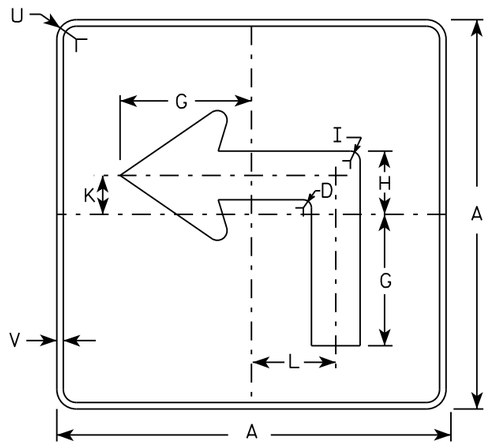
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



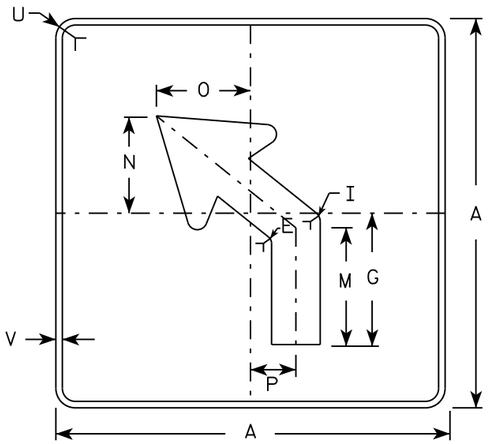
M5-1L
MM5-1L
MO5-1L
MP5-1L



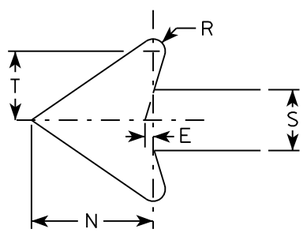
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

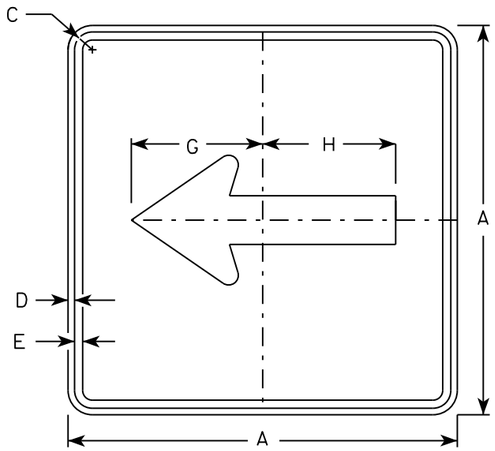
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

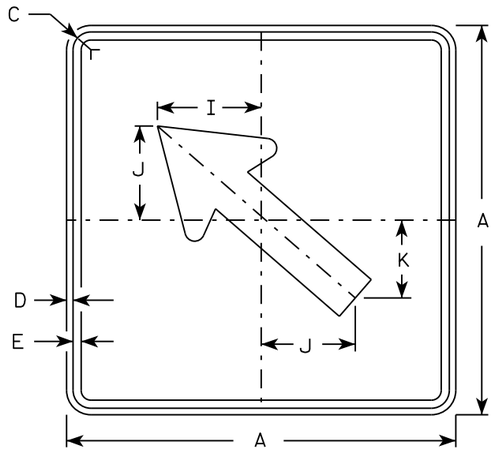
DATE 10/15/15 PLATE NO. M5-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



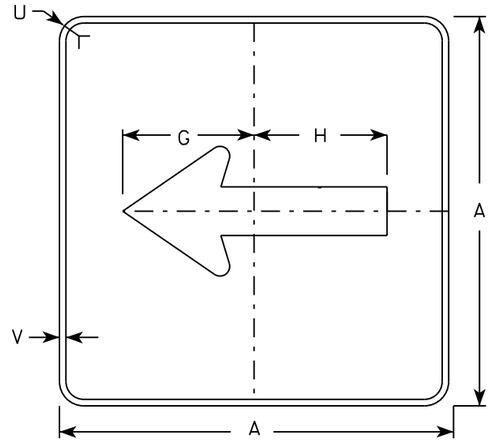
M6-1
MM6-1
MO6-1
MP6-1



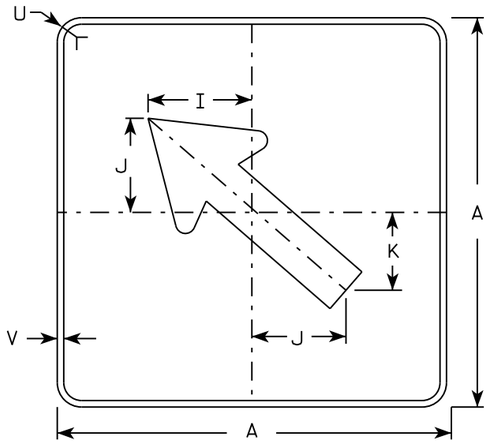
M6-2
MM6-2
MO6-2
MP6-2

NOTES

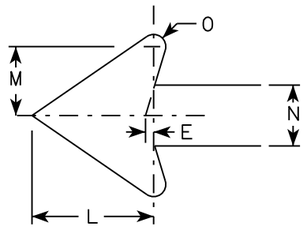
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

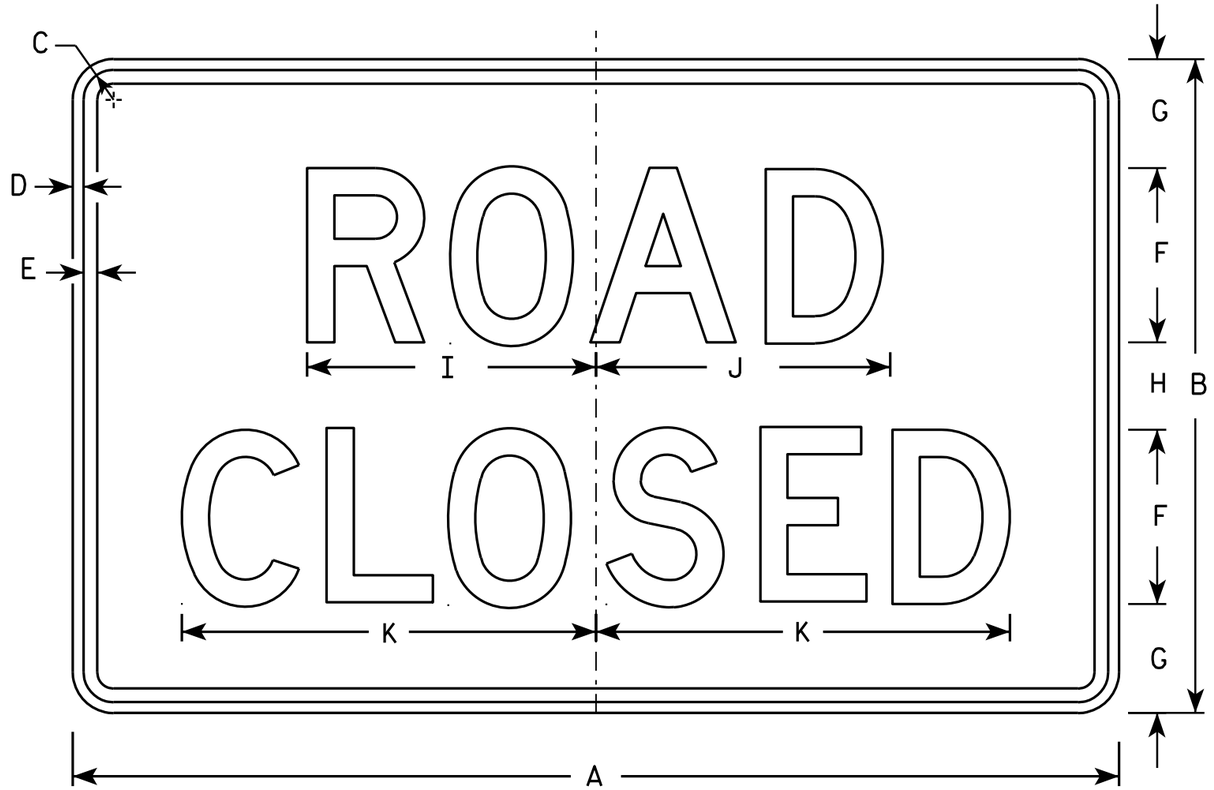
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 180 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

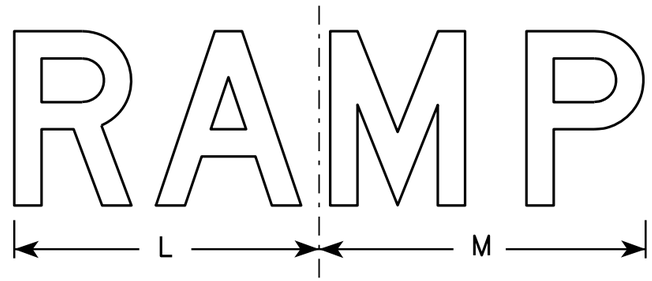
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



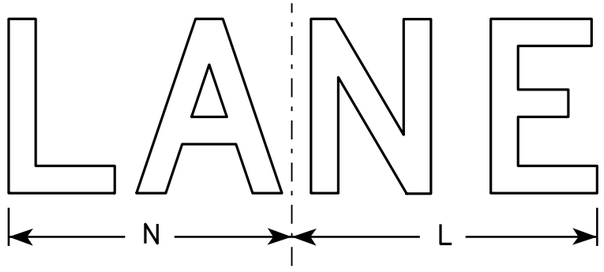
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

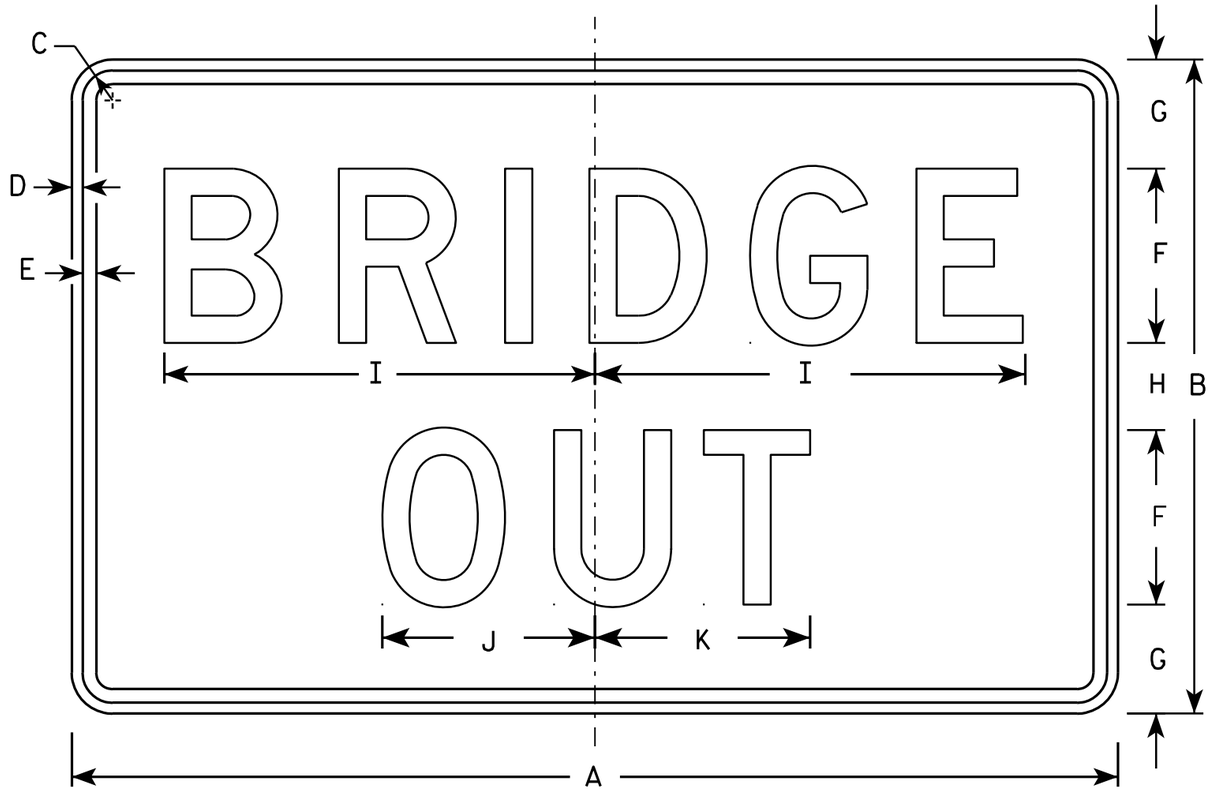
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E



R11-2B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

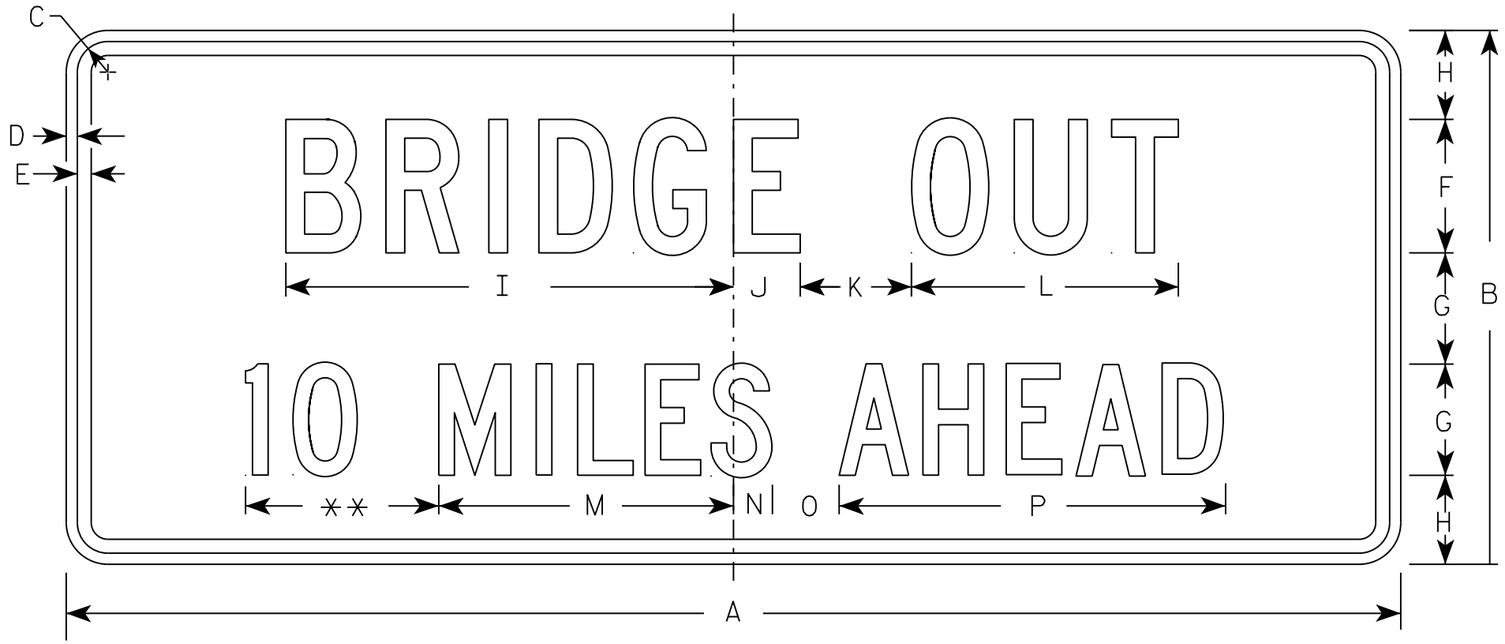
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 182 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4											3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8											10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8											10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

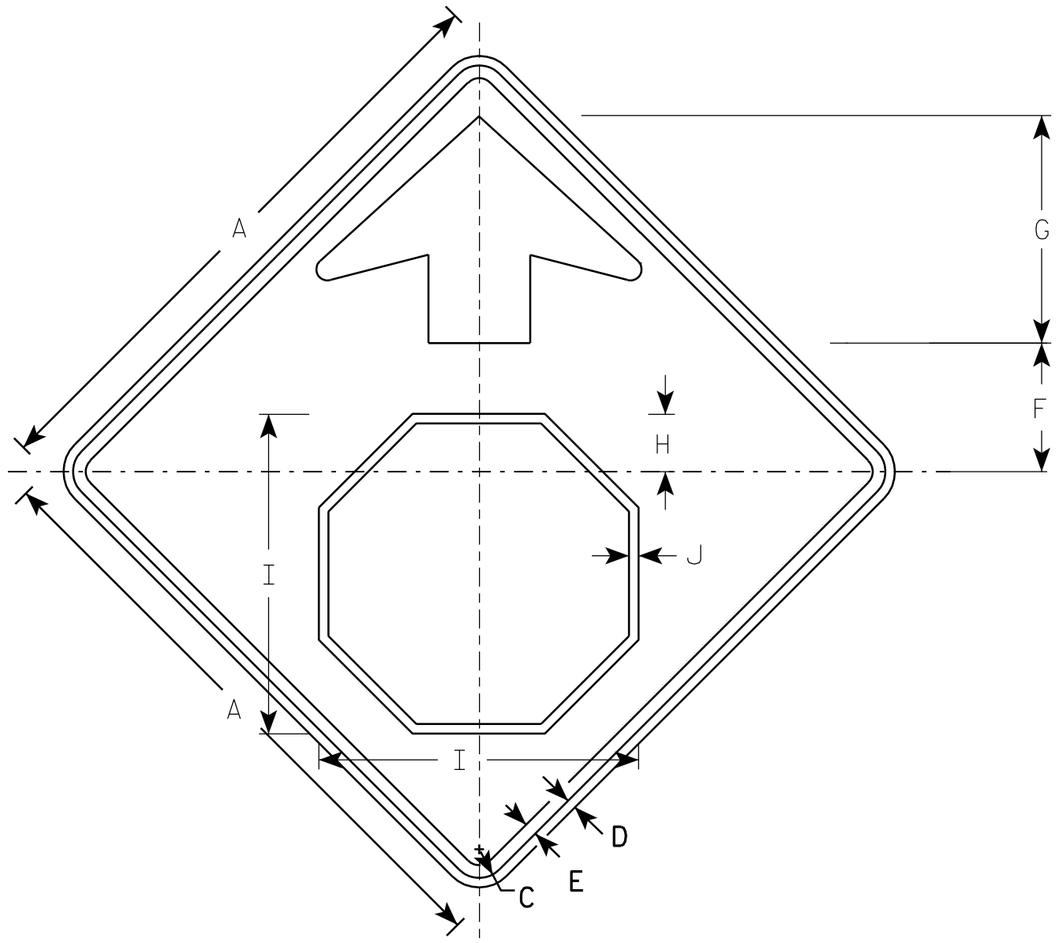
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE R11-3C.3

PROJECT NO:

SHEET NO: E

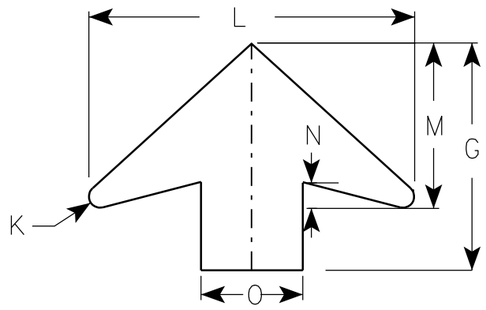
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R113C.DGN PLOT DATE : 28-JUL-2016 16:56 PLOT BY : ** platuser **



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

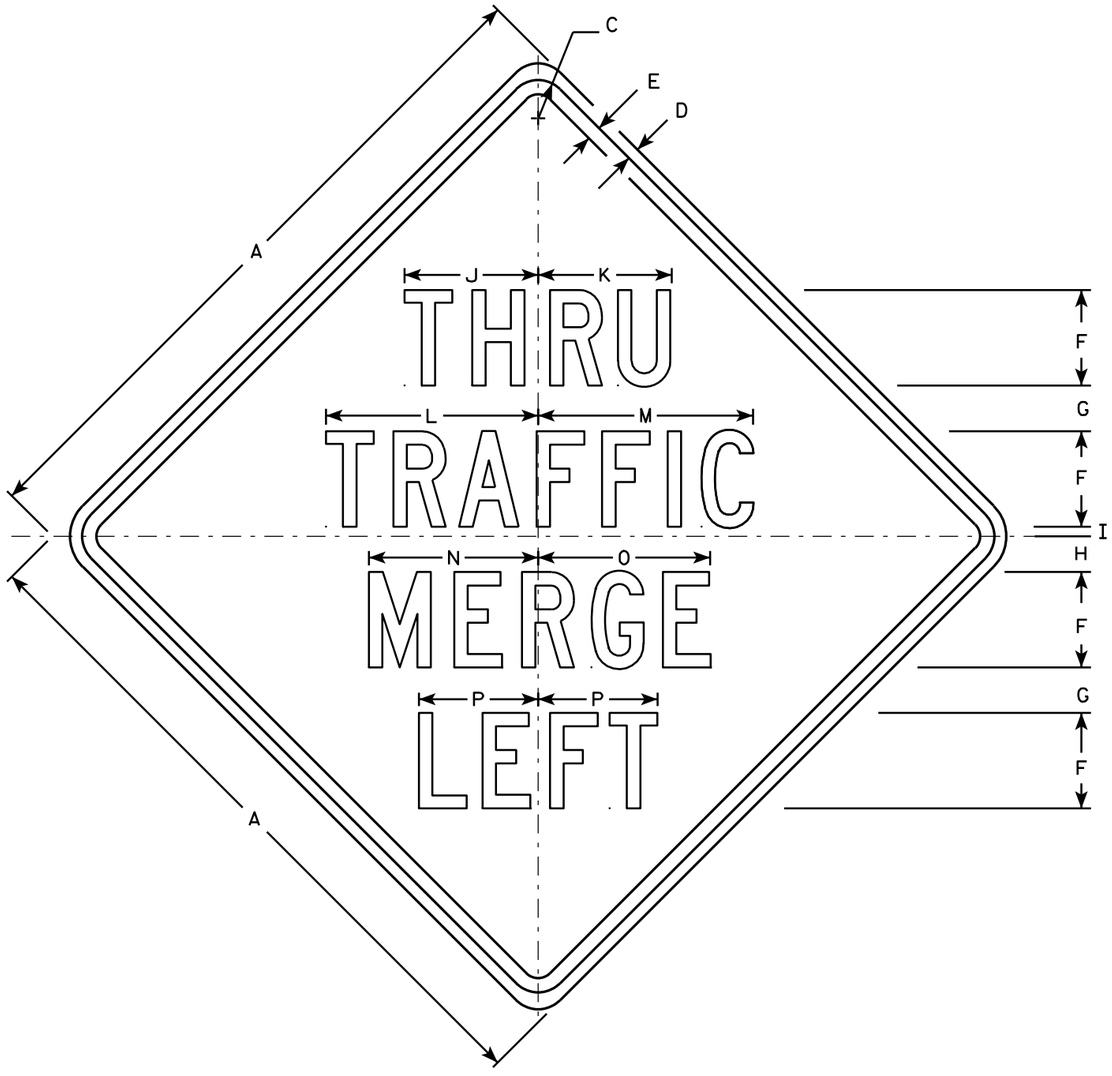
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

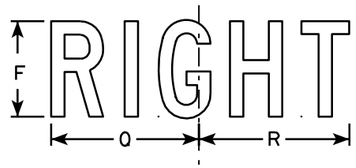
DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 184 E



W4-7L



W4-7R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Message - BLACK
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	5	2 3/8	1 7/8	1/2	7	7	11 1/8	11 1/4	8 7/8	9	6 1/4	7 3/4	7 7/8									9.0
2M	36		1 5/8	5/8	3/4	5	2 3/8	1 7/8	1/2	7	7	11 1/8	11 1/4	8 7/8	9	6 1/4	7 3/4	7 7/8									9.0
3	48		2 1/4	3/4	1	6	3	2 1/4	3/4	8 3/8	8 1/2	13 3/8	13 1/2	10 3/4	10 3/4	7 1/2	9 3/8	9 3/8									16.0
4	48		2 1/4	3/4	1	6	3	2 1/4	3/4	8 3/8	8 1/2	13 3/8	13 1/2	10 3/4	10 3/4	7 1/2	9 3/8	9 3/8									16.0
5	48		2 1/4	3/4	1	6	3	2 1/4	3/4	8 3/8	8 1/2	13 3/8	13 1/2	10 3/4	10 3/4	7 1/2	9 3/8	9 3/8									16.0

STANDARD SIGN
W4-7L&R

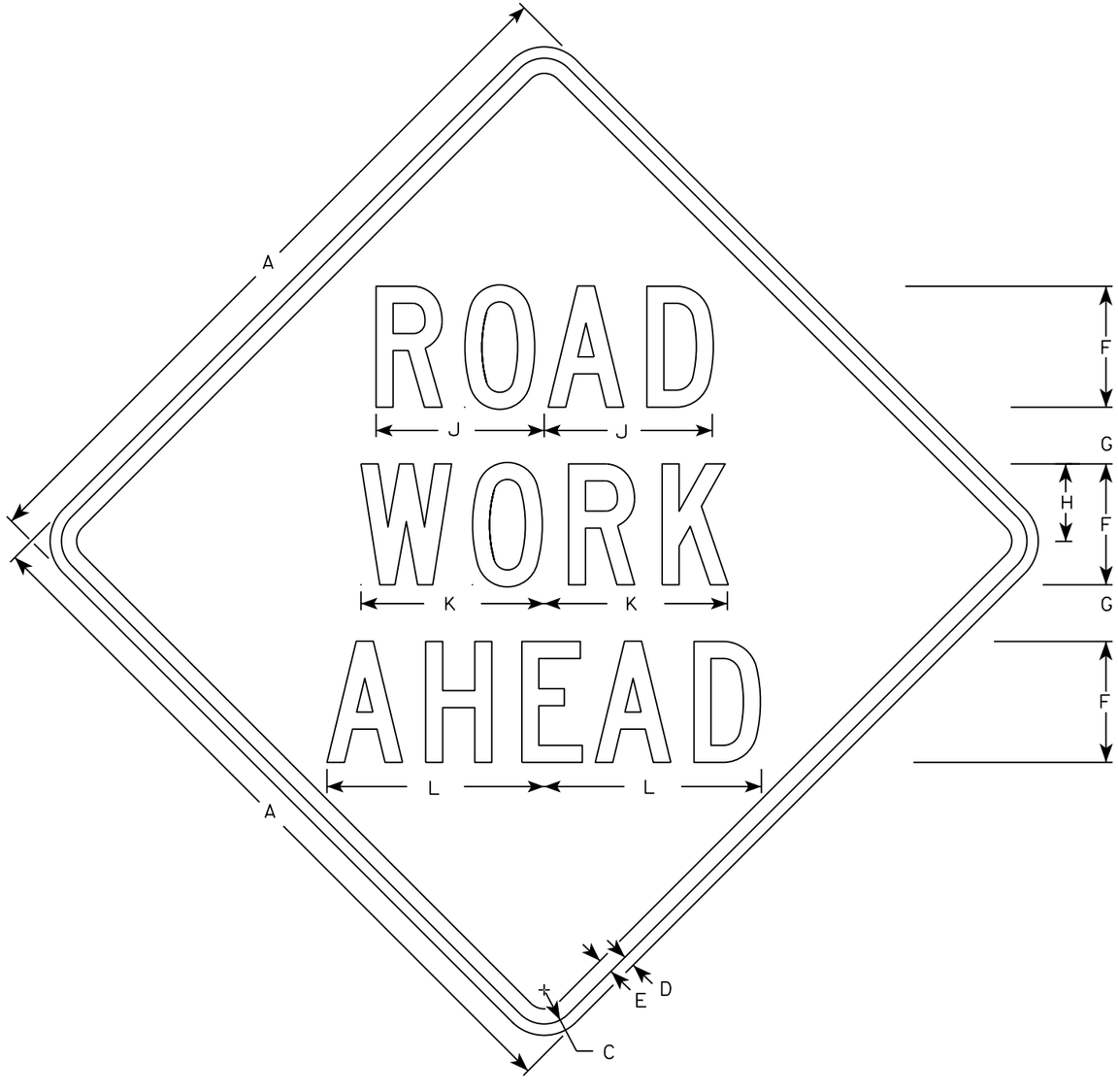
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

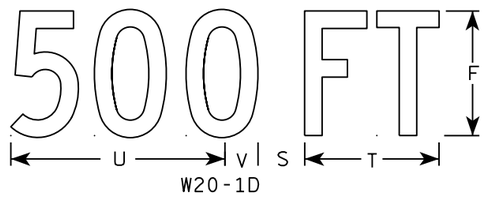
DATE 6/17/13 PLATE NO W4-7L&R.3

PROJECT NO:

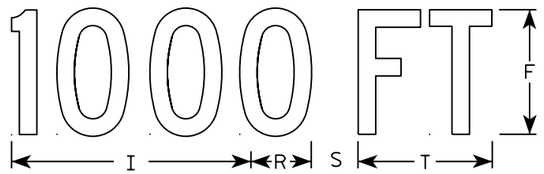
SHEET NO: 185 E



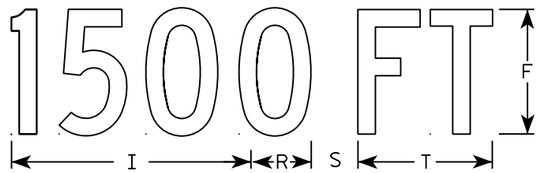
W20-1A



W20-1D



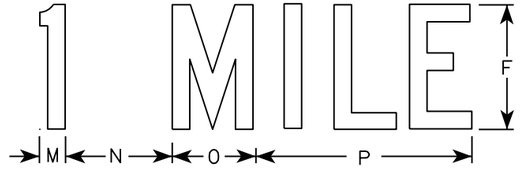
W20-1C



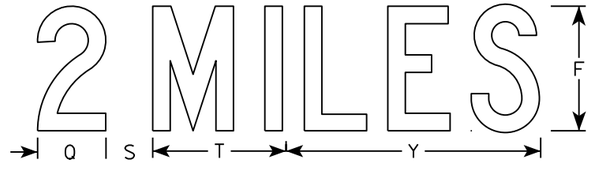
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

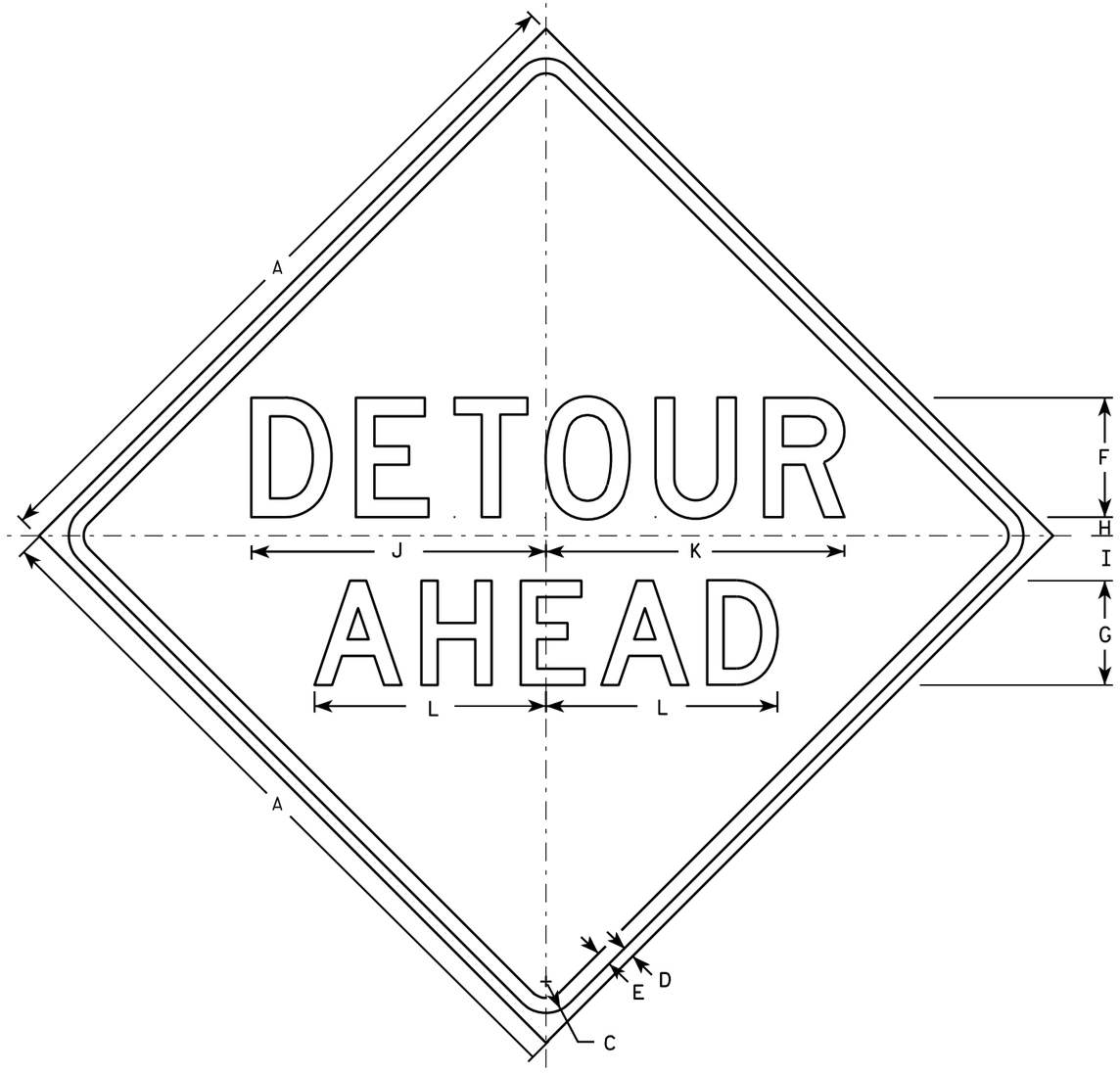
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

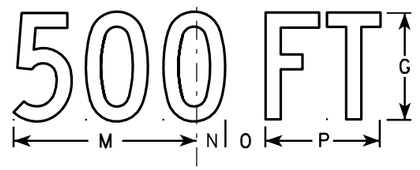
PROJECT NO:

SHEET NO: E

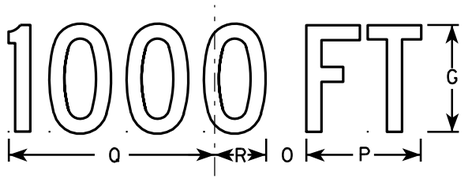
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



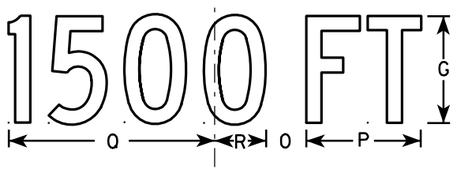
W20-2A



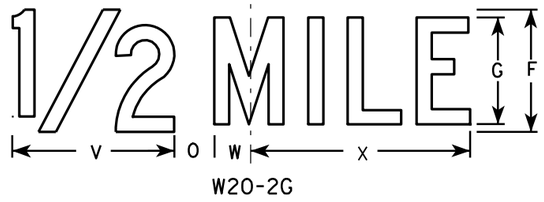
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

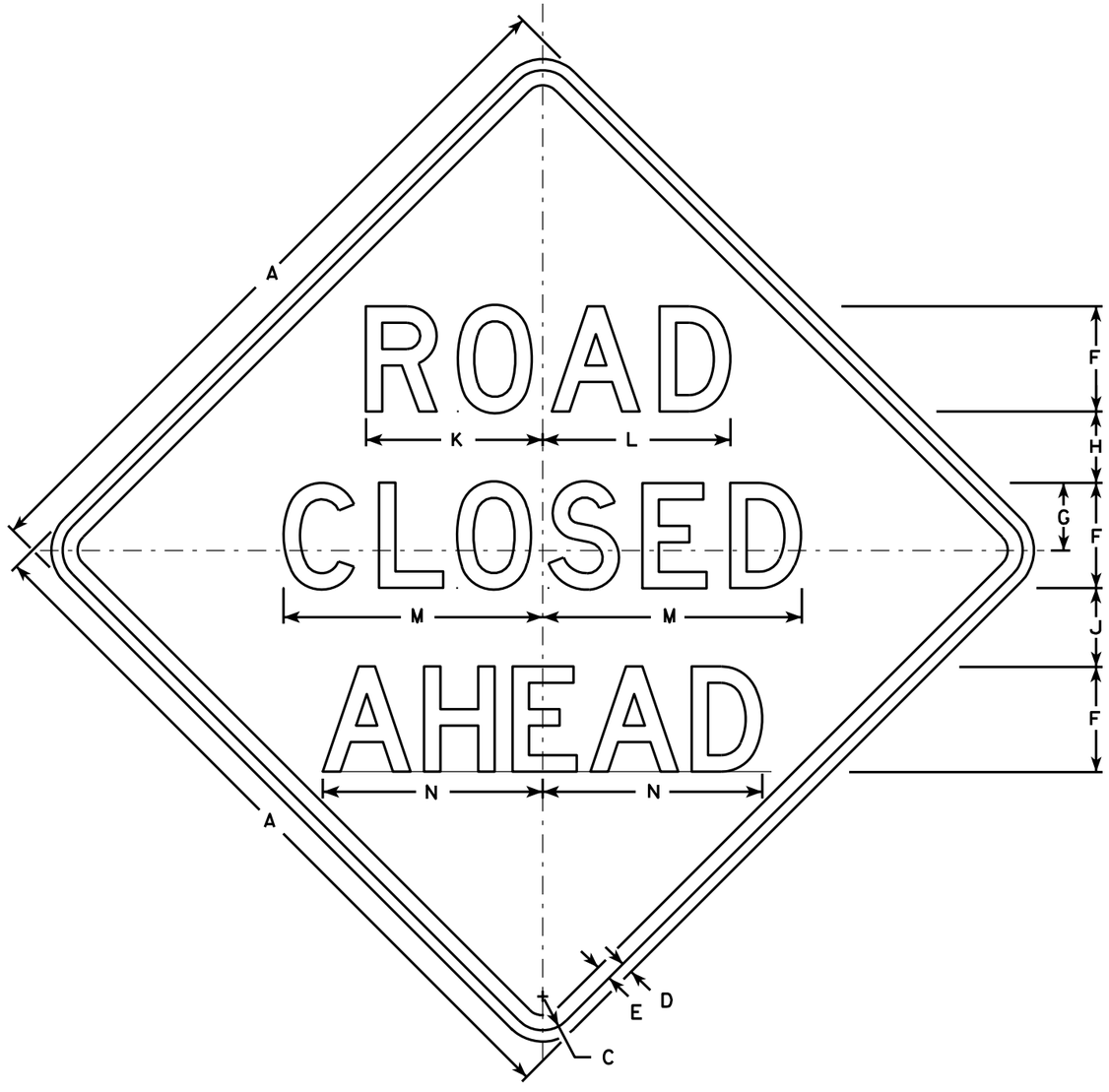
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

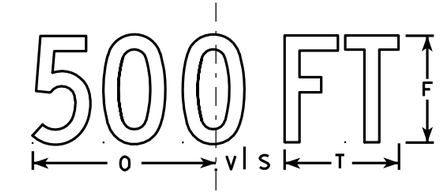
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

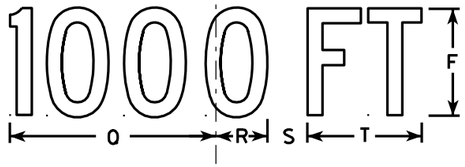
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 187	E



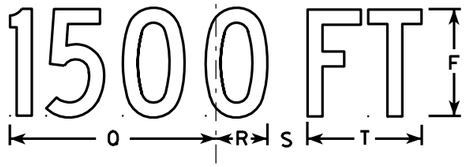
W20-3A



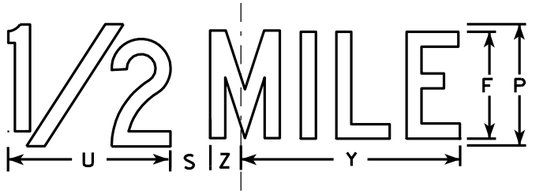
W20-3D



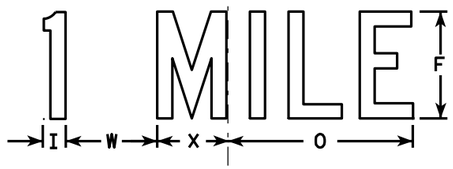
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

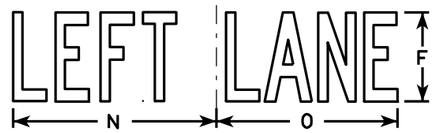
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 188 | E

7

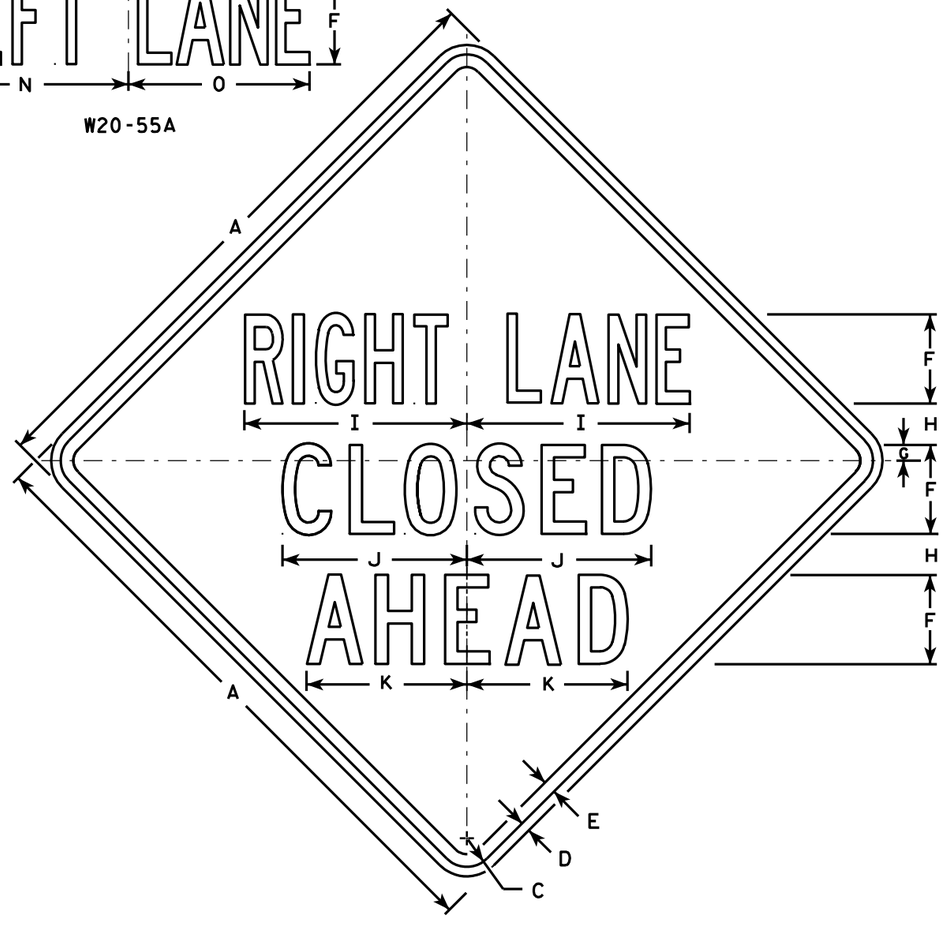
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



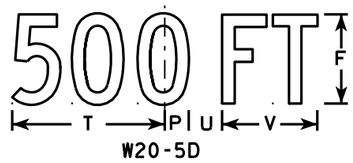
W20-56A



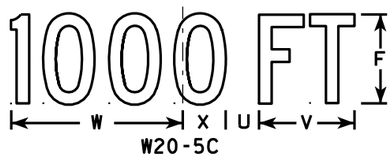
W20-55A



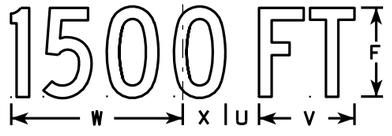
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

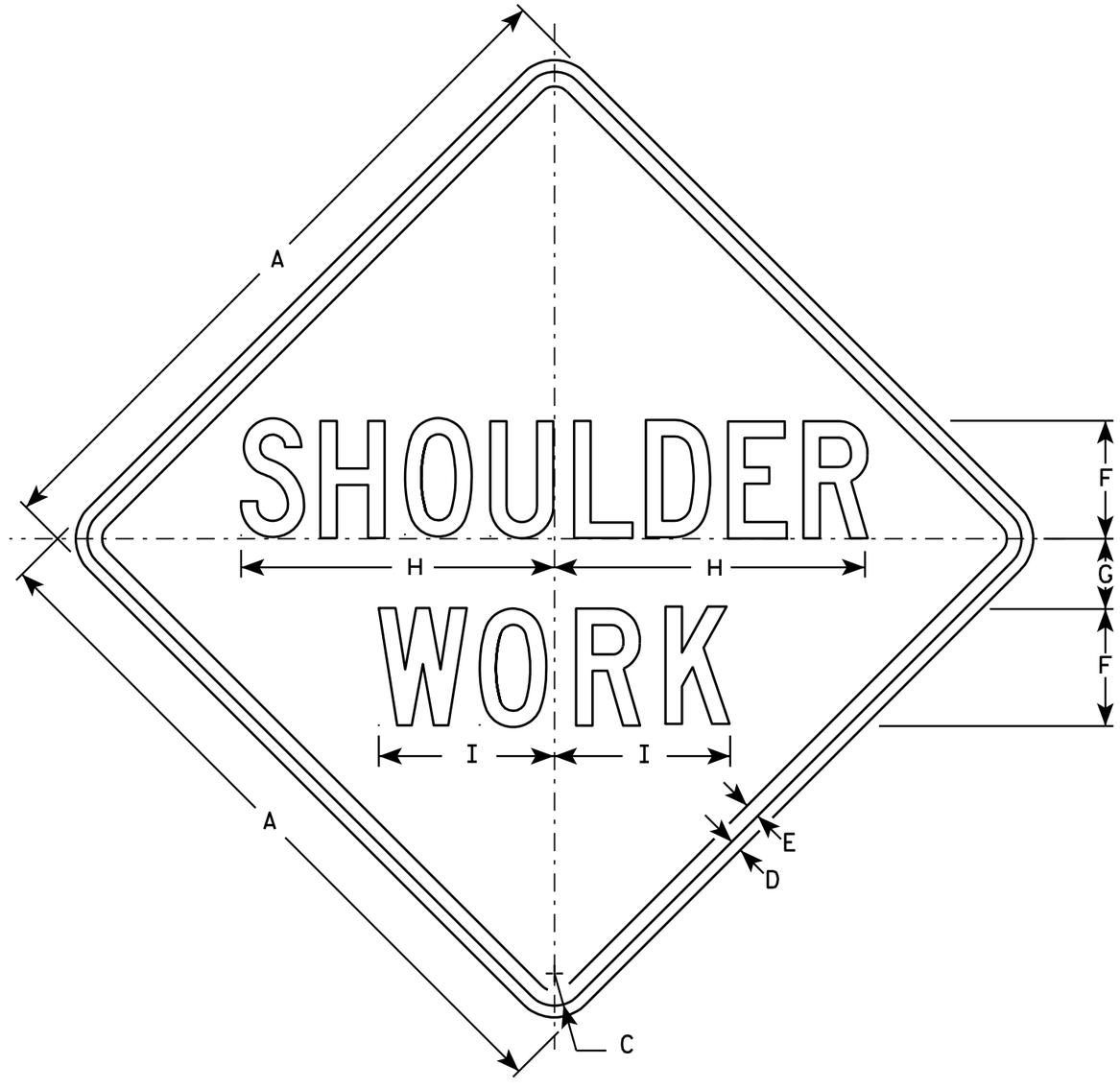
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 189 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

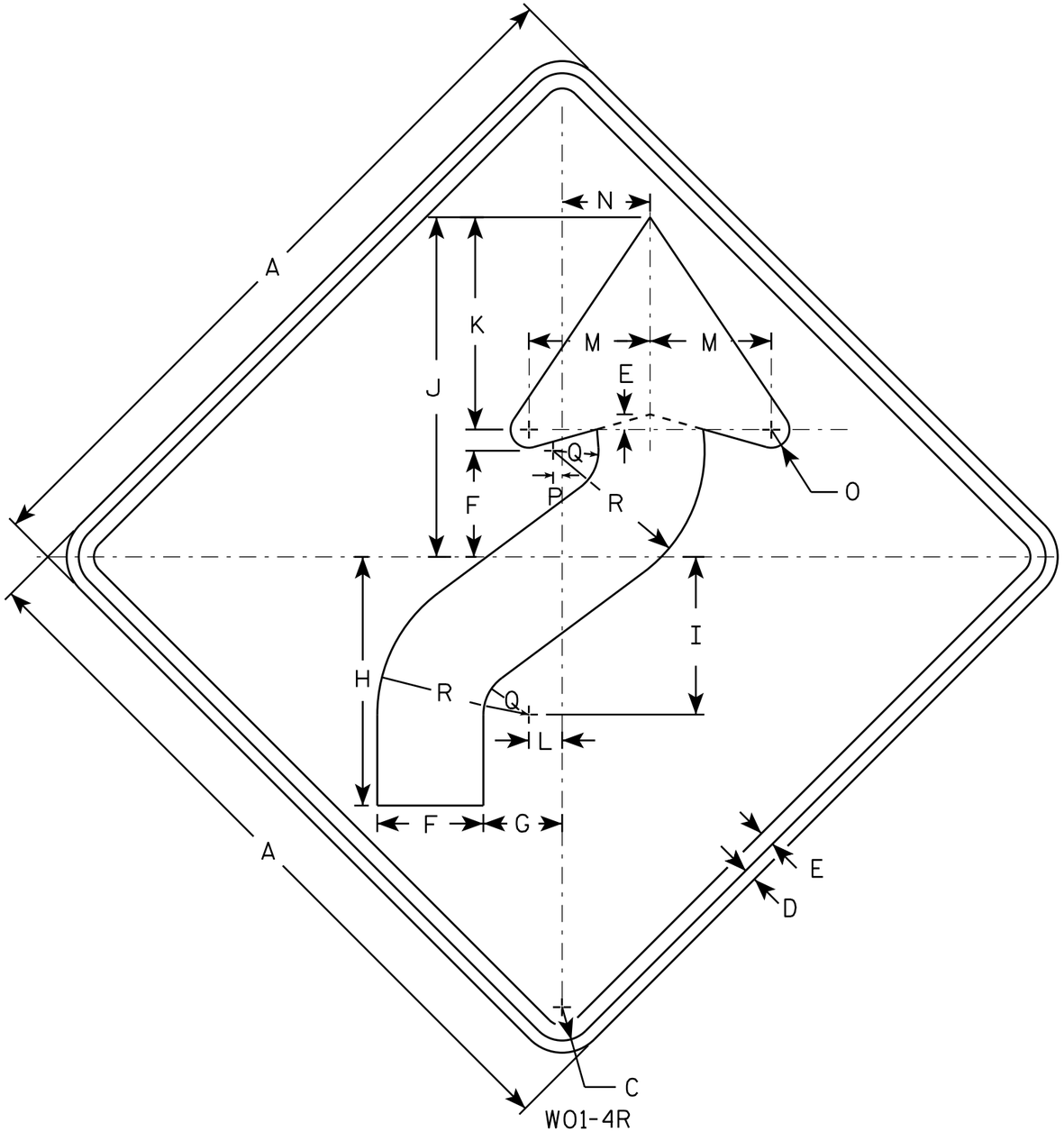
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

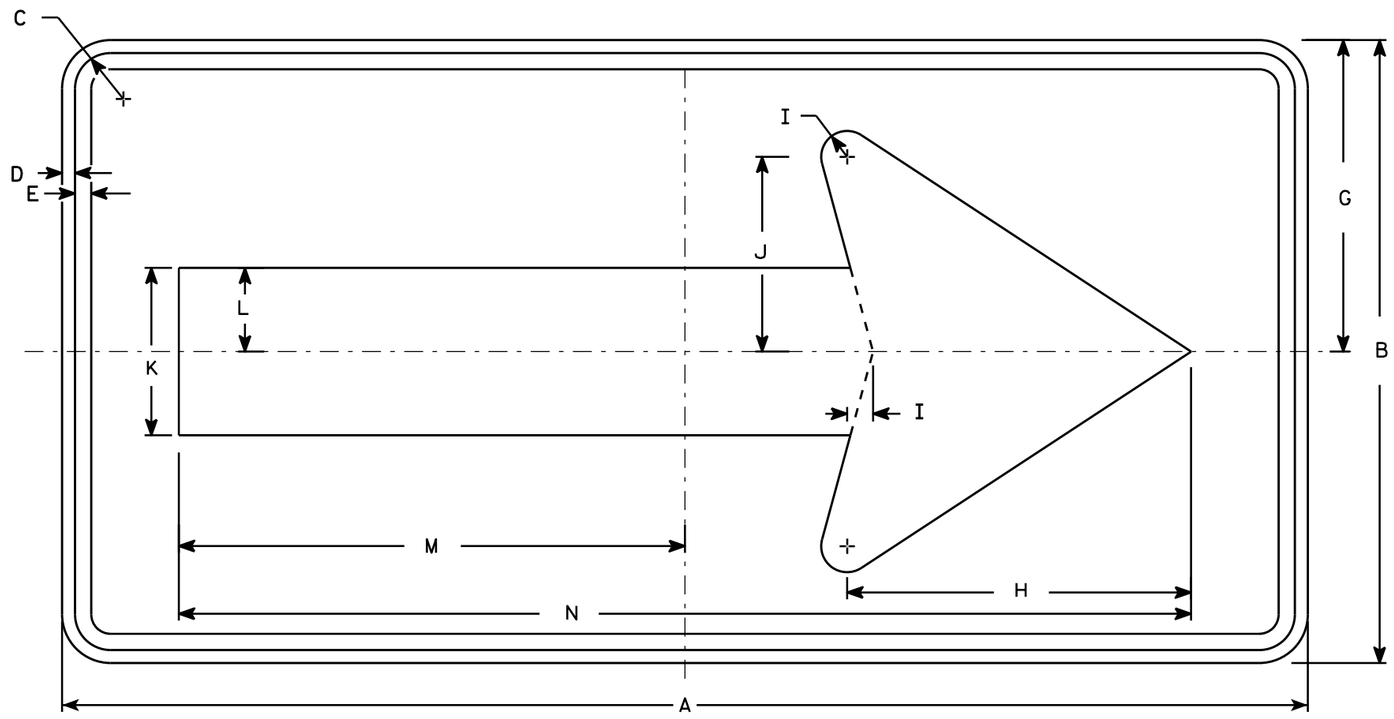
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

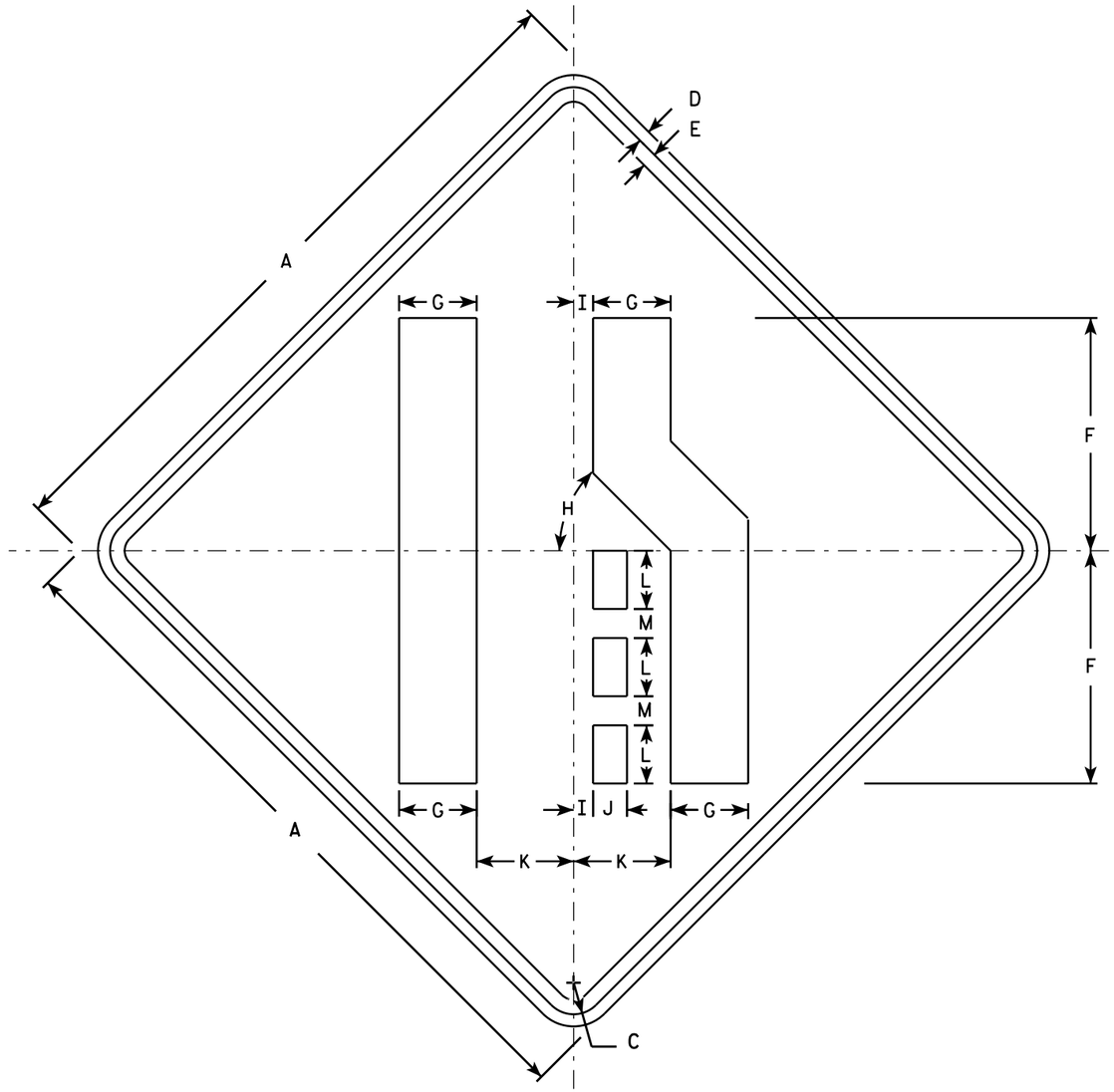
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

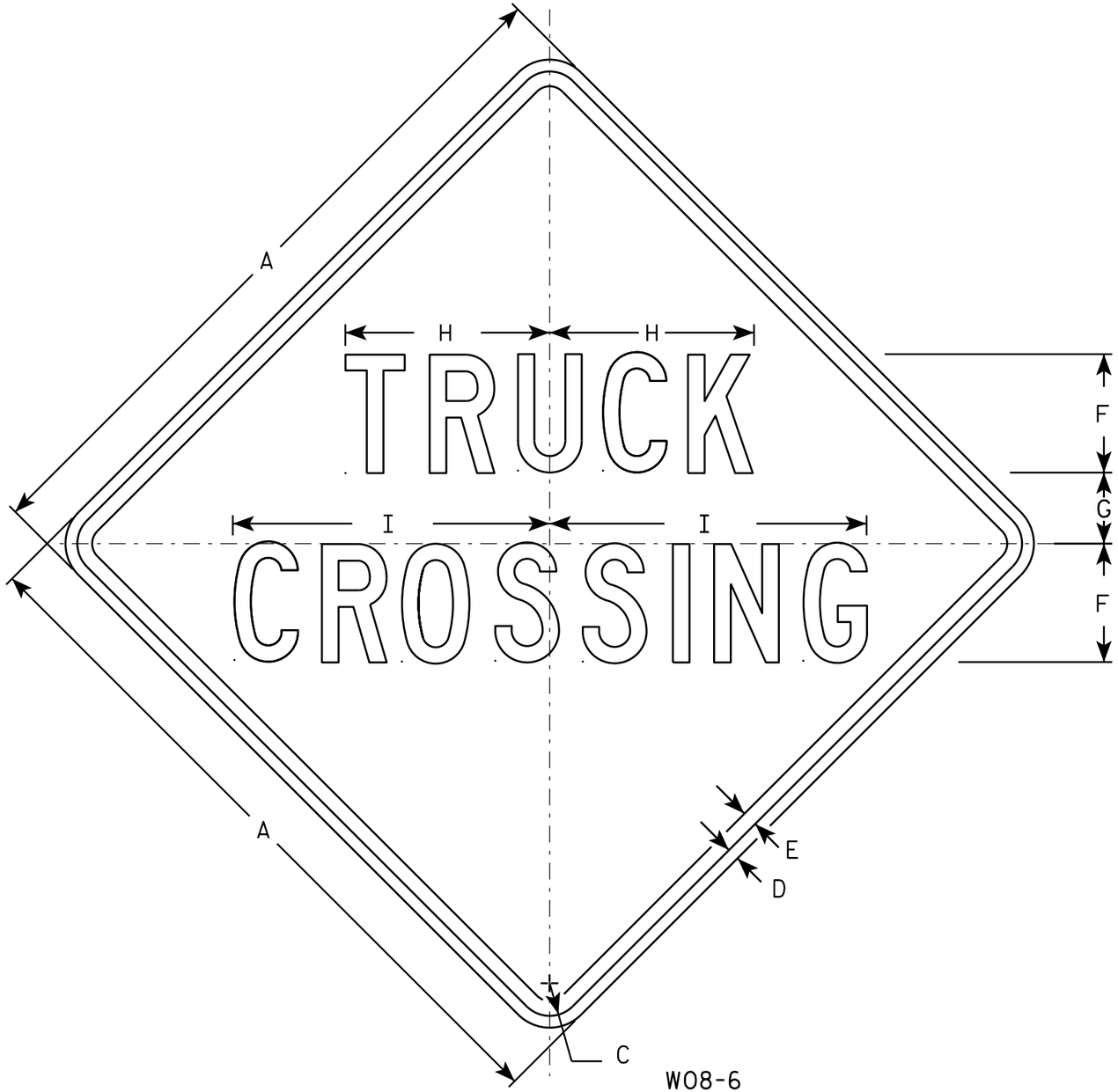
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 193 W04-2.1

PROJECT NO: | SHEET NO: E



W08-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	3 1/2	10 3/8	16																		9.0
2S	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
2M	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
3	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
4	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	13 3/4	21 1/4																		16.0

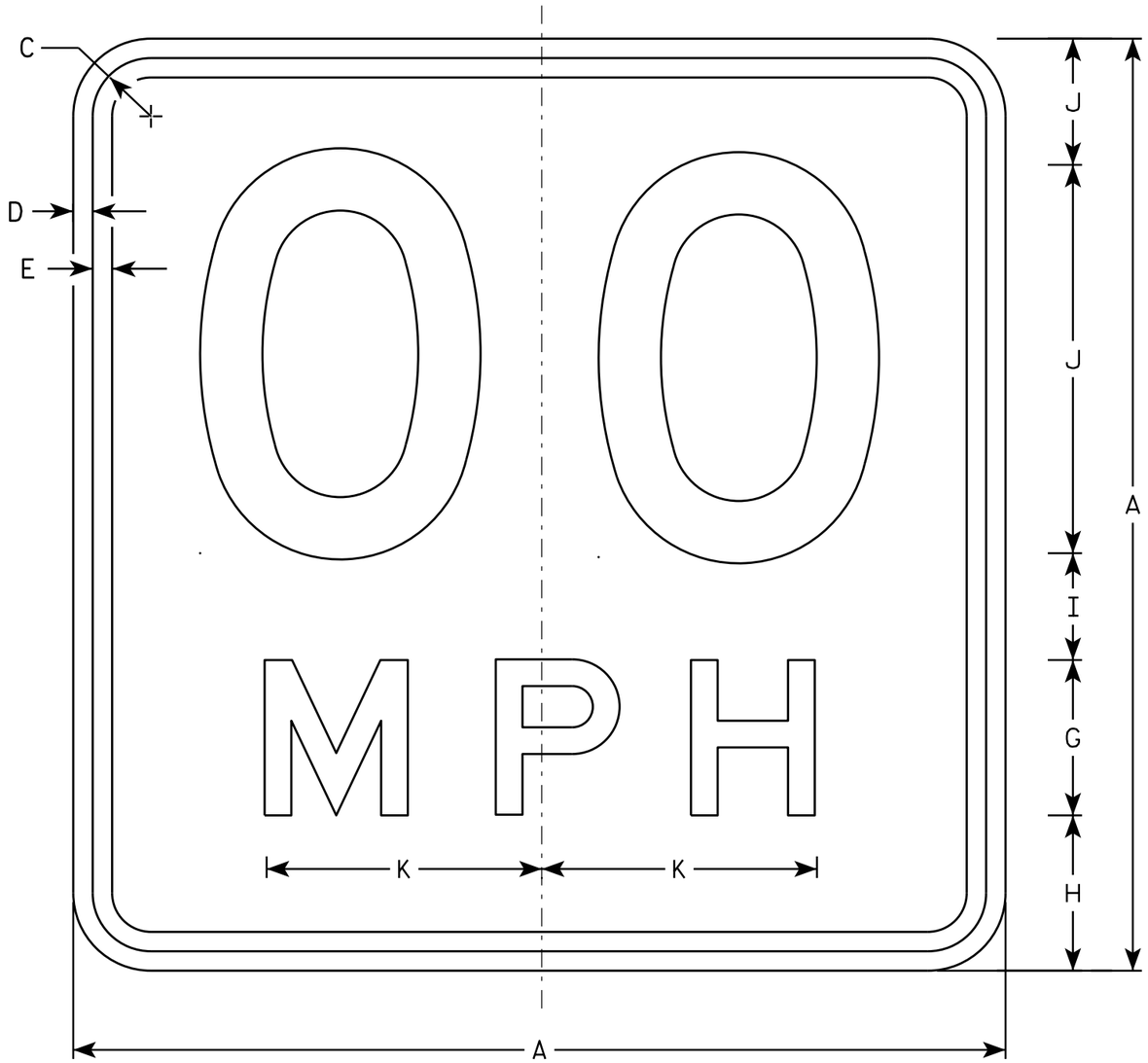
STANDARD SIGN
W08-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 194 W08-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

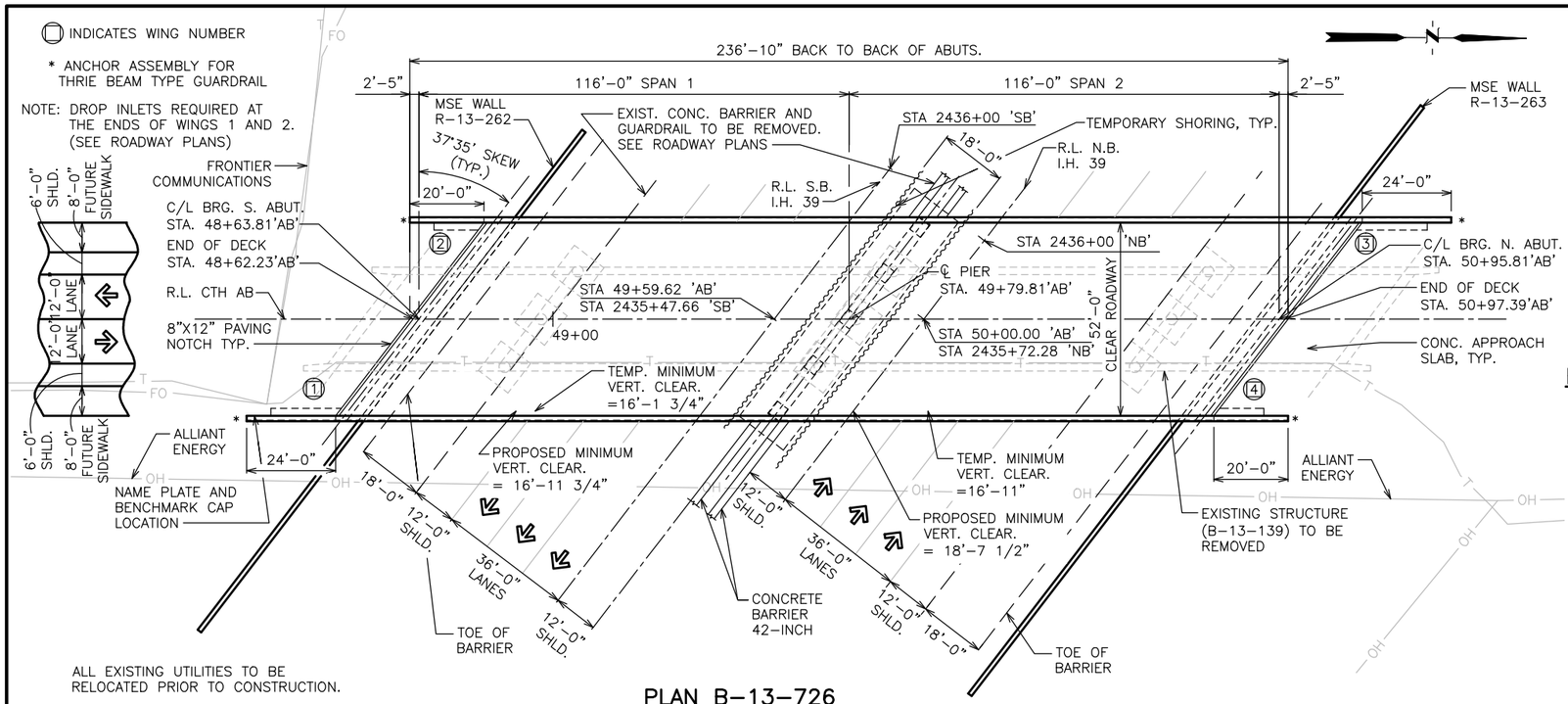
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 195 W013-1.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

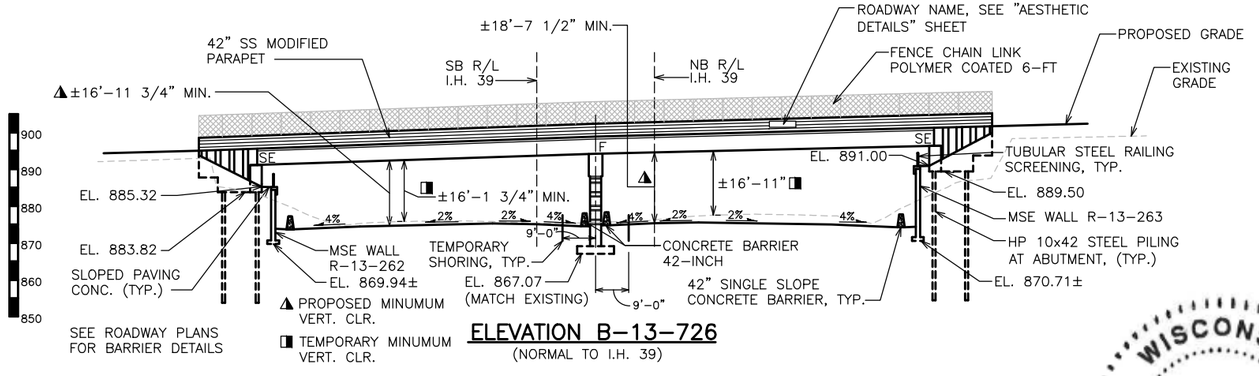
STATE PROJECT NUMBER

1007-10-81



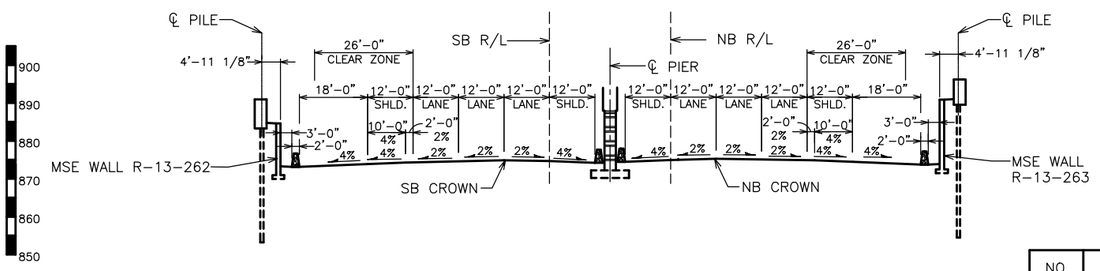
PLAN B-13-726

(TWO SPAN - 54W" PRESTRESSED CONCRETE GIRDER BRIDGE)



ELEVATION B-13-726

(NORMAL TO I.H. 39)



TYPICAL FINISHED SECTION I.H. 39

ALLOWANCE FOR FUTURE SHOULDER
(NORMAL TO I.H. 39)
FOR INFORMATION ONLY - IH39/90 TO BE RECONSTRUCTED UNDER FUTURE CONTRACTS

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.16
OPERATING RATING FACTOR: RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV) = 250 KIPS

● STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY - SLAB----------f'c = 4,000 P.S.I.
- ALL OTHERS ----------f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)----------Fy = 60,000 P.S.I.
STRUCTURAL STEEL ASTM A709 (GRADE 36)----------Fy = 36,000 P.S.I.
54W" PRESTRESSED GIRDER
CONCRETE MASONRY----------f'c = 8,000 P.S.I.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF =270,000 P.S.I.

FOUNDATION DATA

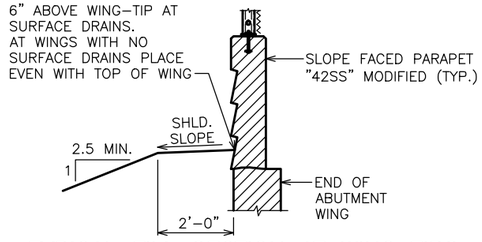
ABUTMENTS SHALL BE SUPPORTED ON HP10x42 STEEL PILES DRIVEN WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ABUTMENT PILING TO BE PREBORED TO 10' BELOW MSE WALL FOUNDATION, THEN DRIVEN TO REQUIRED DRIVING RESISTANCE. ESTIMATED LENGTH OF 35 FEET FOR THE NORTH ABUTMENT AND 30 FEET FOR THE SOUTH ABUTMENT. MINIMUM PILE PENETRATION SHALL BE 10' BELOW BOTTOM OF MSE WALL FOUNDATION AT BOTH ABUTMENTS.

PIER SHALL BE SUPPORTED ON SPREAD FOOTING FOUNDATIONS WITH A FACTORED SOIL BEARING CAPACITY OF 6 TONS/SF. SOIL BEARING CAPACITY TO BE FIELD VERIFIED PRIOR TO PLACING FOOTING.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

AVERAGE DAILY TRAFFIC (ADT)
IH39 ---------- 49,100 (2009)
70,300 (2040)
R.D.S. ---------- 70 MPH
CTH AB ---------- 2,430 (2018)
3,220 (2038)
R.D.S. ---------- 60 MPH



TYPICAL FILL SECTION AT WING TIPS

WISDOT BRIDGE OFFICE CONTACT:
WILLIAM DREHER, PE
608.266.8489

OTIE CONTACT:
SAM BARGHOUT, PE, SE
608.241.6704

WISCONSIN PROFESSIONAL ENGINEER
JAMES J. HALL
E-36292
VERONA, WI
8/3/16

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION AND QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. PIER DETAILS
10. 54W" PRESTRESSED GIRDER DETAILS 1
11. 54W" PRESTRESSED GIRDER DETAILS 2
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE CROSS SECTION
14. SUPERSTRUCTURE PLAN
15. SUPERSTRUCTURE DETAILS
16. MODIFIED SINGLE SLOPE PARAPET 42SS
17. CONDUIT DETAILS
18. AESTHETIC DETAILS
19. CHAIN LINK FENCE DETAILS
20. ALTERNATE CONSTRUCTION JOINT

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM1	STA.2439'SB'+70	67.9" LT	CUT "X" ON THE NE SIGN BOLT OF E. SIGN LEG	871.15

NO.	DATE	REVISION	BY

PLANS PREPARED BY

OTIE An Oneida Nation Company
5100 Eastpark Blvd
Suite 300
Madison, WI 53718
www.OTIE.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/05/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-726

COUNTY HWY AB OVER I.H.39

COUNTY DANE
TOWN ~~CITY/VILLAGE~~ BLOOMING GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPEC.

DESIGNED BY SDB	DESIGN CK'D. JJH	DRAWN BY KGC	PLANS CK'D. SDB

GENERAL PLAN

SHEET 1 OF 20

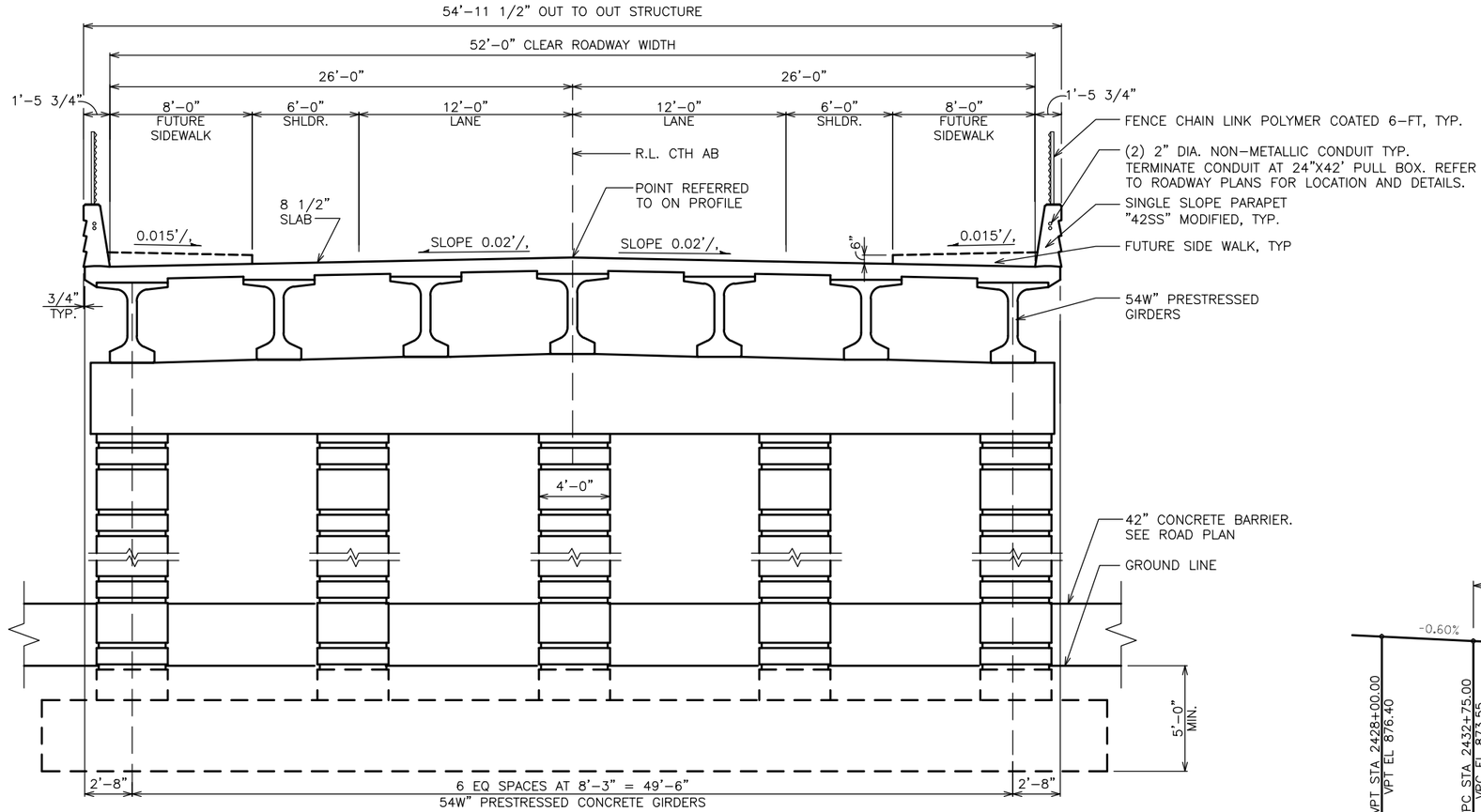
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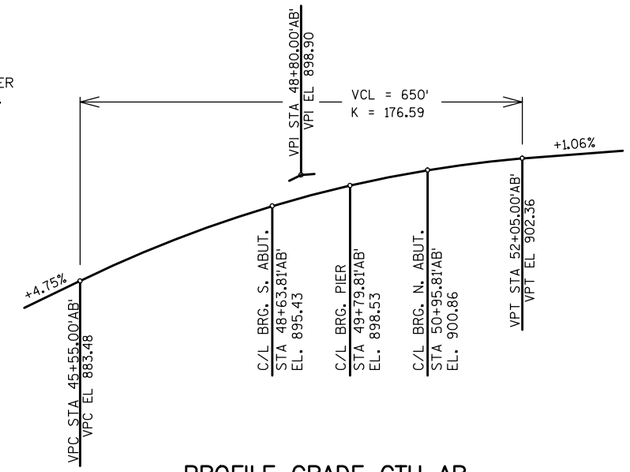
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STATE PROJECT NUMBER

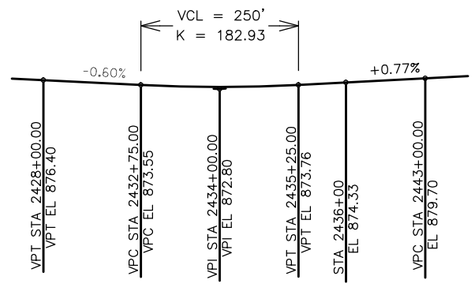
1007-10-81



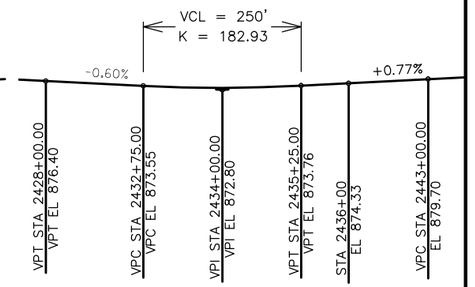
CROSS SECTION THRU ROADWAY



PROFILE GRADE CTH AB



PROFILE GRADE I.H. 39 NB



PROFILE GRADE I.H. 39 SB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	PIER	NORTH ABUT.	SUPER.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 49+79.81	LS	–	–	–	–	1
203.0210.S.	ABATEMENT OF ASBESTOS CONTAINING MATERIALS, B-13-139	LS	–	–	–	–	1
203.0225.S.	DEBRIS CONTAINMENT B-13-139	LS	–	–	–	–	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-726	LS	–	–	–	–	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	705	–	705	–	1,410
502.0100	CONCRETE MASONRY BRIDGES	CY	91	199	88	571	949
502.3200	PROTECTIVE SURFACE TREATMENT	SY	–	–	–	1,370	1,370
502.3210	PIGMENTED SURFACE SEALER	SY	23	–	23	234	280
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	–	–	–	1,629	1,629
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	6,090	14,700	5,930	–	26,720
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4,630	25,490	4,650	111,550	146,320
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EA	7	14	7	–	28
506.4000	STEEL DIAPHRAGMS B-13-726	EA	–	–	–	24	24
511.1200	TEMPORARY SHORING B-13-726	SF	–	1,515	–	–	1,515
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18	–	18	–	36
517.1010.S	CONCRETE STAINING B-13-726	SF	785	5,752	783	6,020	13,340
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	170	–	170	–	340
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	510	–	595	–	1,105
604.0400	SLOPE PAVING CONCRETE	SY	20	–	20	–	40
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	105	–	105	–	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	2	–	2	–	4
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	12	–	12	24	48
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	112	–	112	926	1,150
653.0222	JUNCTION BOXES 18x12x6-INCH	EACH	–	–	–	4	4
SPV.0090.700	FENCE CHAIN LINK POLYMER COATED 6-FT	LF	44	–	44	474	562
	NON-BID ITEMS						
	FILLER	SIZE	–	–	–	–	1/2" AND 3/4"

GENERAL NOTES

DRAWINGS ARE NOT TO BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

AT THE BACK FACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET.

BEVEL EXPOSED CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE EXISTING BRIDGE B-13-139 IS A 4-SPAN CONTINUOUS STEEL GIRDER BRIDGE WITH AN OVERALL LENGTH OF 274'-8 3/4" AND A CLEAR ROADWAY WIDTH OF 24"-0". THE EXISTING BRIDGE IS TO BE REMOVED BEFORE CONSTRUCTING B-13-726. REMOVAL SHALL INCLUDE EXISTING BRIDGE PILING AS NECESSARY TO CONSTRUCT R-13-262 AND R-13-263.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT WINGS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE RUSTICATIONS IN THE ABUTMENTS AND PIERS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES". SEE SHEET 18 FOR AESTHETIC DETAILS.

THE RUSTICATIONS IN THE BACK FACES OF PARAPETS ARE INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

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STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

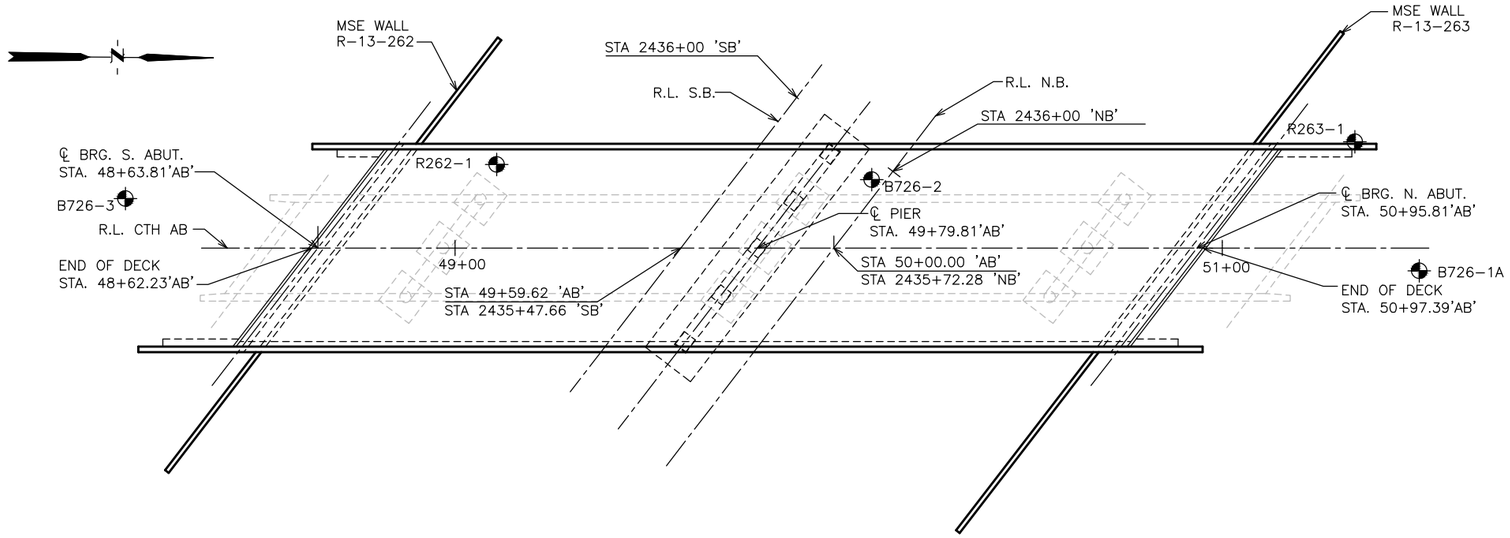
CROSS SECTION AND QUANTITIES

SHEET 2 OF 20

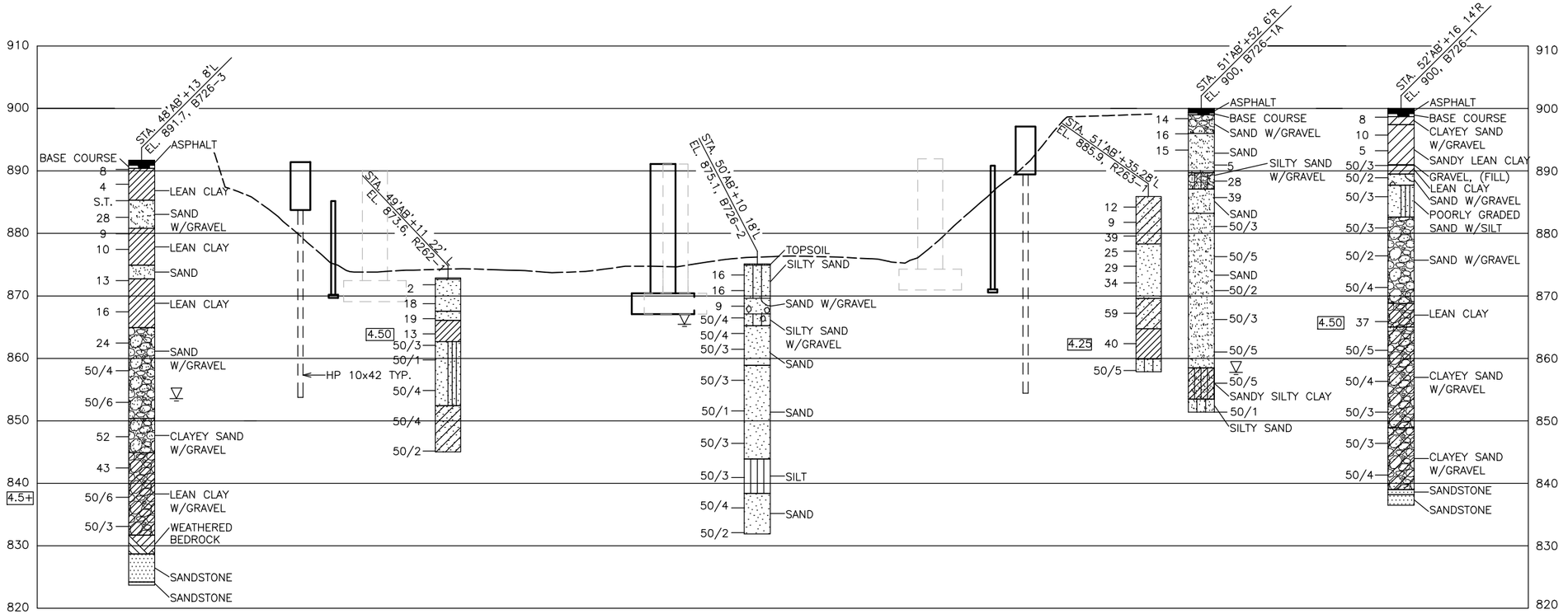
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BORINGS TAKEN BY:
GESTRA ENGINEERING, INC.
10/29/2012 – 06/13/2014



STATE PROJECT NUMBER

1007-10-81

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	BEDROCK
CONCRETE	SILT	SANDSTONE
SAND	PEAT	LIMESTONE
GRAVEL	CLAY	IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F.
BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2"O.D.x1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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SUBSURFACE EXPLORATION

SHEET 3 OF 20

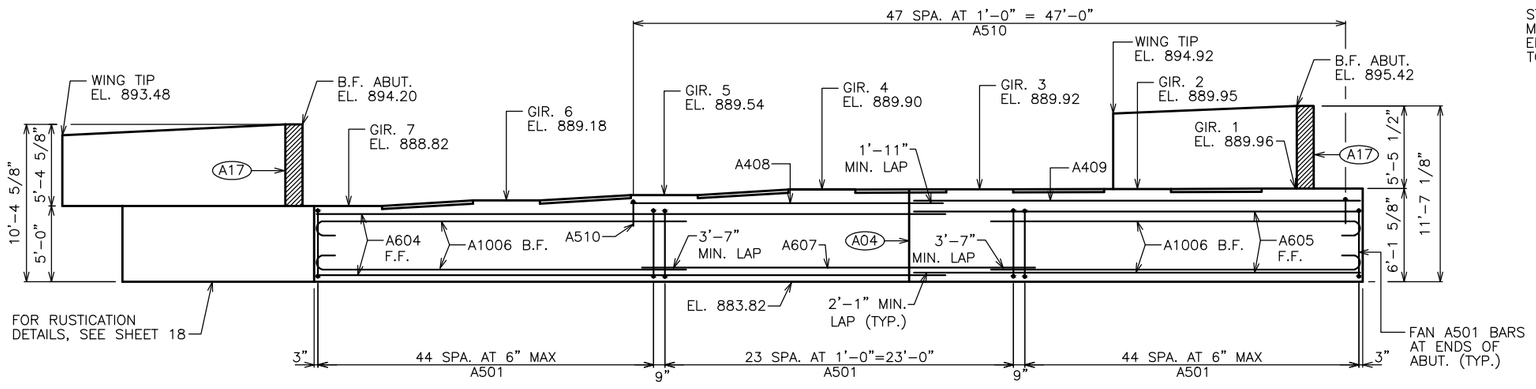
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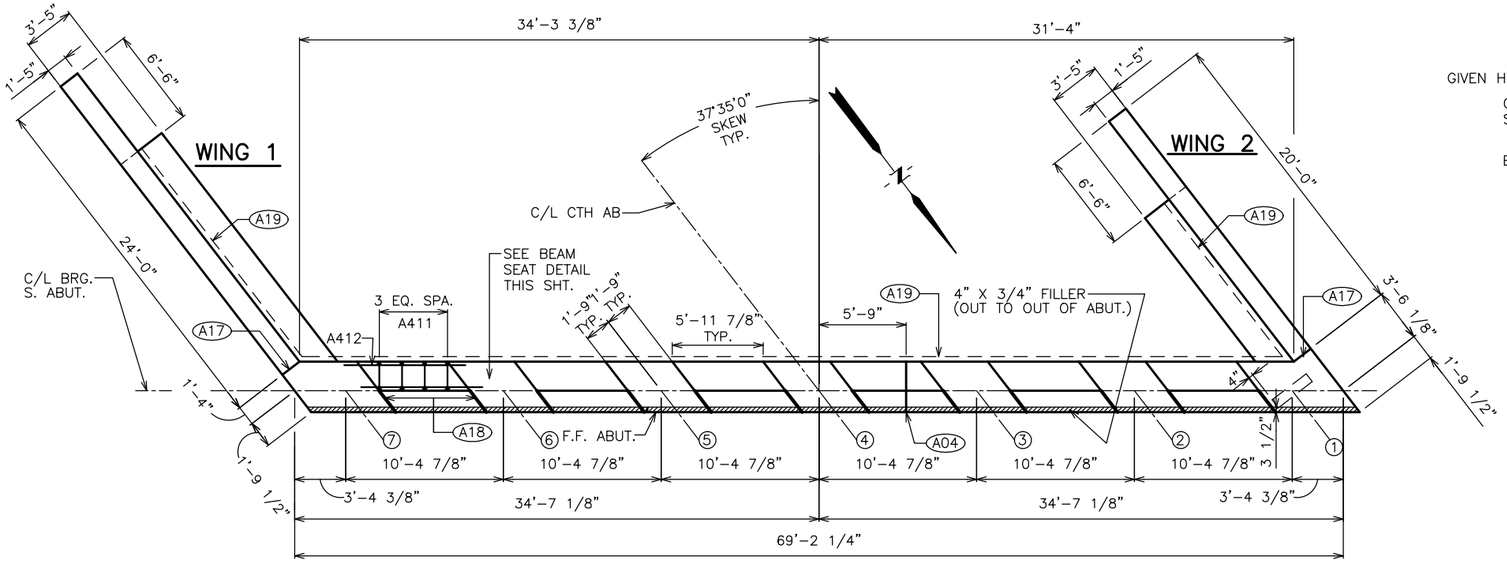
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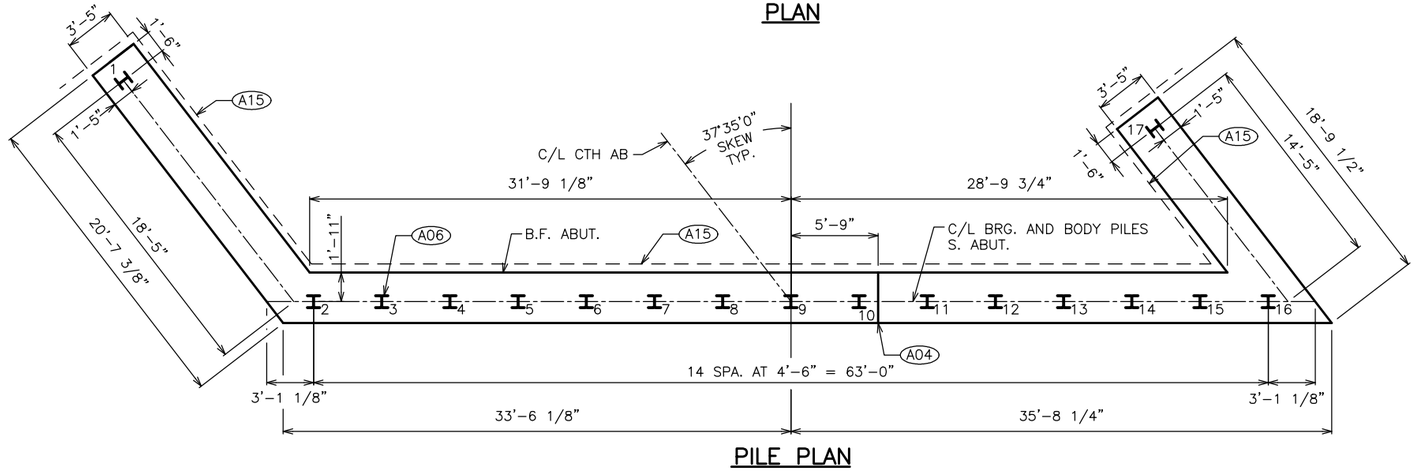
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ELEVATION LOOKING SOUTH

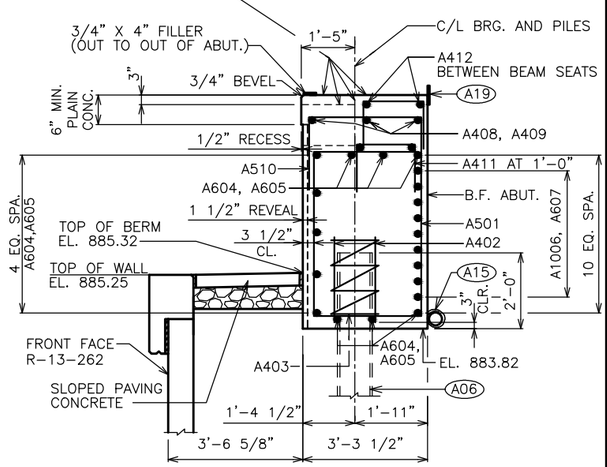


PLAN

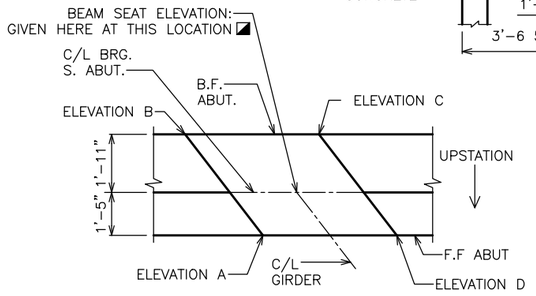


PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"



SECTION THRU BODY



SLOPED BEAM SEAT DETAIL

GIRDER	BEARING ELEV ◪	ELEV A	ELEV B	ELEV C	ELEV D
1	889.96	889.98	889.87	889.94	890.04
2	889.95	889.96	889.85	889.92	890.03
3	889.92	889.94	889.82	889.90	890.01
4	889.90	889.91	889.80	889.87	889.98
5	889.54	889.55	889.44	889.51	889.63
6	889.18	889.20	889.08	889.16	889.27
7	888.82	888.84	888.72	888.79	888.91

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 8". 3/4" "V" GROOVE AT THE FRONT FACE AND 18" R.M.W. AT BACKFACE. FOR ALTERNATE CONSTRUCTION JOINT DETAILS, SEE SHEET 20

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PREBORE FOR PILES SHALL OCCUR AFTER EXCAVATION FOR RETAINING WALLS IS COMPLETED. PREBORE 10' BELOW RETAINING WALL LEVELING PAD, THEN DRIVE TO REQUIRED DRIVING RESISTANCE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED. SEE SHT. 6 FOR DETAILS.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.

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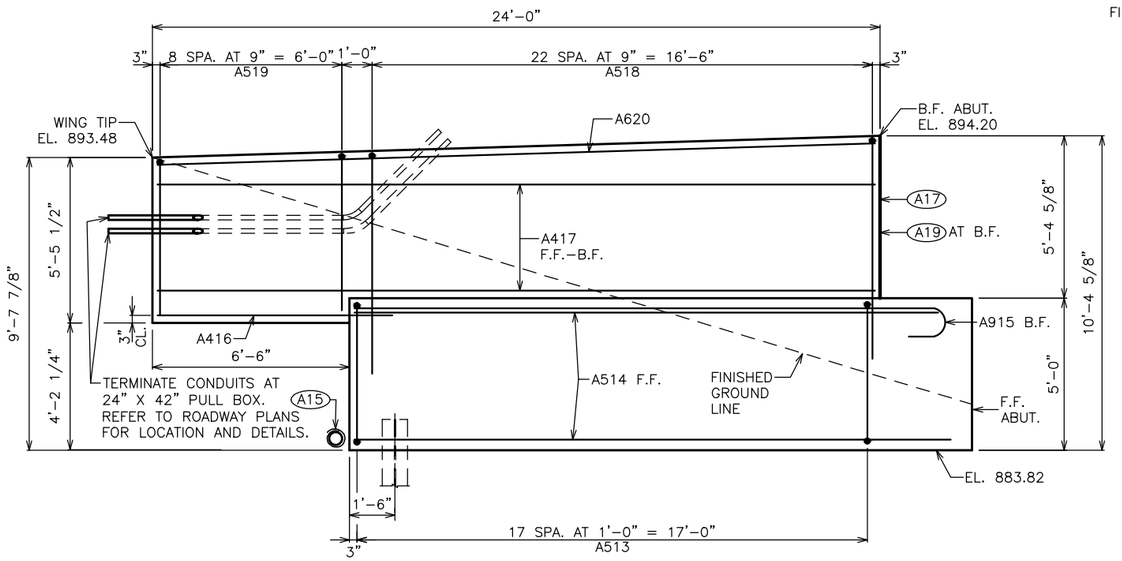
SOUTH ABUTMENT

SHEET 4 OF 20

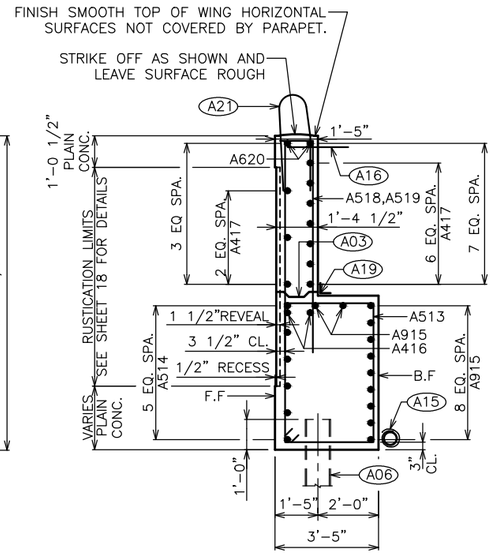
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WING 1 ELEVATION



WING 1 SECTION

BILL OF BARS

FOR SOUTH ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		114	14-6	X		BODY-STIRRUPS VERT.
A402		30	2-3			BODY-VERT.-BOT.-2 PER PILE
A403		15	28-0	X		BODY-VERT.-BOT.-SPIRAL-1 PER PILE
A604		11	41-6			BODY-HORIZ.-F.F.
A605		11	29-6			BODY-HORIZ.-F.F.
A1006		18	25-5	X		BODY-HORIZ.-B.F.
A607		9	28-4			BODY-HORIZ.-B.F.
A408		3	20-7			BODY-HORIZ.-BTWN. BEAM SEATS
A409		3	29-6			BODY-HORIZ.-BTWN. BEAM SEATS
A510		48	5-7	X		BODY-STIRRUP
A411		24	4-1	X		BODY-VERT.-BTWN. BEAM SEATS
A412		12	8-0			BODY-HORIZ.-BTWN. BEAM SEATS
A513	X	18	15-2	X		WING 1-STIRRUP
A514	X	6	19-1			WING 1-HORIZ.-F.F
A915	X	11	20-6	X		WING 1-HORIZ.-B.F
A416	X	2	7-9			WING 1-HORIZ.
A417	X	10	23-8			WING 1-HORIZ.-B.F. AND F.F.
A518	X	23	15-2	X		WING 1-VERT.
A519	X	9	10-8	X		WING 1-VERT.
A620	X	2	23-8			WING 1-HORIZ.-TOP-B.F. AND F.F.
A521	X	14	17-6	X		WING 2 STIRRUP
A522	X	7	15-1			WING 2-HORIZ.-F.F.
A823	X	10	16-5	X		WING 2-HORIZ.-B.F.
A424	X	2	7-9			WING 2-HORIZ.
A425	X	10	19-8			WING 2-HORIZ.-B.F. AND F.F.
A526	X	18	15-0	X		WING 2-VERT.
A527	X	9	11-10	X		WING 2-VERT.
A628	X	2	19-8			WING 2-HORIZ.-TOP-B.F. AND F.F.
A429	X	44	2-0			WING 1 AND 2-DOWEL-SURFACE DRAIN

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

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. AT B.F. AND 3/4" "V" GROOVE AT F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PREBORE FOR PILES SHALL OCCUR AFTER EXCAVATION FOR RETAINING WALLS IS COMPLETED. PREBORE 10' BELOW RETAINING WALL LEVELING PAD, THEN DRIVE TO REQUIRED DRIVING RESISTANCE.

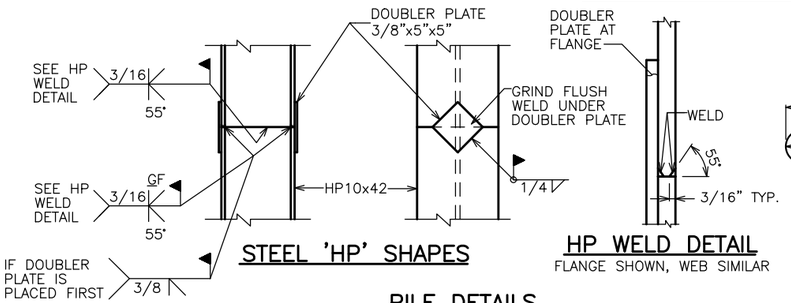
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHT. 6 FOR DETAILS

(A16) A429 BARS SPACED AT 1'-0" CTRS. EMBED 1'-0" INTO WING CONCRETE. LOCATE 3" DOWN FROM TOP OF WING AT BACKFACE ABUT. TO 6" DOWN AT WING TIP. (DRILLED IN EPOXY ANCHORED #4 BARS 2'-0" LONG MAY BE USED). COST INCLUDED IN BID ITEM "BAR STEEL REINFORCEMENT HS COATED BRIDGES".

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS AND DIMENSIONS SEE PARAPET SHEET 16

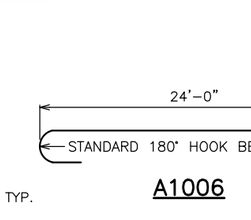


STEEL 'HP' SHAPES

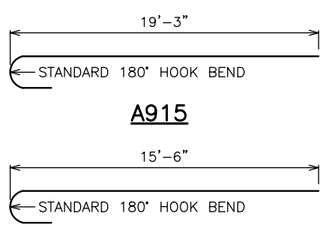
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

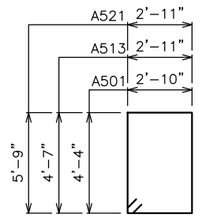


A1006

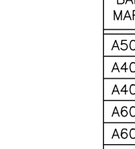


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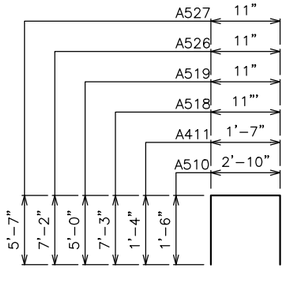
A823



A501, A513, A521

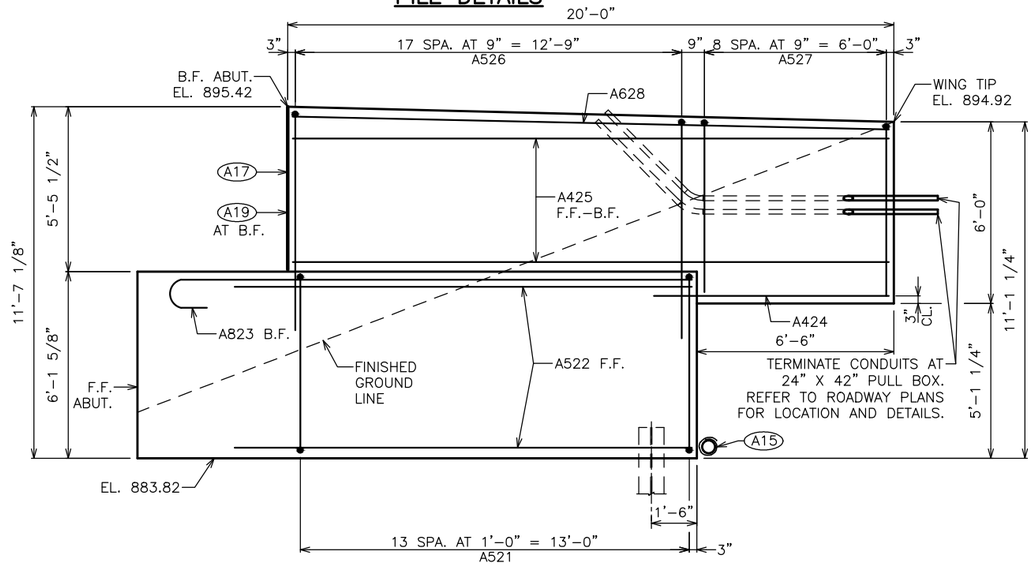


A403

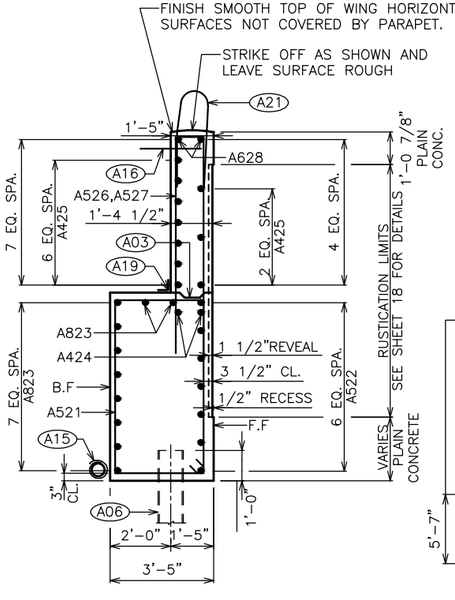


A510, A411, A518, A519, A526, A527

PILE DETAILS



WING 2 ELEVATION



WING 2 SECTION

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STRUCTURE B-13-726

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SOUTH ABUTMENT DETAILS

SHEET 5 OF 20

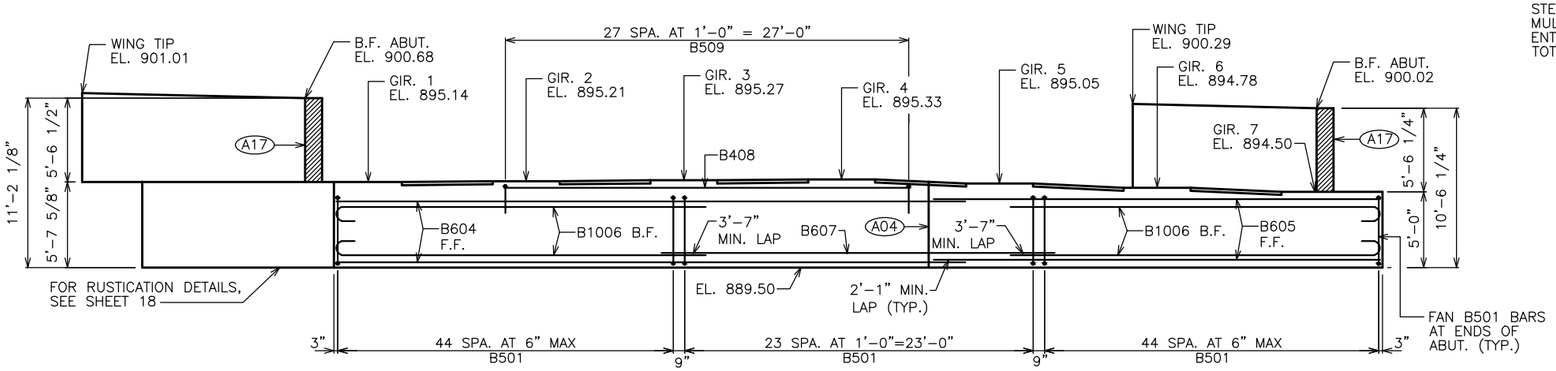
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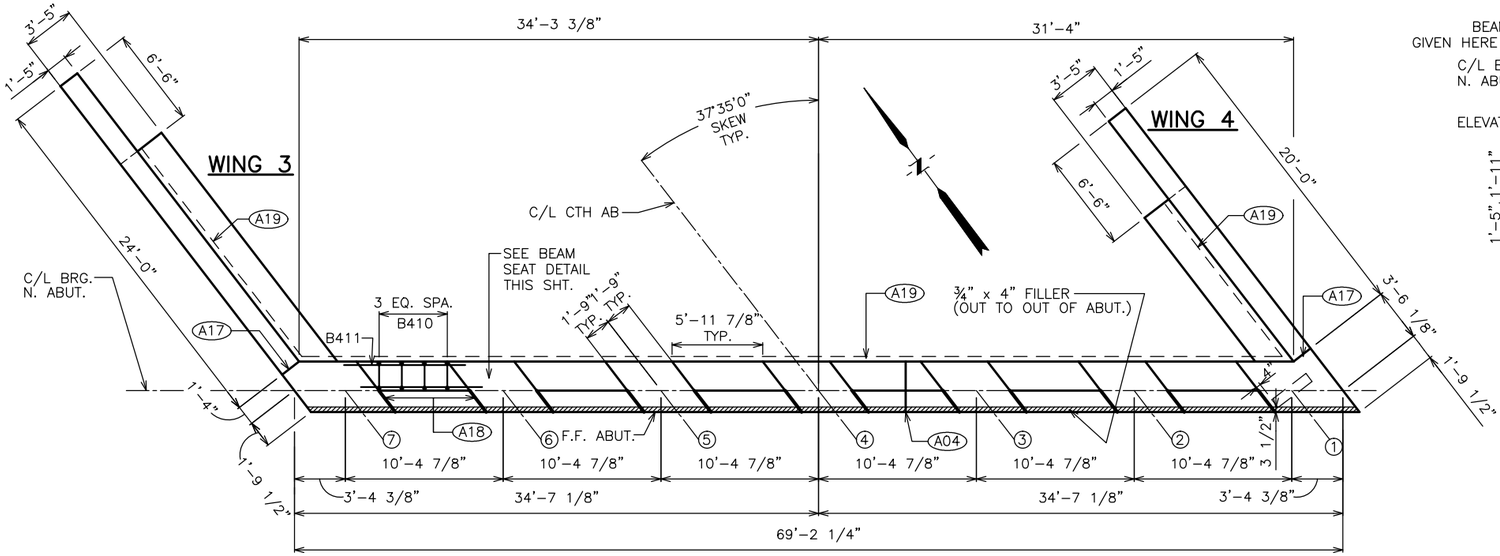
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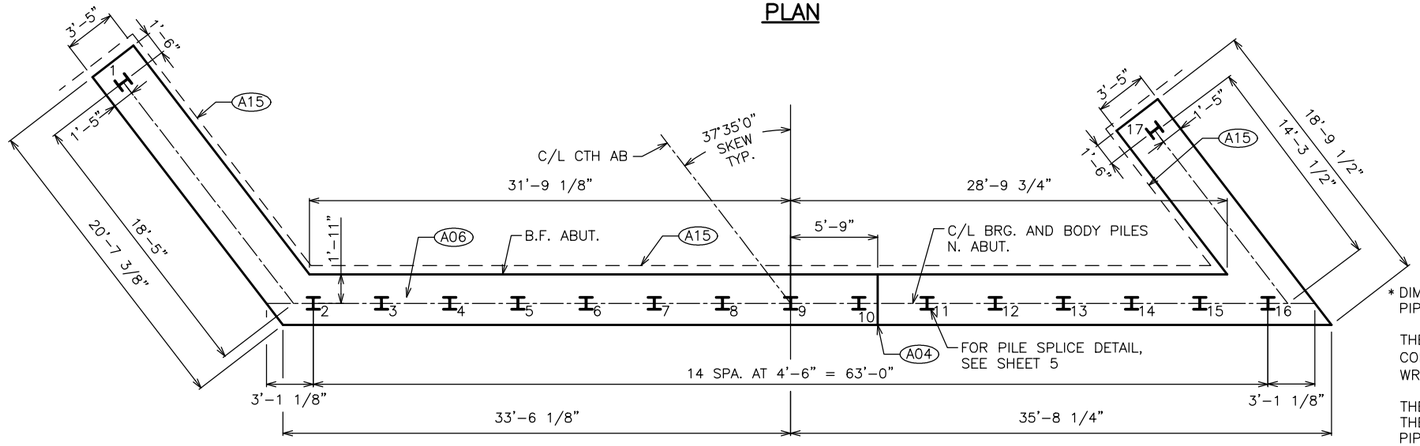
1007-10-81



ELEVATION LOOKING NORTH

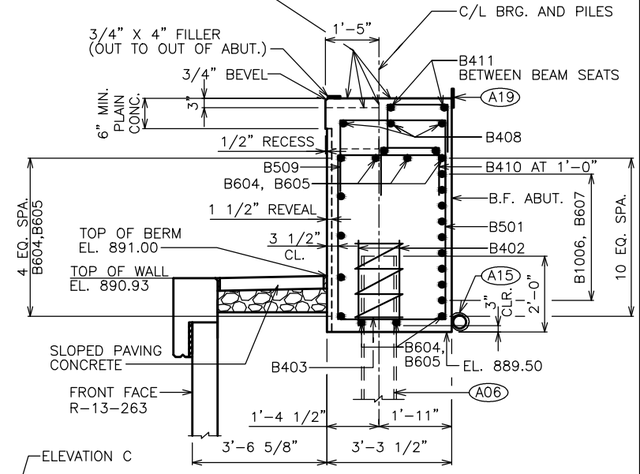


PLAN

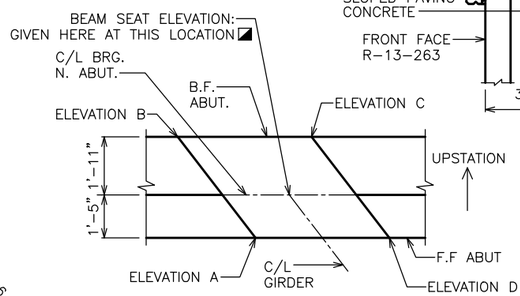


PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"

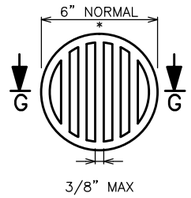


SECTION THRU BODY

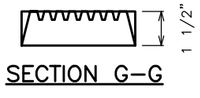


SLOPED BEAM SEAT DETAIL

GIRDER	BEARING ELEV ◪	ELEV A	ELEV B	ELEV C	ELEV D
1	895.14	895.13	895.21	895.16	895.08
2	895.21	895.20	895.28	895.23	895.15
3	895.27	895.26	895.34	895.29	895.21
4	895.33	895.32	895.40	895.35	895.26
5	895.05	895.05	895.13	895.08	894.99
6	894.78	894.77	894.86	894.80	894.71
7	894.50	894.49	894.58	894.52	894.44



RODENT SCREEN DETAIL



SECTION G-G

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6 INCH".

THE RODENT SCREEN SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1" SHEET METAL SCREWS.

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 8". 3/4" "V" GROOVE AT THE FRONT FACE AND 18" R.M.W. AT BACKFACE. FOR ALTERNATE CONSTRUCTION JOINT DETAILS, SEE SHEET 20.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35 FEET LONG WITH A REQUIRED DRIVING PILE RESISTANCE OF 180 TONS PER PILE. PREBORE FOR PILES SHALL OCCUR AFTER EXCAVATION FOR RETAINING WALLS IS COMPLETED. PREBORE 10' BELOW RETAINING WALL LEVELING PAD, THEN DRIVE TO REQUIRED DRIVING RESISTANCE.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED. SEE THIS SHT. FOR DETAILS.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF THE JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

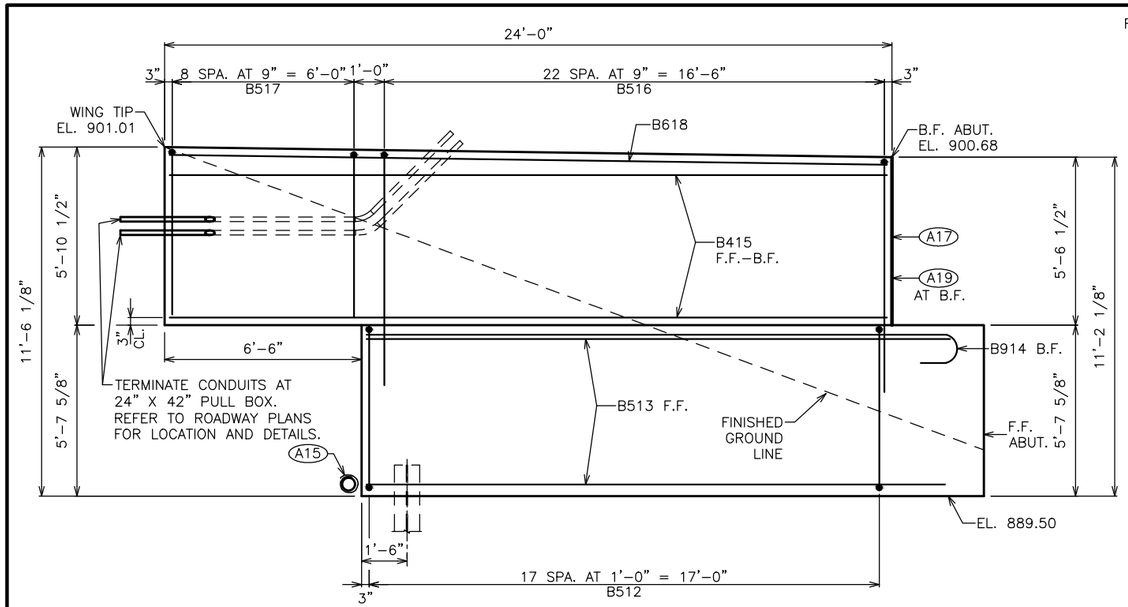
NORTH ABUTMENT

SHEET 6 OF 20

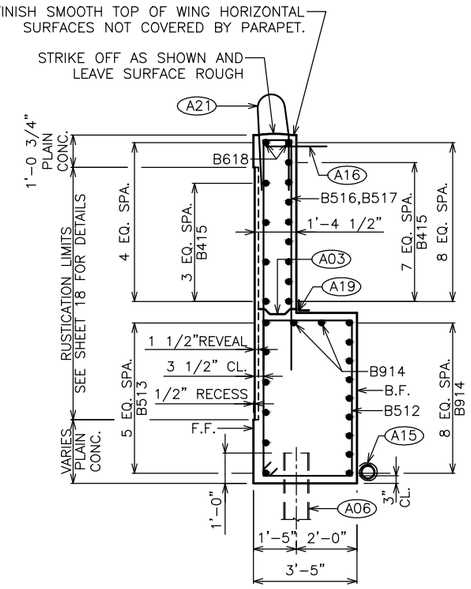
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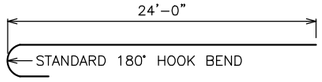
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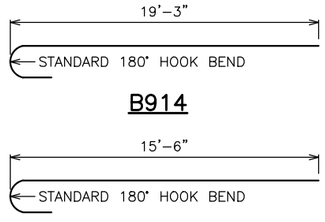
WING 3 ELEVATION



WING 3 SECTION

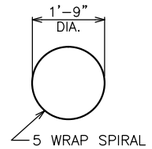


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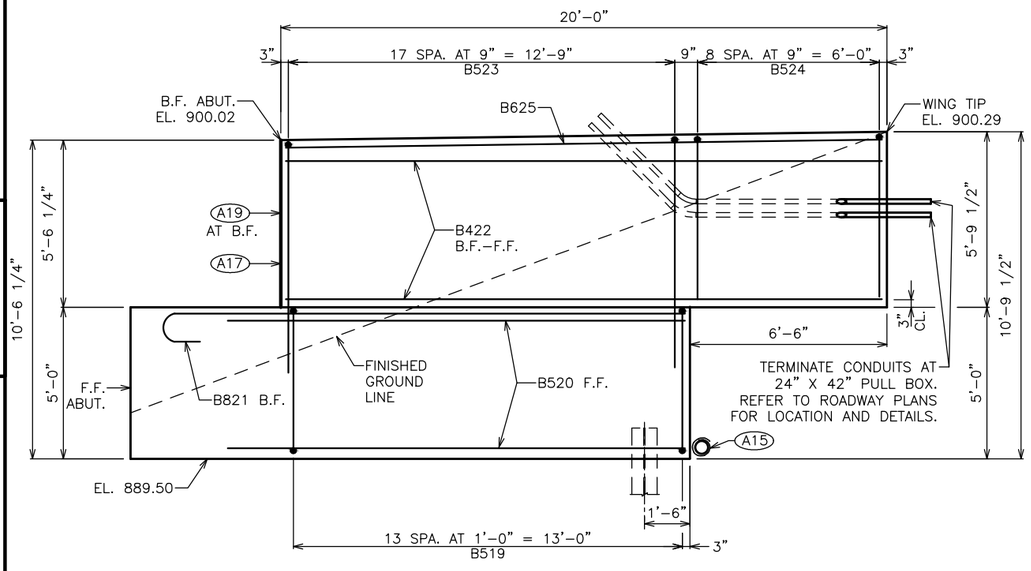


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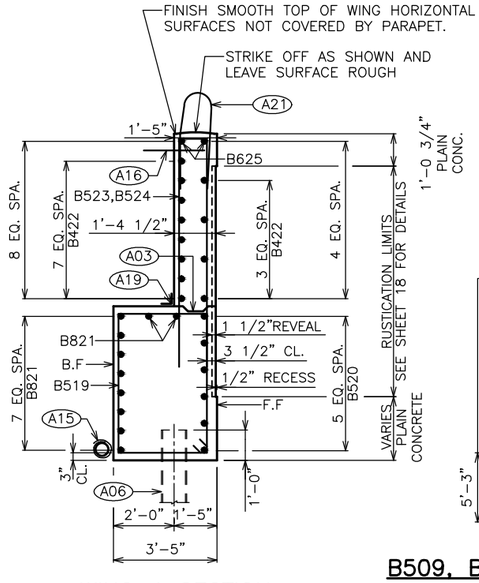
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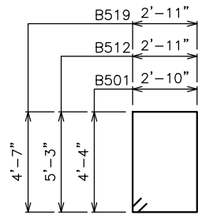
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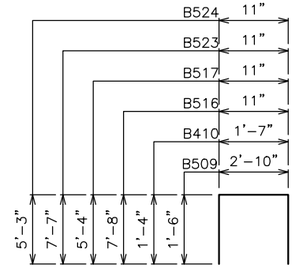
WING 4 ELEVATION



WING 4 SECTION



B501, B512, B519



B509, B410, B516, B517, B523, B524

BILL OF BARS

FOR NORTH ABUTMENT

STATE PROJECT NUMBER

1007-10-81

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		114	14-6	X		BODY-STIRRUPS VERT.
B402		30	2-3			BODY-VERT.-BOT.-2 PER PILE
B403		15	28-0	X		BODY-VERT.-BOT.-SPIRAL-1 PER PILE
B604		11	41-6			BODY-HORIZ.
B605		11	29-6			BODY-HORIZ.
B1006		18	25-5	X		BODY-HORIZ.-B.F.
B607		9	28-6			BODY-HORIZ.-B.F.
B408		3	26-10			BODY-HORIZ.-BTWN. BEAM SEATS
B509		28	5-7	X		BODY-STIRRUP
B410		24	4-1	X		BODY-VERT.-BTWN. BEAM SEATS
B411		12	8-0			BODY-HORIZ.-BTWN. BEAM SEATS
B512	X	18	16-5	X		WING 3-STIRRUP
B513	X	6	19-1			WING 3-HORIZ.-F.F
B914	X	11	20-6	X		WING 3-HORIZ.-B.F
B415	X	10	23-8			WING 3-HORIZ.-B.F. AND F.F.
B516	X	23	16-0	X		WING 3-VERT.
B517	X	9	11-4	X		WING 3-VERT.
B618	X	2	23-8			WING 3-HORIZ.-TOP-B.F. AND F.F.
B519	X	14	15-2	X		WING 4 STIRRUP
B520	X	6	15-1			WING 4-HORIZ.-F.F.
B821	X	10	16-5	X		WING 4-HORIZ.-B.F.
B422	X	12	19-8			WING 4-HORIZ.-B.F. AND F.F.
B523	X	18	15-10	X		WING 4-VERT.
B524	X	9	11-2	X		WING 4-VERT.
B625	X	2	19-8			WING 4-HORIZ.-TOP-B.F. AND F.F.
B426	X	44	2-0			WING 3 AND 4-DOWEL-SURFACE DRAIN

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

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. AT B.F. AND 3/4" "V" GROOVE AT F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PREBORE FOR PILES SHALL OCCUR AFTER EXCAVATION FOR RETAINING WALLS IS COMPLETED. PREBORE 10' BELOW RETAINING WALL LEVELING PAD, THEN DRIVE TO REQUIRED DRIVING RESISTANCE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHT. 6 FOR DETAILS

(A16) B426 BARS SPACED AT 1'-0" CTRS. EMBED 1'-0" INTO WING CONCRETE. LOCATE 3" DOWN FROM TOP OF WING AT BACKFACE ABUT. TO 6" DOWN AT WING TIP. (DRILLED IN EPOXY ANCHORED #4 BARS 2'-0" LONG MAY BE USED). COST INCLUDED IN BID ITEM "BAR STEEL REINFORCEMENT HS COATED BRIDGES".

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS AND DIMENSIONS SEE PARAPET SHEET 16

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

NORTH ABUTMENT DETAILS

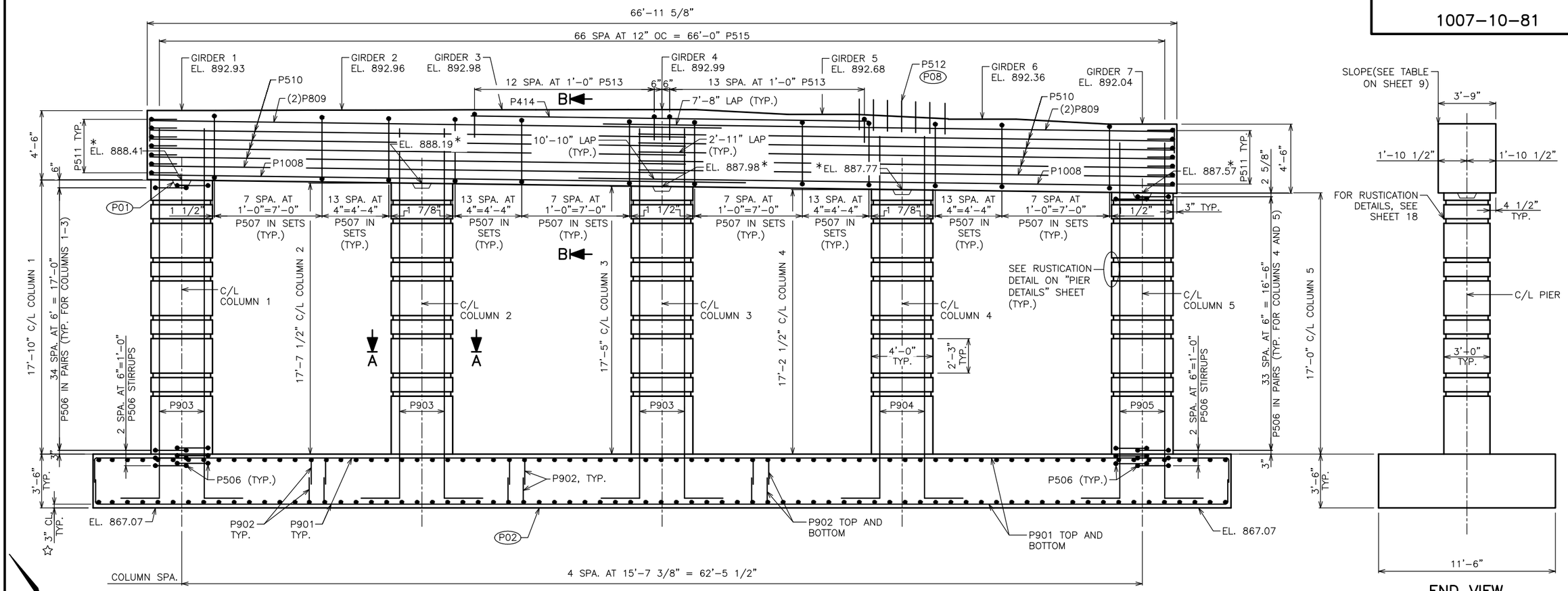
SHEET 7 OF 20

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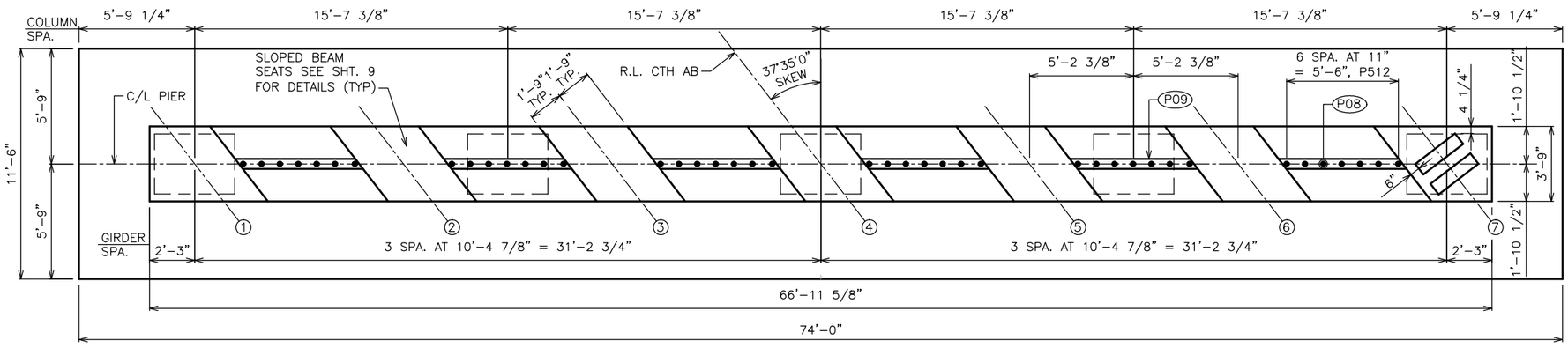
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STATE PROJECT NUMBER
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ELEVATION
(LOOKING NORTH)

END VIEW
(LOOKING NORTHWEST)



PLAN

(P01) 1'-3" X 2'-0" X 2" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) PIER SHALL BE SUPPORTED ON SHALLOW FOUNDATION WITH A FACTORED SOIL BEARING CAPACITY OF 6 TONS/SF.

(P08) P512 BARS AT 11" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT – FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

* SLOPE TOP OF COLUMN 1/8"/FT TO MATCH BOTTOM OF CAP SLOPE.

☆ IF OVEREXCAVATION OCCURS BELOW ELEVATION 867.07' DURING REMOVAL OF EXISTING PIER FOOTINGS, EXTEND FOOTING DEPTH TO BOTTOM OF EXCAVATION AND INCREASE THE 3" BOTTOM COVER. AN ADDITIONAL 5 CY OF CONCRETE MASONRY BRIDGES HAS BEEN ADDED TO THE PIER FOOTING QUANTITY TO ACCOUNT FOR THIS PROVISION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

PIER

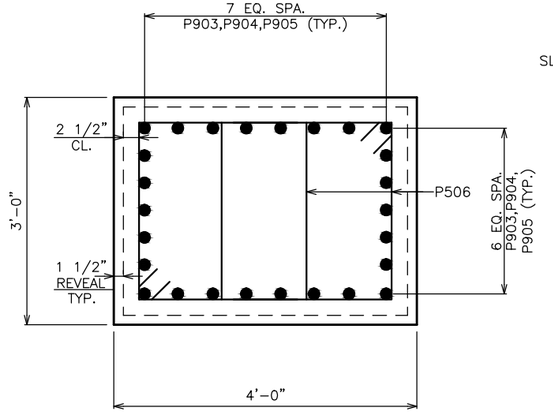
SHEET 8 OF 20

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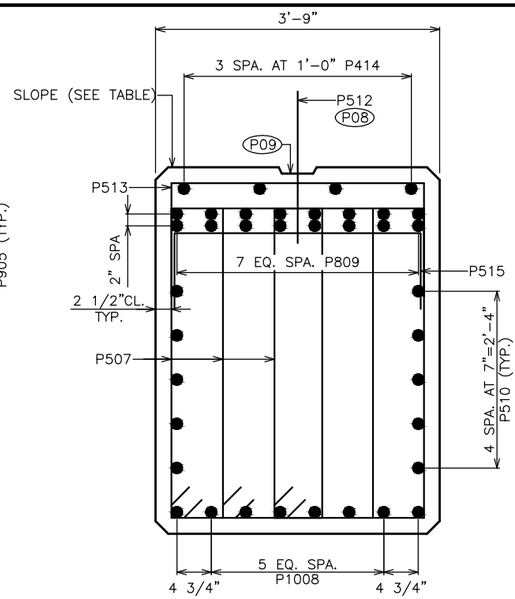
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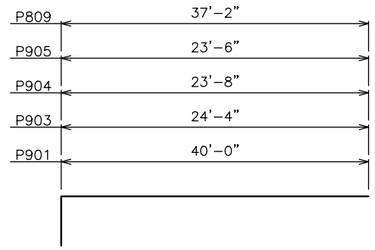
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SECTION A–A



SECTION B–B

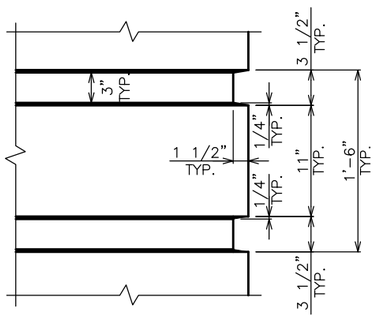


P901, P903, P904, P905, P809

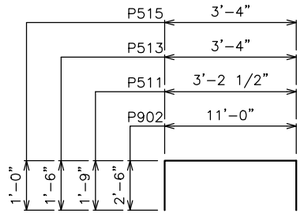
BILL OF BARS

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

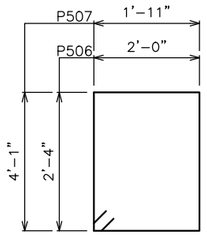
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
P901		48	42–3	X		FOOTING	HORIZ.
P902		148	15–6	X		FOOTING	HORIZ.
P903	X	78	25–9	X		FOOTING/COLUMN COL 1–3	VERT.
P904	X	26	25–0	X		FOOTING/COLUMN COL 4	VERT.
P905	X	26	24–11	X		FOOTING/COLUMN COL 5	VERT.
P506	X	366	9–4	X		COLUMN – STIRRUPS	
P507	X	252	12–2	X		CAP – STIRRUPS	
P1008	X	16	38–9			CAP – BOTTOM	HORIZ.
P809	X	32	38–4	X		CAP – TOP	HORIZ.
P510	X	20	36–3			CAP – SIDES	HORIZ.
P511	X	14	6–6	X		CAP – ENDS	HORIZ.
P512	X	42	2–0			DOWEL BARS	VERT.
P513	X	27	6–1	X		CAP – TOP – U BAR	VERT.
P414	X	4	31–0			CAP – TOP	HORIZ.
P515	X	66	5–1	X		CAP	



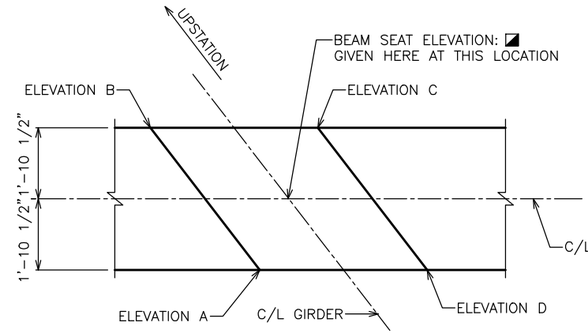
RUSTICATION DETAIL



P902, P511, P513, P515

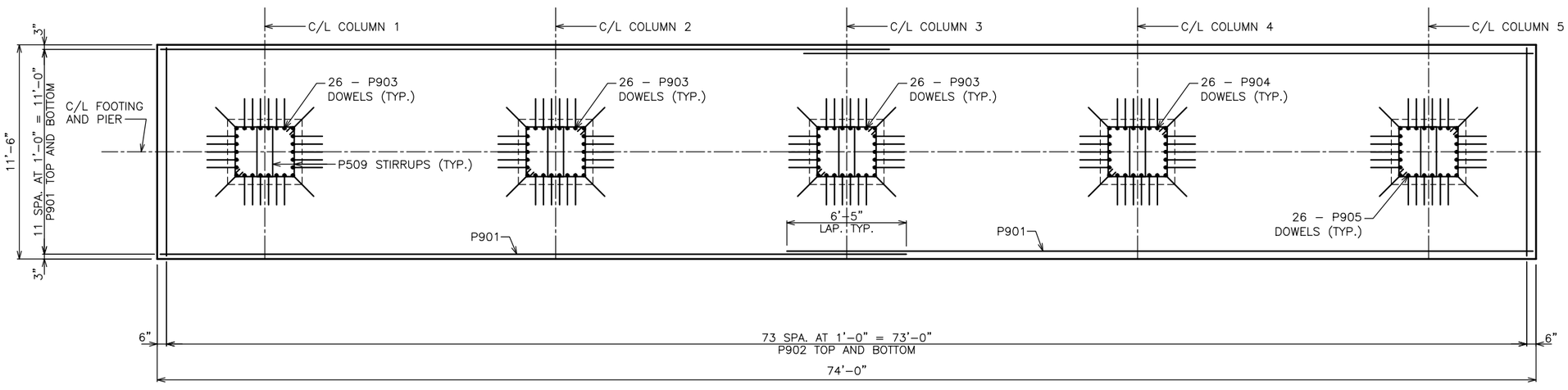


P506, P507



BEAM SEAT DETAIL AT PIER
(SHOWN AT INTERIOR GIRDER, EXTERIOR GIRDER SIMILAR)

GIRDER	BEARING ELEV ◪	ELEV A	ELEV B	ELEV C	ELEV D
1	892.93	892.91	893.01	892.95	892.84
2	892.96	892.93	893.03	892.98	892.86
3	892.98	892.95	893.05	893.00	892.88
4	892.99	892.97	893.07	893.02	892.90
5	892.68	892.65	892.76	892.70	892.58
6	892.36	892.33	892.44	892.38	892.26
7	892.04	892.02	892.12	892.07	891.94



FOOTING REINFORCEMENT PLAN

(P08) P512 BARS AT 11" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'–0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT – FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–13–726

DRAWN BY KGC | PLANS CHK'D SDB

PIER DETAILS

SHEET 9 OF 20

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NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

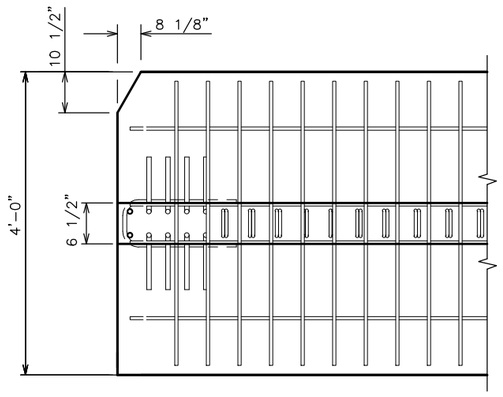
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

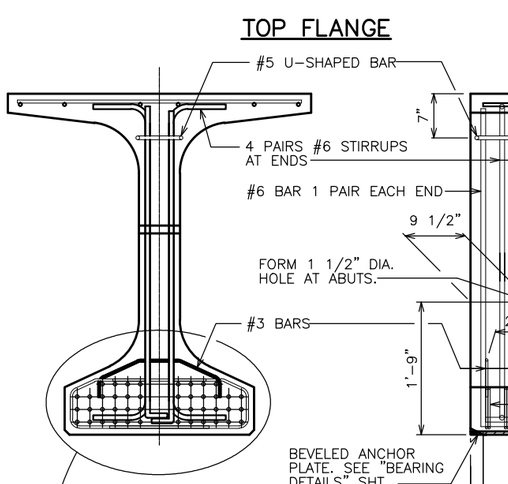
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

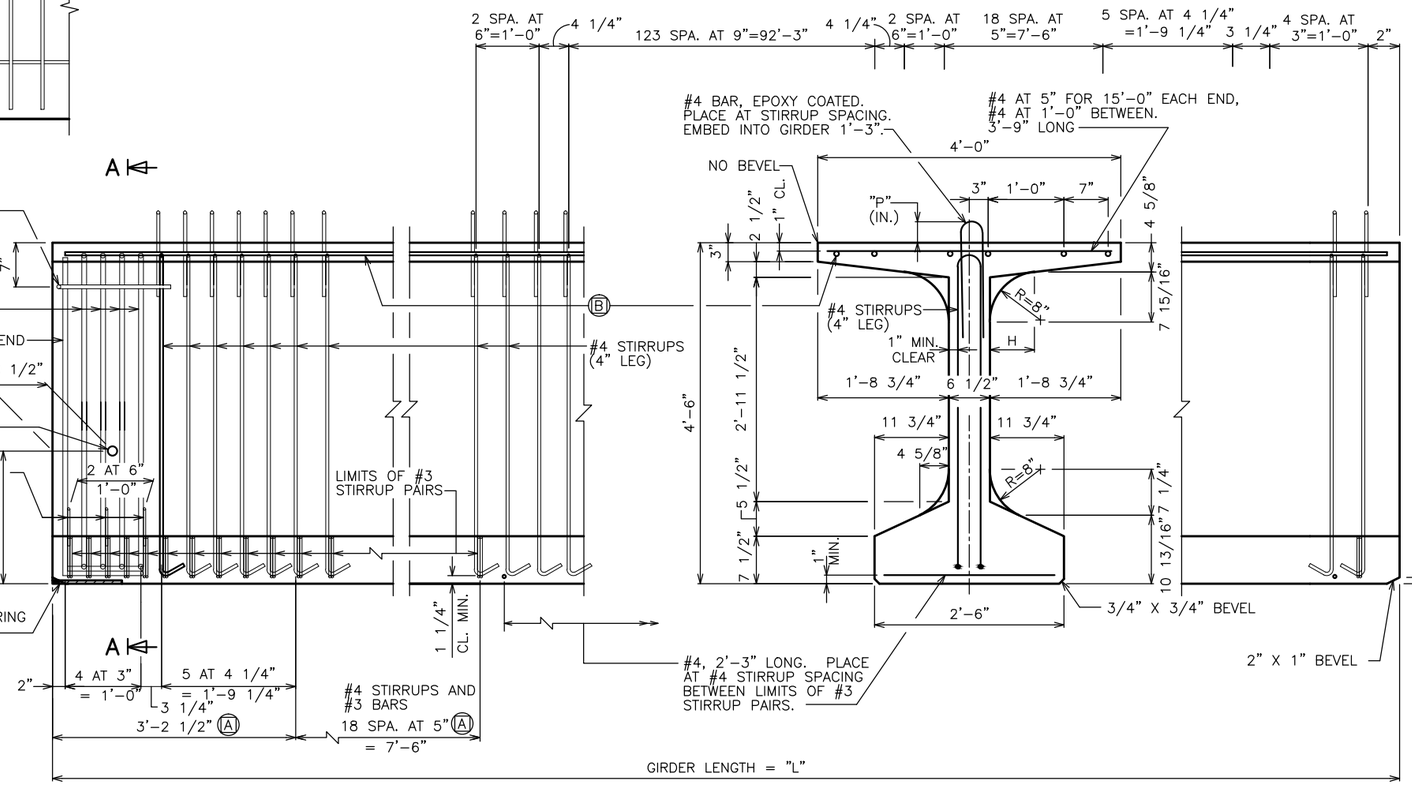
PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT AND CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





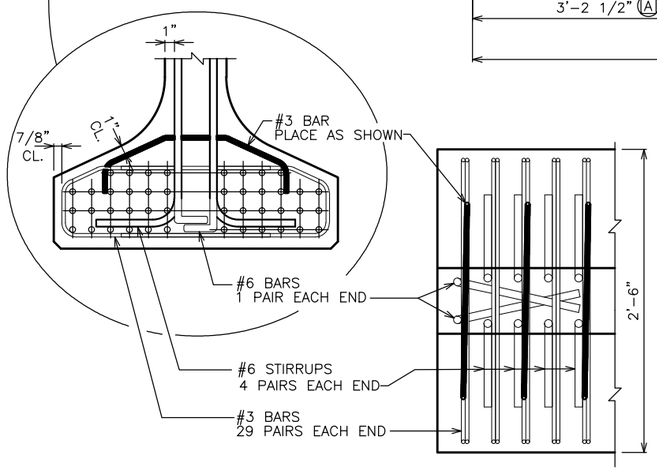
SECTION A-A



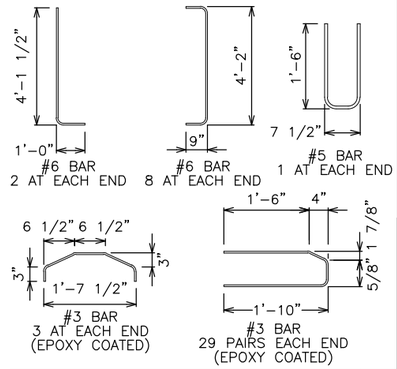
SIDE VIEW AND TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"



BOTTOM FLANGE



* MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1st 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1-7	116.375	SEE DEFLECTION TABLE ON SHEET 11									8000	8.00"	7.00"	8.00"	0.60	34	6400	49	16	19	5	-	-
2	1-7	116.375										8000	8.00"	7.00"	8.00"	0.60	34	6400	49	16	19	5	-	-

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

54W" PRESTRESSED CONCRETE GIRDER DETAILS 1

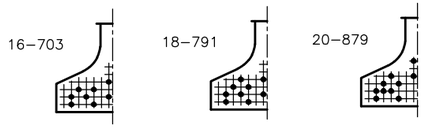
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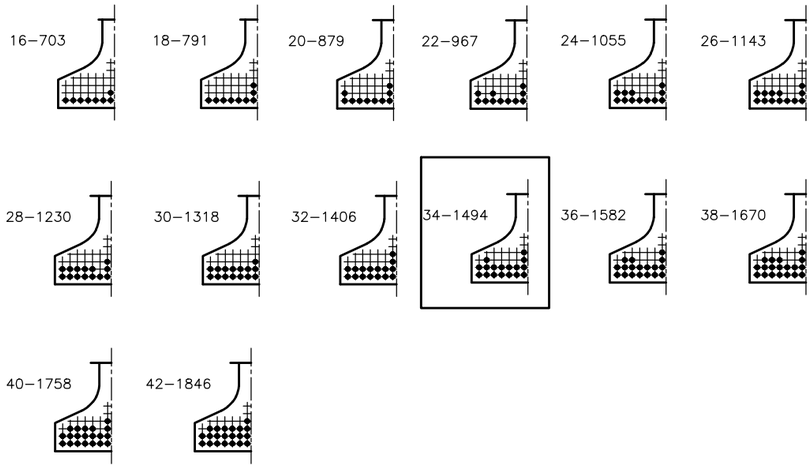
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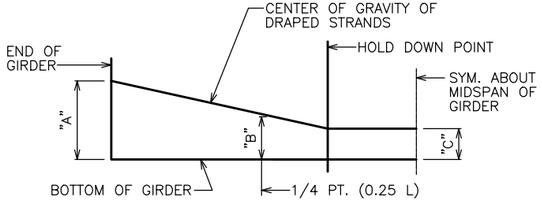
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF 0.6" DIA. STRANDS

0.6" DIA. STRANDS



ARRANGEMENT AT ℄ SPAN – FOR GIRDERS WITH DRAPED 0.6" DIA. STRANDS

0.6" DIA. STRANDS



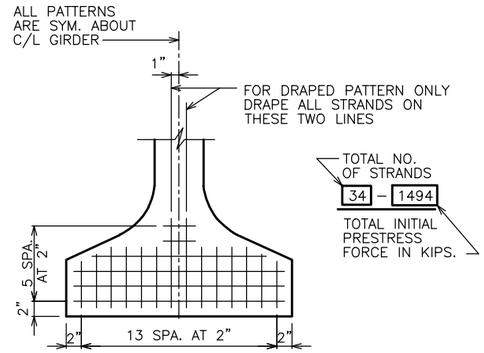
DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

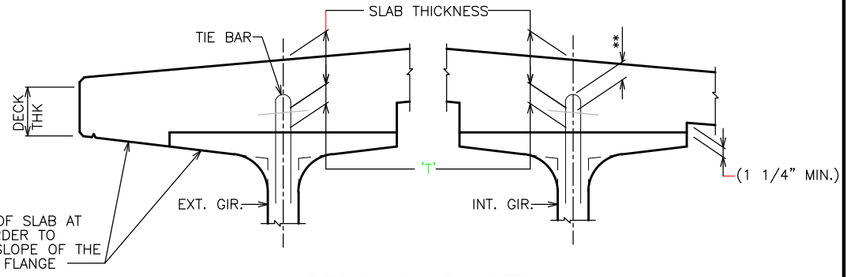
SPAN	CAMBER (IN.)*
1	3 1/4
2	3 1/4

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



TYP. STRAND PATTERN



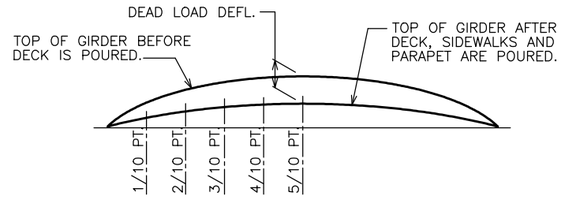
DECK HAUNCH DETAIL

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS AND AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
– TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
– DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2 7/8" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

TABLE OF THEORETICAL CONCRETE ONLY DEAD LOAD DEFLECTIONS (INCHES)

SPAN	DESCRIPTION	C/L BRG. S. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	C/L PIER
1	GIRDER 1	0.0	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.5	0.0
1	GIRDER 2	0.0	0.7	1.3	1.8	2.1	2.2	2.0	1.7	1.2	0.6	0.0
1	GIRDER 3	0.0	0.7	1.3	1.8	2.1	2.2	2.0	1.7	1.2	0.6	0.0
1	GIRDER 4	0.0	0.7	1.3	1.8	2.1	2.2	2.0	1.7	1.2	0.6	0.0
1	GIRDER 5	0.0	0.7	1.3	1.8	2.1	2.2	2.0	1.7	1.2	0.6	0.0
1	GIRDER 6	0.0	0.7	1.3	1.8	2.1	2.2	2.0	1.7	1.2	0.6	0.0
1	GIRDER 7	0.0	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.5	0.0
		C/L PIER	**0.1**	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**C/L N. ABUT.**
2	GIRDER 1	0.0	0.5	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	0.0
2	GIRDER 2	0.0	0.6	1.2	1.7	2.0	2.2	2.1	1.8	1.3	0.7	0.0
2	GIRDER 3	0.0	0.6	1.2	1.7	2.0	2.2	2.1	1.8	1.3	0.7	0.0
2	GIRDER 4	0.0	0.6	1.2	1.7	2.0	2.2	2.1	1.8	1.3	0.7	0.0
2	GIRDER 5	0.0	0.6	1.2	1.7	2.0	2.2	2.1	1.8	1.3	0.7	0.0
2	GIRDER 6	0.0	0.6	1.2	1.7	2.0	2.2	2.1	1.8	1.3	0.7	0.0
2	GIRDER 7	0.0	0.5	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	0.0

NOTE: DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.
THEORETICAL CONCRETE ONLY DEAD LOAD DEFLECTION = DECK AND HAUNCH DL DEF. + DIAPHRAGM DL DEF. + COMPOSITE DL DEF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

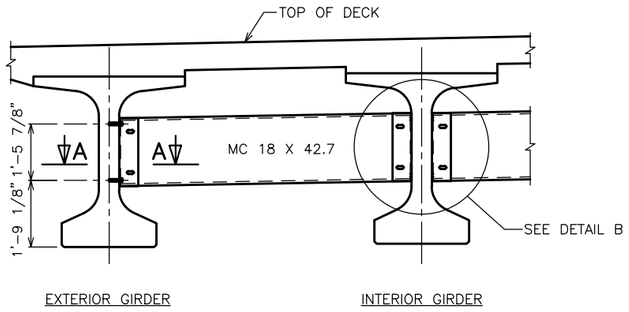
STRUCTURE B–13–726

DRAWN BY KGC | PLANS CHK'D SDB

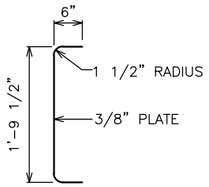
54W" PRESTRESSED CONCRETE GIRDER DETAILS 2

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PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM

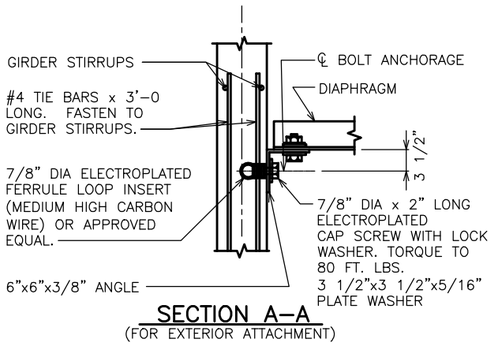
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-726, EACH.

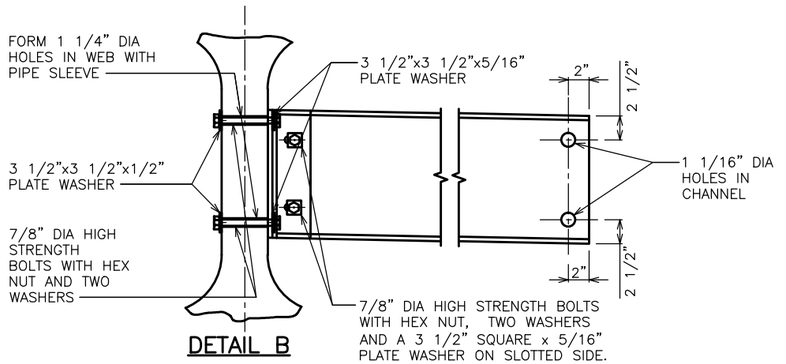
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

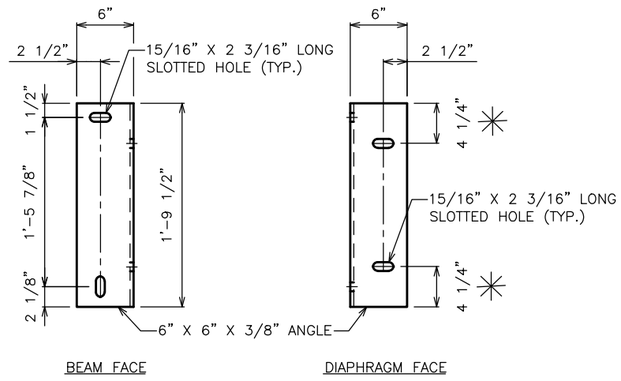


SECTION A-A
(FOR EXTERIOR ATTACHMENT)



DETAIL B

SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



DIAPHRAGM SUPPORT

✳ 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

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STATE OF WISCONSIN
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STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

STEEL DIAPHRAGM

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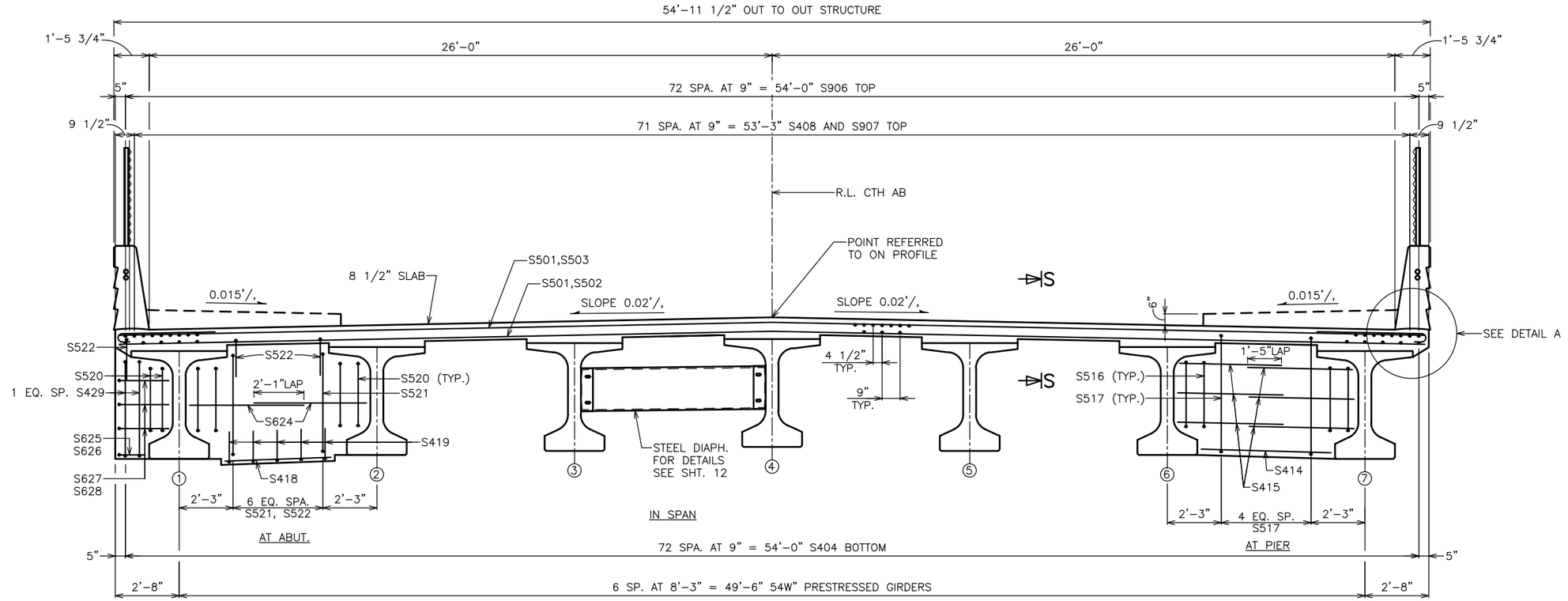
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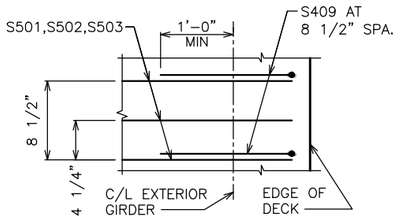
STATE PROJECT NUMBER

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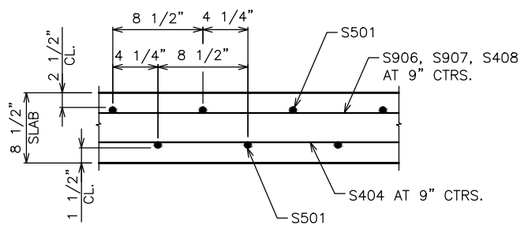


CROSS SECTION THRU ROADWAY

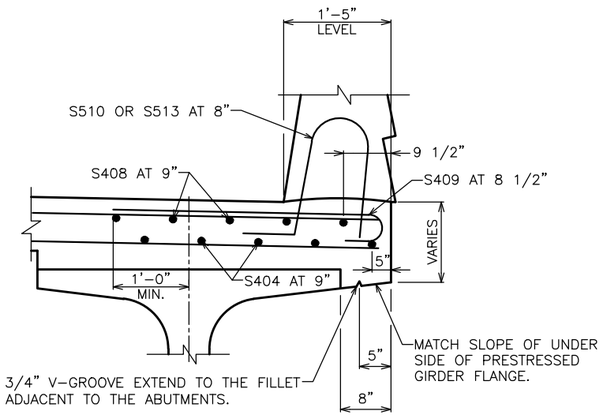
LOOKING NORTH



ADDITIONAL REINFORCEMENT DETAIL



SECTION S-S



DETAIL A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

SUPERSTRUCTURE CROSS SECTION

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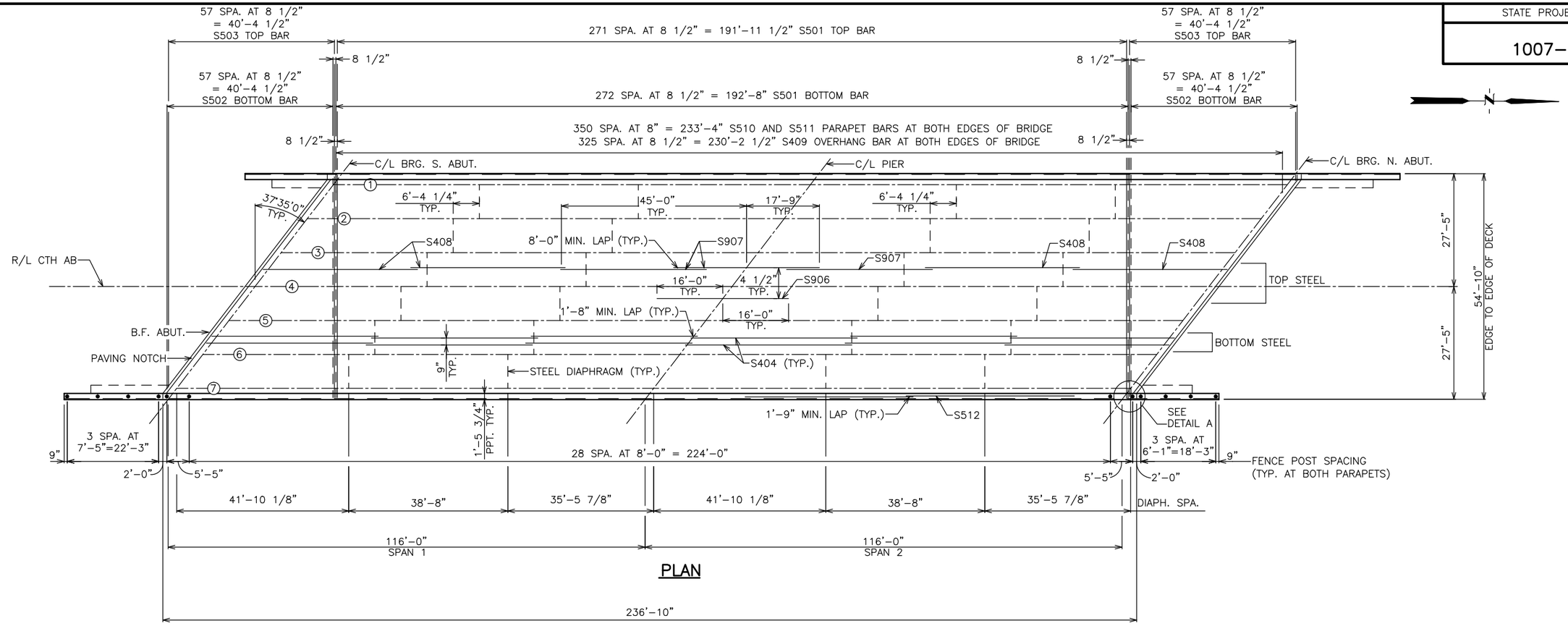
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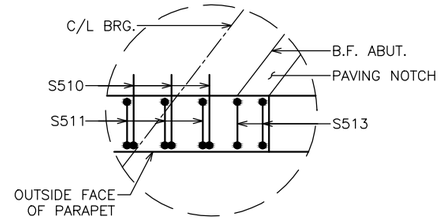
8

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PLAN



DETAIL A

TOP OF DECK ELEVATION

SPAN	DESCRIPTION	C/L BRG. S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	C/L PIER
1	WEST EDGE	895.50	895.83	896.15	896.47	896.78	897.08	897.37	897.65	897.93	898.20	898.46
1	GIRDER 1	895.50	895.83	896.16	896.47	896.78	897.08	897.38	897.66	897.94	898.21	898.47
1	GIRDER 2	895.48	895.81	896.14	896.46	896.77	897.08	897.38	897.67	897.95	898.22	898.49
1	GIRDER 3	895.46	895.80	896.13	896.46	896.77	897.08	897.38	897.68	897.96	898.24	898.51
1	GIRDER 4	895.43	895.78	896.11	896.44	896.76	897.07	897.38	897.68	897.97	898.25	898.53
1	GIRDER 5	895.08	895.43	895.77	896.10	896.43	896.74	897.05	897.36	897.65	897.94	898.22
1	GIRDER 6	894.72	895.07	895.41	895.75	896.08	896.40	896.72	897.02	897.32	897.61	897.90
1	GIRDER 7	894.36	894.72	895.07	895.41	895.74	896.07	896.38	896.70	897.00	897.29	897.58
1	EAST EDGE	894.24	894.59	894.94	895.29	895.62	895.95	896.27	896.58	896.89	897.18	897.47

SPAN	DESCRIPTION	C/L PIER	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	C/L BRG. N. ABUT.
2	WEST EDGE	898.46	898.71	898.96	899.20	899.43	899.65	899.87	900.07	900.27	900.47	900.65
2	GIRDER 1	898.47	898.73	898.98	899.21	899.45	899.67	899.89	900.10	900.30	900.49	900.68
2	GIRDER 2	898.49	898.75	899.00	899.24	899.48	899.71	899.93	900.14	900.35	900.55	900.74
2	GIRDER 3	898.51	898.78	899.03	899.28	899.52	899.76	899.98	900.20	900.41	900.61	900.81
2	GIRDER 4	898.53	898.79	899.05	899.31	899.55	899.79	900.02	900.24	900.45	900.66	900.86
2	GIRDER 5	898.22	898.49	898.75	899.01	899.26	899.50	899.73	899.96	900.18	900.39	900.59
2	GIRDER 6	897.90	898.17	898.44	898.70	898.95	899.20	899.44	899.67	899.89	900.10	900.31
2	GIRDER 7	897.58	897.86	898.13	898.40	898.66	898.91	899.15	899.38	899.61	899.83	900.04
2	EAST EDGE	897.47	897.75	898.03	898.29	898.55	898.80	899.05	899.28	899.51	899.73	899.94

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

SUPERSTRUCTURE PLAN

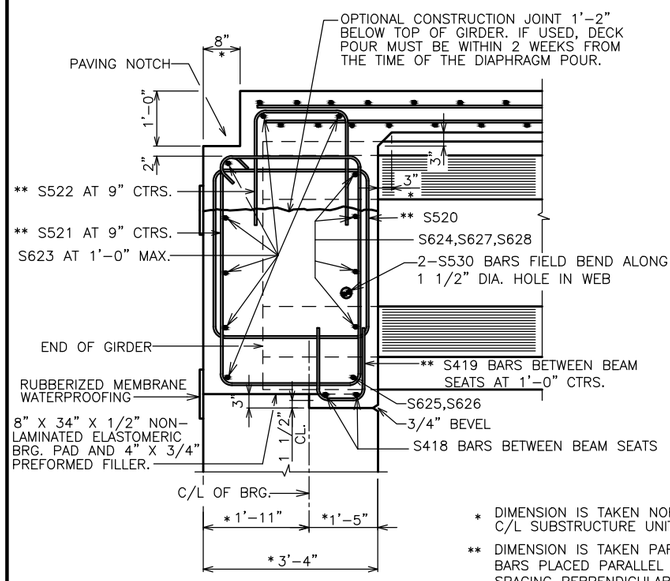
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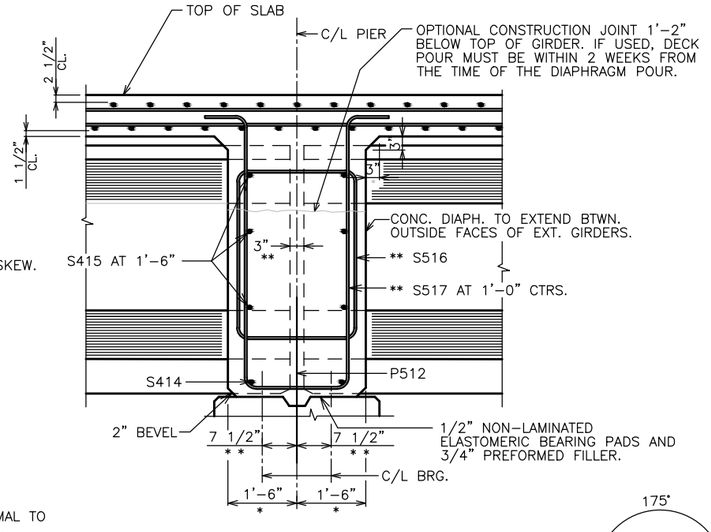
STATE PROJECT NUMBER
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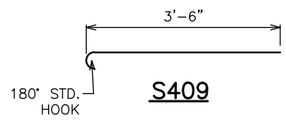
* DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

** DIMENSION IS TAKEN PARALLEL TO C/L GIRDER. BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L GIRDERS.

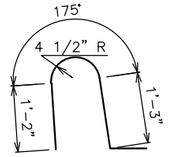
CROSS SECTION THRU ABUTMENT DIAPHRAGMS BETWEEN EXTERIOR GIRDERS



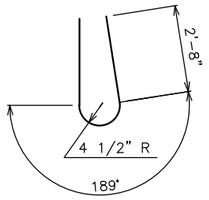
CROSS SECTION THRU PIER DIAPHRAGM



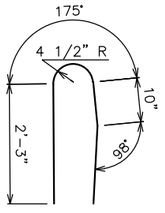
S409



S510



S511



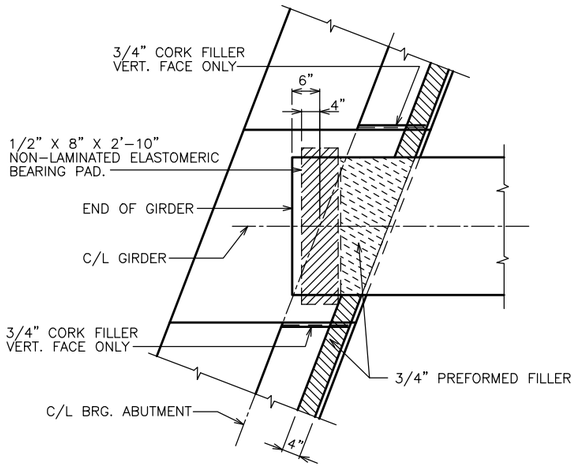
S513

BILL OF BARS

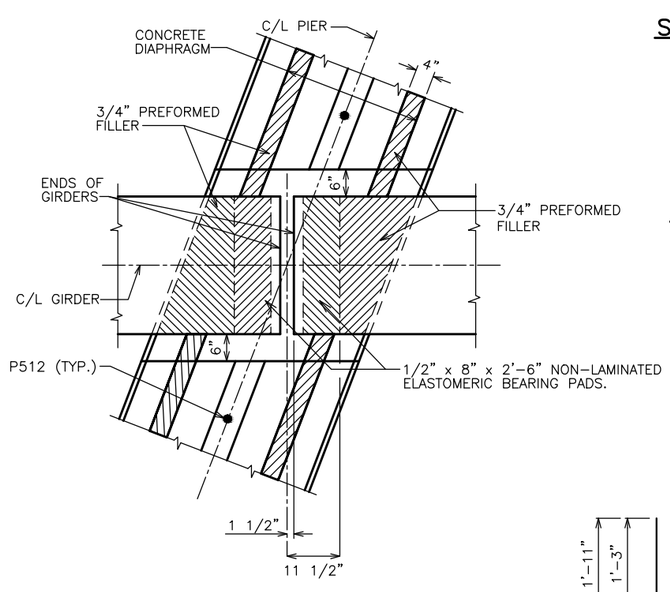
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	545	54-4			SLAB TOP AND BOTTOM TRANS.
S502	X	116	27-3		⚠	SLAB BOTTOM TRANS.
S503	X	116	27-9		⚠	SLAB TOP TRANS.
S404	X	438	40-6			SLAB BOTTOM LONG.
SX05						
S906	X	73	32-0			SLAB TOP LONG.
S907	X	216	35-6			SLAB TOP LONG.
S408	X	288	37-7			SLAB TOP LONG.
S409	X	652	4-0	X		SLAB TOP - OVERHANGS AT EDGES
S510	X	702	4-5	X		PARAPET VERT.
S511	X	702	6-8	X		PARAPET VERT.
S512	X	96	40-11			PARAPET HORIZ.
S513	X	8	5-10	X		PARAPET VERT.
S414	X	12	6-10			PIER DIAPHRAGM HORIZ.
S415	X	72	5-5			PIER DIAPHRAGM HORIZ.
S516	X	24	12-8	X		PIER DIAPHRAGM STIRRUP
S517	X	30	14-3	X		PIER DIAPHRAGM VERT.
S418	X	24	5-6			ABUT. DIAPHRAGM HORIZ.
S419	X	60	3-9	X		ABUT. DIAPHRAGM VERT.
S520	X	56	13-3	X		ABUT. DIAPHRAGM STIRRUP
S521	X	84	16-6	X		ABUT. DIAPHRAGM STIRRUP
S522	X	88	6-4	X		ABUT. DIAPHRAGM STIRRUP
S623	X	28	35-2			ABUT. DIAPHRAGM B.F. HORIZ.
S624	X	96	5-9			ABUT. DIAPHRAGM HORIZ.
S625	X	2	8-6	X		ABUT. DIAPHRAGM-WING 2 AND 4
S626	X	2	9-9	X		ABUT. DIAPHRAGM-WING 1 AND 3
S627	X	8	6-7	X		ABUT. DIAPHRAGM-WING 2 AND 4
S628	X	8	7-10	X		ABUT. DIAPHRAGM-WING 1 AND 3
S429	X	8	15-10	X		ABUT. DIAPHRAGM STIRRUP
S530	X	28	6-0			ABUT. DIAPHRAGM HORIZ.

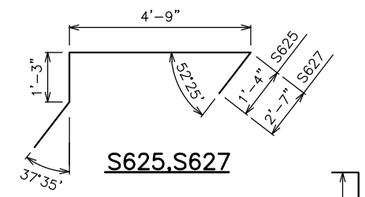
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



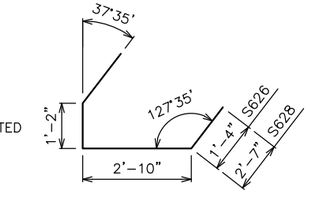
BEARING PAD DETAIL AT ABUTMENT



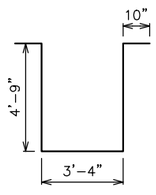
BEARING PAD DETAIL AT PIER



S625,S627



S626,S628

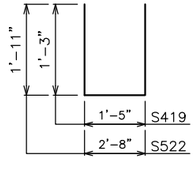


S517

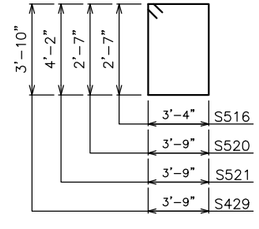
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
S502	2 SERIES OF 58	1'-0" TO 53'-6"
S503	2 SERIES OF 58	1'-6" TO 53'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.



S419, S522



S516, S520, S521, S429

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STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

SUPERSTRUCTURE DETAILS

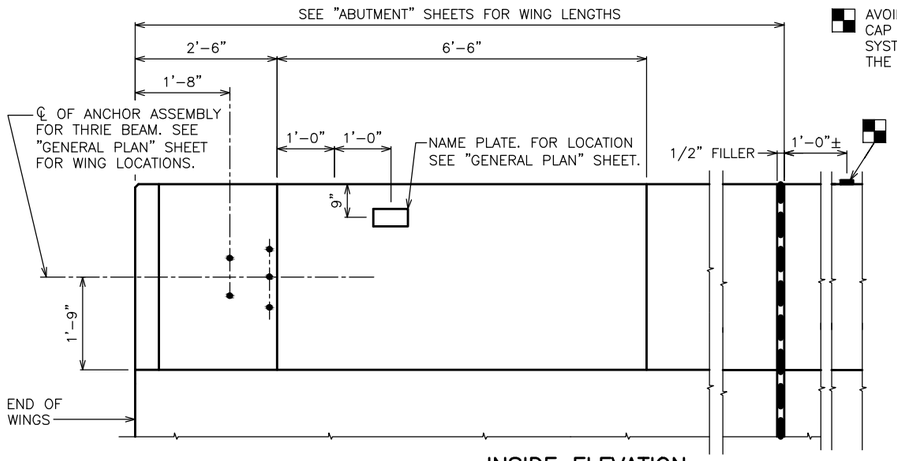
SHEET 15 OF 20

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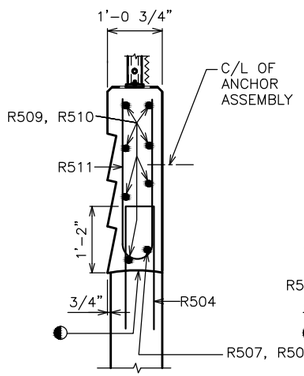
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STATE PROJECT NUMBER
1007–10–81

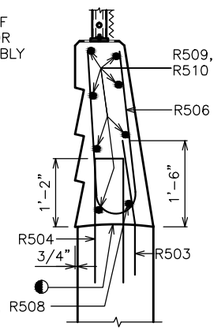


INSIDE ELEVATION

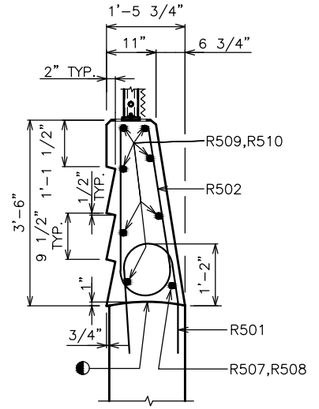
AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A–A



SECTION B–B



SECTION C–C

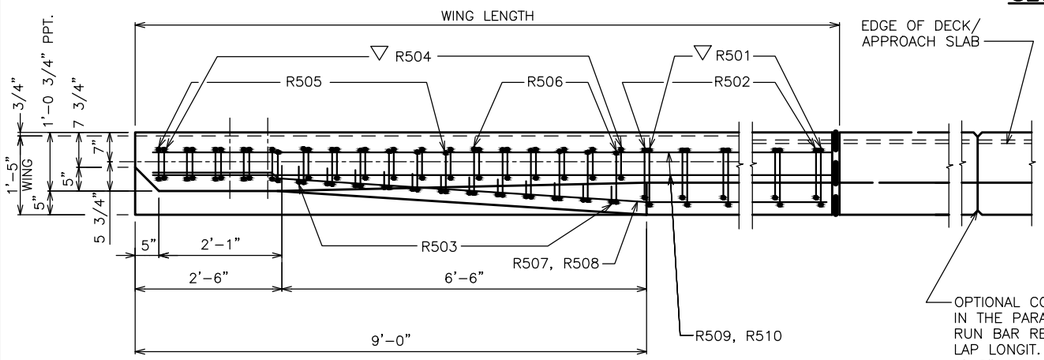
BILL OF BARS

FOR CONCRETE PAVEMENT APPROACH SLAB PARAPETS

BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	40	40	5–10	X		PARAPET–VERT.
R502	X	40	40	6–8	X		PARAPET–VERT.
R503	X	22	22	3–0	X		PARAPET–VERT.
R504	X	34	34	5–7	X		PARAPET–VERT.
R505	X	10	10	6–5	X		PARAPET–VERT.
R506	X	12	12	6–6	X		PARAPET–VERT.
R507	X	1	1	19–6	X		PARAPET–HORIZ. WING 2 AND 4
R508	X	1	1	23–6	X		PARAPET–HORIZ. WING 1 AND 3
R509	X	7	7	19–6			PARAPET–HORIZ. WING 2 AND 4
R510	X	7	7	23–6			PARAPET–HORIZ. WING 1 AND 3

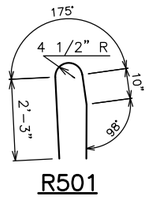
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

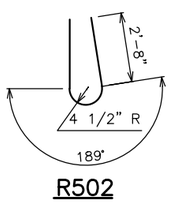


PLAN

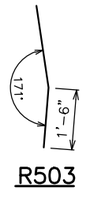
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'–9". MIN. JOINT SPACING OF 80'–0" DEFINE CONST. JOINT WITH A 3/4" – 'V' GROOVE.



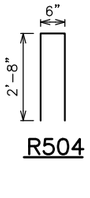
R501



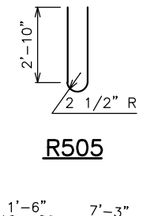
R502



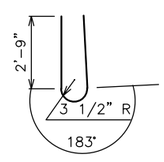
R503



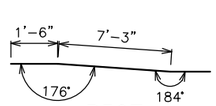
R504



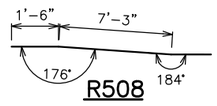
R505



R506



R507

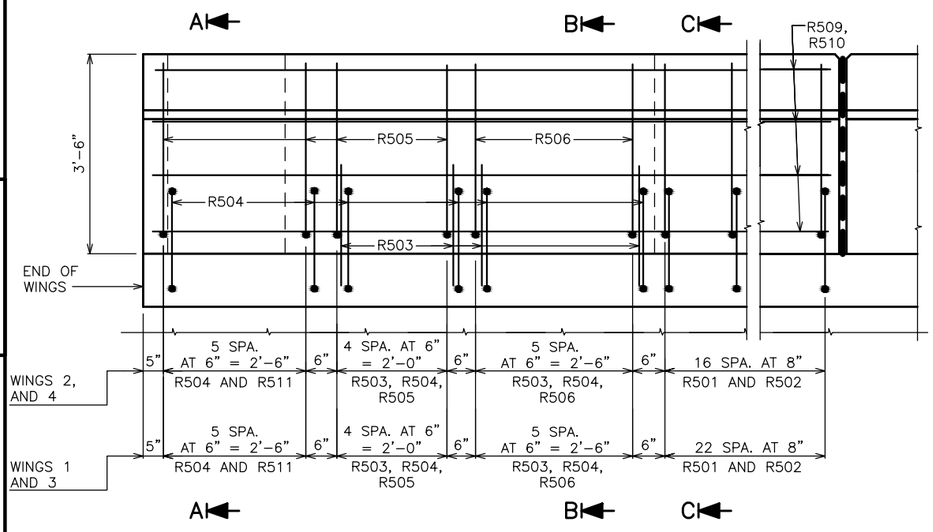


R508

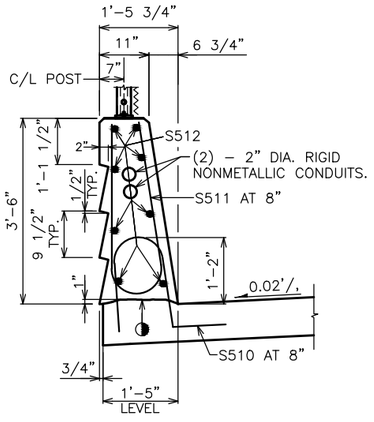
◐ CONST. JOINT – STRIKE OFF AS SHOWN.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

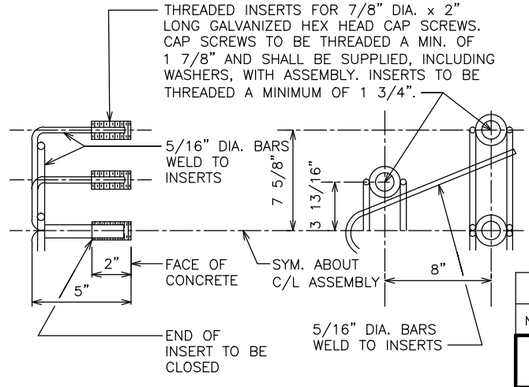
◆ SLOPE FOR DRAINAGE



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–13–726

DRAWN BY KGC | PLANS CHK'D SDB

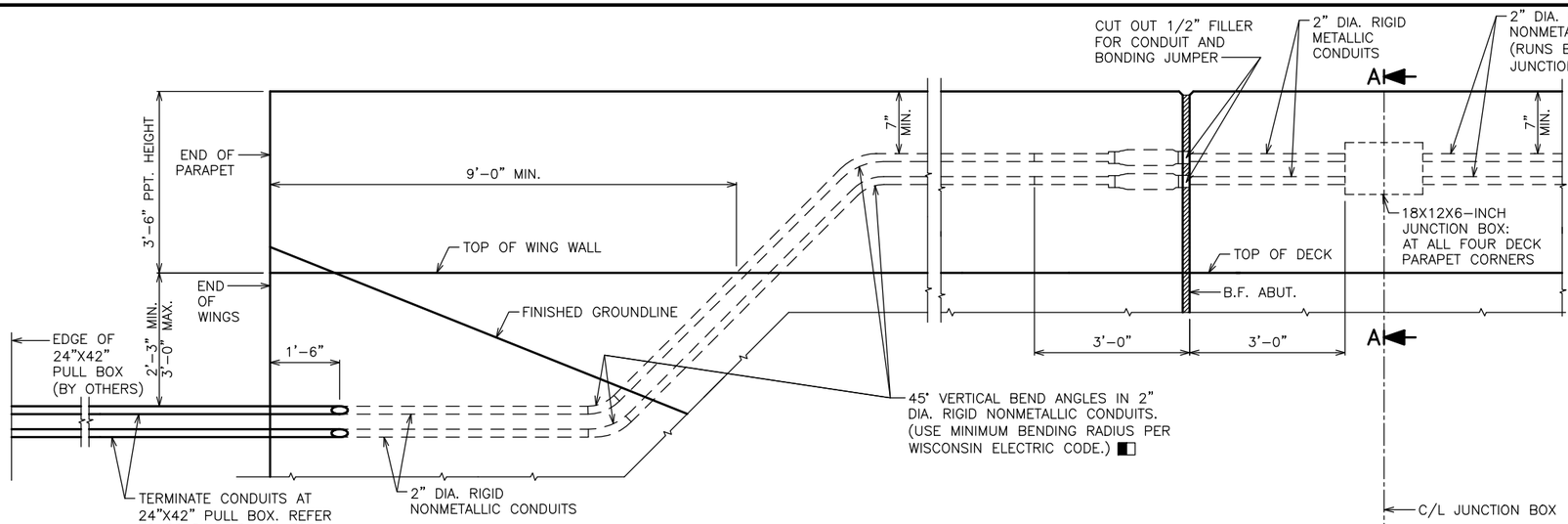
MODIFIED SINGLE SLOPE PARAPET 42SS

SHEET 16 OF 20

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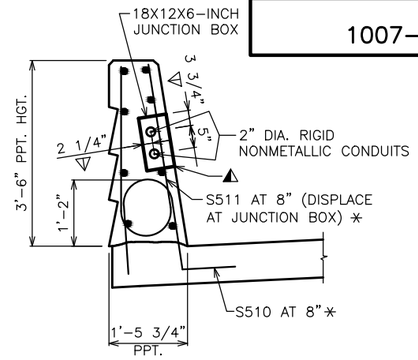
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8

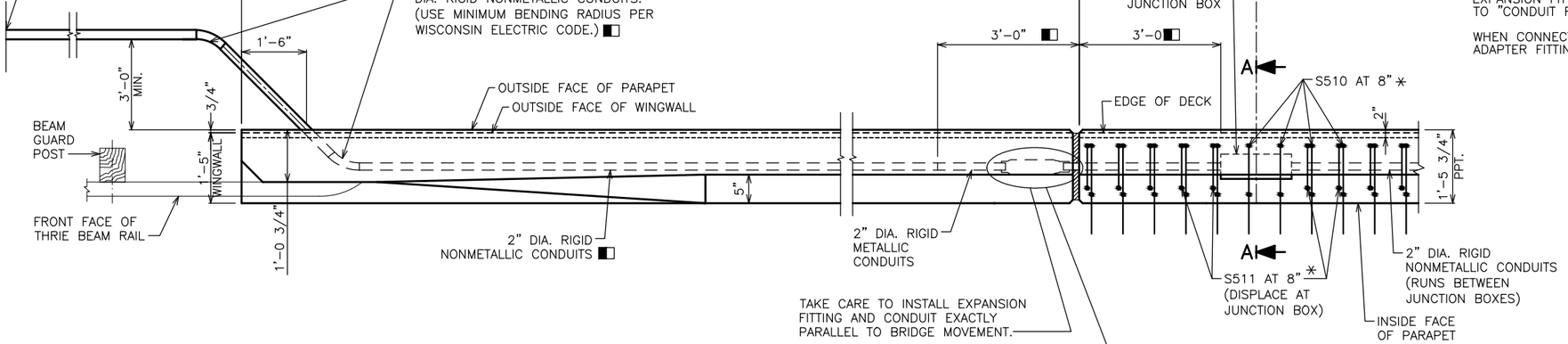


OUTSIDE ELEVATION OF WINGWALL AND PARAPET SHOWING CONDUITS

(TYPICAL AT ALL FOUR WINGS)



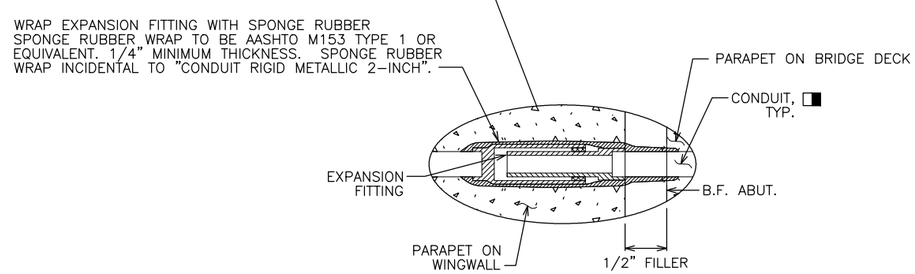
SECTION A-A (AT JUNCTION BOX)



PLAN VIEW OF WINGWALL AND PARAPET SHOWING CONDUITS

(TYPICAL AT ALL FOUR WINGS)

PLAN AT JUNCTION BOX



NOTES

BID ITEMS SHALL BE:

"JUNCTION BOXES 18X12X6-INCH", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

◨ USE 2" DIA. RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE 2" DIA. RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE B.F. ABUT.

▲ CUT OUT 1"± OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

* SEE "MODIFIED SINGLE SLOPE PARAPET 42SS" SHEET 16 FOR ADDITIONAL BAR STEEL DETAILS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

CONDUIT DETAILS

SHEET 17 OF 20

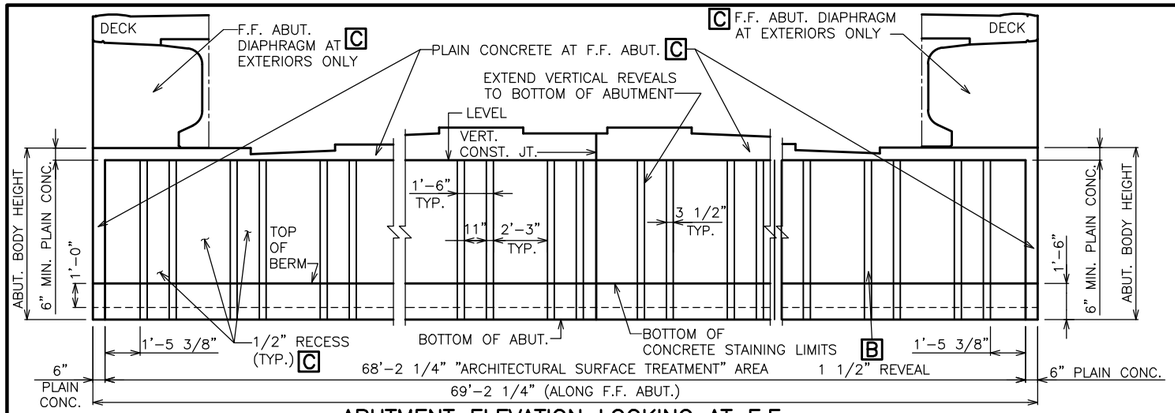
212

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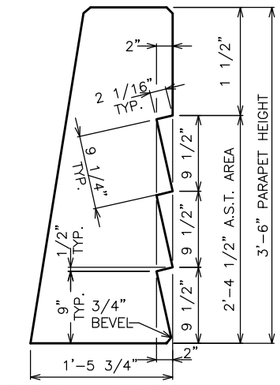
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STATE PROJECT NUMBER

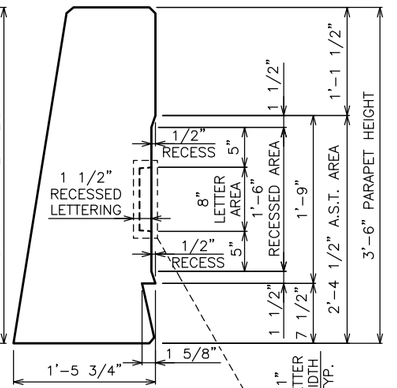
1007-10-81



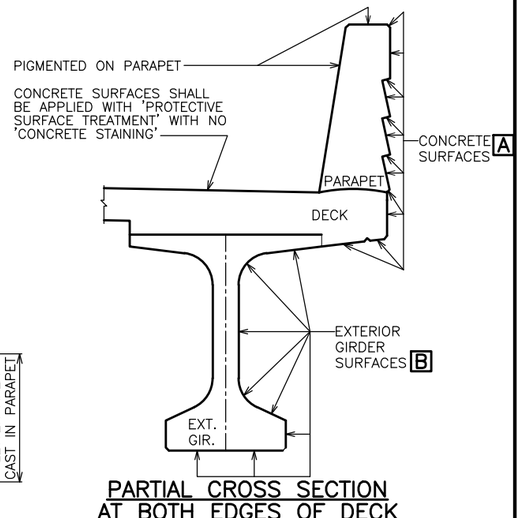
ABUTMENT ELEVATION LOOKING AT F.F.
(TYPICAL AT BOTH ABUTMENTS)



TYPICAL SECTION THRU PARAPET



SECTION THRU PARAPET AT LETTERING



PARTIAL CROSS SECTION AT BOTH EDGES OF DECK

NOTES

FORMING LETTERING INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES".

STAINING LETTERING WORK SHALL BE PAID FOR UNDER THE BID ITEM "CONCRETE STAINING B-13-726" THE LETTERING FONT TYPE SHALL BE "HELVETICA" (1" WIDE X 1" DEEP) WITH 8" HIGH UPPER CASE LETTERS AND 6" HIGH LOWER CASE LETTERS.

LETTERING SHALL ONLY BE PLACED AT THE OUTSIDE FACES OF PARAPETS.

STAINING OF CONCRETE SURFACE AREAS SHALL BE PAID FOR UNDER THE BID ITEM "CONCRETE STAINING B-13-726".

IF TOUCH UP PAINTING IS REQUIRED, IT SHALL BE DONE TO THE SATISFACTION OF THE FIELD ENGINEER AT NO ADDITIONAL COST.

A.S.T. = ARCHITECTURAL SURFACE TREATMENT

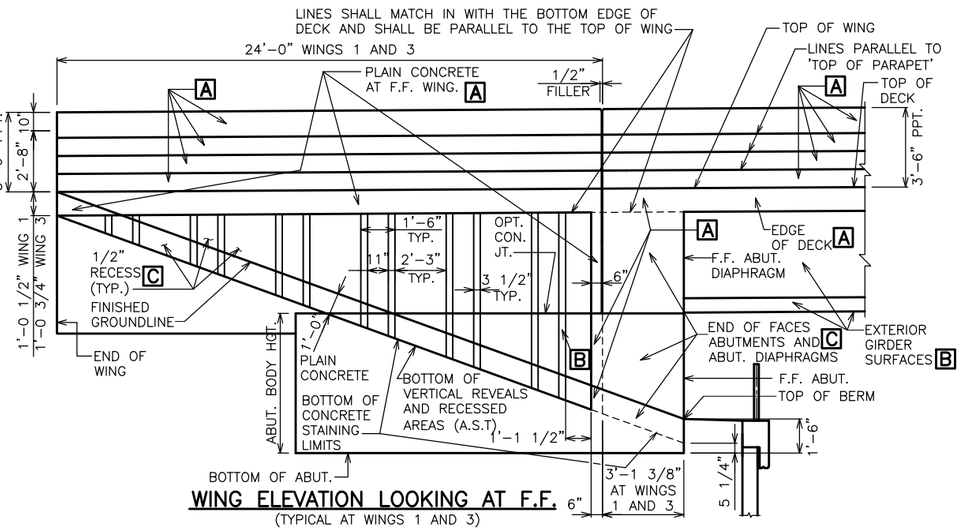
COLOR STAINING SCHEDULE

A AREAS SHALL BE STAINED WITH FEDERAL COLOR NUMBER 36642.

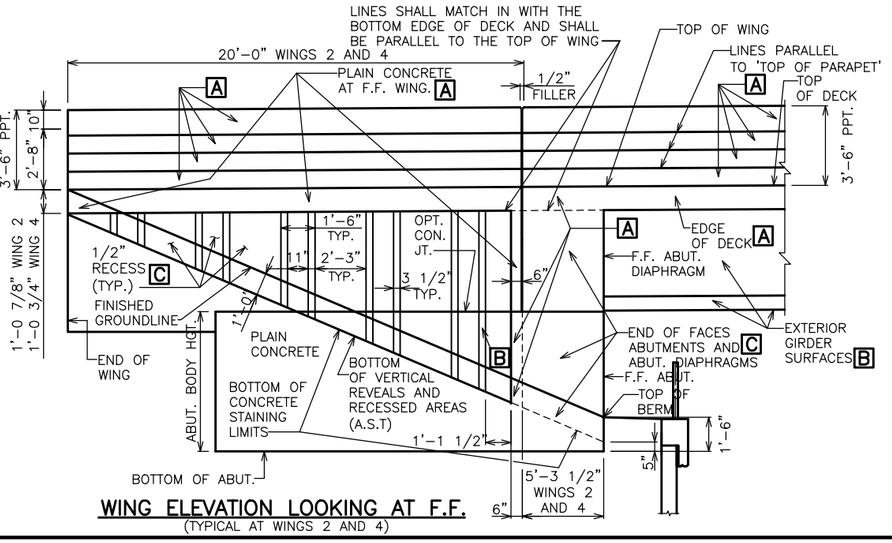
B AREAS SHALL BE STAINED WITH FEDERAL COLOR NUMBER 30140.

C AREAS SHALL BE STAINED WITH FEDERAL COLOR NUMBER 30372.

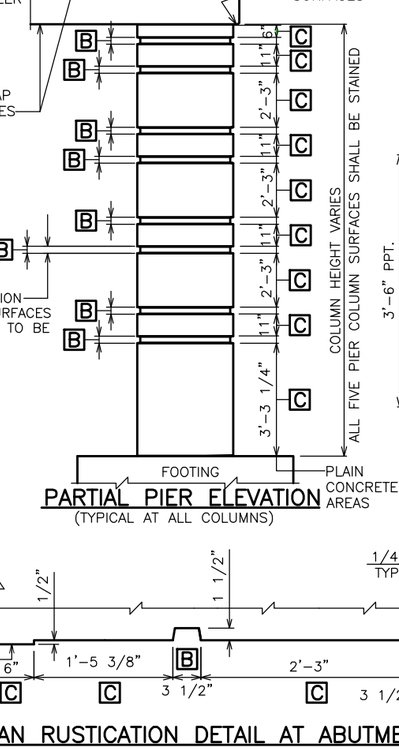
D LETTERING SHALL BE STAINED WITH FEDERAL COLOR NUMBER 27038.



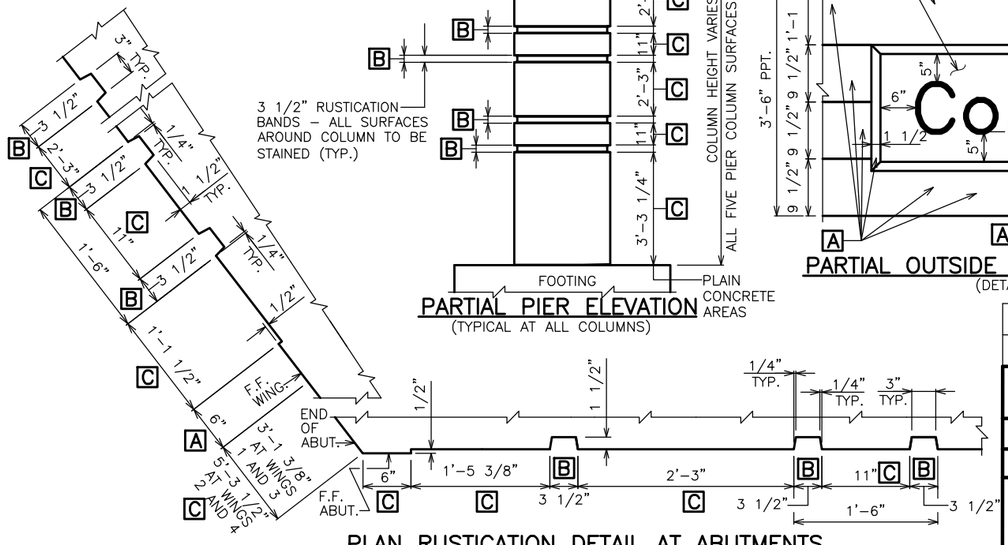
WING ELEVATION LOOKING AT F.F.
(TYPICAL AT WINGS 1 AND 3)



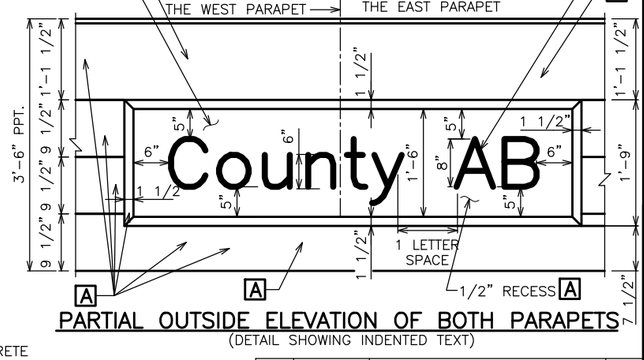
WING ELEVATION LOOKING AT F.F.
(TYPICAL AT WINGS 2 AND 4)



PARTIAL PIER ELEVATION
(TYPICAL AT ALL COLUMNS)



PLAN RUSTICATION DETAIL AT ABUTMENTS



PARTIAL OUTSIDE ELEVATION OF BOTH PARAPETS
(DETAIL SHOWING INDENTED TEXT)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

AESTHETIC DETAILS

SHEET 18 OF 20

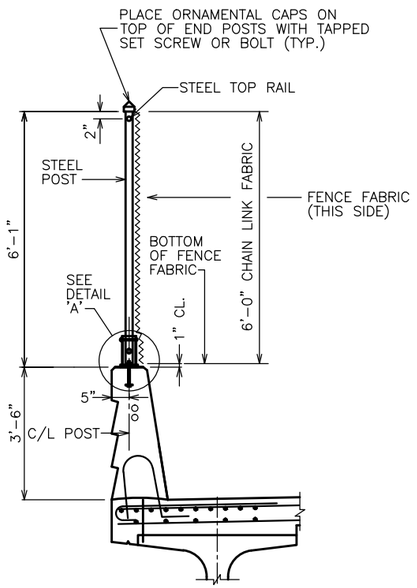
213

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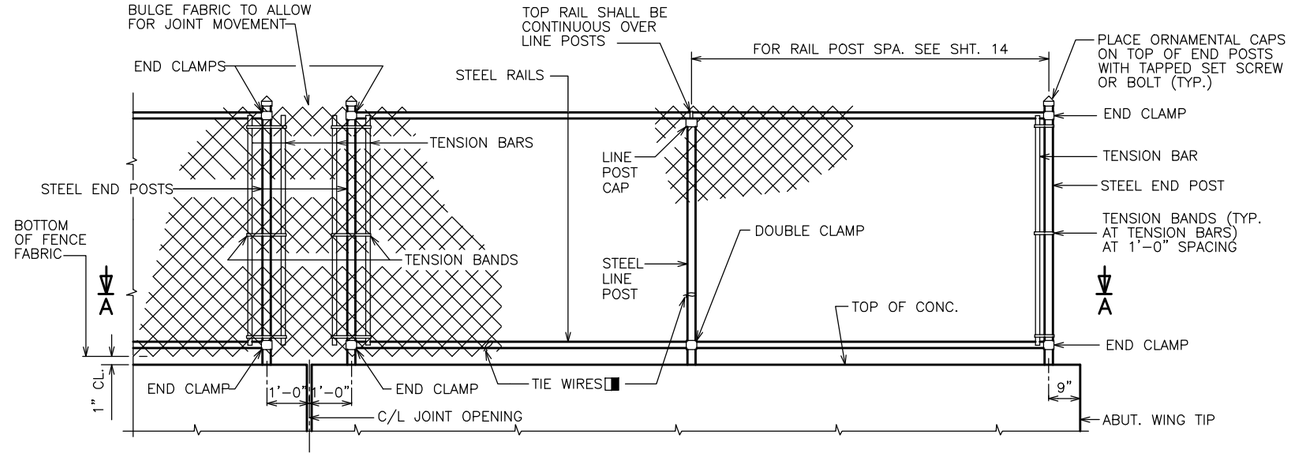
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STATE PROJECT NUMBER

1007-10-81

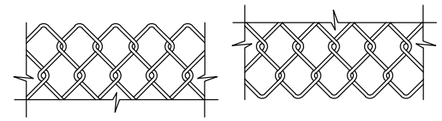


SECTION THRU FENCE ON SINGLE SLOPE PARAPET



FENCE PART ELEVATION

VIEWING FABRIC SIDE



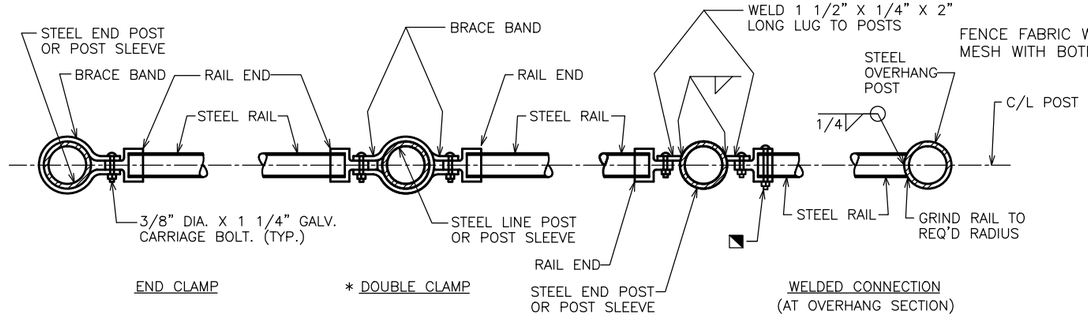
TOP DETAIL

BOTTOM DETAIL

▽ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



END CLAMP

* DOUBLE CLAMP

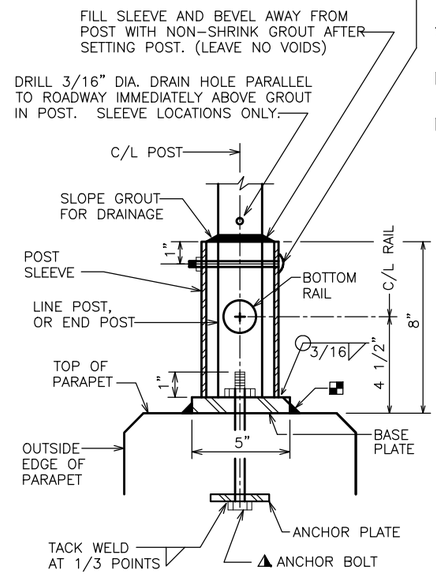
WELDED CONNECTION (AT OVERHANG SECTION)

SECTION A-A

NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GUAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE FEDERAL COLOR NO. 30140 IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 6-FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

* ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180^ BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

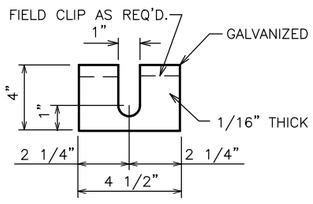
◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT AND WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ MASONRY ANCHOR TYPE S 1/2-INCH. EMBED 6" IN CONCRETE. ANCHOR, WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

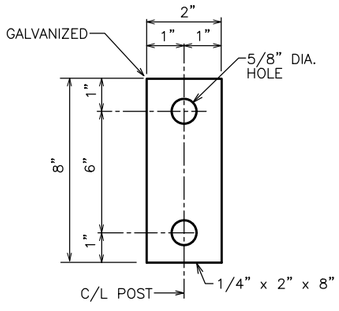
◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

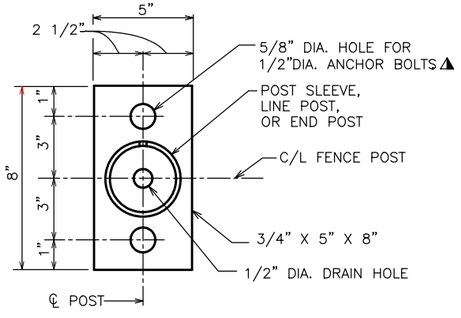


POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



ANCHOR PLATE



BASE PLATE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-726

DRAWN BY KGC | PLANS CHK'D SDB

CHAIN LINK FENCE DETAILS

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NOTES

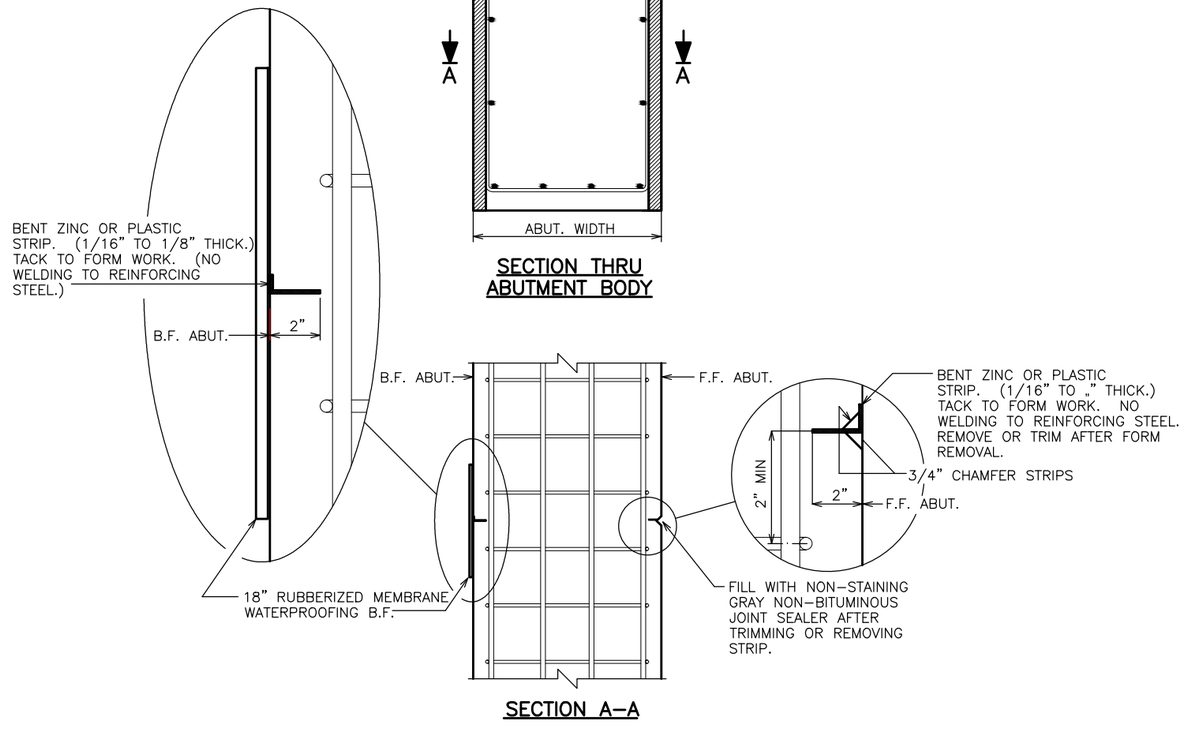
PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY " DEEP.



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–13–726

DRAWN BY KGC | PLANS CHK'D SDB

ALTERNATE CONSTRUCTION JOINT

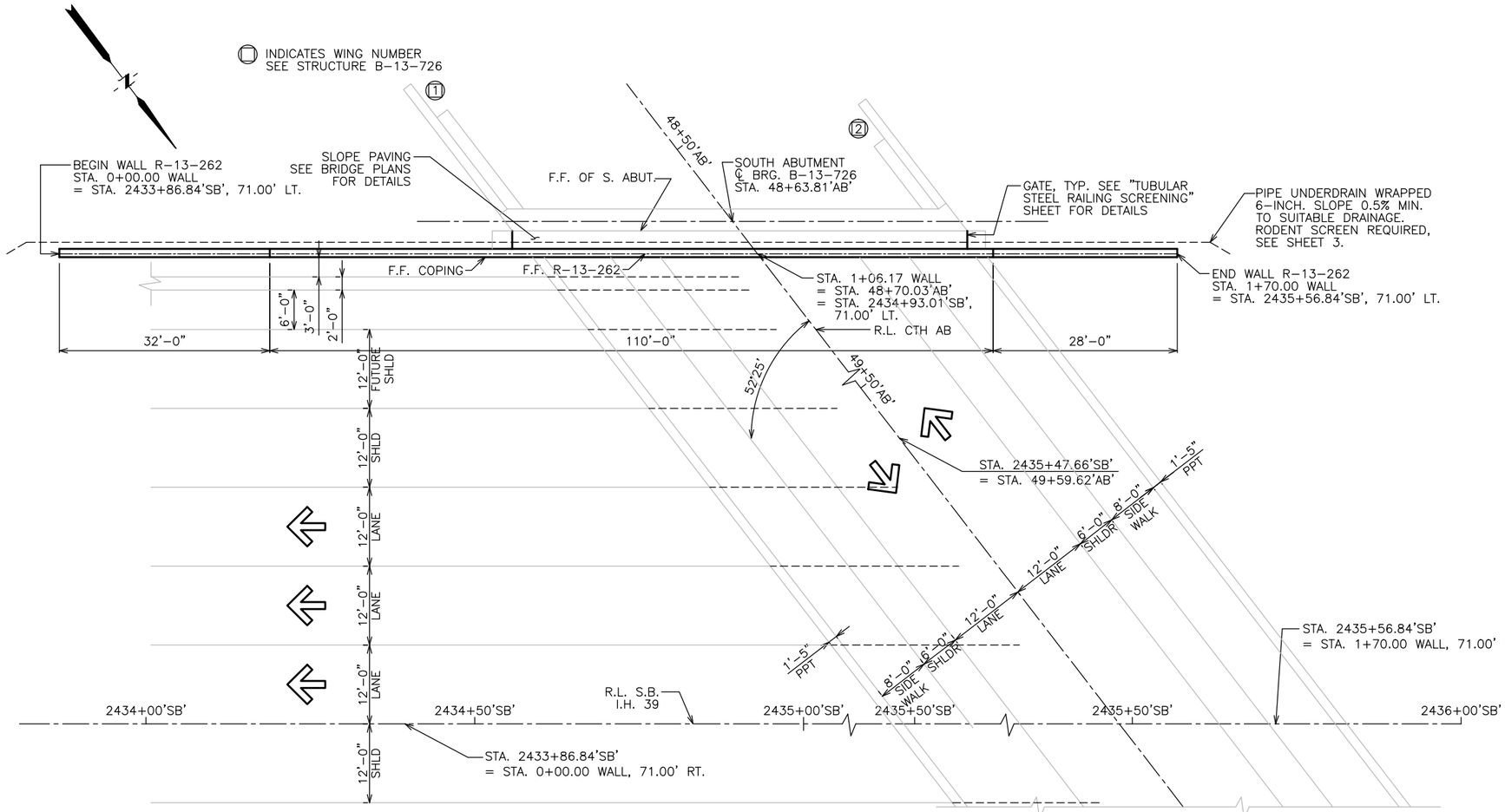
SHEET 20 OF 20

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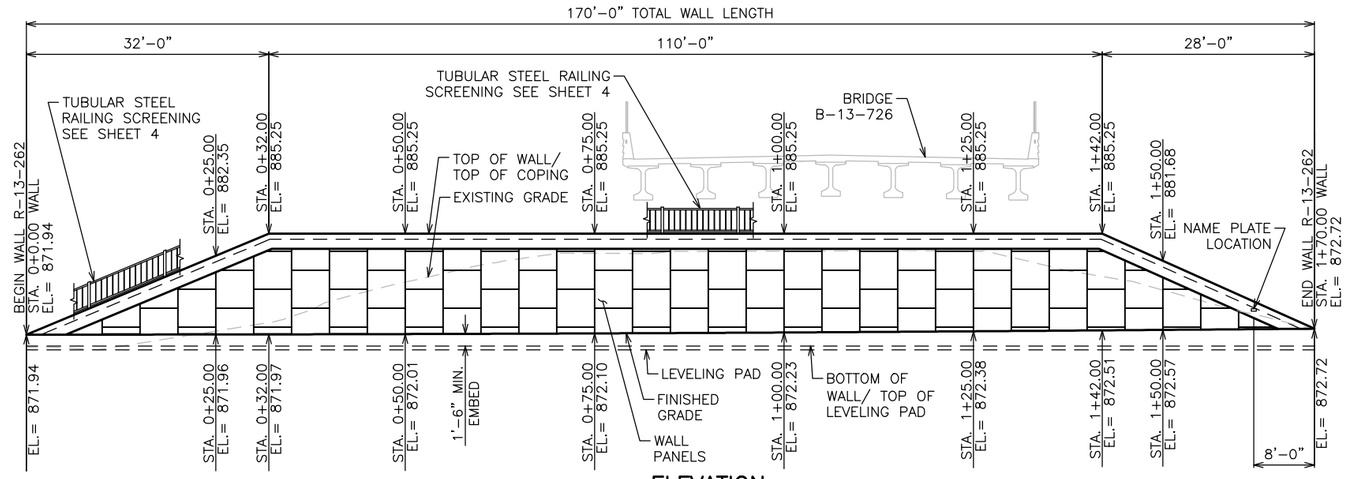
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1007-10-81



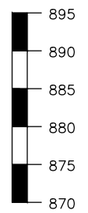
PLAN

MSE RETAINING WALL



ELEVATION

LOOKING SOUTH AT F.F. OF WALL



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL (R-13-262).

THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-262 WITH THE SOUTH ABUTMENT OF BRIDGE B-13-726.

EXISTING STRUCTURE IS NOT SHOWN ON THESE PLANS. THE REMOVAL OF THIS STRUCTURE IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-13-726 BRIDGE QUANTITIES.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS PLAN.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO THE TOP OF LEVELING PAD, SET A CONSTANT DEPTH 1'-6" BELOW FINISHED GRADE.

THE QUANTITY OF CONCRETE MASONRY AND REINFORCING STEEL FOR THE CAST-IN-PLACE COPING IS PAID FOR UNDER THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS, TO 1'-0" MIN. BELOW FINISHED GRADE. COPING TO BE STAINED FEDERAL COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED FEDERAL COLOR NUMBER 30372.

OVER EXCAVATE UNDER THE REINFORCED SOIL ZONE TO REMOVE UNSUITABLE MATERIAL AS DIRECTED BY THE ENGINEER AND BACKFILL WITH GRANULAR BACKFILL, GRADE #2.

THE REGIONAL SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.

OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALLS IS PAID FOR UNDER THE ITEM "BACKFILL GRANULAR GRADE 2".

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP.

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING) ---------- f'c = 3,500 P.S.I
BAR STEEL REINFORCEMENT, GRADE 60 ------- f'c = 60,000 P.S.I.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & WALL DATA
3. RETAINING WALL DETAILS
4. TUBULAR STEEL RAILING SCREENING
5. SUBSURFACE EXPLORATION

DESIGN CONTACT:
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608.241.6704

BRIDGE OFFICE CONTACT:
WILLIAM DREHER, PE
608.266.8489

WISCONSIN
JAMES J. HALL
E-36292
VERONA, WI
PROFESSIONAL ENGINEER
9/16/16

NO.	DATE	REVISION	BY

PLANS PREPARED BY

OTIE An Oneida Nation Company
5100 Eastpark Blvd
Suite 300
Madison, WI 53718
www.OTIE.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 09/19/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-13-262

RETAINING WALL UNDER CTH AB ALONG I.H.39 SB

COUNTY	TOWN ~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SDB	JJH	MTW	JSM

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

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SOIL PARAMETERS

SOIL UNIT	APPROXIMATE BOTTOM ELEVATION (FEET)	SOIL UNIT WEIGHT (pcf)	UNDRAINED		DRAINED	
			COHESION, c (psf)	FRICTION ANGLE	COHESION, c (psf)	FRICTION ANGLE
SOIL PARAMETERS FOR R-13-262 FOR RETAINING WALL STATION LIMITS 0+00 TO 1+70						
GRANULAR FILL FOR MSE WALL	870.0	125	--	30	--	30
M. DENSE SAND	867.0	125	--	30	--	30
STIFF TO HARD LEAN CLAY	863.0	135	3,000	--	--	28
V. DENSE SAND/CLAYEY SAND W/ GRAVEL	<845.0	140	--	40	--	40

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING THE CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR THE RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN AND A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
209.2100	BACKFILL GRANULAR GRADE 2	CY	1,410
513.4091	RAILING TUBULAR SCREENING R-13-262	LF	176
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
517.1010.S	CONCRETE STAINING R-13-262	SF	2,280
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	200
SPV.0165.850	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	2,133
	NON-BID ITEMS		
	PRE-FORMED JOINT FILLER	SIZE	¾"
	EXPANDED POLYSTYRENE	SIZE	1"
	NON-BITUMINOUS JOINT SEALER	---	---

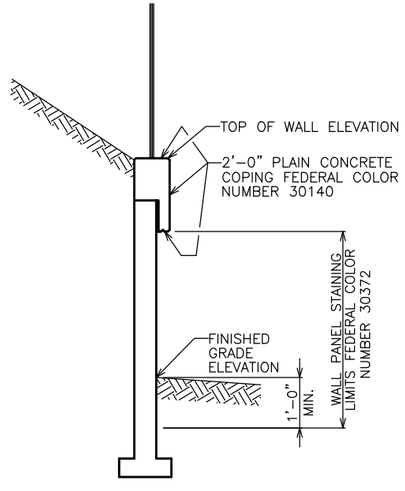
WALL EXTERNAL STABILITY EVALUATION

WALL STATION	DRAIN CONDITION	CRITICAL CONDITION	MAXIMUM WALL HEIGHT#, FT	REINFORCEMENT LENGTH, FT	MINIMUM REINFORCEMENT LENGTH/WALL HEIGHT RATIO	CDR
0+00.0 TO 0+20.0 & 1+50.0 TO 1+70.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	11	8	0.7	1.3
		ECCENTRICITY	11	8	0.7	1.0
		SLIDING	11	8	0.7	1.2
		BEARING	11	8	0.7	1.7
	FACTORED BEARING RESISTANCE=5,000 psf					
0+20.0 TO 0+32.0 & 1+42.0 TO 1+50.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	15	11	0.7	1.3
		ECCENTRICITY	15	11	0.7	1.1
		SLIDING	15	11	0.7	1.3
		BEARING	15	11	0.7	1.4
	FACTORED BEARING RESISTANCE=6,000 psf					
0+32.0 TO 1+42.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	15	18	1.2	1.0
		ECCENTRICITY	15	18	1.2	1.3
		SLIDING	15	18	1.2	1.1
		BEARING	15	18	1.2	1.5
	FACTORED BEARING RESISTANCE=7,000 psf					

INCLUDES 1.5 FT EMBEDMENT DEPTH BELOW FRONT WALL GRADE

* A RESISTANCE FACTOR OF 0.75 WAS USED FOR THE TAPERED WALLS NOT SUPPORTING STRUCTURAL ELEMENTS AND A RESISTANCE FACTOR OF 0.65 WAS USED FOR FRONT ABUTMENT WALL INCLUDING STRUCTURAL COMPONENT TO DETERMINE CDR.

FINAL DESIGN FOR THE INTERNAL STABILITY, SLIDING AND ECCENTRICITY IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.



SECTION THRU WALL
SHOWING CONCRETE STAINING

GEOMETRY TABLE

WALL STATION	I.H. 39 SB R.L. STA.	R.L. OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.
0+00.00	2433+86.84	71.00' LT.	871.94	871.94
0+25.00	2434+11.84	71.00' LT.	882.35	871.96
0+32.00	2434+18.84	71.00' LT.	885.25	871.97
0+50.00	2434+36.84	71.00' LT.	885.25	872.01
0+75.00	2434+61.84	71.00' LT.	885.25	872.10
1+00.00	2434+86.84	71.00' LT.	885.25	872.23
1+25.00	2435+11.84	71.00' LT.	885.25	872.38
1+42.00	2435+28.84	71.00' LT.	885.25	872.51
1+50.00	2435+36.84	71.00' LT.	881.68	872.57
1+70.00	2435+56.84	71.00' LT.	872.72	872.72

NOTE: STATIONS & OFFSET DISTANCES ARE TO FRONT FACE OF WALL.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-262

COUNTY HWY AB OVER I.H.39

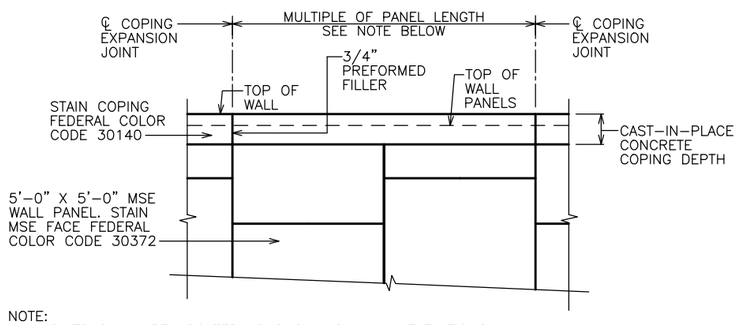
DRAWN BY MTW | PLANS CHK'D JSM

QUANTITIES & WALL DATA

SHEET 2 OF 5

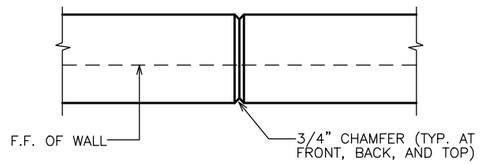
STATE PROJECT NUMBER

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NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINT ON FRONT FACE WHERE BOTTOM OF LIP INSTERSECTS WITH PANEL JOINT.

MSE WALL ELEVATION
(LOOKING AT F.F. OF WALL)

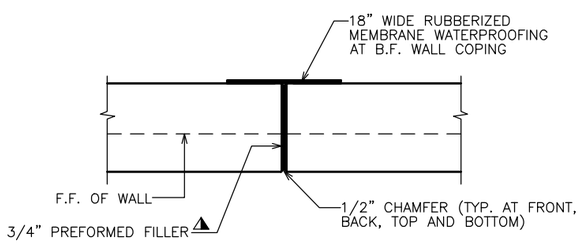


COPING CONTRACTION JOINT

DO NOT RUN STEEL THRU JOINT.

MAXIMUM SPACING OF JOIINTS SHALL BE 12'-0" AND MUST LINE UP WITH THE WALL PANEL JOINTS.

ALL CONTRACTION JOINTS TO EXTEND THE FULL DEPTH OF COPING.



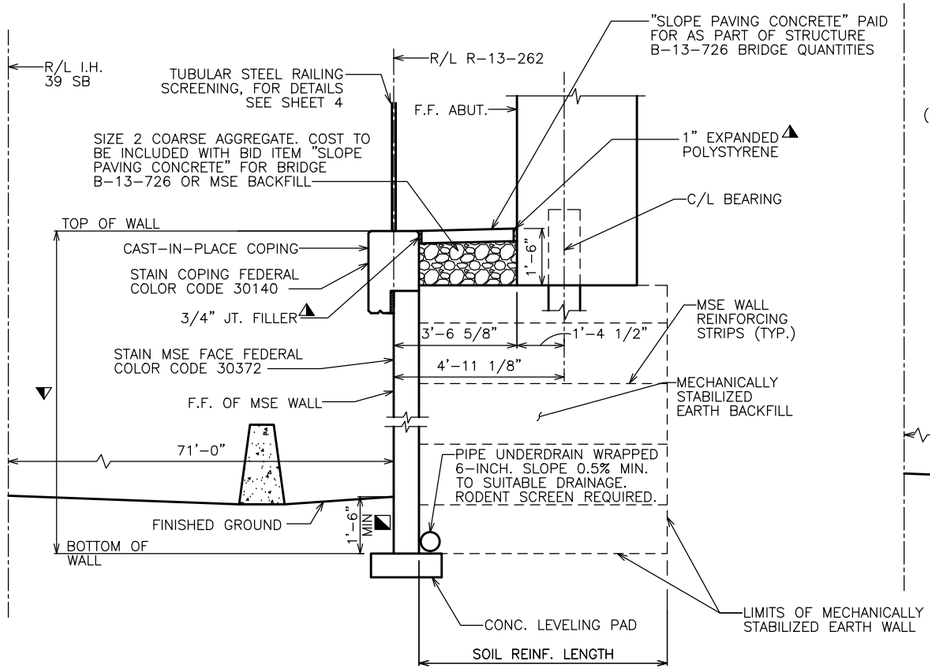
COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT.

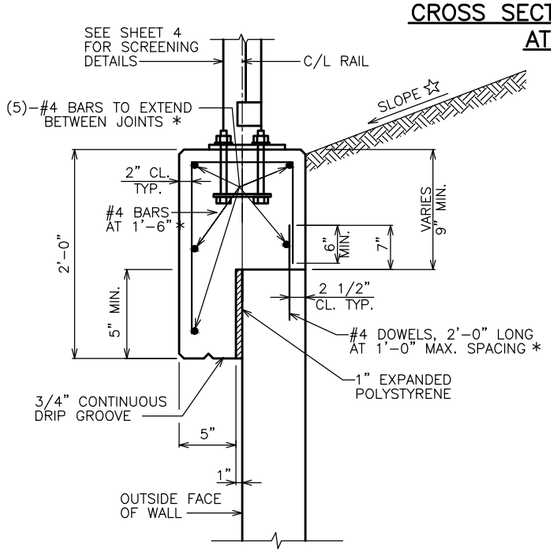
MAXIMUM SPACING OF JOINTS SHALL BE 50'-0" AND MUST LINE UP WITH THE WALL PANEL JOINTS.

RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF WALL PANELS

ALL EXPANSION JOINTS TO EXTEND THE FULL DEPTH OF COPING.



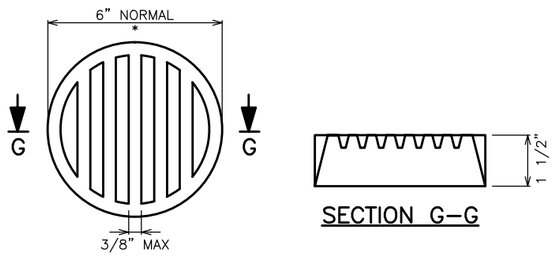
CROSS SECTION THRU ABUTMENT AT MSE WALL



CAST-IN-PLACE CONCRETE COPING DETAIL

* WALL COPING CONCRETE AND THE REINFORCEMENT BARS ARE TO BE INCLUDED IN THE BID ITEM: "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP"

☆ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

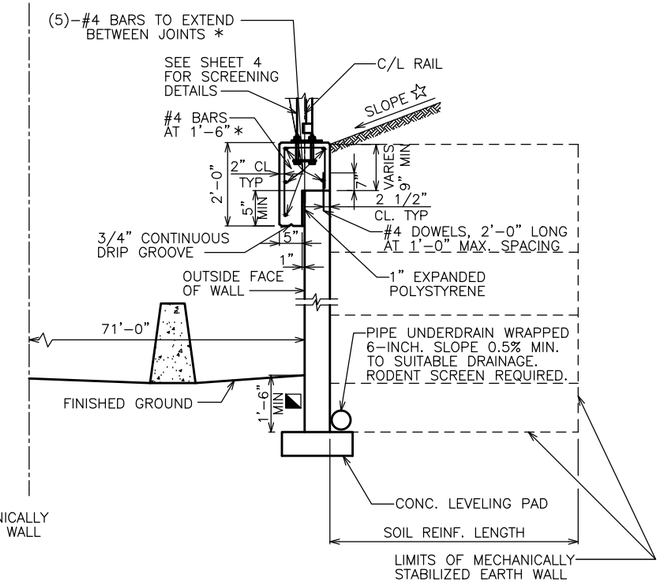


RODENT SCREEN DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6 INCH".

THE RODENT SCREEN SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1" SHEET METAL SCREWS.



CROSS SECTION THRU MSE WALL WITHOUT ABUTMENT

NOTES

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

▼ PAY LIMIT FOR "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP R-13-262".

◹ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-262

COUNTY HWY AB OVER I.H.39

DRAWN BY MTW | PLANS CHK'D JSM

RETAINING WALL DETAILS

SHEET 3 OF 5

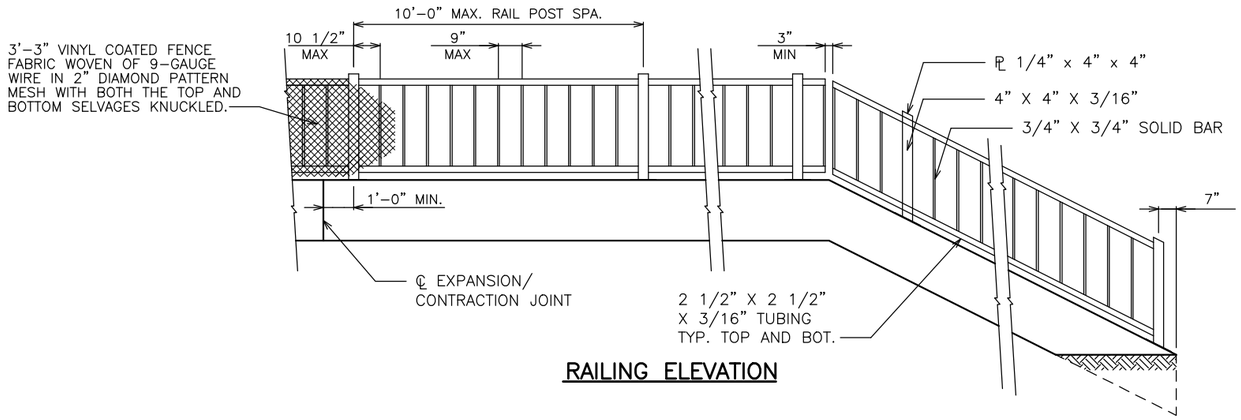
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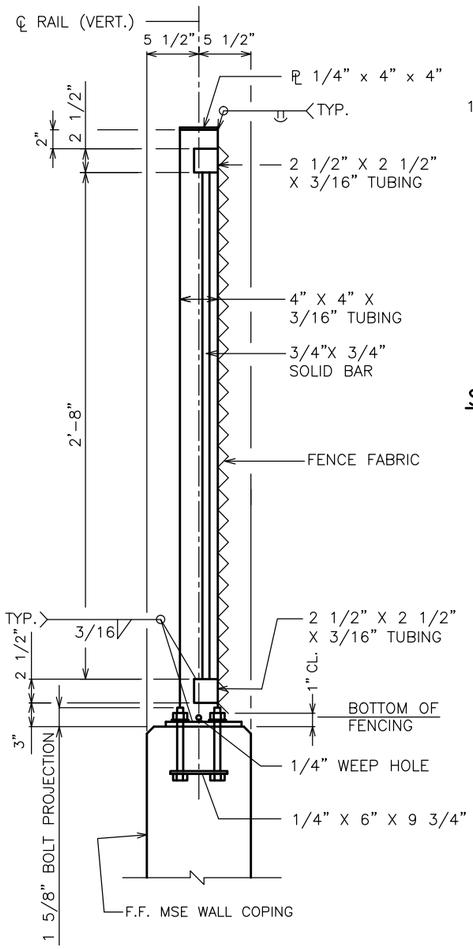
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STATE PROJECT NUMBER

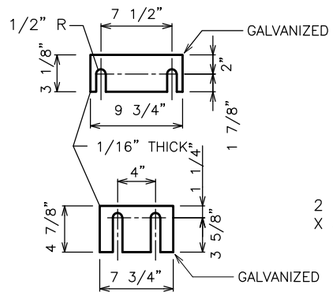
1007-10-81



RAILING ELEVATION

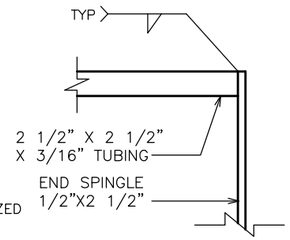


SECTION THRU RAILING

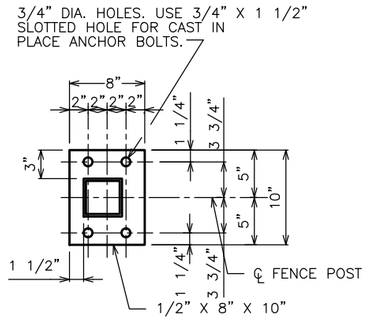


SHIM PLATE DETAILS

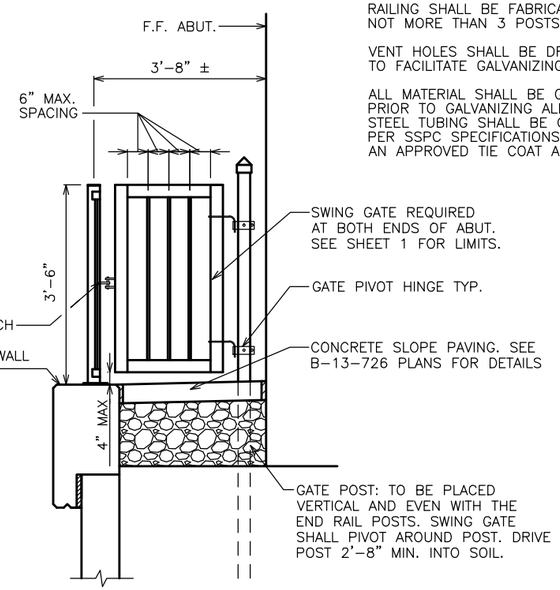
TWO SHIMS OF EACH SIZE REQUIRED PER POST



RAIL DETAIL

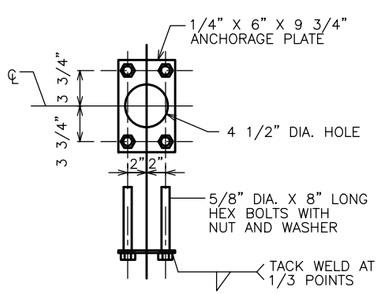


BASE PLATE



SECTION THRU WALL AT GATES

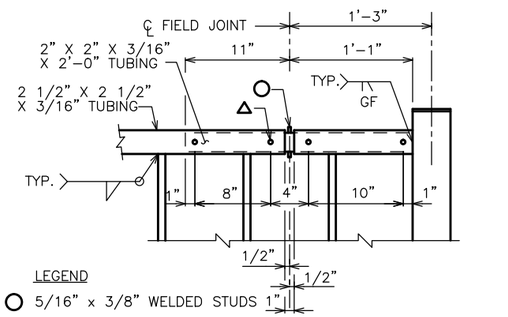
NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING R-13-262"



ANCHORAGE DETAIL

5/8" CAST-IN-PLACE ANCHOR BOLTS. MASONRY ANCHORS MAY BE SUBSTITUTED FOR C.I.P ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

MASONRY ADHESIVE ANCHOR 5/8"-INCH. EMBED 7" IN CONCRETE. MECHANICAL ANCHORS ARE NOT PERMITTED.



LEGEND

○ 5/16" x 3/8" WELDED STUDS 1"

△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2 1/2" X 2 1/2" TUBE.

RAILING EXPANSION JOINT DETAIL

NOTES

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

RAILING TO BE PAINTED AND FENCE FABRIC AND TIES TO BE VINYL COATED. FEDERAL COLOR NO. 30140 (BROWN).

BID ITEM SHALL BE "RAILING TUBULAR SCREENING R-13-262" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-262

COUNTY HWY AB OVER I.H.39

DRAWN BY MTW | PLANS CHK'D JSM

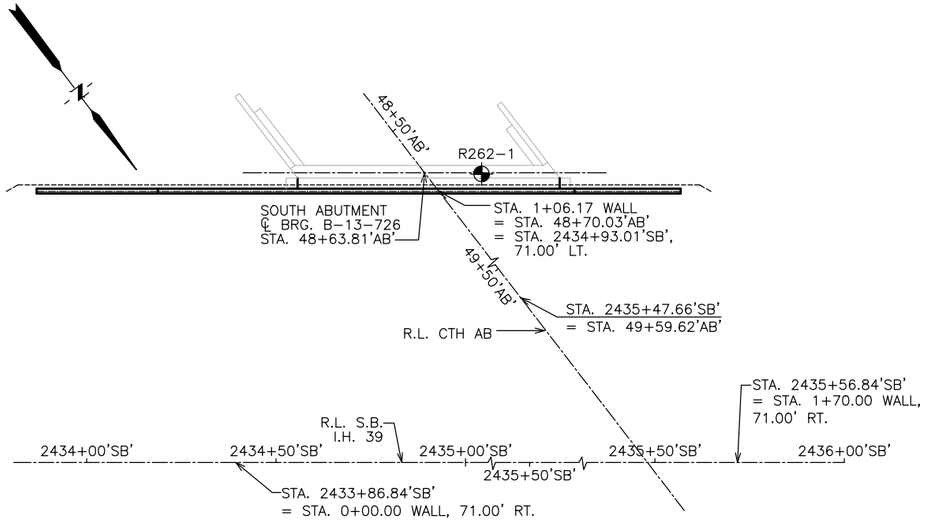
TUBULAR STEEL RAILING SCREENING

SHEET 4 OF 5

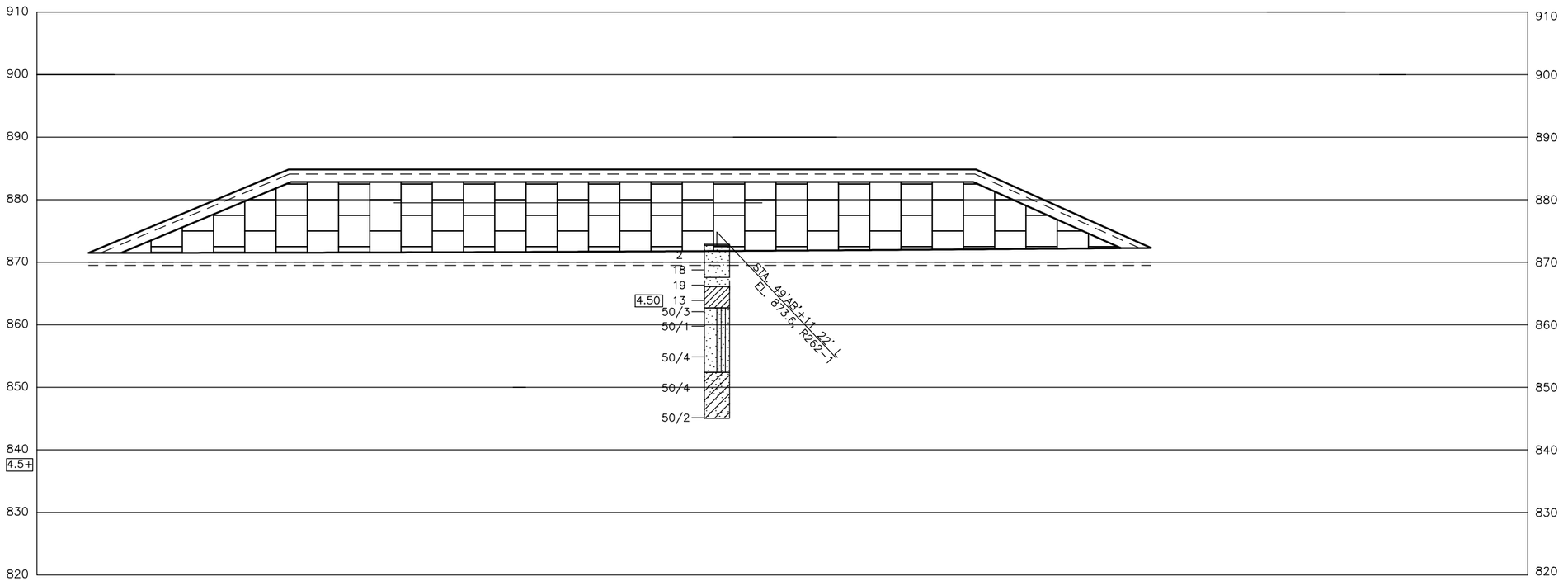
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BORINGS TAKEN BY:
GESTRA ENGINEERING, INC.
6/13/2014



STATE PROJECT NUMBER

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ABBREVIATIONS

F—FINE M—MEDIUM C—COURSE
WS—WEATHERED SO—SOUND

MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F.
BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2"O.D.x1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-262

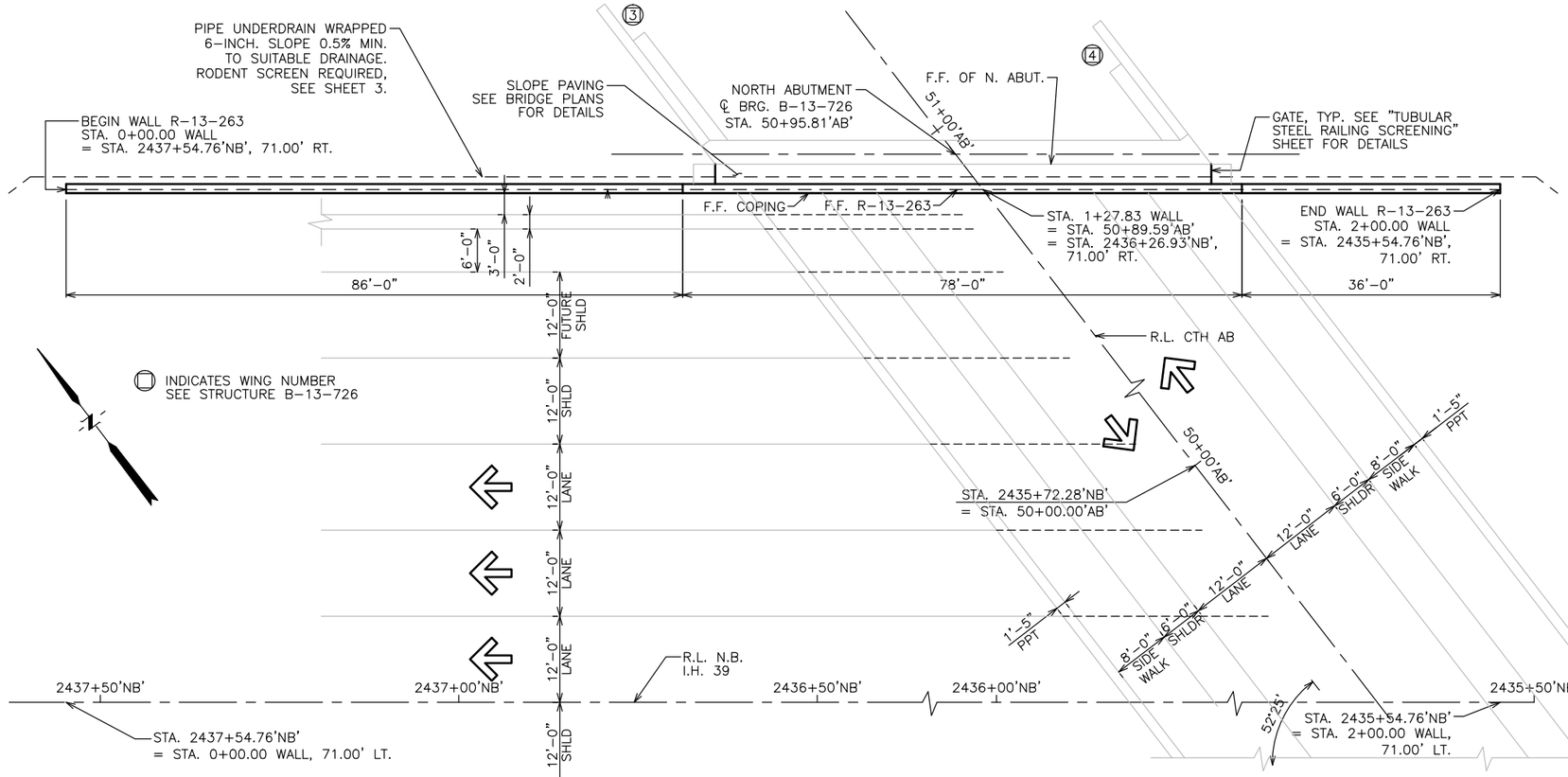
DRAWN BY KGC | PLANS CHK'D JSM

SUBSURFACE EXPLORATION

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GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL (R-13-263).

THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

COORDINATE THE CONSTRUCTION OF RETAINING WALL R-13-263 WITH THE NORTH ABUTMENT OF BRIDGE B-13-726.

EXISTING STRUCTURE IS NOT SHOWN ON THESE PLANS. THE REMOVAL OF THIS STRUCTURE IS INCLUDED IN A LUMP SUM PAY ITEM AS PART OF THE B-13-726 BRIDGE QUANTITIES.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS PLAN.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE WALL TO THE TOP OF LEVELING PAD, SET A CONSTANT DEPTH 1'-6" BELOW FINISHED GRADE.

THE QUANTITY OF CONCRETE MASONRY AND REINFORCING STEEL FOR THE CAST-IN-PLACE COPING IS PAID FOR UNDER THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

CONCRETE STAINING TO BE APPLIED TO EXPOSED AREAS OF COPING AND MSE WALL PANELS, TO 1'-0" MIN. BELOW FINISHED GRADE. COPING TO BE STAINED FEDERAL COLOR NUMBER 30140 AND WALL PANELS TO BE STAINED FEDERAL COLOR NUMBER 30372.

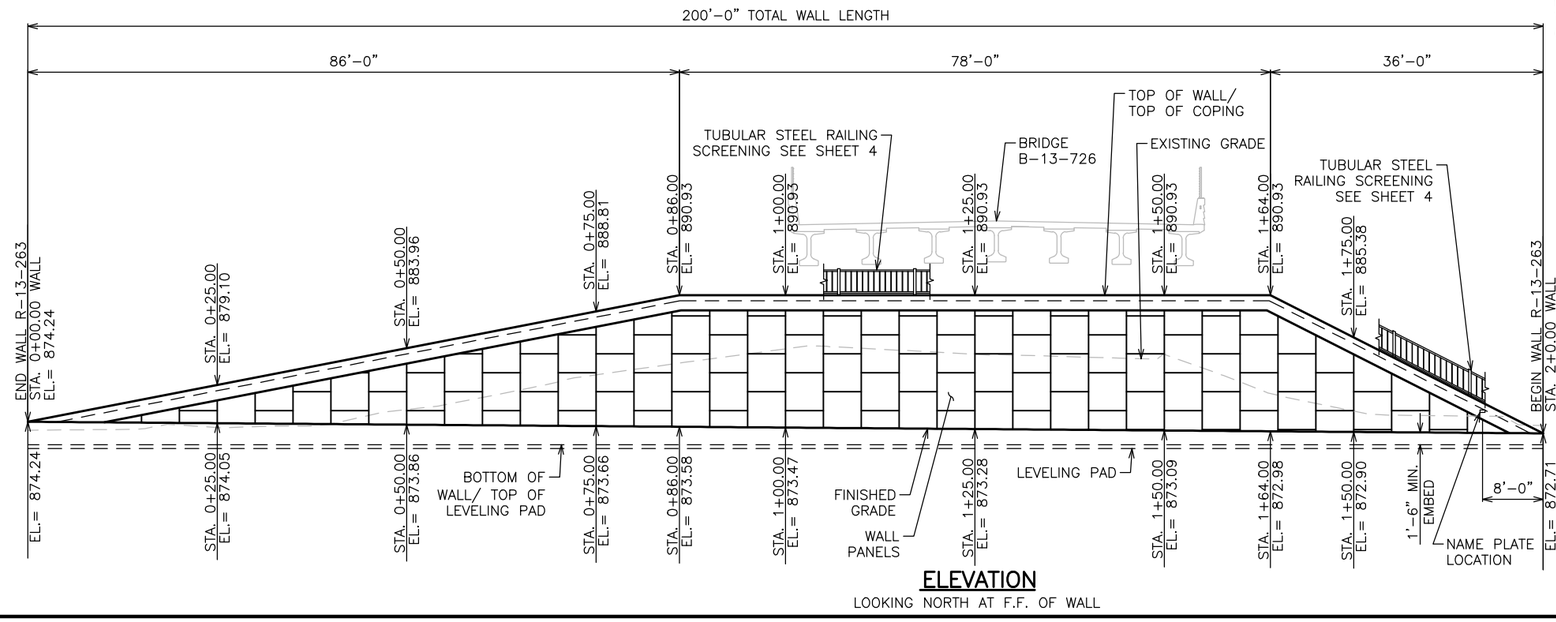
OVER EXCAVATE UNDER THE REINFORCED SOIL ZONE TO REMOVE UNSUITABLE MATERIAL AS DIRECTED BY THE ENGINEER AND BACKFILL WITH GRANULAR BACKFILL, GRADE #2.

THE REGIONAL SOILS ENGINEER SHALL REVIEW THE FILL SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.

OVER-EXCAVATION BEYOND THE BOTTOM OF THE WALLS IS PAID FOR UNDER THE ITEM "BACKFILL GRANULAR GRADE 2".

PLAN

MSE RETAINING WALL



ELEVATION

LOOKING NORTH AT F.F. OF WALL

DESIGN CONTACT:
SAM BARGHOUT, PE, SE
608.241.6704

BRIDGE OFFICE CONTACT:
WILLIAM DREHER, PE
608.266.8489

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP.

MATERIAL PROPERTIES

CONCRETE MASONRY (COPING) ---------- f'c = 3,500 P.S.I
BAR STEEL REINFORCEMENT, GRADE 60 ------ f'c = 60,000 P.S.I.

WISCONSIN PROFESSIONAL ENGINEER
JAMES J. HALL
E-36292
VERONA, WI
9/16/16

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & WALL DATA
3. RETAINING WALL DETAILS
4. TUBULAR STEEL RAILING SCREENING
5. SUBSURFACE EXPLORATION

NO.	DATE	REVISION	BY

PLANS PREPARED BY

OTIE An Oneida Nation Company
5100 Eastpark Blvd
Suite 300
Madison, WI 53718
www.OTIE.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 09/19/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-263

RETAINING WALL UNDER CTH AB ALONG I.H.39 NB

COUNTY	TOWN ~~CITY/VILLAGE~~
DANE	BLOOMING GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SDB	JJH	MTW	JSM

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

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SOIL PARAMETERS

SOIL UNIT	APPROXIMATE BOTTOM ELEVATION (FEET)	SOIL UNIT WEIGHT (pcf)	UNDRAINED		DRAINED	
			COHESION, c (psf)	FRICTION ANGLE	COHESION, c (psf)	FRICTION ANGLE
SOIL PARAMETERS FOR R-13-263 FOR RETAINING WALL STATION LIMITS 0+00 TO 2+00						
GRANULAR FILL FOR MSE WALL	870.0	125	--	30	--	32
M. DENSE SAND	869.0	125	--	30	--	30
VERY DENSE CLAYEY SAND	864.0	135	--	36	--	36
HARD CLAY	859.0	135	5,000	--	100	28
VERY DENSE SAND	<857.0	140	--	40	--	40

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING THE CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE PLANS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR THE RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN AND A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

CONTRACTOR, WALL SUPPLIER, AND RAILING FABRICATOR SHALL COORDINATE RAILING POST SPACING, MSE PANELS, AND COPING JOINTS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
209.2100	BACKFILL GRANULAR GRADE 2	CY	1,917
513.4091	RAILING TUBULAR SCREENING R-13-263	LF	206
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
517.1010.S	CONCRETE STAINING R-13-263	SF	3,000
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	230
SPV.0165.850	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	2,903
	NON-BID ITEMS		
	PRE-FORMED JOINT FILLER	SIZE	¾"
	EXPANDED POLYSTYRENE	SIZE	1"
	NON-BITUMINOUS JOINT SEALER	---	---

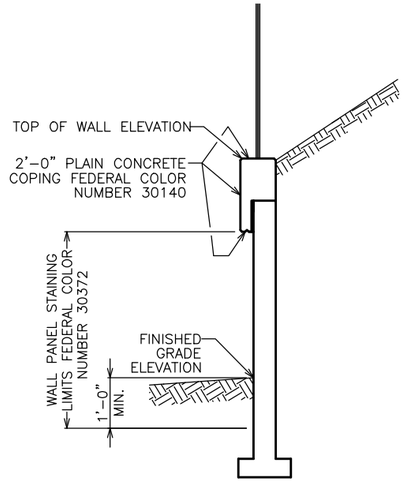
WALL EXTERNAL STABILITY EVALUATION

WALL STATION	DRAIN CONDITION	CRITICAL CONDITION	MAXIMUM WALL HEIGHT#, FT	REINFORCEMENT LENGTH, FT	MINIMUM REINFORCEMENT LENGTH/WALL HEIGHT RATIO	CDR
0+00.0 TO 0+40.0 & 1+80.0 TO 2+00.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	11	8	0.7	1.8
		ECCENTRICITY	11	8	0.7	1.0
		SLIDING	11	8	0.7	1.2
		BEARING	11	8	0.7	1.7
	FACTORED BEARING RESISTANCE=5,000 psf					
0+40.0 TO 0+86.0 & 1+64.0 TO 1+80.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	19	13	0.7	1.4
		ECCENTRICITY	19	13	0.7	1.1
		SLIDING	19	13	0.7	1.3
		BEARING	19	13	0.7	1.4
	FACTORED BEARING RESISTANCE=6,000 psf					
0+86.0 TO 1+64.0	DRAINED/ UNDRAINED	GLOBAL STABILITY*	19	20	1.1	1.0
		ECCENTRICITY	19	20	1.1	1.1
		SLIDING	19	20	1.1	1.1
		BEARING	19	20	1.1	1.4
	FACTORED BEARING RESISTANCE=7,000 psf					

INCLUDES 1.5 FT EMBEDMENT DEPTH BELOW FRONT WALL GRADE

* A RESISTANCE FACTOR OF 0.75 WAS USED FOR THE TAPERED WALLS NOT SUPPORTING STRUCTURAL ELEMENTS AND A RESISTANCE FACTOR OF 0.65 WAS USED FOR FRONT ABUTMENT WALL INCLUDING STRUCTURAL COMPONENT TO DETERMINE CDR.

FINAL DESIGN FOR THE INTERNAL STABILITY, SLIDING AND ECCENTRICITY IS THE RESPONSIBILITY OF THE CONTRACTOR'S WALL DESIGNER.



SECTION THRU WALL
SHOWING CONCRETE STAINING

GEOMETRY TABLE

WALL STATION	I.H. 39 NB R.L. STA.	R.L. OFFSET TO F.F. OF WALL	TOP OF WALL ELEV.	FINISHED GRADE ELEV.
0+00.00	2437+54.76	71.00' RT.	874.24	874.24
0+25.00	2437+29.76	71.00' RT.	879.10	874.05
0+50.00	2437+04.76	71.00' RT.	883.96	873.86
0+75.00	2436+79.76	71.00' RT.	888.81	873.66
0+86.00	2436+68.76	71.00' RT.	890.93	873.58
1+00.00	2436+54.76	71.00' RT.	890.93	873.47
1+25.00	2436+29.76	71.00' RT.	890.93	873.28
1+50.00	2436+04.76	71.00' RT.	890.93	873.09
1+64.00	2435+90.76	71.00' RT.	890.93	872.98
1+75.00	2435+79.76	71.00' RT.	885.38	872.90
2+00.00	2435+54.76	71.00' RT.	872.71	872.71

NOTE: STATIONS & OFFSET DISTANCES ARE TO FRONT FACE OF WALL.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-263

COUNTY HWY AB OVER I.H.39

DRAWN BY MTW | PLANS CHK'D JSM

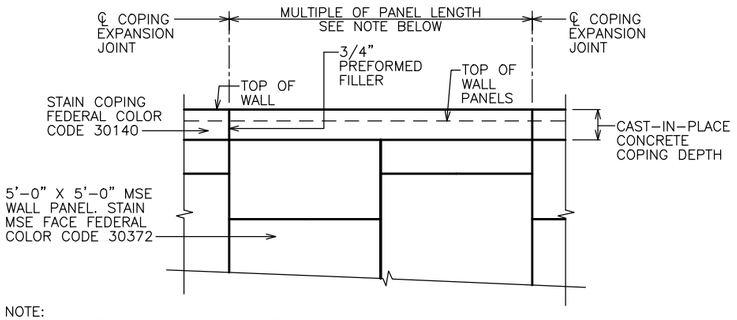
QUANTITIES & WALL DATA

SHEET 2 OF 5

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STATE PROJECT NUMBER

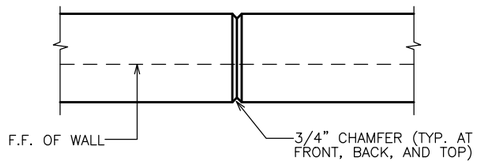
1007-10-81



NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINT ON FRONT FACE WHERE BOTTOM OF LIP INSTERSECTS WITH PANEL JOINT.

MSE WALL ELEVATION

(LOOKING AT F.F. OF WALL)

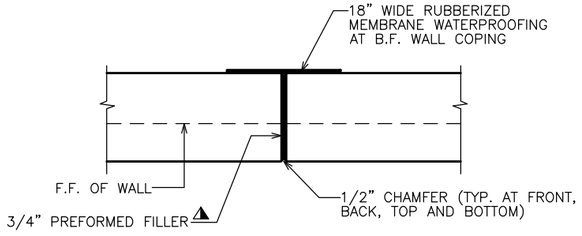


COPING CONTRACTION JOINT

DO NOT RUN STEEL THRU JOINT.

MAXIMUM SPACING OF JOIINTS SHALL BE 12'-0" AND MUST LINE UP WITH THE WALL PANEL JOINTS.

ALL CONTRACTION JOINTS TO EXTEND THE FULL DEPTH OF COPING.



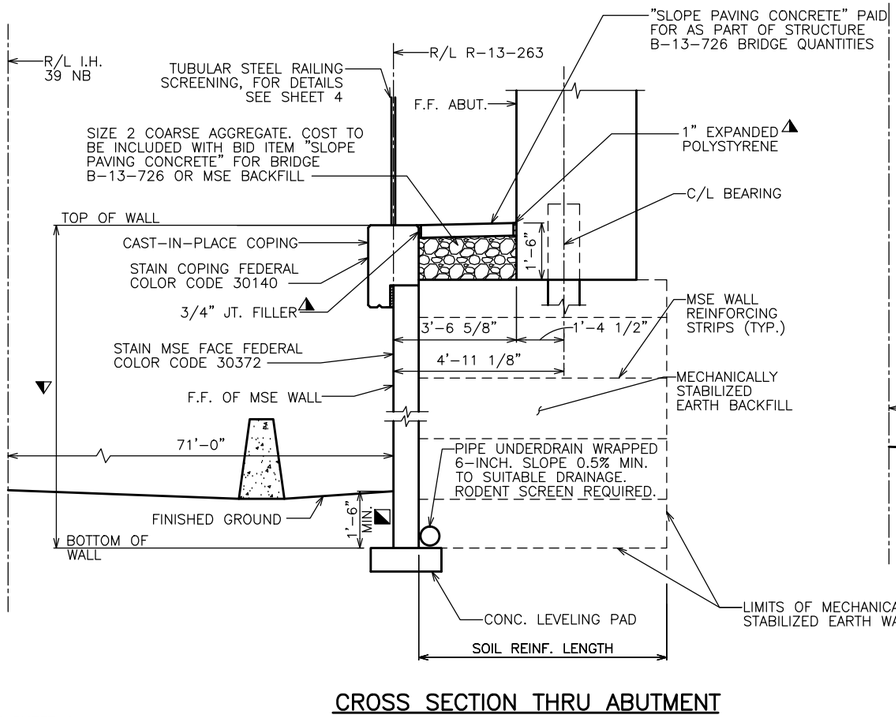
COPING EXPANSION JOINT

DO NOT RUN BAR STEEL THRU JOINT.

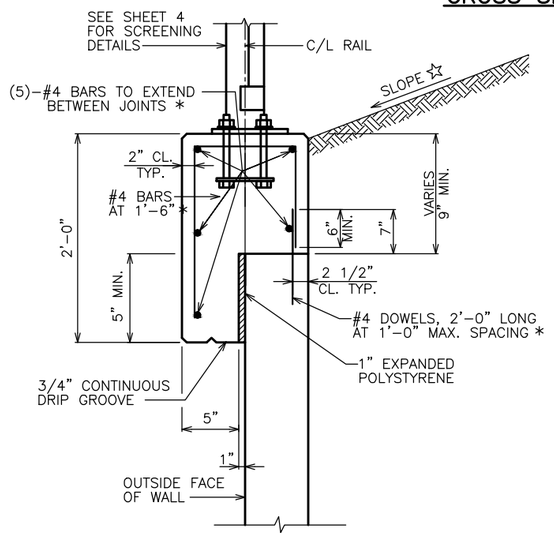
MAXIMUM SPACING OF JOINTS SHALL BE 50'-0" AND MUST LINE UP WITH THE WALL PANEL JOINTS.

RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF WALL PANELS

ALL EXPANSION JOINTS TO EXTEND THE FULL DEPTH OF COPING.



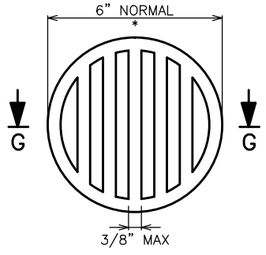
CROSS SECTION THRU ABUTMENT AT MSE WALL



CAST-IN-PLACE CONCRETE COPING DETAIL

* WALL COPING CONCRETE AND THE REINFORCEMENT BARS ARE TO BE INCLUDED IN THE BID ITEM: "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP"

☆ SLOPE BEHIND MSE WALL VARIES. SEE ROADWAY PLANS FOR MORE INFORMATION.

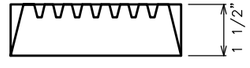


RODENT SCREEN DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

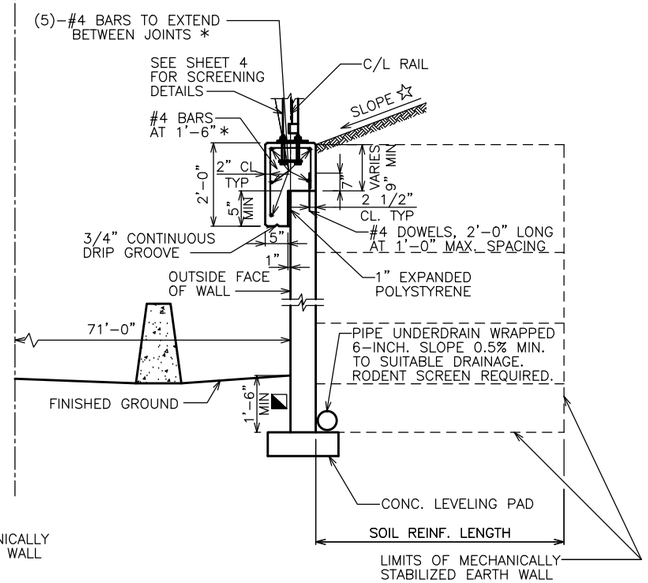
THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6 INCH".

THE RODENT SCREEN SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1" SHEET METAL SCREWS.



SECTION G-G

CROSS SECTION THRU MSE WALL WITHOUT ABUTMENT



NOTES

THE DESIGN OF THE WALL IN FRONT OF THE ABUTMENT SHALL INCLUDE THE HORIZONTAL EARTH LOADS AND 240 PSF LIVE LOAD SURCHARGE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS.

◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF FILLER AND EXPANDED POLYSTYRENE WITH NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

▼ PAY LIMIT FOR "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP R-13-263".

◹ MINIMUM EMBEDMENT BASED ON SITE SPECIFIC PARAMETERS (1'-6" MINIMUM FOR ALL WALLS ON LEVEL GROUND). FIELD EMBEDMENTS SHALL MEET OR EXCEED THE MINIMUM EMBEDMENT. FIELD EMBEDMENTS BELOW MINIMUM EMBEDMENT SHALL NOT BE INCLUDED IN THE PAY LIMITS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-263

COUNTY HWY AB OVER I.H.39

DRAWN BY MTW | PLANS CHK'D JSM

RETAINING WALL DETAILS

SHEET 3 OF 5

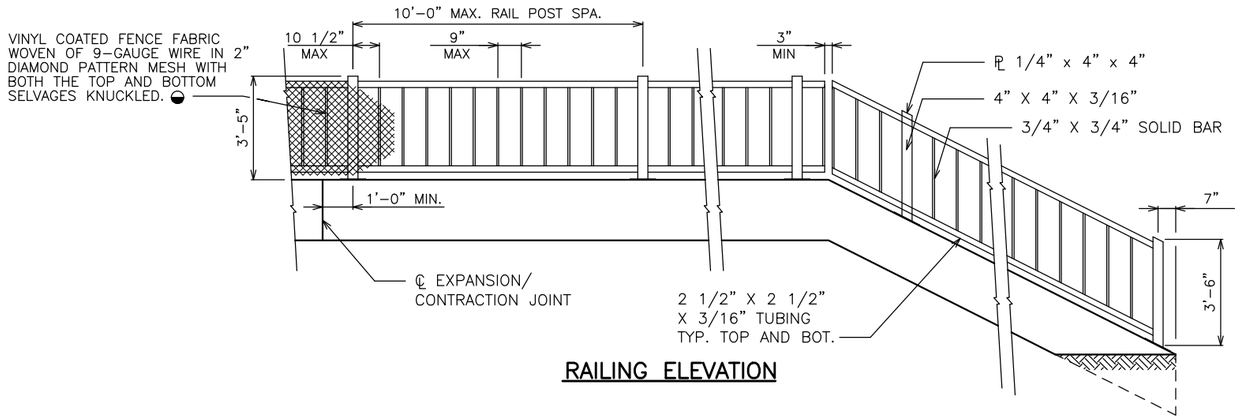
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STATE PROJECT NUMBER

1007-10-81



RAILING ELEVATION

◒ FABRIC HEIGHT SHALL BE 3'-3" FROM STA. 0+00-0+86 AND 1+64-2+00 AND 3'-2" FROM STA. 0+86-1+64.

◩ RAILING HEIGHT SHALL BE 3'-6" FROM STA. 0+00-0+86 AND 1+64-2+00 AND 3'-5" FROM STA. 0+86-1+64.

☆ PROVIDE RAIL POST SPACING AND GATE TO MISS CONFLICT WITH BOTTOM FLANGE OF GIRDER 7 ON B-13-726

NOTES

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

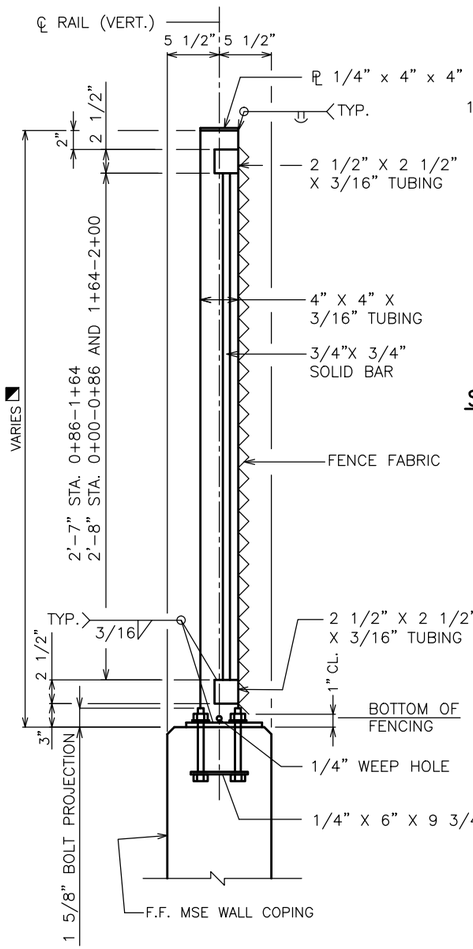
RAILING TO BE PAINTED AND FENCE FABRIC AND TIES TO BE VINYL COATED. FEDERAL COLOR NO. 30140 (BROWN).

BID ITEM SHALL BE "RAILING TUBULAR SCREENING R-13-263" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

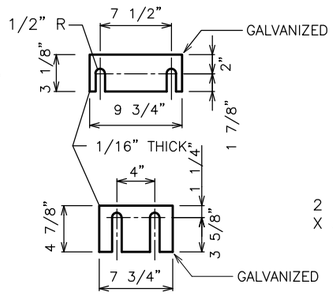
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT.

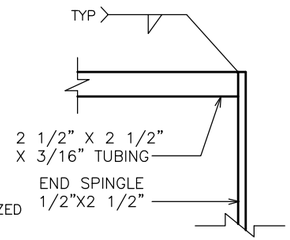


SECTION THRU RAILING

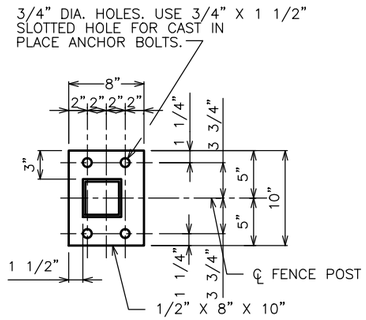


SHIM PLATE DETAILS

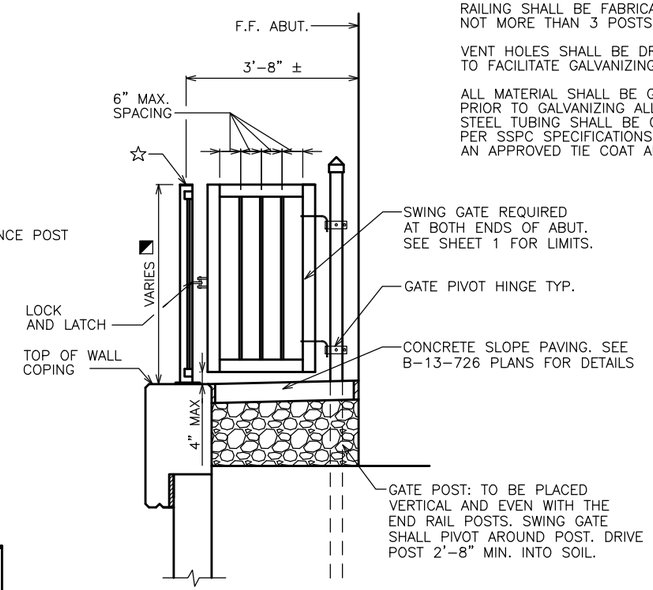
TWO SHIMS OF EACH SIZE REQUIRED PER POST



RAIL DETAIL

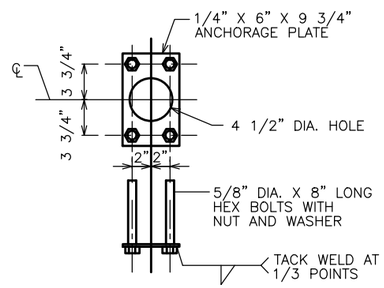


BASE PLATE



SECTION THRU WALL AT GATES

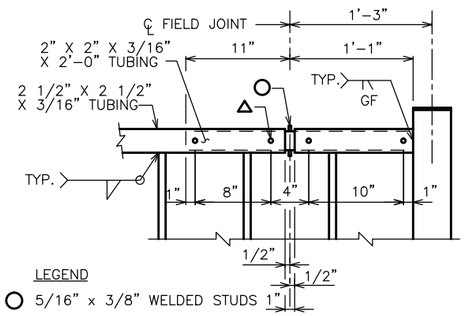
NOTE:
ALL POSTS, GATES AND ASSOCIATED HARDWARE SHALL BE PAINTED (FEDERAL COLOR NO. 30140) AND SHALL BE PAID FOR UNDER THE BID ITEM "RAILING TUBULAR SCREENING R-13-263"



ANCHORAGE DETAIL

5/8" CAST-IN-PLACE ANCHOR BOLTS. MASONRY ANCHORS MAY BE SUBSTITUTED FOR C.I.P ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

MASONRY ADHESIVE ANCHOR 5/8"-INCH. EMBED 7" IN CONCRETE. MECHANICAL ANCHORS ARE NOT PERMITTED.



LEGEND

○ 5/16" x 3/8" WELDED STUDS 1"

△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2 1/2" X 2 1/2" TUBE.

RAILING EXPANSION JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-13-263

COUNTY HWY AB OVER I.H.39

DRAWN BY MTW | PLANS CHK'D JSM

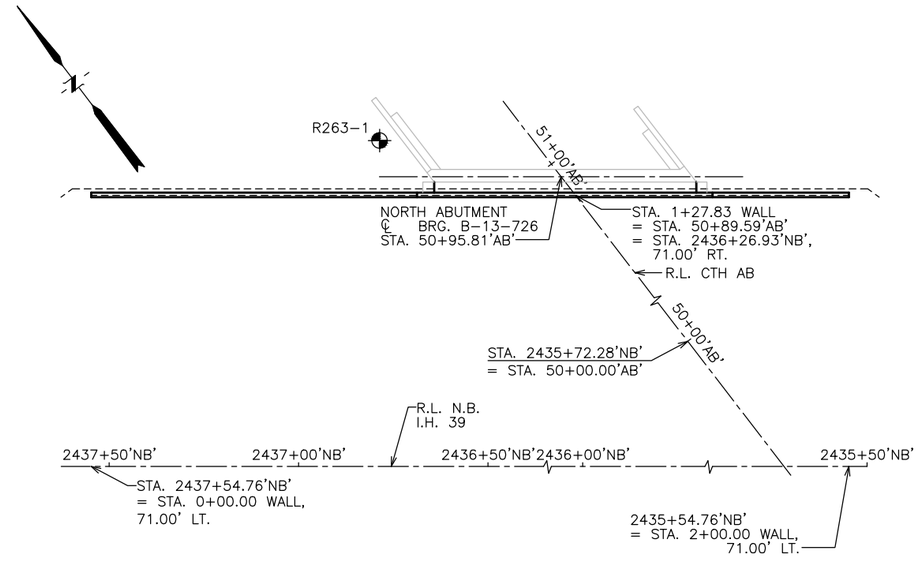
TUBULAR STEEL RAILING SCREENING

SHEET 4 OF 5

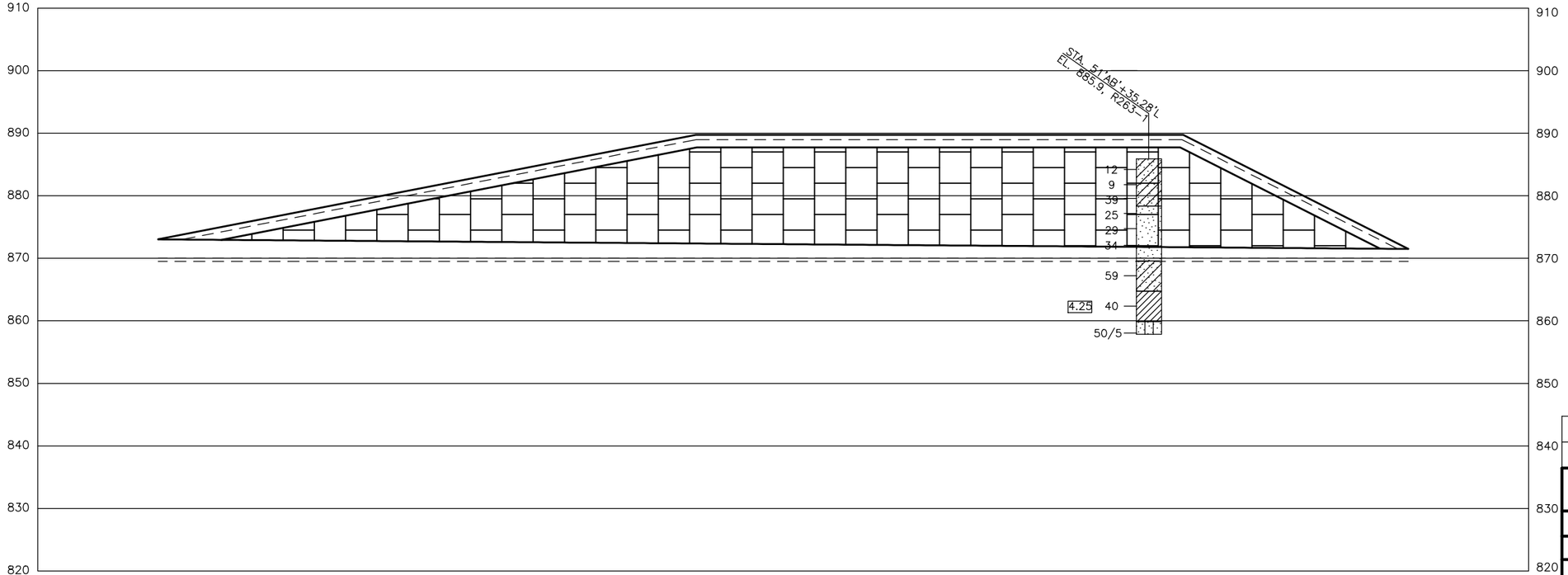
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BORINGS TAKEN BY:
GESTRA ENGINEERING, INC.
6/13/2014



STATE PROJECT NUMBER

1007–10–81

ABBREVIATIONS
F—FINE M—MEDIUM C—COURSE
WS—WEATHERED SO—SOUND

MATERIAL SYMBOLS
TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING

BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH — 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F.
BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2"O.D.x1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R–13–263

DRAWN BY KGC | PLANS CHK'D JSM

SUBSURFACE EXPLORATION

SHEET 5 OF 5

DIVISION 1A - IH 39 'XNB' RT - OUTSIDE SHOULDER WIDENING

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.00	Mass Ordinate
1026+70	102670.00	0.00	6.85	0.00	0	0	**0**	**0**	0.00
1027+00	102700.00	30.00	4.81	0.00	6	0	**6**	**0**	6.48
1027+50	102750.00	50.00	3.81	2.07	8	2	**14**	**2**	12.54
1027+70	102770.00	20.00	3.61	3.52	3	2	**17**	**4**	13.22
1027+98.1	102798.10	28.10	3.18	6.41	4	5	**21**	**9**	11.58
1028+00	102800.00	1.90	3.19	6.44	0	0	**21**	**10**	11.35
1028+50	102850.00	50.00	3.17	6.16	6	12	**27**	**21**	5.57
1029+00	102900.00	50.00	3.35	8.32	6	13	**33**	**35**	-1.81
1029+42.17	102942.17	42.17	3.55	5.52	5	11	**38**	**46**	-7.23
1029+50	102950.00	7.83	3.57	4.59	1	1	**39**	**47**	-7.67
1030+00	103000.00	50.00	3.49	10.07	7	14	**46**	**61**	-14.70
1030+50	103050.00	50.00	3.65	10.79	7	19	**52**	**80**	-27.41
1031+00	103100.00	50.00	3.63	13.63	7	23	**59**	**102**	-43.28
1031+50	103150.00	50.00	3.57	15.11	7	27	**66**	**129**	-63.23
1032+00	103200.00	50.00	3.53	14.66	7	28	**72**	**157**	-84.22
1032+50	103250.00	50.00	4.64	0.00	8	14	**80**	**170**	-90.23
1033+00	103300.00	50.00	6.35	8.77	10	8	**90**	**178**	-88.18
1033+50	103350.00	50.00	7.80	17.02	13	24	**103**	**202**	-98.95
1033+64.98	103364.98	14.98	7.24	20.09	4	10	**107**	**213**	-105.07
1033+89.98	103389.98	25.00	7.15	13.07	7	15	**114**	**228**	-113.76
1034+00	103400.00	10.02	6.95	10.65	3	4	**117**	**232**	-115.55
1034+14.98	103414.98	14.98	6.61	8.30	4	5	**120**	**238**	-117.04
1034+50	103450.00	35.02	6.05	6.71	8	10	**129**	**247**	-118.57
1035+00	103500.00	50.00	7.35	3.62	12	10	**141**	**257**	-115.73
1035+50	103550.00	50.00	7.33	10.71	14	13	**155**	**270**	-115.41
1036+00	103600.00	50.00	6.09	9.84	12	19	**167**	**289**	-122.01
1036+50	103650.00	50.00	7.88	5.78	13	14	**180**	**304**	-123.54
1037+00	103700.00	50.00	6.00	2.99	13	8	**193**	**312**	-118.81
1037+01.97	103701.97	1.97	6.00	3.16	0	0	**193**	**312**	-118.59
1037+50	103750.00	48.03	6.00	0.04	11	3	**204**	**315**	-110.77
1038+00	103800.00	50.00	6.00	0.76	11	1	**215**	**316**	-100.39
1038+10	103810.00	10.00	6.00	0.32	2	0	**217**	**316**	-98.37
1038+50	103850.00	40.00	6.00	8.47	9	7	**226**	**322**	-95.99
1039+00	103900.00	50.00	3.70	15.40	9	22	**235**	**344**	-109.11
1039+01.97	103901.97	1.97	3.72	16.92	0	1	**236**	**346**	-110.02
1039+50	103950.00	48.03	3.75	7.44	7	22	**242**	**367**	-125.04
1040+00	104000.00	50.00	3.75	4.45	7	11	**249**	**378**	-129.11
1040+50	104050.00	50.00	3.77	4.58	7	8	**256**	**387**	-130.51
1041+00	104100.00	50.00	3.99	1.36	7	5	**263**	**392**	-128.82
1041+50	104150.00	50.00	3.73	0.86	7	2	**270**	**394**	-123.72
1042+00	104200.00	50.00	3.66	2.44	7	3	**277**	**397**	-119.93
1042+21.4	104221.40	21.40	3.73	1.71	3	2	**280**	**399**	-118.65
1042+50	104250.00	28.60	4.31	0.06	4	1	**284**	**400**	-115.33
1043+00	104300.00	50.00	5.38	0.00	9	0	**293**	**400**	-106.41
1043+30	104330.00	30.00	6.14	0.00	6	0	**300**	**400**	-100.01
				COLUMN TOTAL	300	400			

DIVISION 1A - IH 39 'XSB' LT - OUTSIDE SHOULDER WIDENING

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	
1030+70(2)	103051.11	0.00	6.48	4.74	0	0	0	0	0
1031+00(2)	103081.11	30.00	7.09	5.79	8	6	8	6	2
1031+47.35(2)	103128.46	47.35	6.10	13.12	12	17	19	22	-3
1031+50(2)	103131.11	2.65	6.05	13.17	1	1	20	24	-4
1032+00(2)	103181.11	50.00	5.30	9.89	11	21	30	45	-15
1032+40.23(2)	103221.34	40.23	4.48	5.41	7	11	38	56	-19
1032+50(2)	103231.11	9.77	4.29	5.23	2	2	39	58	-19
1033+00(2)	103281.11	50.00	4.46	5.12	8	10	47	68	-21
1033+50(2)	103331.11	50.00	4.42	4.97	8	9	55	77	-22
1034+00(2)	103381.11	50.00	4.41	7.04	8	11	64	88	-25
1034+50(2)	103431.11	50.00	4.48	8.25	8	14	72	103	-31
1035+00(2)	103481.11	50.00	9.81	4.80	13	12	85	115	-30
1035+34.06(2)	103515.17	34.06	4.92	6.44	9	7	94	122	-27
1035+50(2)	103531.11	15.94	3.13	10.57	2	5	97	127	-30
1036+00(2)	103581.11	50.00	6.20	0.59	9	10	105	137	-32
1036+50(2)	103631.11	50.00	6.00	0.00	11	1	117	138	-21
1037+00(2)	103681.11	50.00	6.00	0.30	11	0	128	138	-10
1037+04.06(2)	103685.17	4.06	6.00	1.00	1	0	129	138	-9
1037+50(2)	103731.11	45.94	6.10	0.46	10	1	139	139	0
1038+00(2)	103781.11	50.00	5.98	0.16	11	1	150	140	10
1038+50(2)	103831.11	50.00	11.12	0.10	16	0	166	140	26
1039+00(2)	103881.11	50.00	7.62	1.19	17	1	183	141	42
1039+50(2)	103931.11	50.00	7.08	9.47	14	10	197	151	46
1039+75(2)	103956.11	25.00	6.93	10.13	6	9	203	160	43
1039+80.02(2)	103961.13	5.02	6.96	10.23	1	2	205	162	43
1040+00(2)	103981.11	19.98	7.27	13.37	5	9	210	171	39
1040+05.02(2)	103986.13	5.02	7.34	14.07	1	3	211	173	38
1040+30.02(2)	104011.13	25.00	8.14	20.45	7	16	218	189	29
1040+50(2)	104031.11	19.98	8.11	16.66	6	14	225	203	21
1041+00(2)	104081.11	50.00	6.79	13.12	14	28	238	231	8
1041+50(2)	104131.11	50.00	3.98	10.48	10	22	248	253	-4
1042+00(2)	104181.11	50.00	4.17	11.63	8	20	256	273	-17
1042+50(2)	104231.11	50.00	4.06	13.22	8	23	263	296	-33
1043+00(2)	104281.11	50.00	4.27	12.46	8	24	271	320	-49
1043+50(2)	104331.11	50.00	4.14	9.45	8	20	279	340	-61
1044+00(2)	104381.11	50.00	5.42	6.88	9	15	288	355	-67
1044+50(2)	104431.11	50.00	7.36	4.76	12	11	300	366	-66
1045+00(2)	104481.11	50.00	4.84	4.57	11	9	311	375	-64
1045+50(2)	104531.11	50.00	3.24	8.66	7	12	318	387	-68
1046+00(2)	104581.11	50.00	2.87	28.52	6	34	324	421	-97
1046+50(2)	104631.11	50.00	4.80	0.99	7	27	331	449	-117
1047+00(2)	104681.11	50.00	4.76	2.03	9	3	340	451	-111
1047+30(2)	104711.11	30.00	5.04	2.88	5	3	346	454	-109
				COLUMN TOTALS	346	454			

DIVISION 1B - IH 39 'XNB' - MEDIAN SHOULDER WIDENING

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	
1027+50	102750.00	#REF!	0.00	0.00	0	0	0	0	0.00
1027+70	102770.00	20.00	8.03	1.05	3	0	3	0	2.59
1027+98.1	102798.10	28.10	7.45	3.37	8	2	11	3	8.34
1028+00	102800.00	1.90	7.41	3.58	1	0	12	3	8.62
1028+50	102850.00	50.00	6.39	10.28	13	13	24	16	8.57
1029+00	102900.00	50.00	5.76	12.11	11	21	36	36	-0.90
1029+42.17	102942.17	42.17	5.11	13.58	8	20	44	57	-12.47
1029+50	102950.00	7.83	5.21	13.54	1	4	46	60	-14.91
1030+00	103000.00	50.00	5.31	14.57	10	26	55	87	-31.20
1030+50	103050.00	50.00	5.97	6.45	10	19	66	106	-40.22
1031+00	103100.00	50.00	6.53	8.78	12	14	77	120	-42.74
1031+50	103150.00	50.00	5.82	21.78	11	28	89	148	-59.61
1032+00	103200.00	50.00	5.20	30.58	10	48	99	197	-97.89
1032+50	103250.00	50.00	5.15	22.80	10	49	109	246	-137.73
1033+00	103300.00	50.00	5.88	18.21	10	38	119	284	-165.49
1033+50	103350.00	50.00	5.76	15.57	11	31	130	316	-186.00
1033+64.98	103364.98	14.98	5.80	14.69	3	8	133	324	-191.19
1033+89.98	103389.98	25.00	6.36	13.37	6	13	138	337	-198.56
1034+00	103400.00	10.02	6.59	12.97	2	5	141	342	-201.04
1034+14.98	103414.98	14.98	6.91	9.05	4	6	145	348	-203.40
1034+50	103450.00	35.02	12.00	0.25	12	6	157	354	-197.17
1035+00	103500.00	50.00	10.17	0.00	21	0	177	354	-176.88
1035+50	103550.00	50.00	4.70	28.95	14	27	191	381	-189.92
1036+00	103600.00	50.00	12.35	0.79	16	28	207	409	-201.67
1036+50	103650.00	50.00	17.62	0.34	28	1	235	410	-174.97
1037+00	103700.00	50.00	21.48	0.06	36	0	271	410	-139.14
1037+01.97	103701.97	1.97	21.64	0.05	2	0	272	410	-137.57
1037+50	103750.00	48.03	21.56	0.37	38	0	311	410	-99.52
1038+00	103800.00	50.00	10.03	0.09	29	0	340	411	-70.69
1038+10	103810.00	10.00	10.40	0.07	4	0	344	411	-66.93
1038+50	103850.00	40.00	0.00	0.00	8	0	352	411	-59.28
				COLUMN TOTALS	352	411			

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PROJECT NO: 1007-10-81 | HWY: IH 39 | COUNTY: DANE | CROSS SECTIONS: COMPUTER EARTHWORK DATA | SHEET 228 | E

DIVISION 1B - IH 39 'XSB' - MEDIAN SHOULDER WIDENING

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	
1030+70(2)	103051.11	0.00	7.47	0.20	0	0	0	0	0.00
1031+00(2)	103081.11	30.00	6.88	2.99	8	2	8	2	6.20
1031+47.35(2)	103128.46	47.35	6.11	8.68	11	10	19	12	7.35
1031+50(2)	103131.11	2.65	6.11	8.89	1	1	20	13	7.09
1032+00(2)	103181.11	50.00	6.06	11.14	11	19	31	31	-0.20
1032+40.23(2)	103221.34	40.23	6.30	10.71	9	16	40	48	-7.27
1032+50(2)	103231.11	9.77	6.53	9.84	2	4	43	51	-8.67
1033+00(2)	103281.11	50.00	7.54	5.54	13	14	56	66	-9.88
1033+50(2)	103331.11	50.00	7.97	3.38	14	8	70	74	-3.78
1034+00(2)	103381.11	50.00	12.26	0.00	19	3	89	77	11.82
1034+50(2)	103431.11	50.00	8.52	0.19	19	0	108	77	30.89
1035+00(2)	103481.11	50.00	10.40	0.00	18	0	126	77	48.23
1035+34.06(2)	103515.17	34.06	9.80	0.17	13	0	138	78	60.85
1035+50(2)	103531.11	15.94	8.72	1.65	5	1	144	78	65.78
1036+00(2)	103581.11	50.00	8.59	0.00	16	2	160	80	80.29
1036+50(2)	103631.11	50.00	12.27	0.00	19	0	179	80	99.61
1037+00(2)	103681.11	50.00	16.18	0.00	26	0	206	80	125.95
1037+04.06(2)	103685.17	4.06	16.22	0.00	2	0	208	80	128.39
1037+50(2)	103731.11	45.94	14.67	0.00	26	0	234	80	154.67
1038+00(2)	103781.11	50.00	23.07	0.00	35	0	269	80	189.62
1038+50(2)	103831.11	50.00	13.38	0.80	34	1	303	80	222.63
1039+00(2)	103881.11	50.00	8.57	3.87	20	4	323	85	238.64
1039+50(2)	103931.11	50.00	9.69	3.65	17	7	340	92	248.59
1039+75(2)	103956.11	25.00	10.35	1.02	9	2	349	94	255.71
1039+80.02(2)	103961.13	5.02	0.00	0.00	1	0	350	94	256.58
				COLUMN TOTALS	350	94			

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PROJECT NO: 1007-10-81 | HWY: IH 39 | COUNTY: DANE | CROSS SECTIONS: COMPUTER EARTHWORK DATA | SHEET 229 | E

DIVISION - 'AB' NORTH

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Mass Ordinate
50+49.53	5049.53	0.00	0.00	0.00	0	0	0	0	0.00
50+50	5050.00	0.47	0.00	0.00	0	0	0	0	0.00
50+77.38	5077.38	27.38	0.00	0.00	0	0	0	0	0.00
50+88.15	5088.15	10.77	0.00	163.83	0	33	0	33	-32.69
50+97.39	5097.39	9.24	0.00	251.45	0	71	0	104	-103.71
51+00	5100.00	2.61	0.00	698.36	0	46	0	150	-149.67
51+12.39	5112.39	12.39	0.00	726.21	0	327	0	476	-476.46
51+21.62	5121.62	9.24	0.00	623.63	0	231	0	707	-707.31
51+50	5150.00	28.38	0.00	899.83	0	801	0	1,508	-1,507.90
51+50.74	5150.74	0.74	0.00	902.02	0	25	0	1,533	-1,532.58
51+65.39	5165.39	14.65	0.00	886.40	0	485	0	2,018	-2,017.70
51+74.62	5174.62	9.24	0.00	794.96	0	288	0	2,305	-2,305.25
51+75.74	5175.74	1.12	0.00	782.37	0	33	0	2,338	-2,337.88
52+00	5200.00	24.26	0.00	475.58	0	565	0	2,903	-2,903.03
52+00.74	5200.74	0.74	0.00	465.93	0	13	0	2,916	-2,915.93
52+32.26	5232.26	31.52	0.00	297.61	0	446	0	3,362	-3,361.61
52+37.74	5237.74	5.48	0.00	281.29	0	59	0	3,420	-3,420.36
52+50	5250.00	12.26	0.00	260.05	0	123	0	3,543	-3,543.27
52+57.26	5257.26	7.26	0.21	253.22	0	69	0	3,612	-3,612.24
52+82.26	5282.26	25.00	6.99	218.22	3	218	3	3,831	-3,827.16
52+90.74	5290.74	8.48	9.69	203.65	3	66	6	3,897	-3,890.79
53+00	5300.00	9.26	12.70	183.77	4	66	10	3,963	-3,953.39
53+19.26	5319.26	19.26	18.61	140.95	11	116	21	4,079	-4,058.04
53+40	5340.00	20.74	48.41	127.98	26	103	47	4,182	-4,135.59
53+50	5350.00	10.00	56.16	106.08	19	43	66	4,226	-4,159.57
53+72.26	5372.26	22.26	64.97	72.88	50	74	116	4,299	-4,183.41
54+00	5400.00	27.74	69.15	48.85	69	63	185	4,362	-4,177.05
54+50	5450.00	50.00	72.80	24.98	131	68	316	4,430	-4,113.98
55+00	5500.00	50.00	89.73	4.64	150	27	467	4,458	-3,990.92
55+50	5550.00	50.00	140.01	1.61	213	6	680	4,464	-3,783.98
56+00	5600.00	50.00	183.45	1.53	299	3	979	4,466	-3,487.39
56+50	5650.00	50.00	79.75	0.01	244	1	1,223	4,468	-3,245.11
56+61.55	5661.55	11.55	81.05	0.13	34	0	1,257	4,468	-3,210.76
57+00	5700.00	38.45	74.62	2.48	111	2	1,368	4,470	-3,101.77
57+50	5750.00	50.00	173.08	1.57	229	4	1,597	4,474	-2,876.18
58+00	5800.00	50.00	160.96	0.86	309	2	1,907	4,476	-2,569.13
58+50	5850.00	50.00	78.90	2.52	222	3	2,129	4,479	-2,350.17
58+60	5860.00	10.00	66.75	2.21	27	1	2,156	4,480	-2,324.07
				COLUMN TOTALS	2,156	4,480			

DIVISION - FREEWAY COURT

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
08+40	840.00	0.00	44.19	0.07	0	0	0	0	0
08+50	850.00	10.00	46.46	0.00	17	0	17	0	17
09+00	900.00	50.00	88.02	1.60	125	1	141	1	140
09+24.6	924.60	24.60	163.09	0.00	114	1	256	2	253
09+50	950.00	25.40	400.32	0.00	265	0	521	2	519
09+52.34	952.34	2.34	401.76	0.00	35	0	555	2	553
09+82	982.00	29.66	197.37	0.00	329	0	885	2	882
				COLUMN TOTALS	885	2			

DIVISION 'AB' -SOUTH

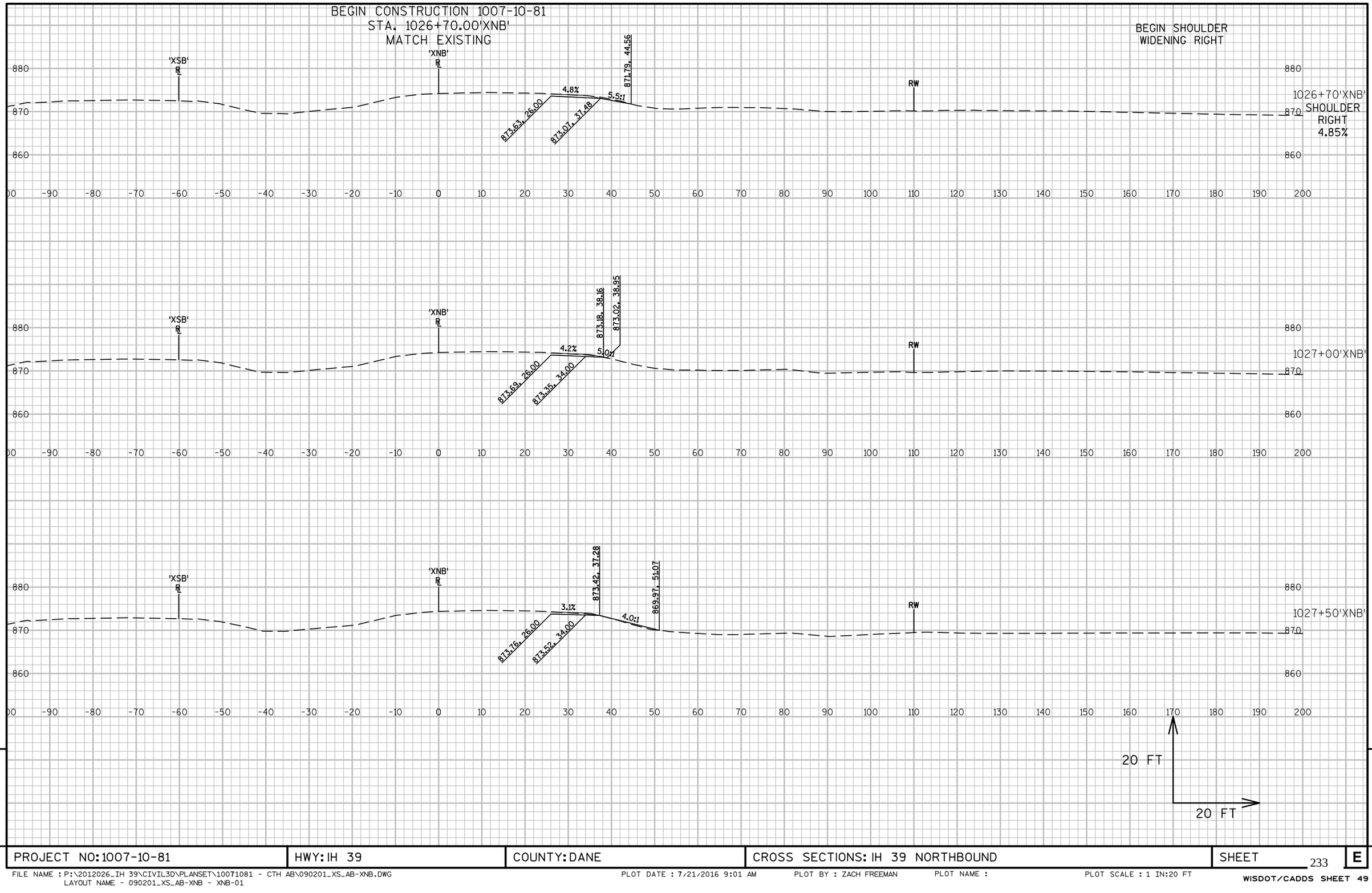
STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut	Expanded Fill	
36+00	3600.00	0.00	59.48	4.81	0	0	0	0	0.00
36+50	3650.00	50.00	67.35	16.32	117	20	117	20	97.87
37+00	3700.00	50.00	53.26	22.14	112	36	229	55	173.94
37+50	3750.00	50.00	32.19	29.92	79	48	308	103	204.85
38+00	3800.00	50.00	15.49	40.66	44	65	352	169	183.65
38+50	3850.00	50.00	0.51	47.89	15	82	367	251	116.48
39+00	3900.00	50.00	0.00	78.24	0	117	368	368	0.17
39+50	3950.00	50.00	0.00	97.06	0	162	368	530	-162.14
40+00	4000.00	50.00	0.00	107.40	0	189	368	719	-351.45
40+50	4050.00	50.00	9.90	132.36	9	222	377	941	-564.29
41+00	4100.00	50.00	9.69	143.58	18	255	395	1,197	-801.65
41+48.55	4148.55	48.55	34.58	143.89	40	258	435	1,455	-1,020.30
41+50	4150.00	1.45	34.34	144.06	2	8	437	1,463	-1,026.18
42+00	4200.00	50.00	0.00	151.60	32	274	468	1,737	-1,268.15
42+06.38	4206.38	6.38	0.00	155.47	0	36	468	1,773	-1,304.43
42+50	4250.00	43.62	0.00	292.23	0	362	468	2,135	-1,666.06
42+59.38	4259.38	9.38	0.00	297.00	0	102	468	2,237	-1,768.42
42+96.38	4296.38	37.00	0.00	321.78	0	424	468	2,661	-2,192.40
43+00	4300.00	3.62	0.00	332.14	0	44	468	2,705	-2,236.23
43+21.38	4321.38	21.38	0.00	379.99	0	282	468	2,987	-2,518.19
43+46.38	4346.38	25.00	4.37	477.56	2	397	470	3,384	-2,913.18
43+50	4350.00	3.62	5.19	488.47	1	65	471	3,448	-2,977.29
44+00	4400.00	50.00	16.11	516.73	20	931	491	4,379	-3,888.30
44+43	4443.00	43.00	25.12	547.01	33	847	524	5,226	-4,702.52
44+50	4450.00	7.00	26.18	558.17	7	143	530	5,369	-4,839.14
45+00	4500.00	50.00	31.06	624.64	53	1,095	583	6,465	-5,881.32
45+50	4550.00	50.00	30.59	706.05	57	1,232	640	7,697	-7,056.35
45+87.36	4587.36	37.36	26.50	721.93	39	988	680	8,685	-8,004.82
46+00	4600.00	12.64	23.65	800.20	12	356	692	9,041	-8,349.35
46+40.36	4640.36	40.36	17.12	1018.29	30	1,359	722	10,400	-9,678.06
46+50	4650.00	9.64	15.05	1039.32	6	367	728	10,767	-10,039.61
46+77.36	4677.36	27.36	9.87	1068.06	13	1,068	740	11,835	-11,094.75
47+00	4700.00	22.64	6.81	1133.50	7	923	747	12,758	-12,010.76
47+02.36	4702.36	2.36	6.72	1139.44	1	99	748	12,858	-12,109.53
47+27.36	4727.36	25.00	1.51	1161.06	4	1,065	752	13,923	-13,170.77
47+50	4750.00	22.64	0.00	1237.56	1	1,006	753	14,928	-14,175.75
48+00	4800.00	50.00	0.00	1048.07	0	2,116	753	17,045	-16,292.08
48+00.8	4800.80	0.80	0.00	1043.16	0	31	753	17,075	-16,322.99
48+42.22	4842.22	41.42	0.10	625.83	0	1,280	753	18,356	-17,603.23
48+44.82	4844.82	2.60	0.04	590.04	0	58	753	18,414	-17,661.66
48+50	4850.00	5.18	0.04	540.66	0	109	753	18,523	-17,770.16
48+62.23	4862.23	12.23	0.00	473.51	0	230	753	18,752	-17,999.89
48+71.47	4871.47	9.24	0.00	309.72	0	134	753	18,886	-18,133.84
48+82.24	4882.24	10.77	0.00	87.05	0	79	753	18,966	-18,213.01
49+00	4900.00	17.76	0.00	5.33	0	30	753	18,996	-18,243.39
49+03.56	4903.56	3.56	0.00	0.00	0	0	753	18,996	-18,243.74
				COLUMN TOTALS	753	18,996			

DIVISION 3A - IH 39 'XNB' RT STRUCTURE AND RETAINING WALL AREA

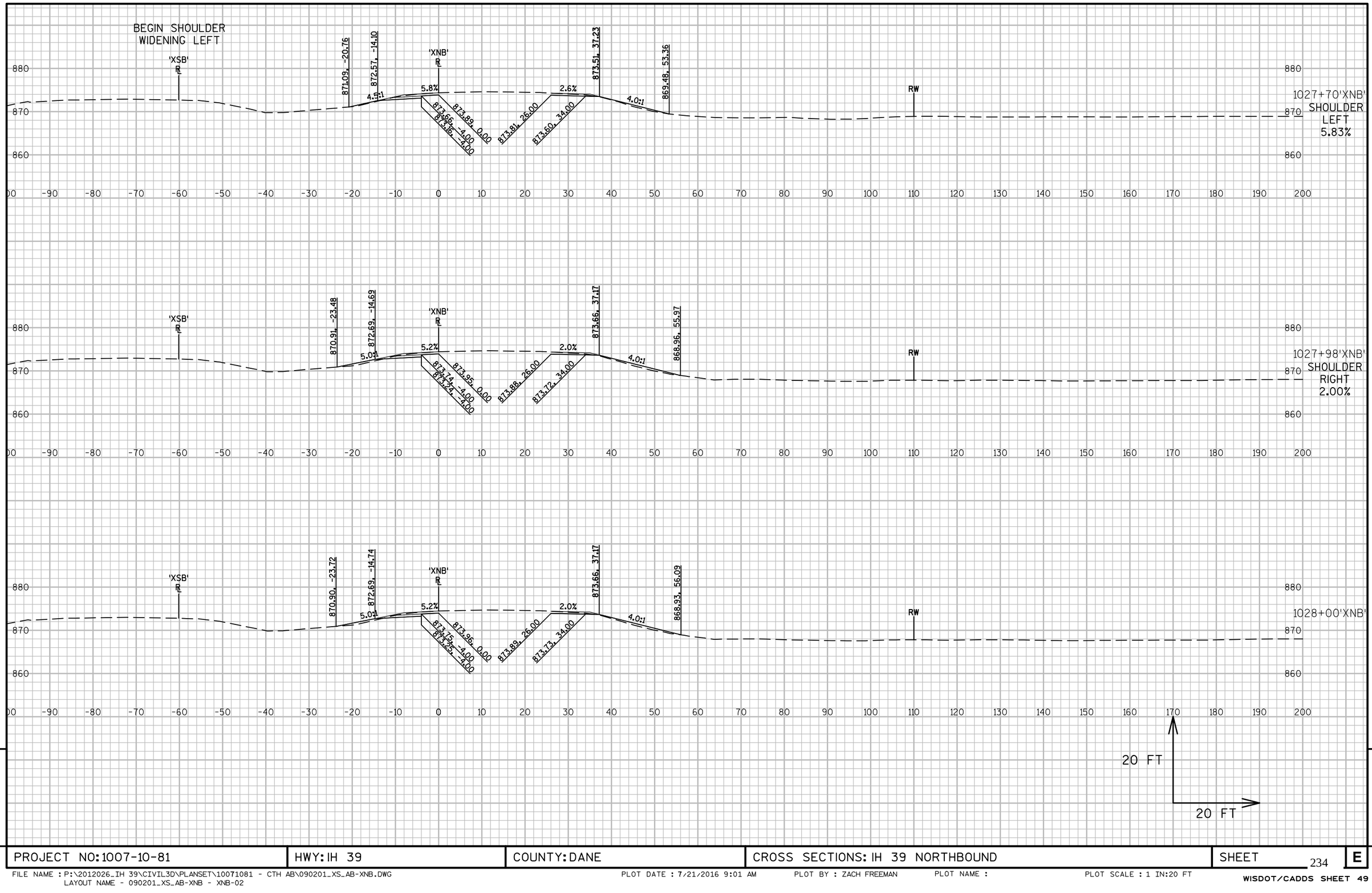
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
103650.00	103650.00	0.00	1.00	0.00	**0**	**0**	**0**	**0**	**0**
1037+00	103700.00	50.00	26.00	0.00	25	0	25	0	25
1037+01.97	103701.97	1.97	33.51	0.00	2	0	27	0	27
1037+50	103750.00	48.03	70.84	0.00	93	0	120	0	120
1038+00	103800.00	50.00	82.46	0.00	142	0	262	0	262
1038+10	103810.00	10.00	66.94	0.00	28	0	290	0	290
1038+50	103850.00	40.00	6.97	0.00	55	0	344	0	344
1039+00	103900.00	50.00	0.00	0.00	6	0	351	0	351
1039+01.97	103901.97	1.97	0.00	0.00	0	0	351	0	351
					351	0			

DIVISION 3A - IH 39 'XSB' LT STRUCTURE AND RETAINING WALL AREA

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Expanded Fill	Mass Ordinate
1035+34.06(2)	103515.17	0.00	0.00	0.00	0	0	0	0	#REF!
1035+50(2)	103531.11	15.94	0.00	0.00	0	0	0	0	0.00
1036+00(2)	103581.11	50.00	100.71	0.00	93	0	93	0	93.25
1036+50(2)	103631.11	50.00	111.85	0.00	197	0	290	0	290.05
1037+00(2)	103681.11	50.00	8.08	0.00	111	0	401	0	401.09
1037+04.06(2)	103685.17	4.06	1.56	0.00	1	0	402	0	401.82
				COLUMN TOTALS	402	0			



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 233	E



9

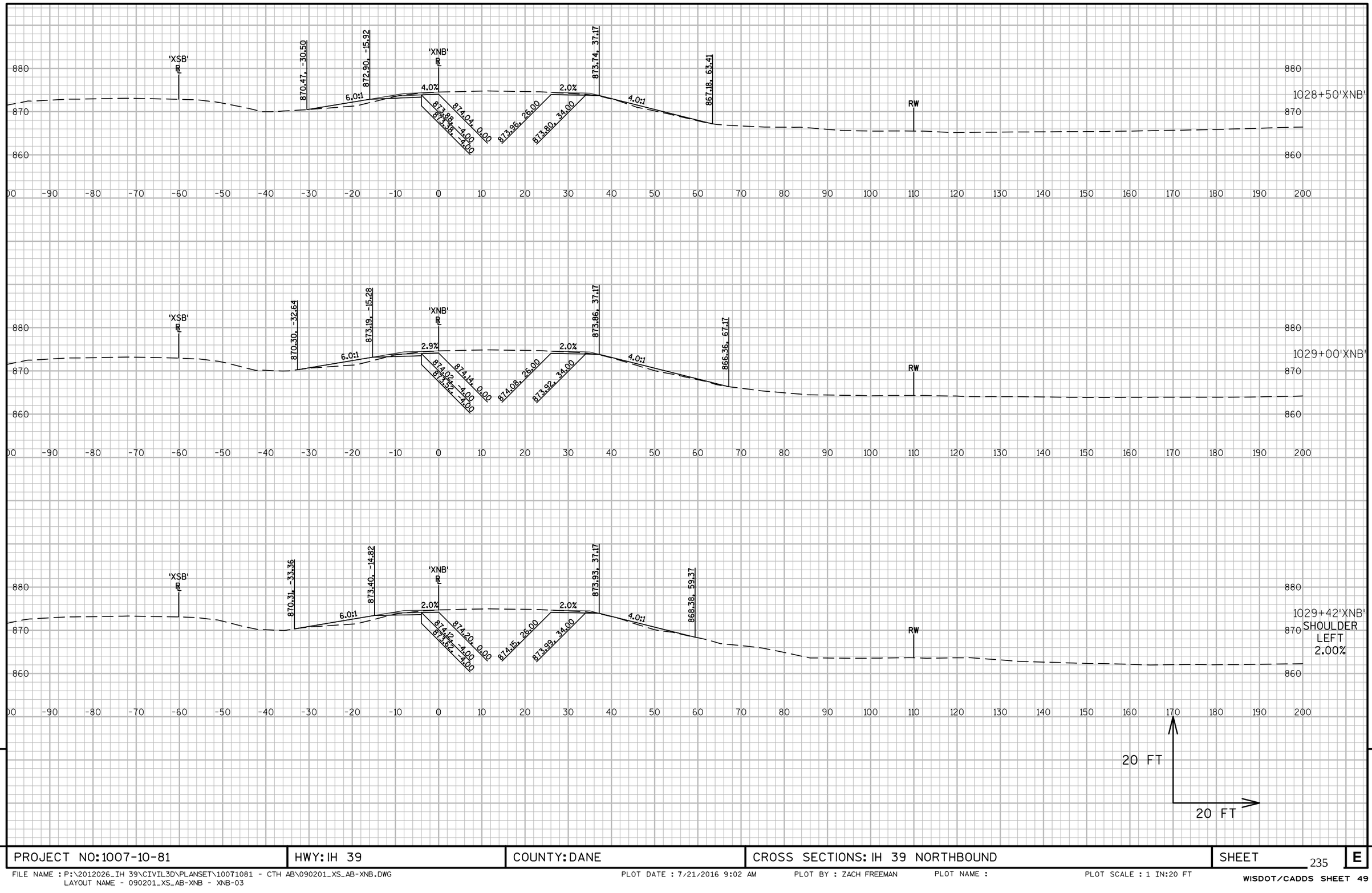
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 234	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-02

PLOT DATE : 7/21/2016 9:01 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

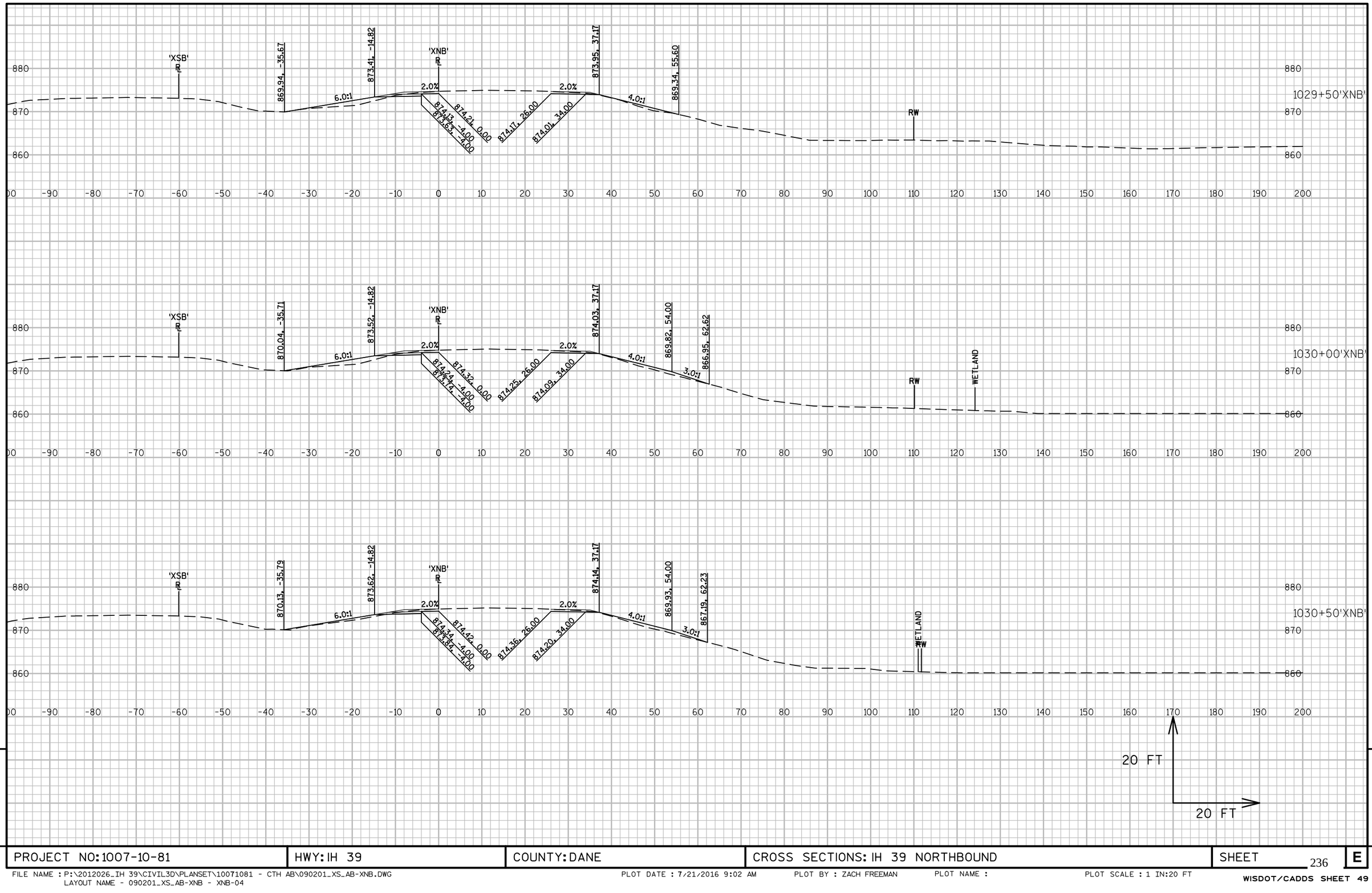
9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 235	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-03

PLOT DATE : 7/21/2016 9:02 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

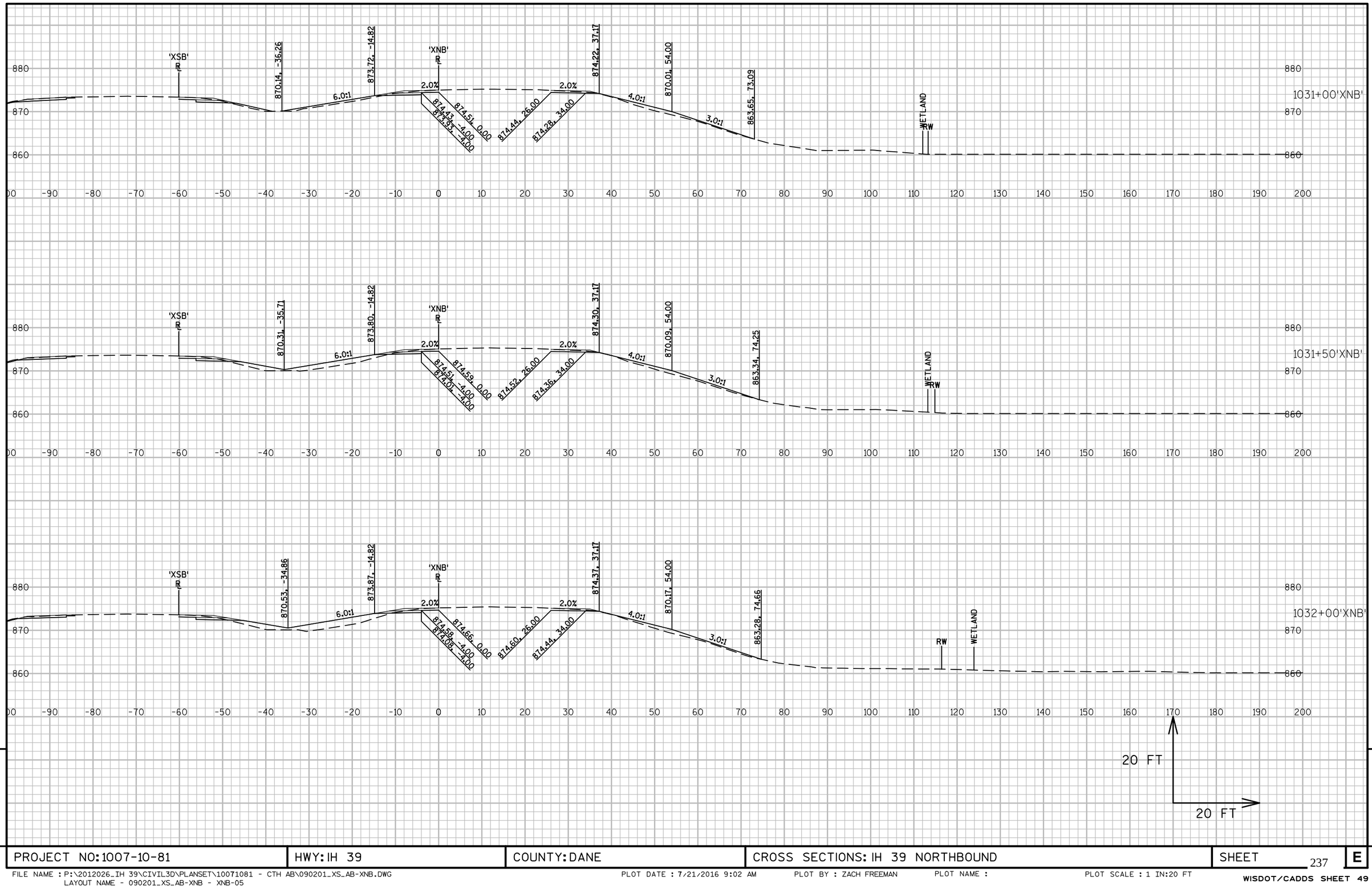
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 236	E

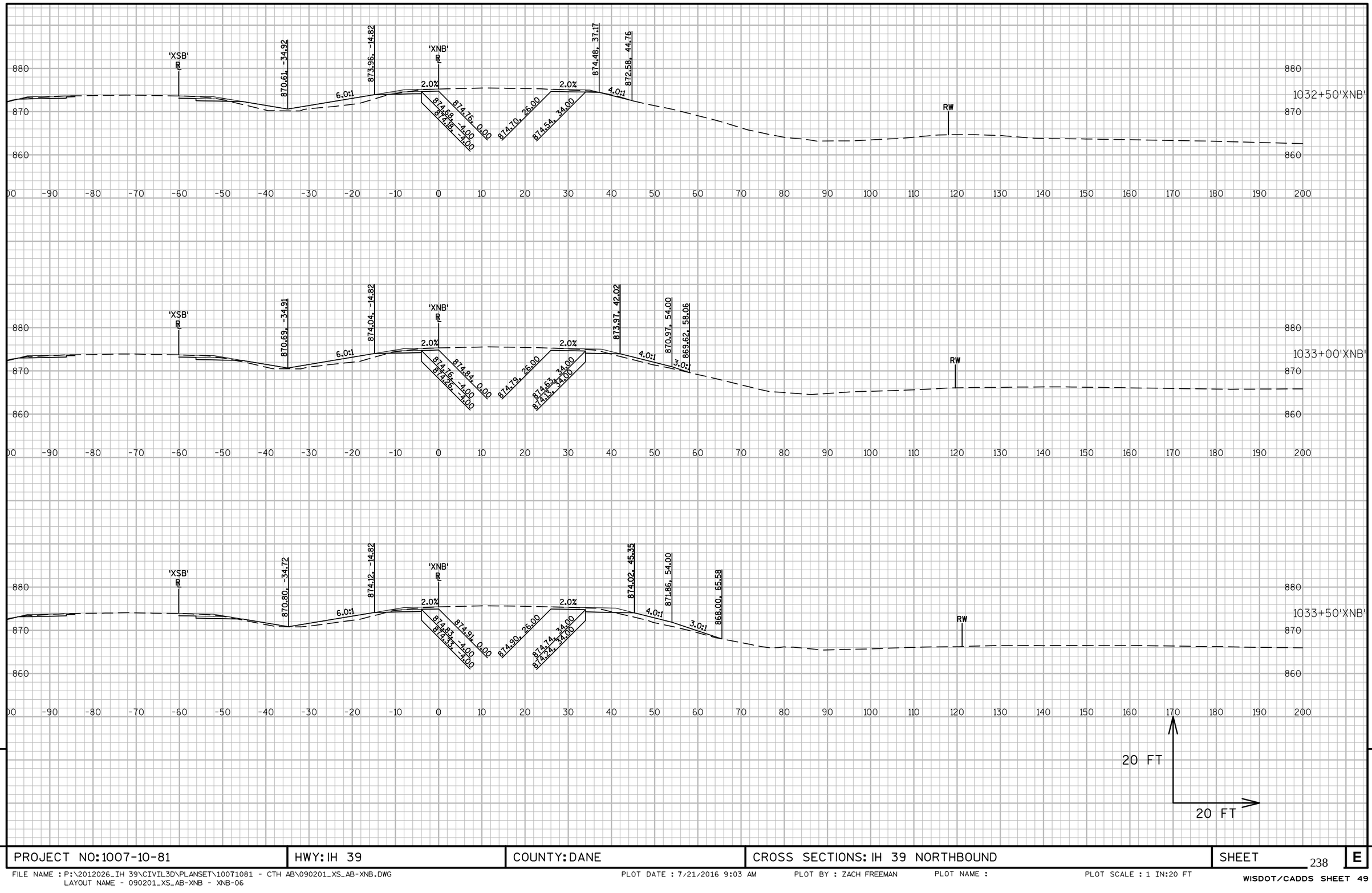
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-04

PLOT DATE : 7/21/2016 9:02 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 237	E



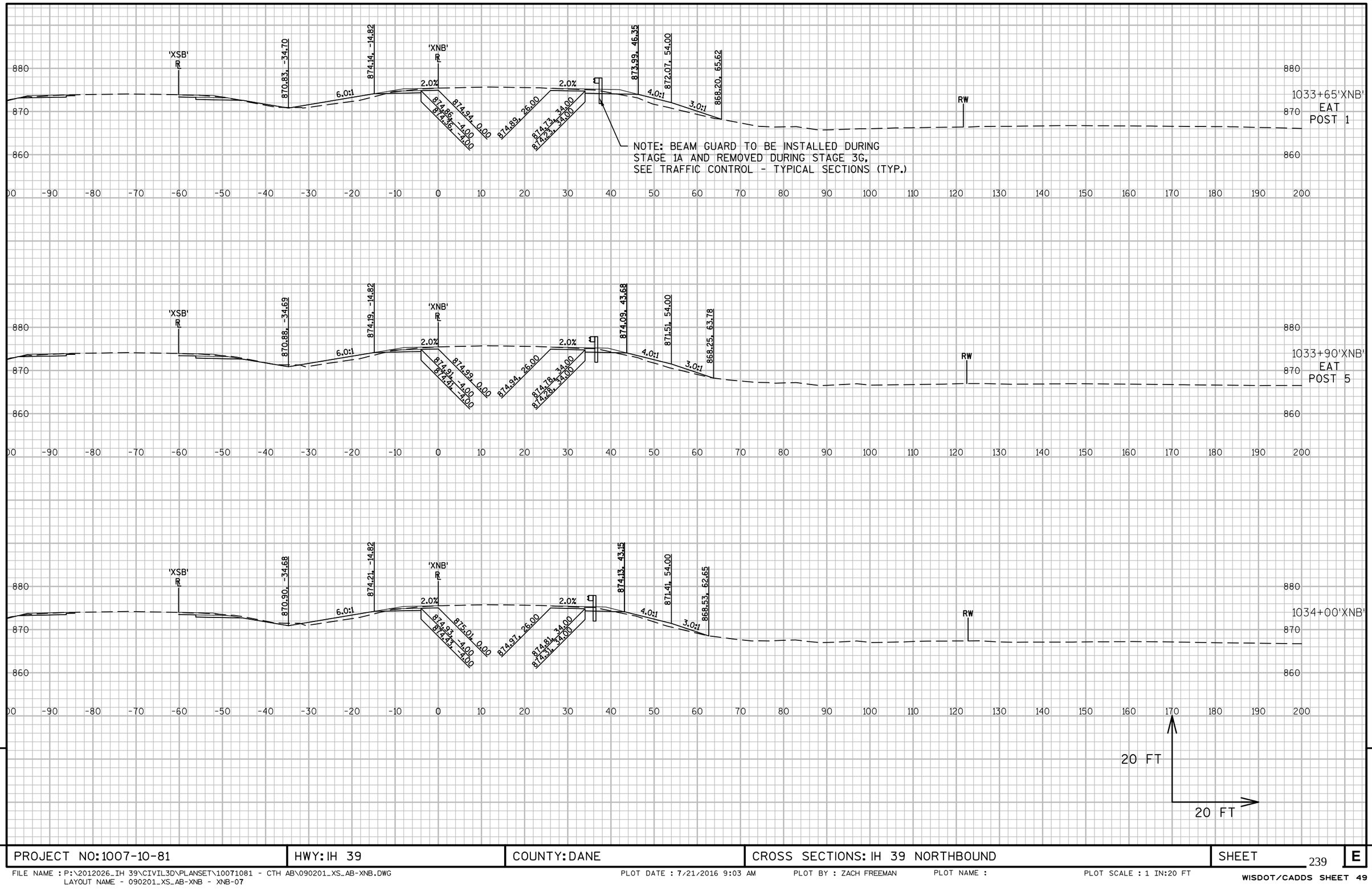
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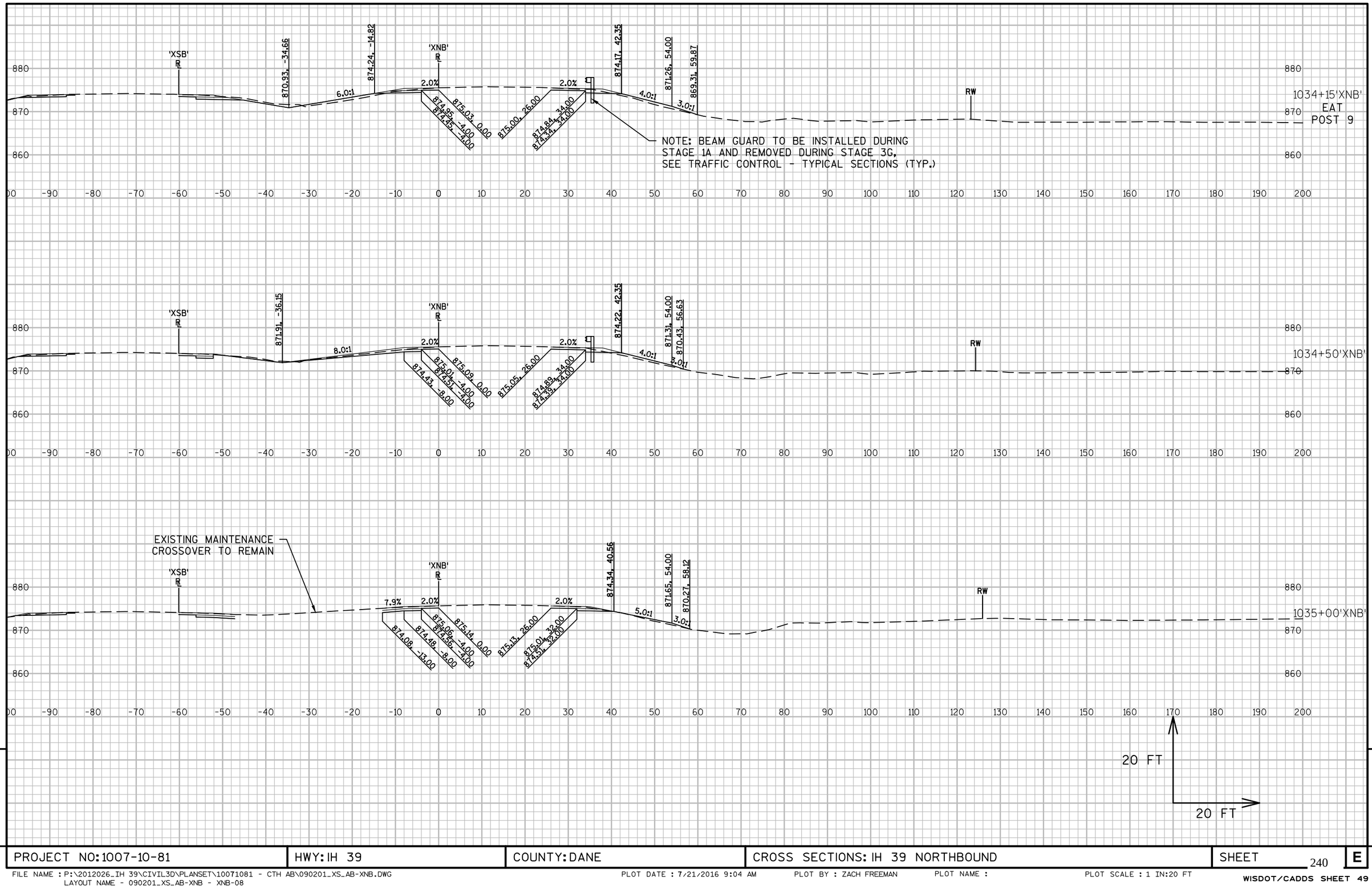
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 238	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-06

PLOT DATE : 7/21/2016 9:03 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 239	E



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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 240	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-08
PLOT DATE : 7/21/2016 9:04 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 241 E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-09
PLOT DATE : 7/21/2016 9:04 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

9

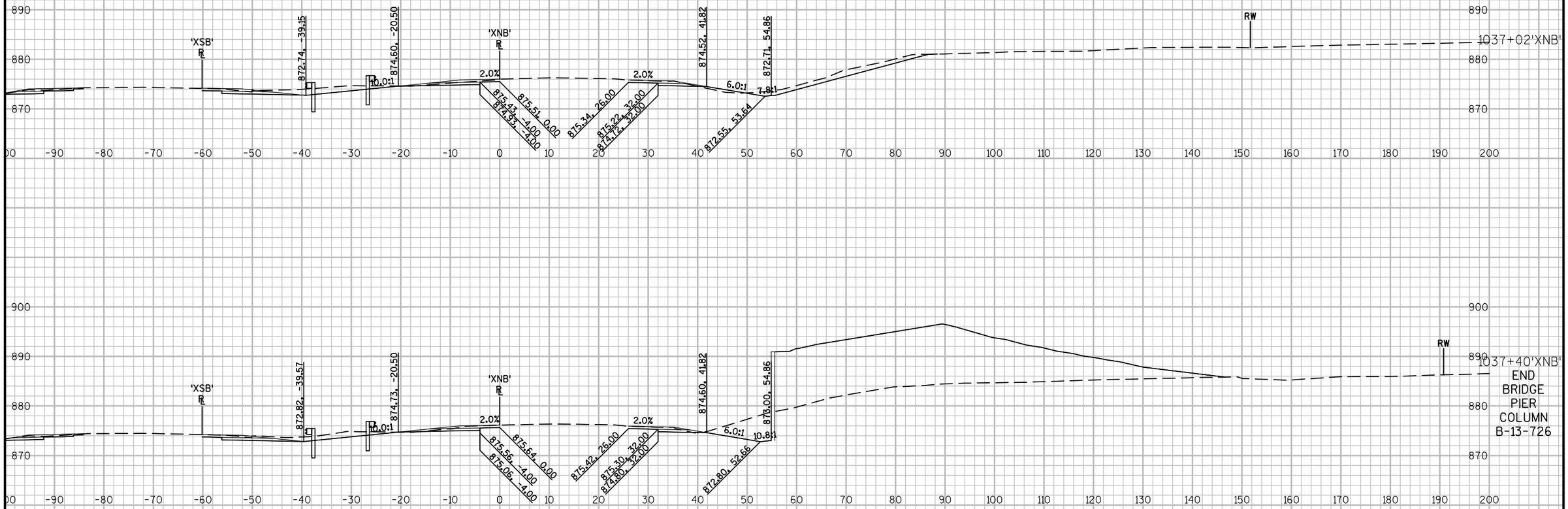
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 242	E

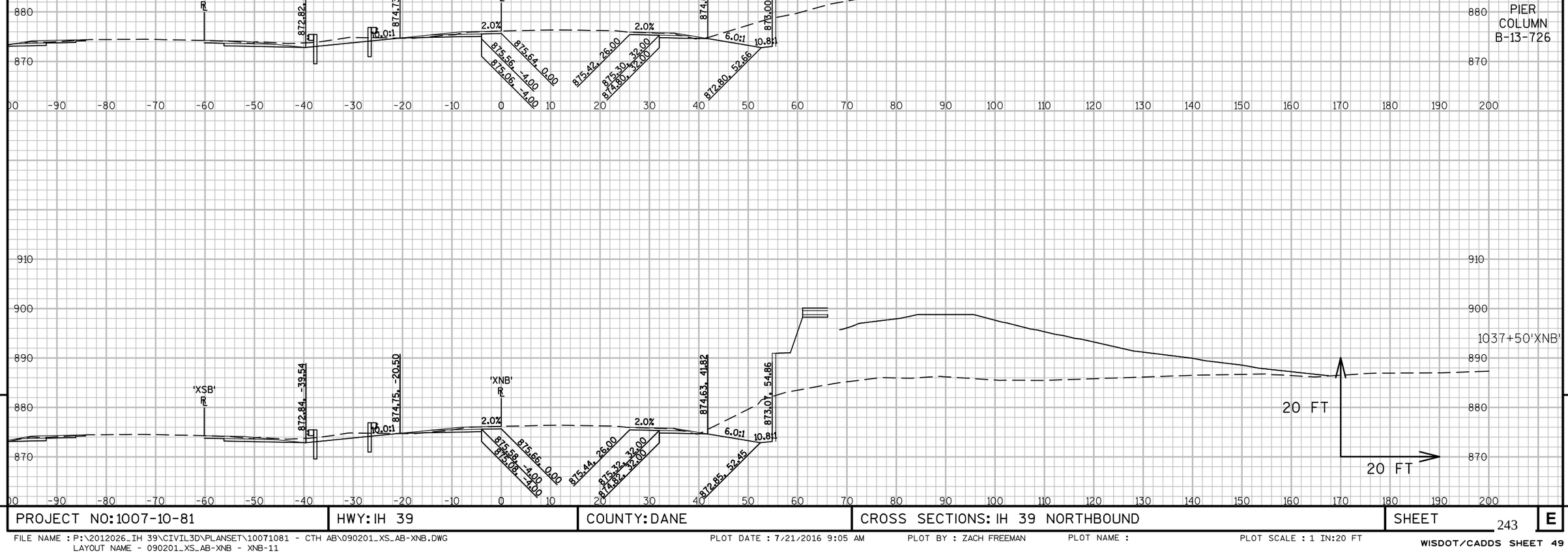
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-10

PLOT DATE : 7/21/2016 9:04 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

BEGIN RETAINING WALL
R-13-263
STA. 1037+01.97'XNB'





9

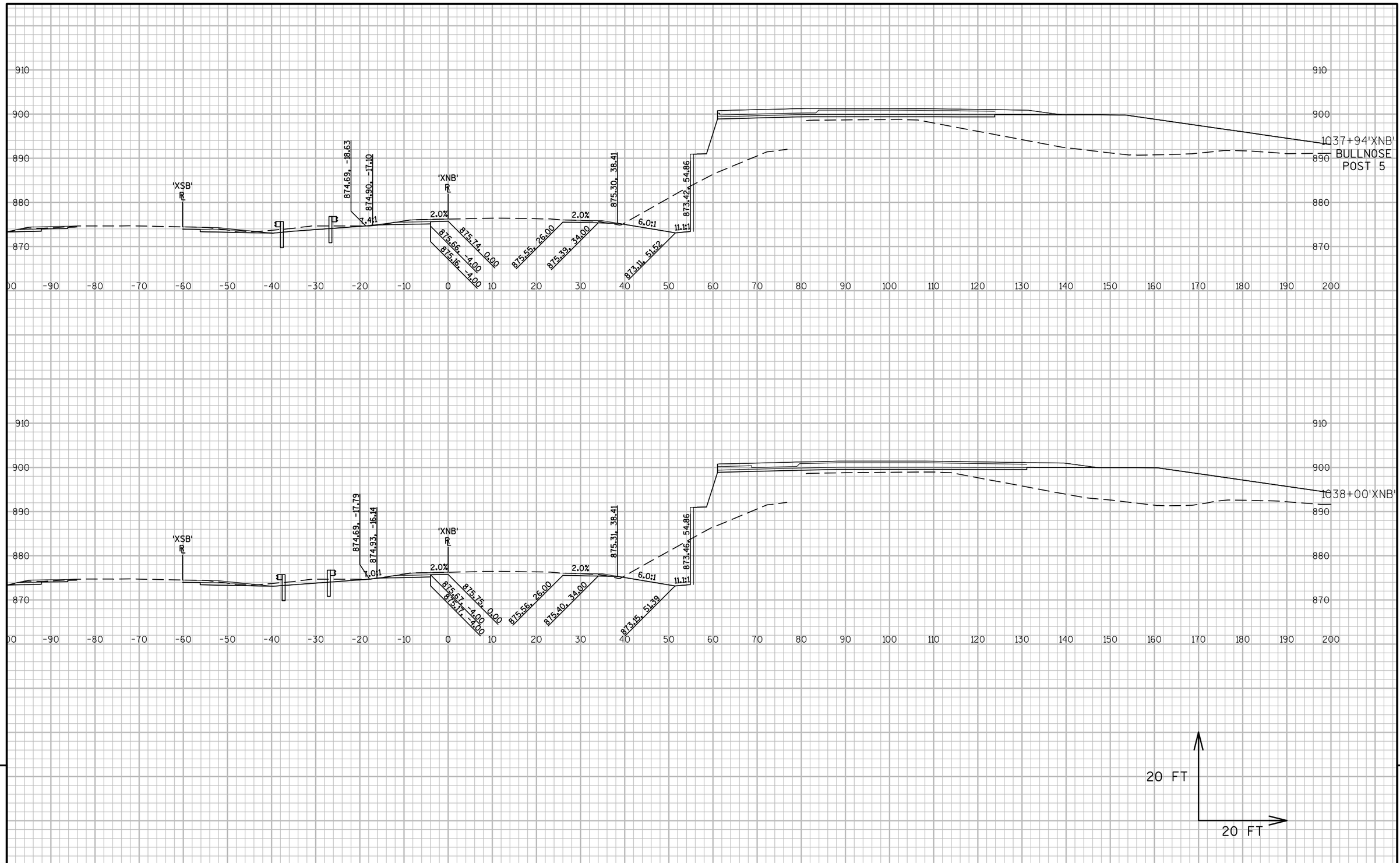
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 243	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-11

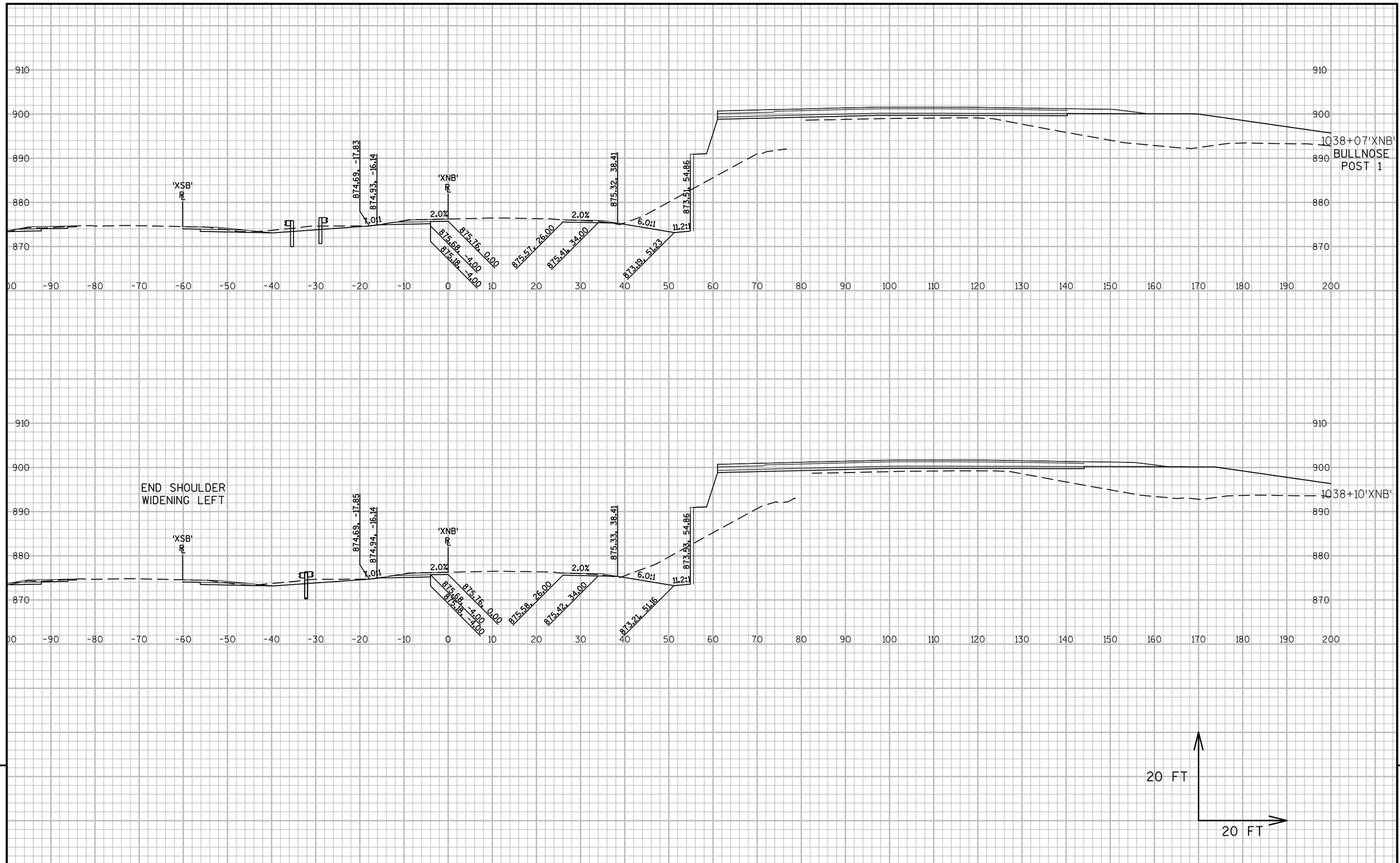
PLOT DATE : 7/21/2016 9:05 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 244	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-12
PLOT DATE : 7/21/2016 9:05 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



9

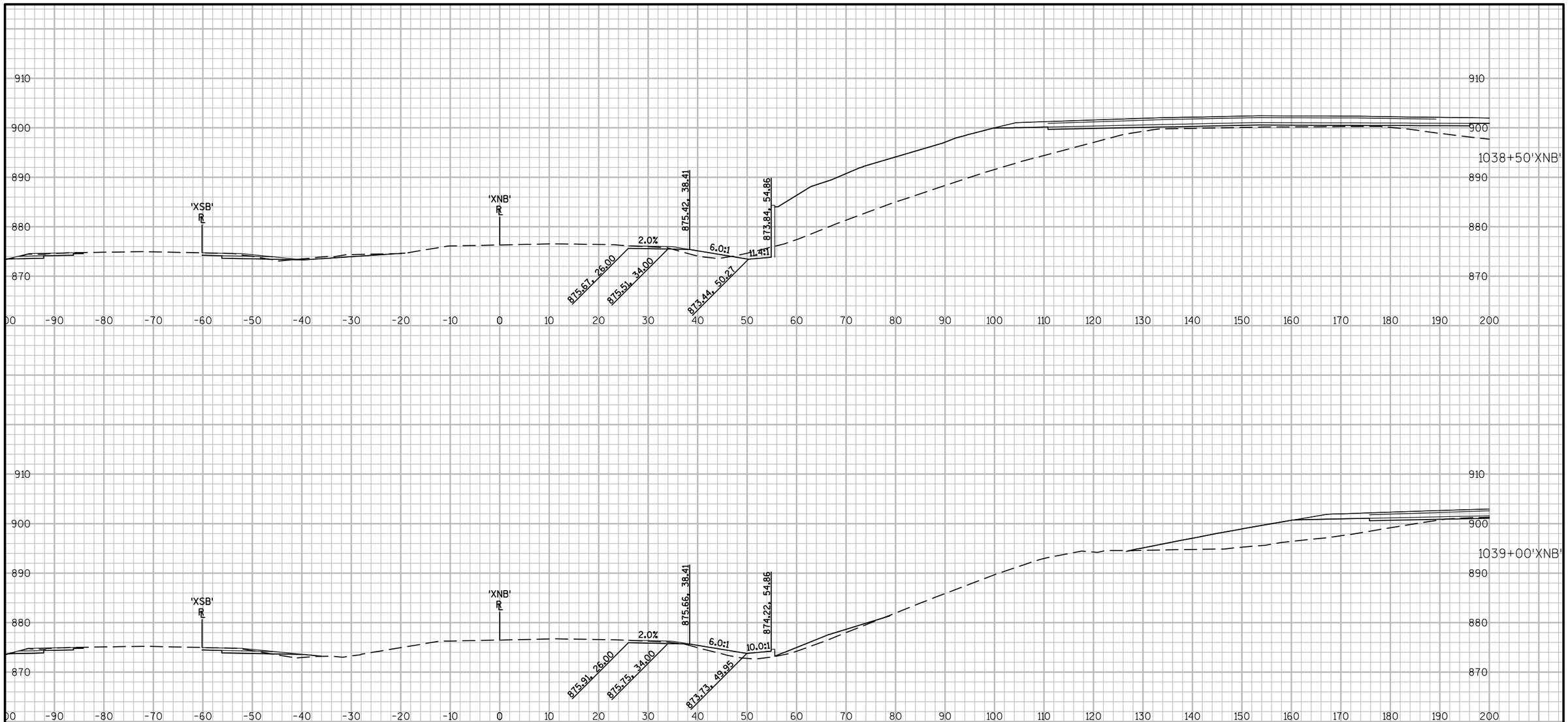
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 245	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-13

PLOT DATE : 7/21/2016 9:06 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

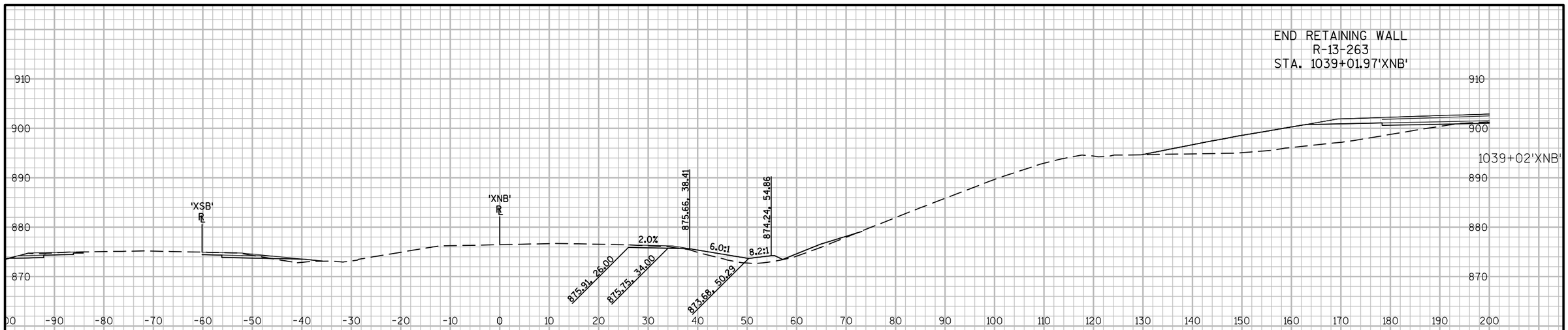


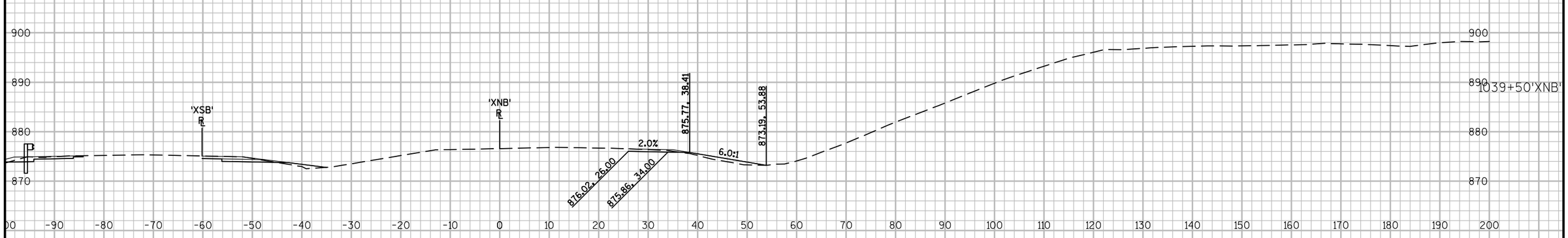
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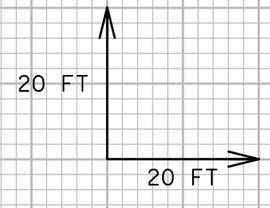
9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 246	E

END RETAINING WALL
R-13-263
STA. 1039+01.97'XNB'







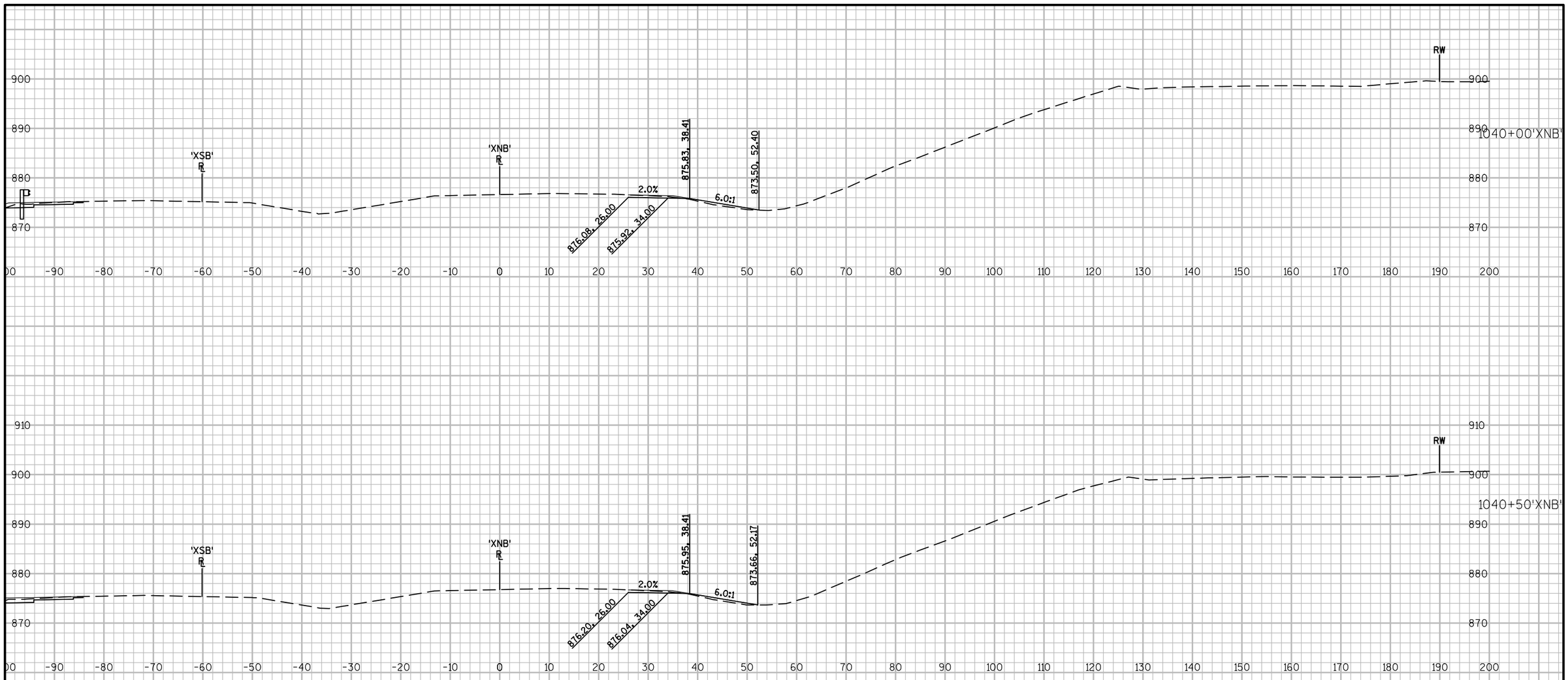
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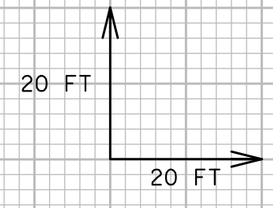
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 247	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-15

PLOT DATE : 7/21/2016 9:07 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT





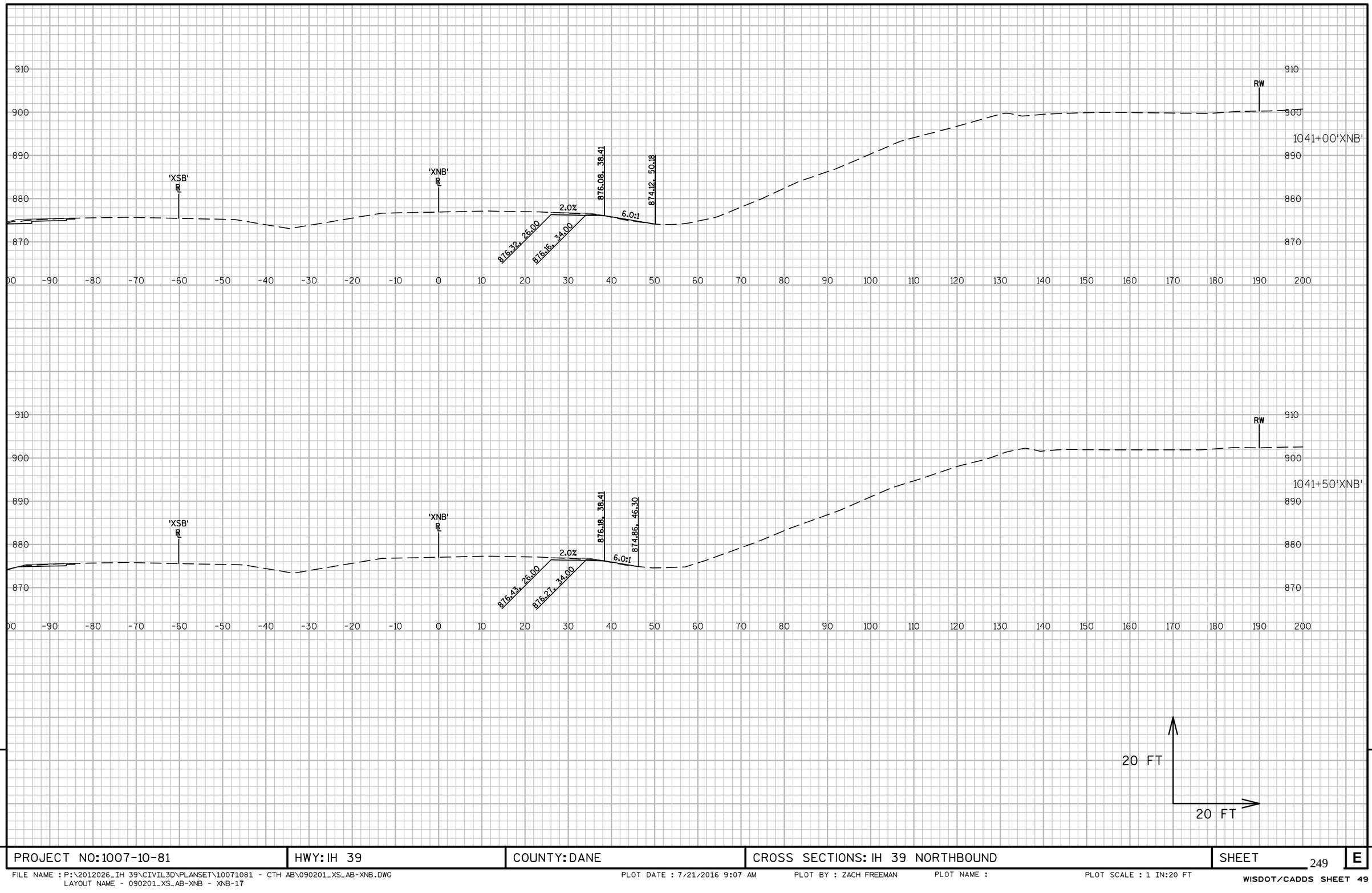
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 248	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-16

PLOT DATE : 7/21/2016 9:07 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



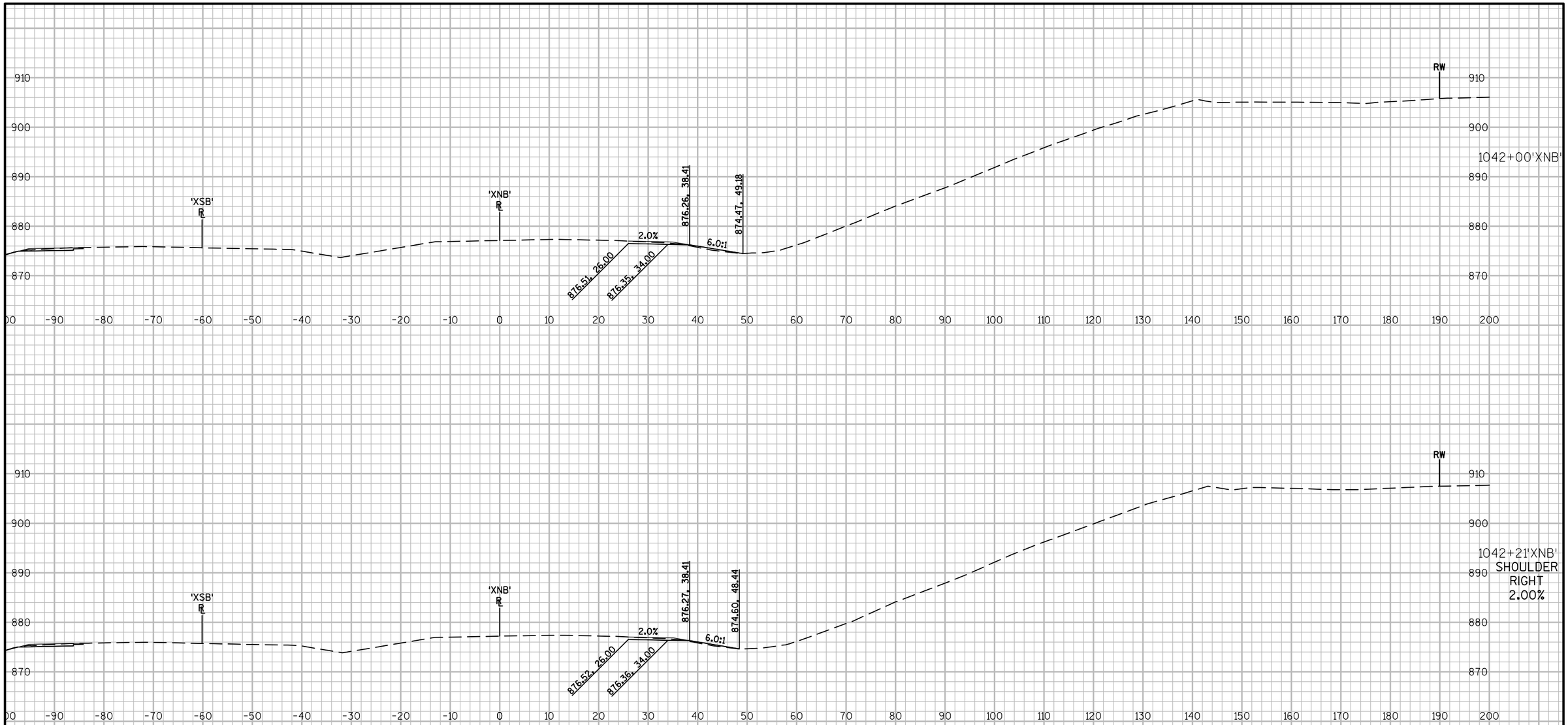
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9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 249	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-17

PLOT DATE : 7/21/2016 9:07 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

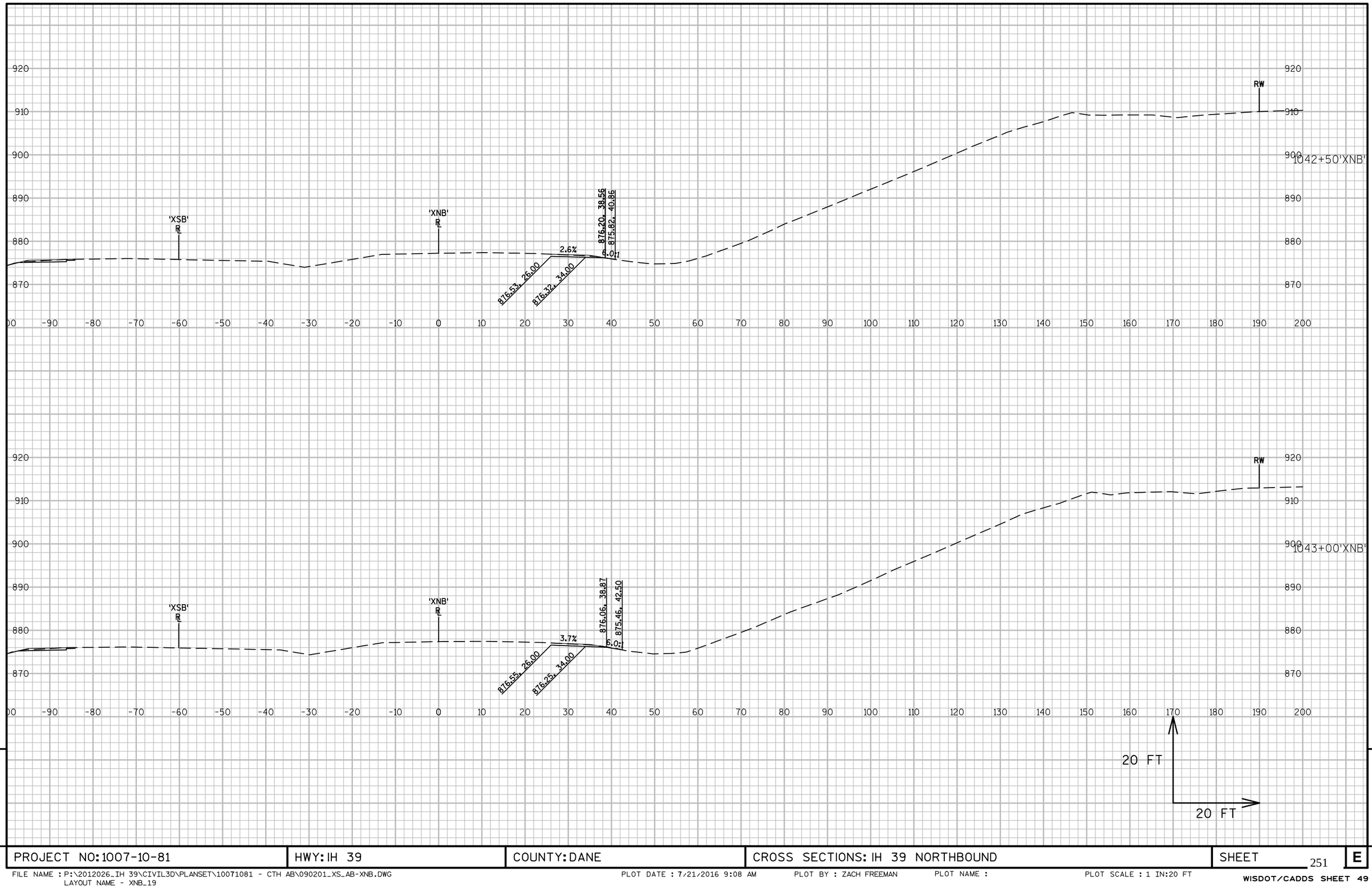
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 250	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - 090201_XS_AB-XNB - XNB-18

PLOT DATE : 7/21/2016 9:08 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



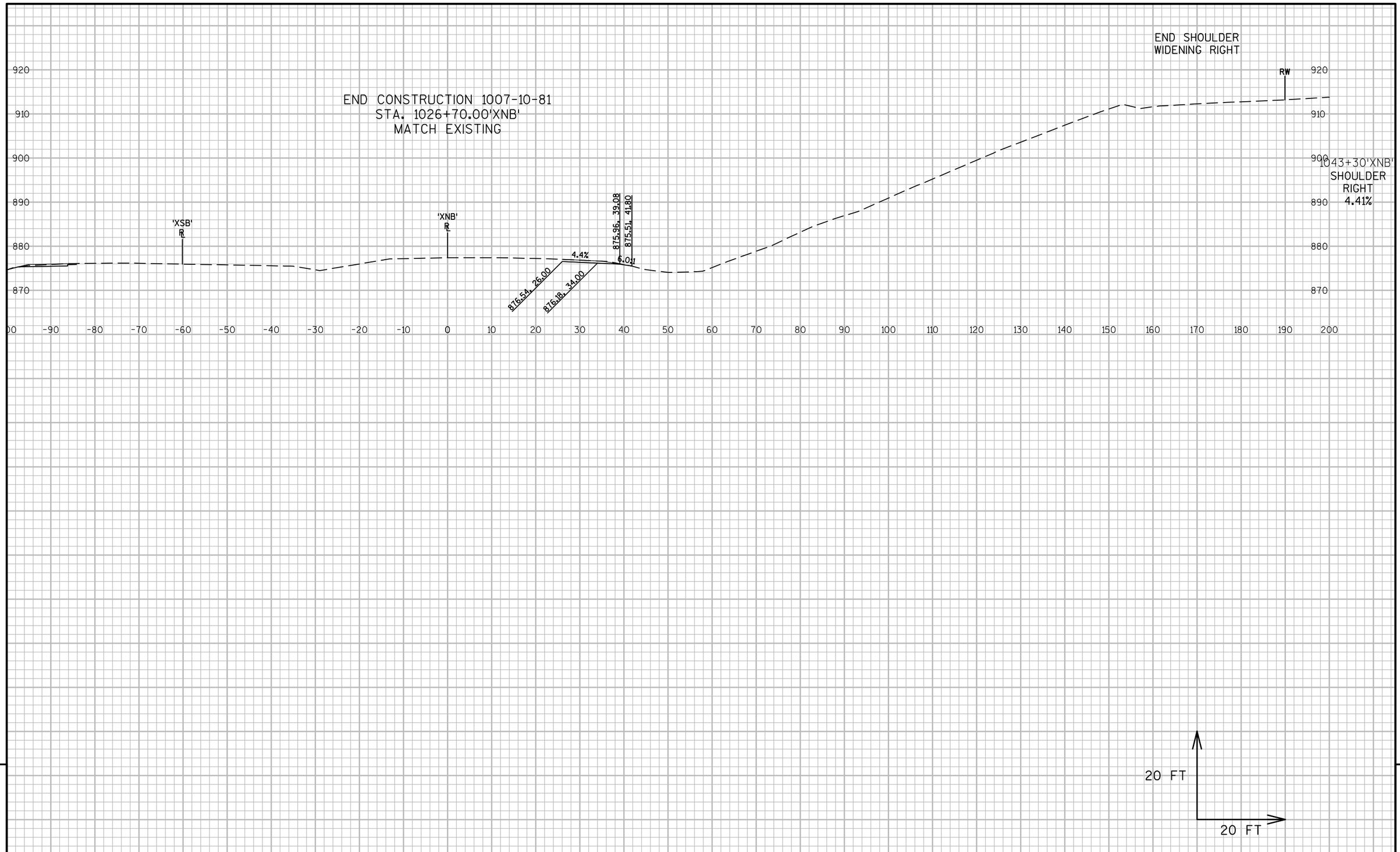
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 251	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - XNB_19

PLOT DATE : 7/21/2016 9:08 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



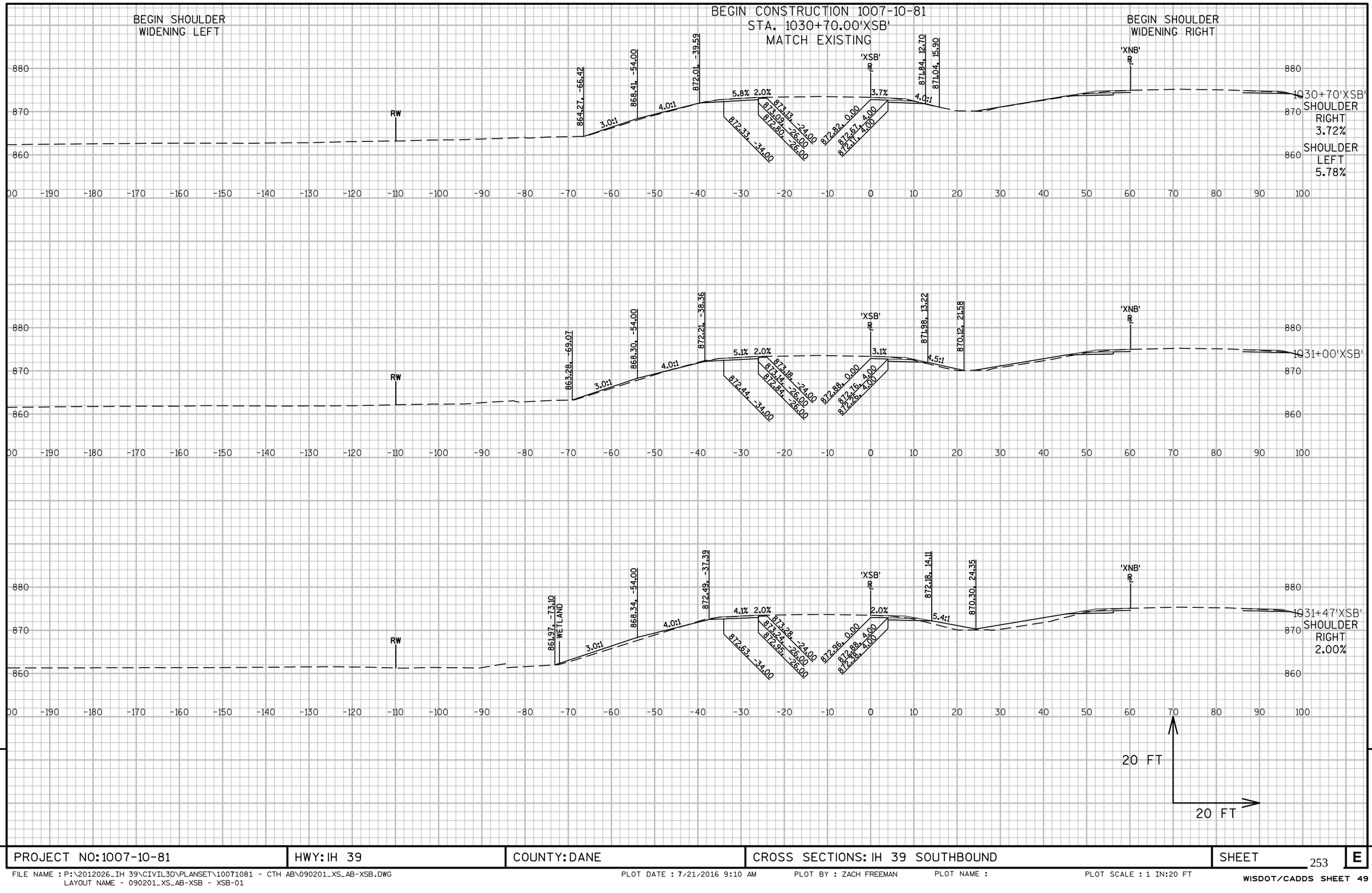
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 NORTHBOUND	SHEET 252	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XNB.DWG
LAYOUT NAME - XNB_20

PLOT DATE : 7/21/2016 9:09 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

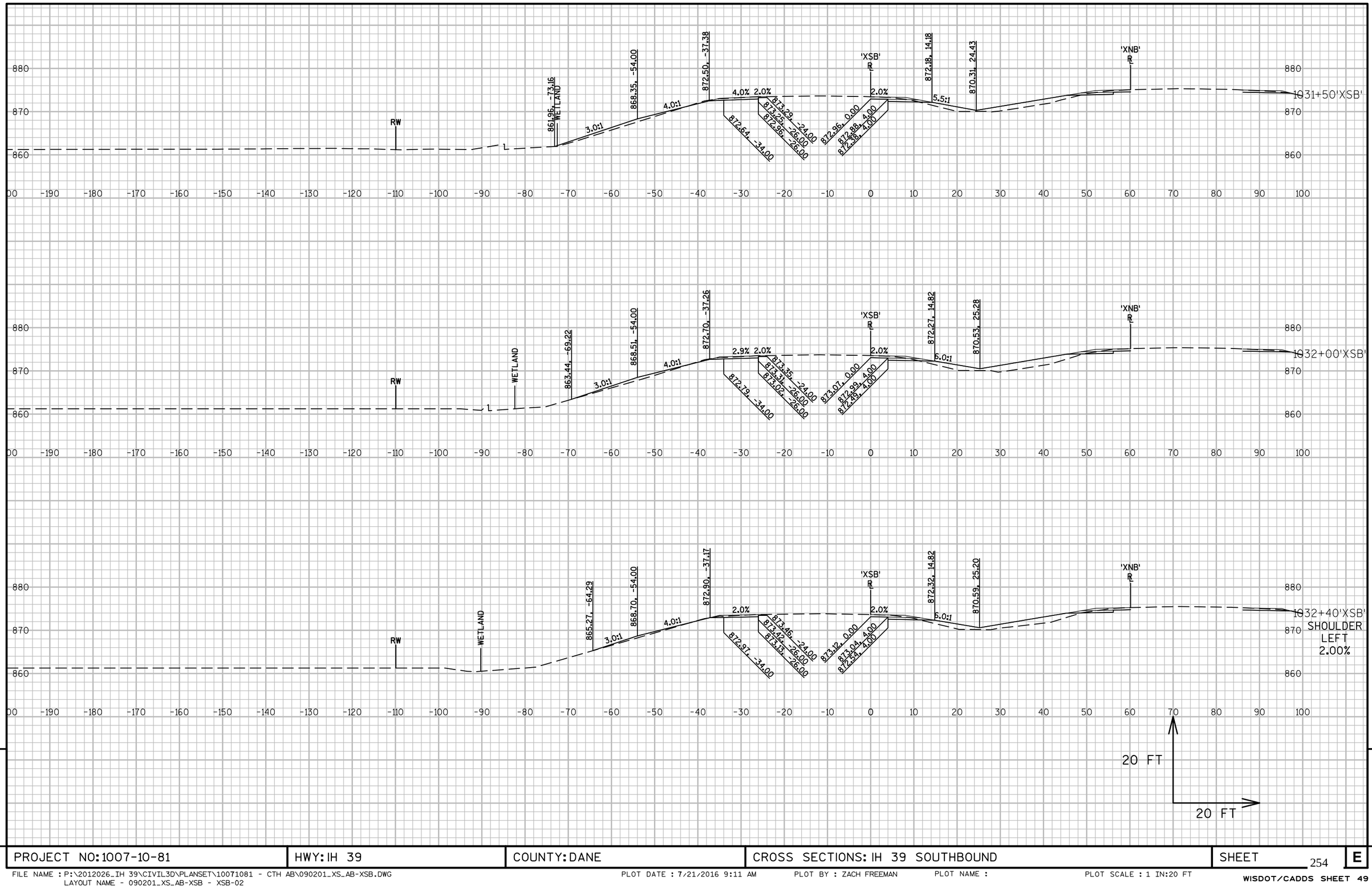
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 253	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-01

PLOT DATE : 7/21/2016 9:10 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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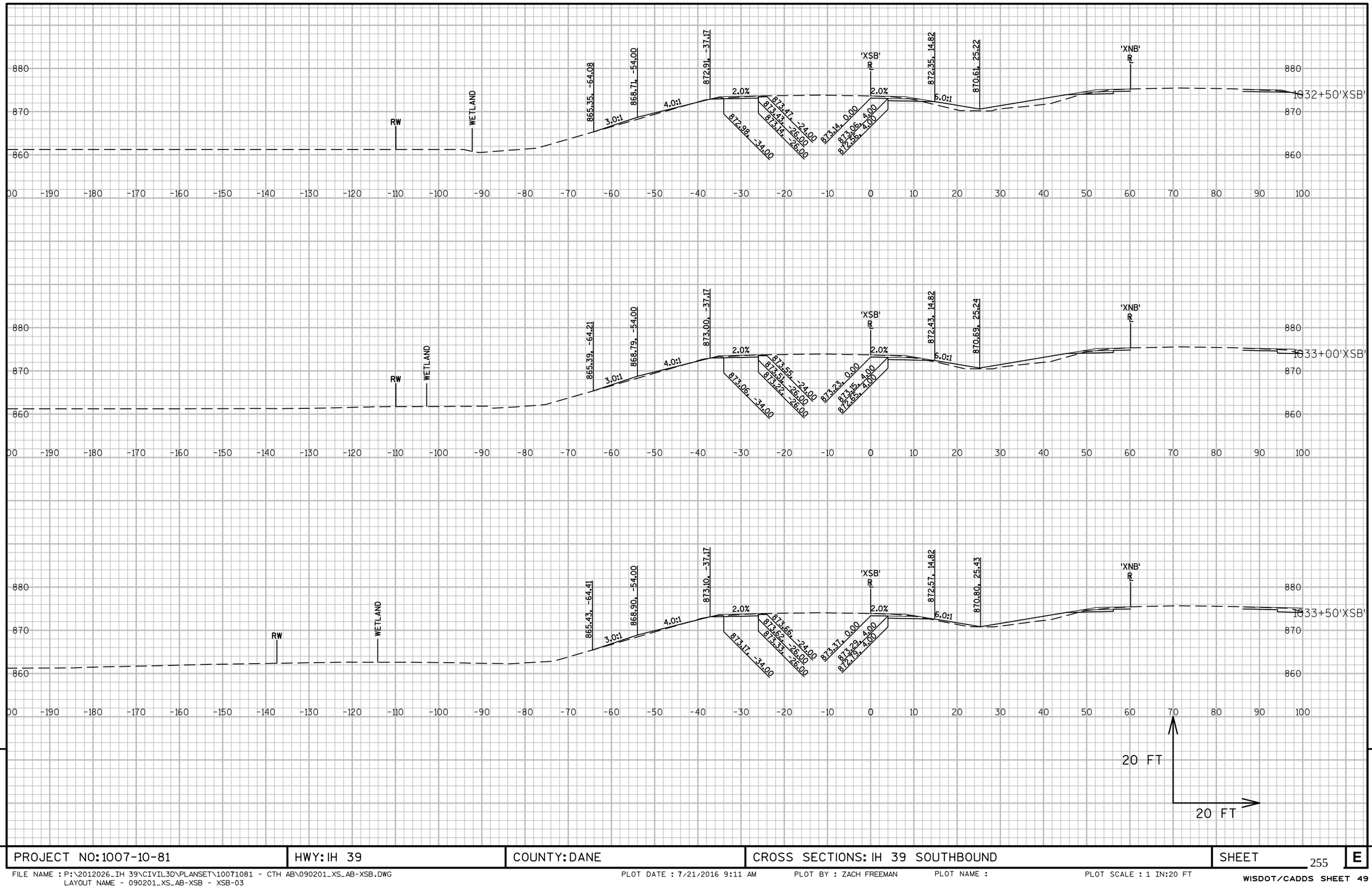
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 254	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-02

PLOT DATE : 7/21/2016 9:11 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

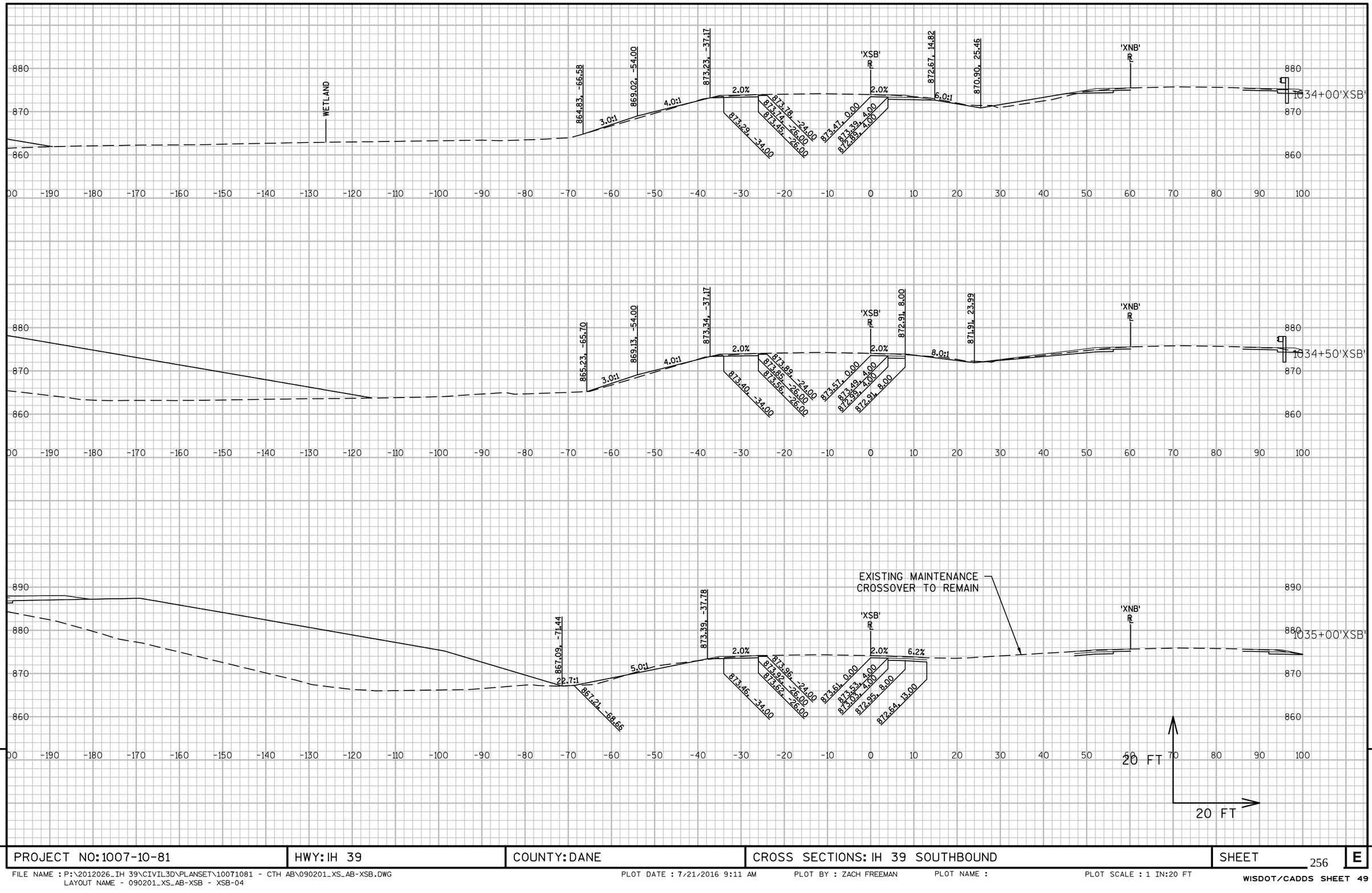
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 255	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-03

PLOT DATE : 7/21/2016 9:11 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



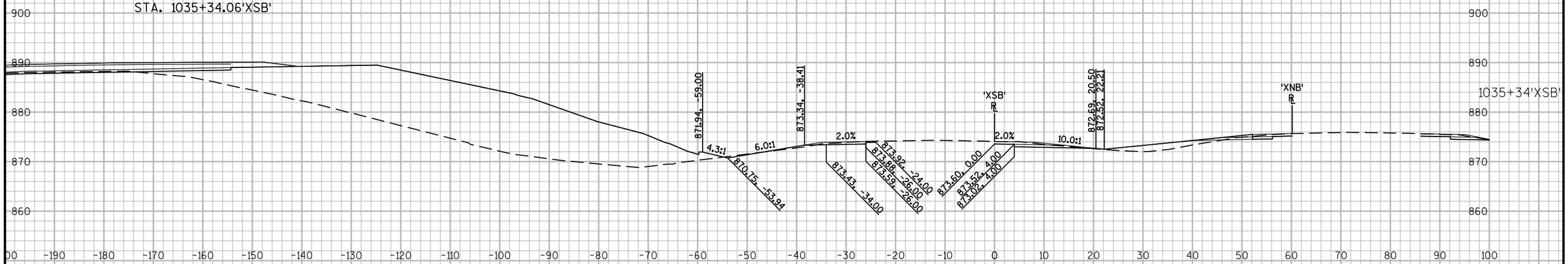
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 256	E

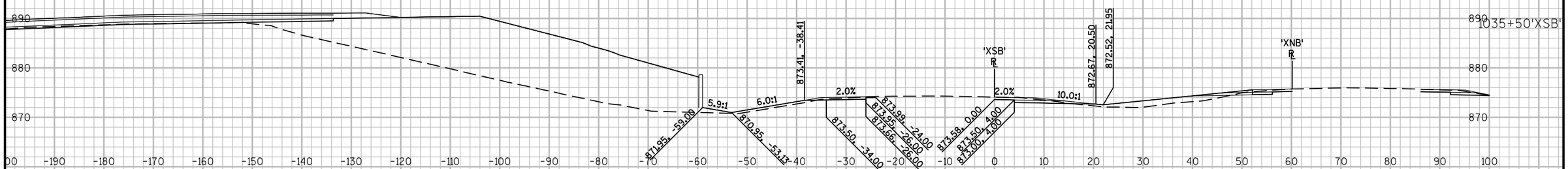
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-04

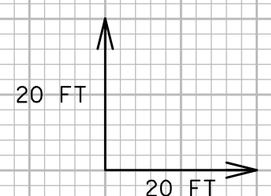
PLOT DATE : 7/21/2016 9:11 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

BEGIN RETAINING WALL
R-13-262
STA. 1035+34.06'XSB'







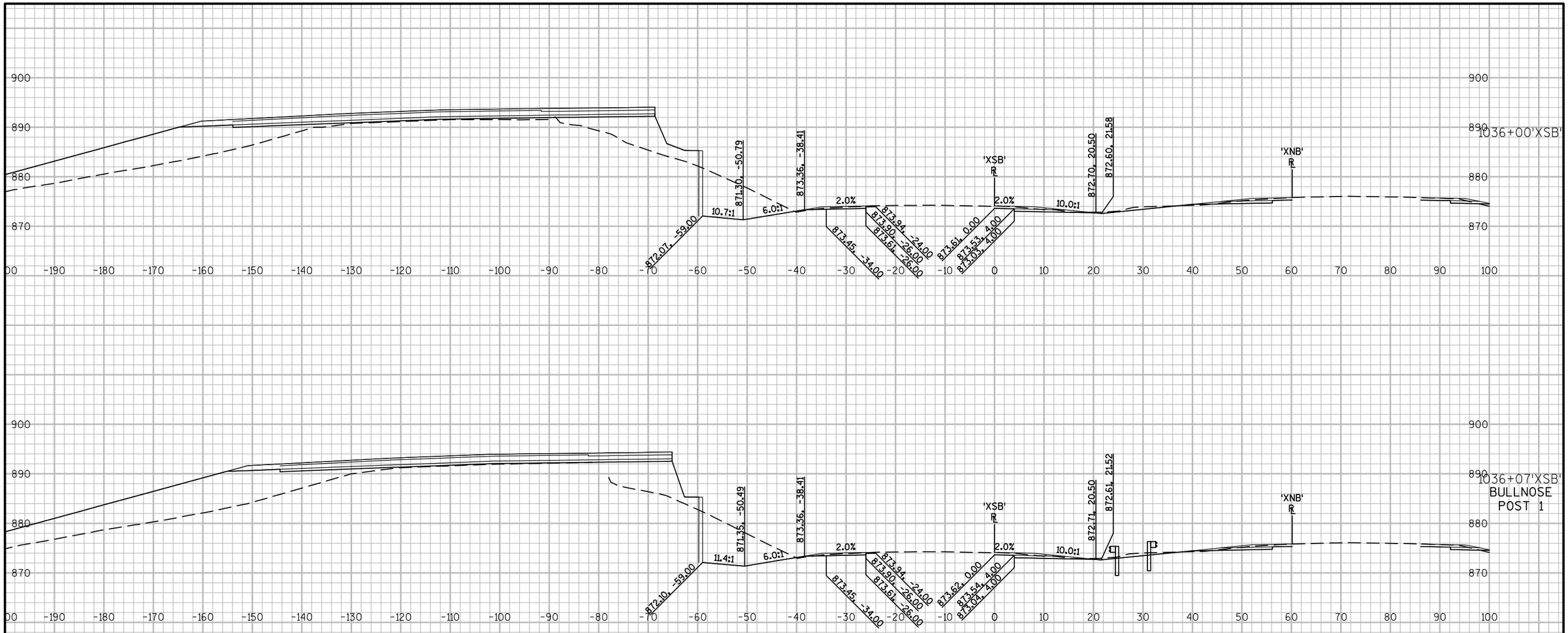
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 257	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-05

PLOT DATE : 7/21/2016 9:12 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

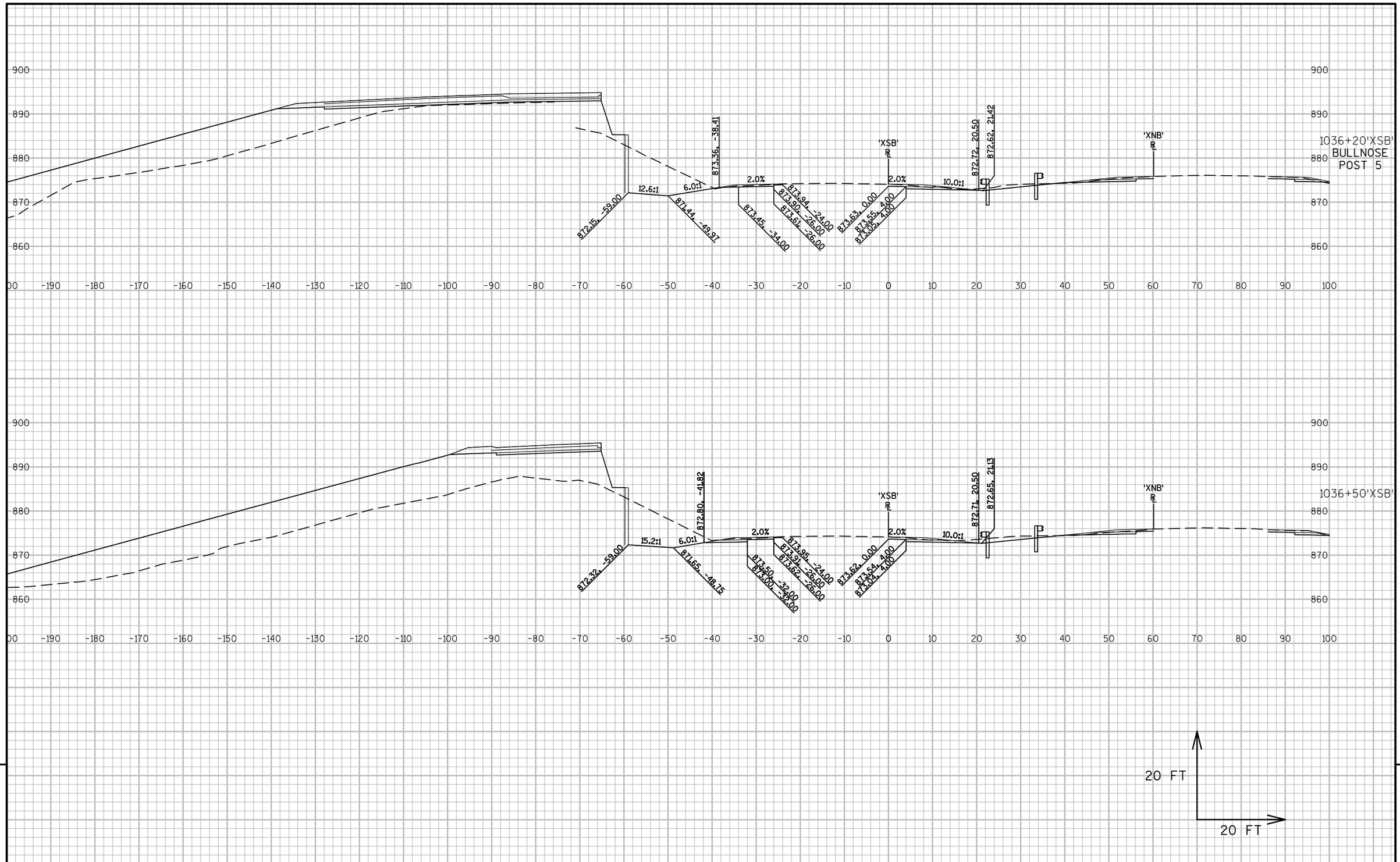
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 258	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-06

PLOT DATE : 7/21/2016 9:12 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

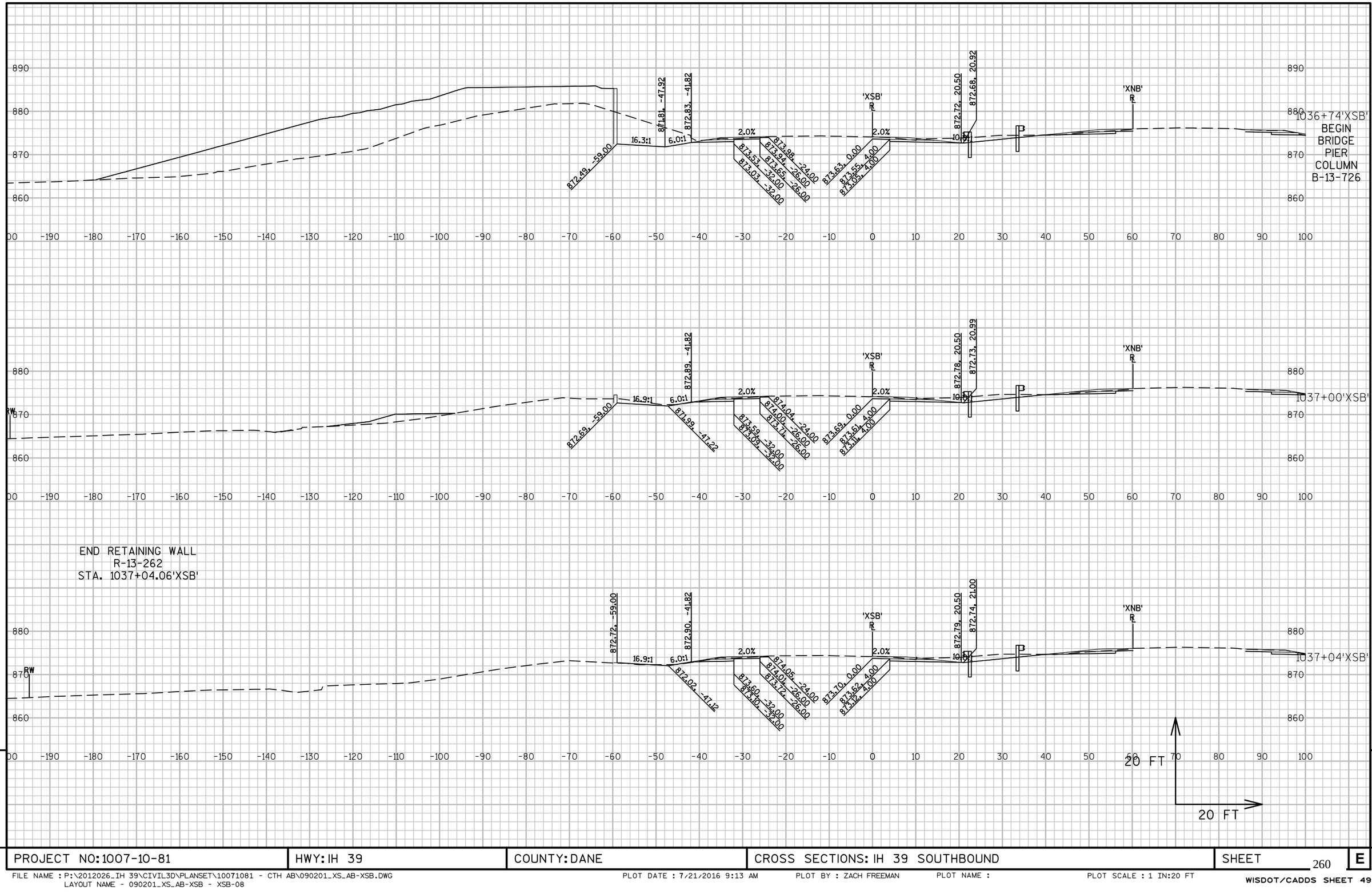
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 259	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-07

PLOT DATE : 7/21/2016 9:13 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



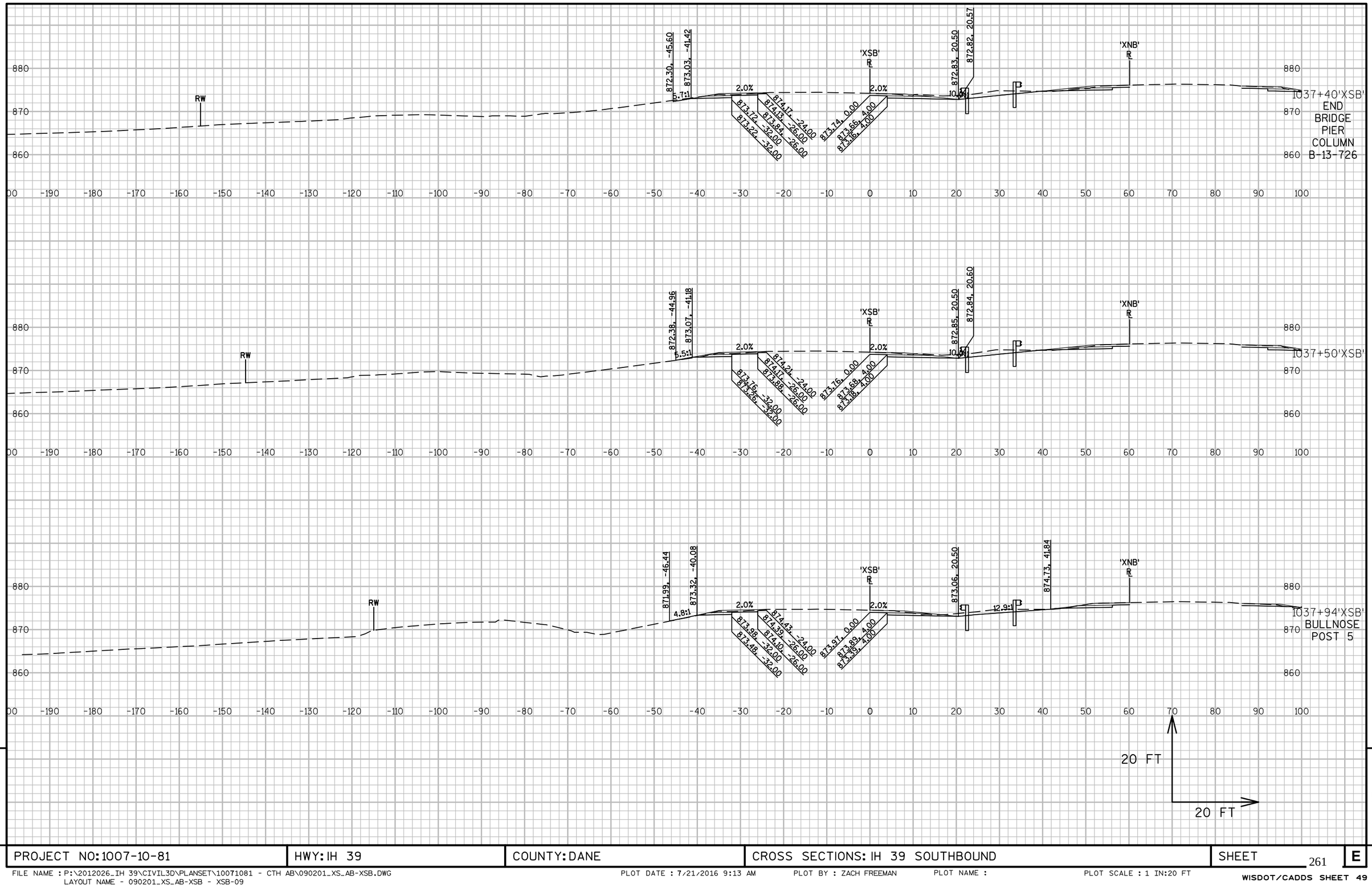
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9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 260	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-08

PLOT DATE : 7/21/2016 9:13 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

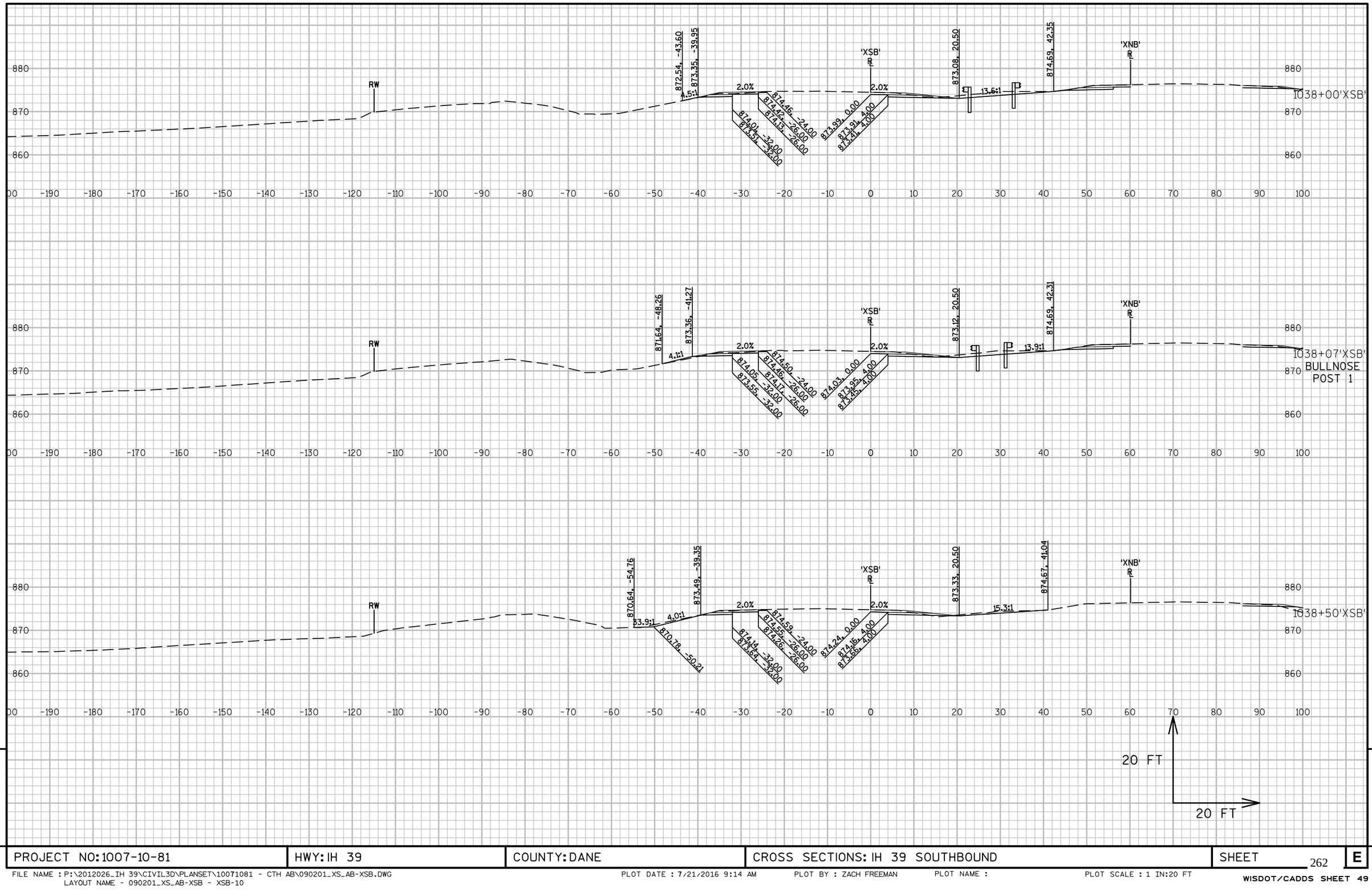
9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 261	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-09

PLOT DATE : 7/21/2016 9:13 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

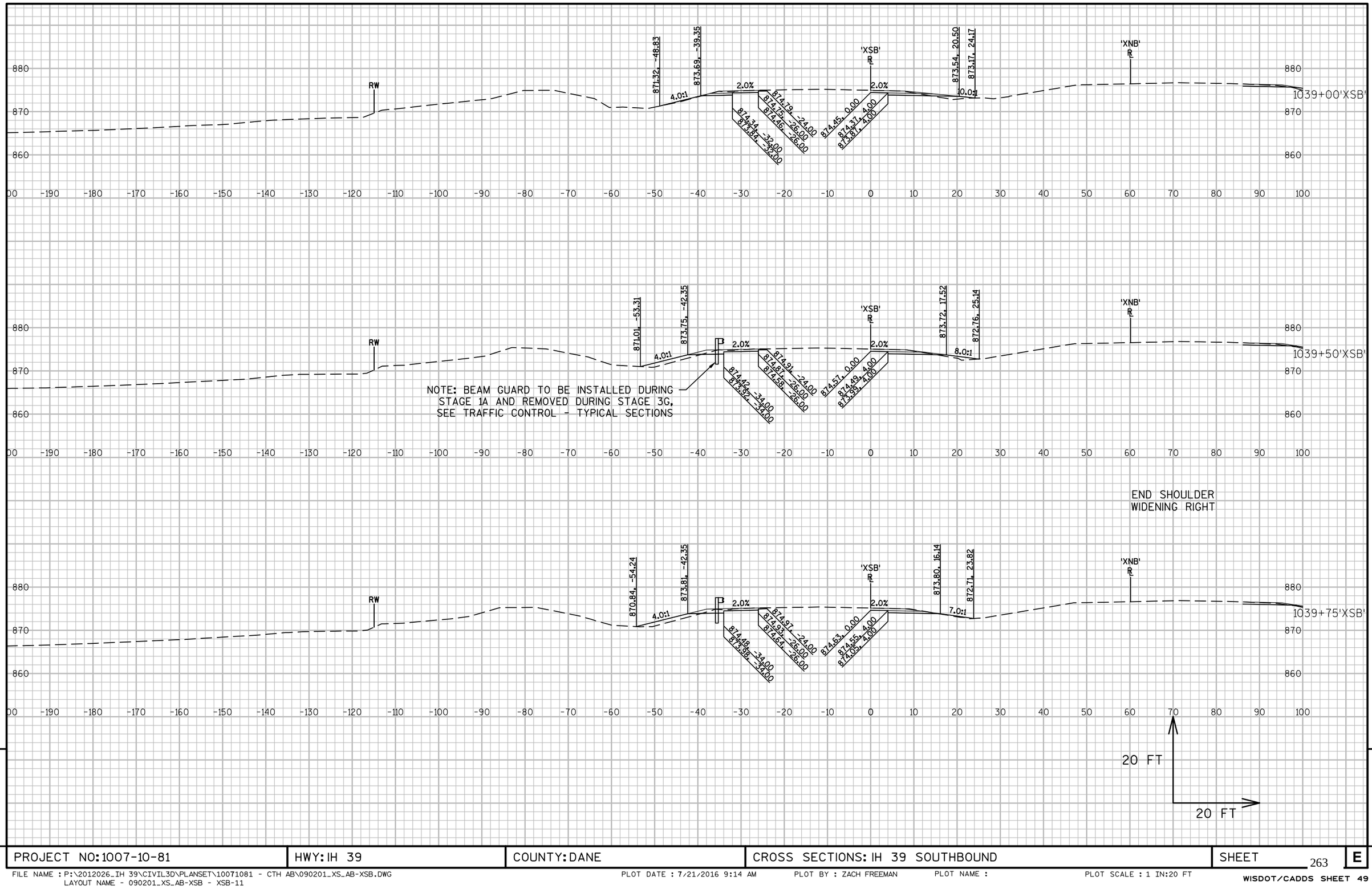
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 262	E



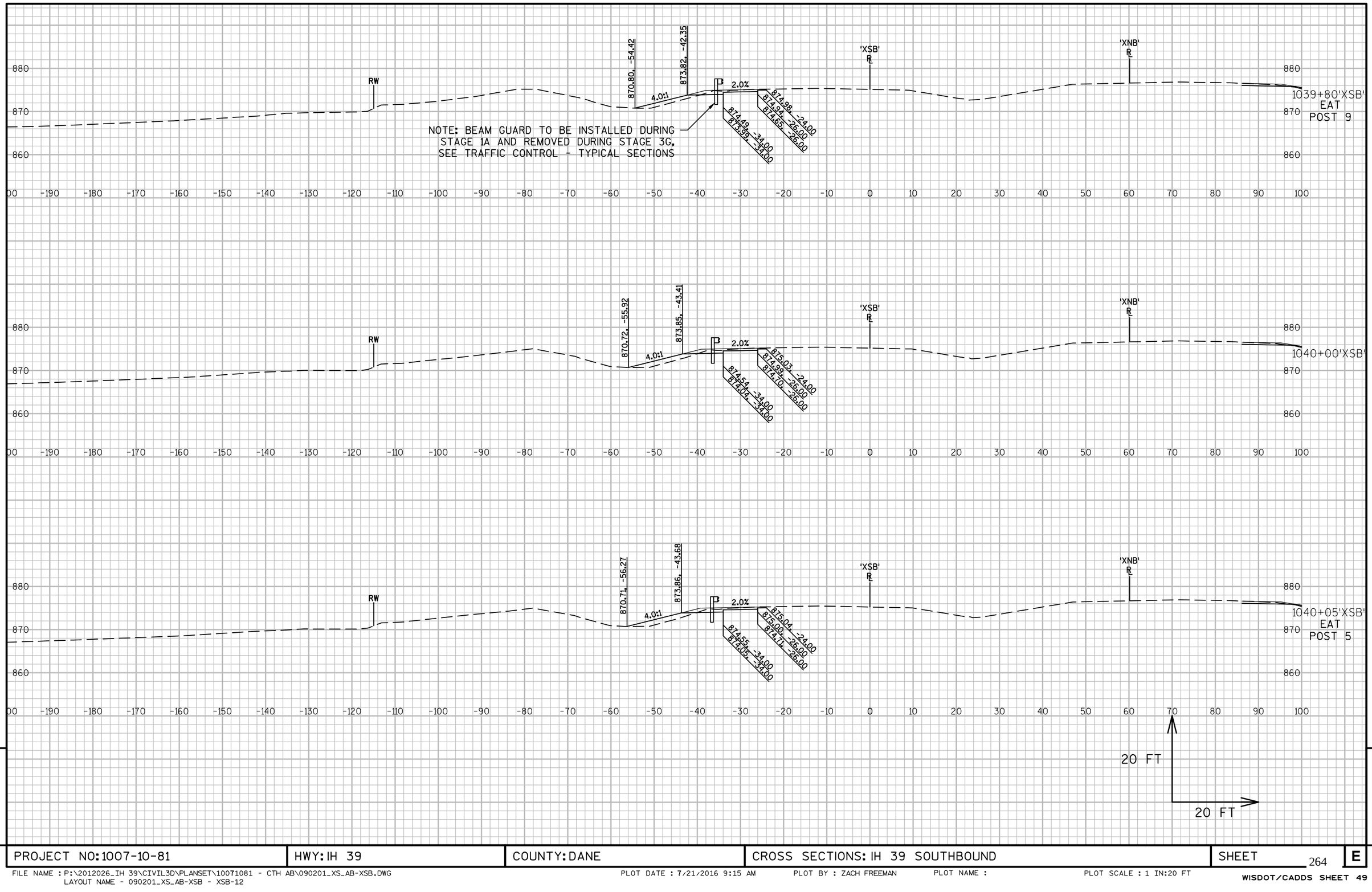
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 263	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-11

PLOT DATE : 7/21/2016 9:14 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

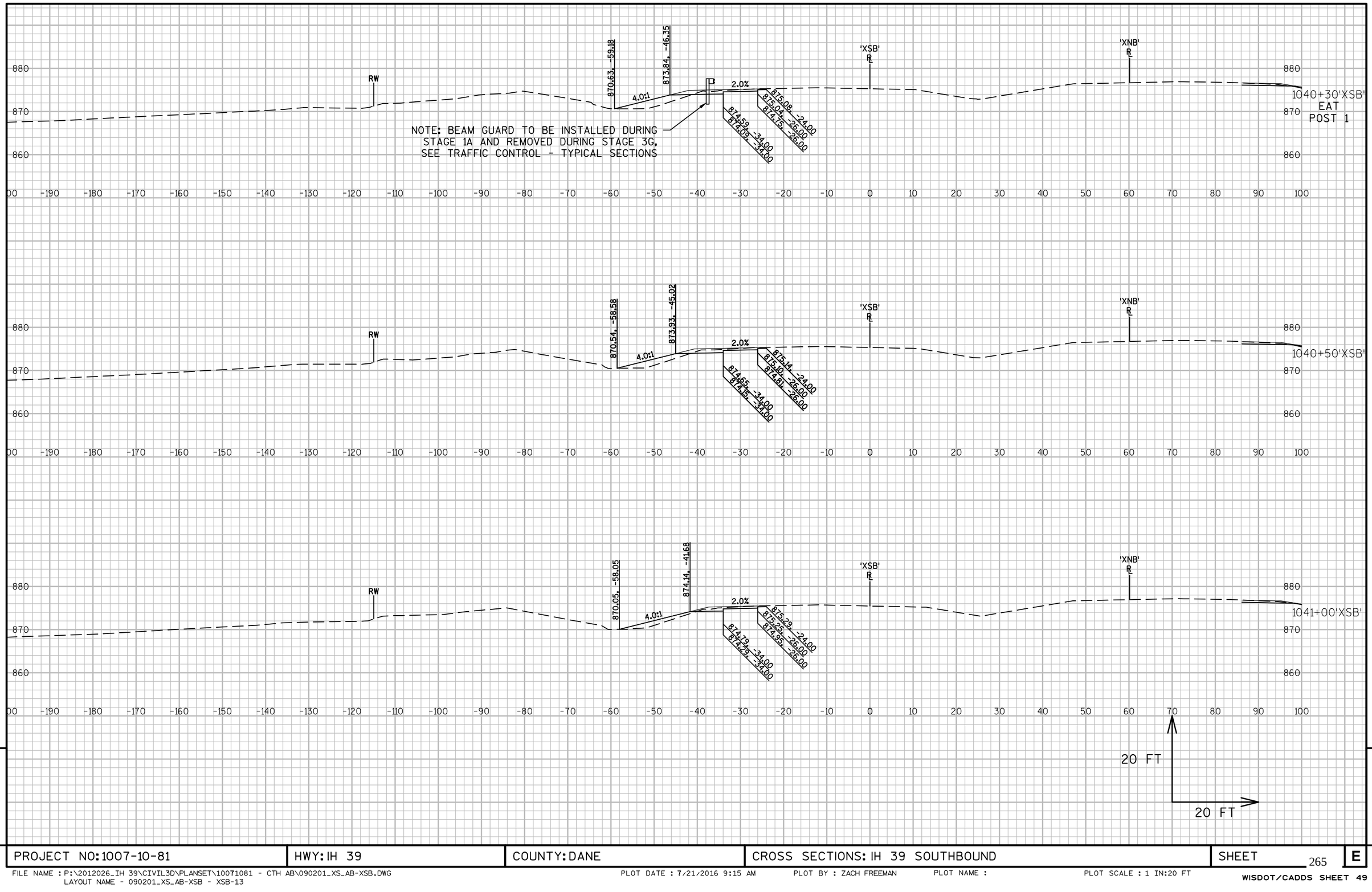


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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 264	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-12
PLOT DATE : 7/21/2016 9:15 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49

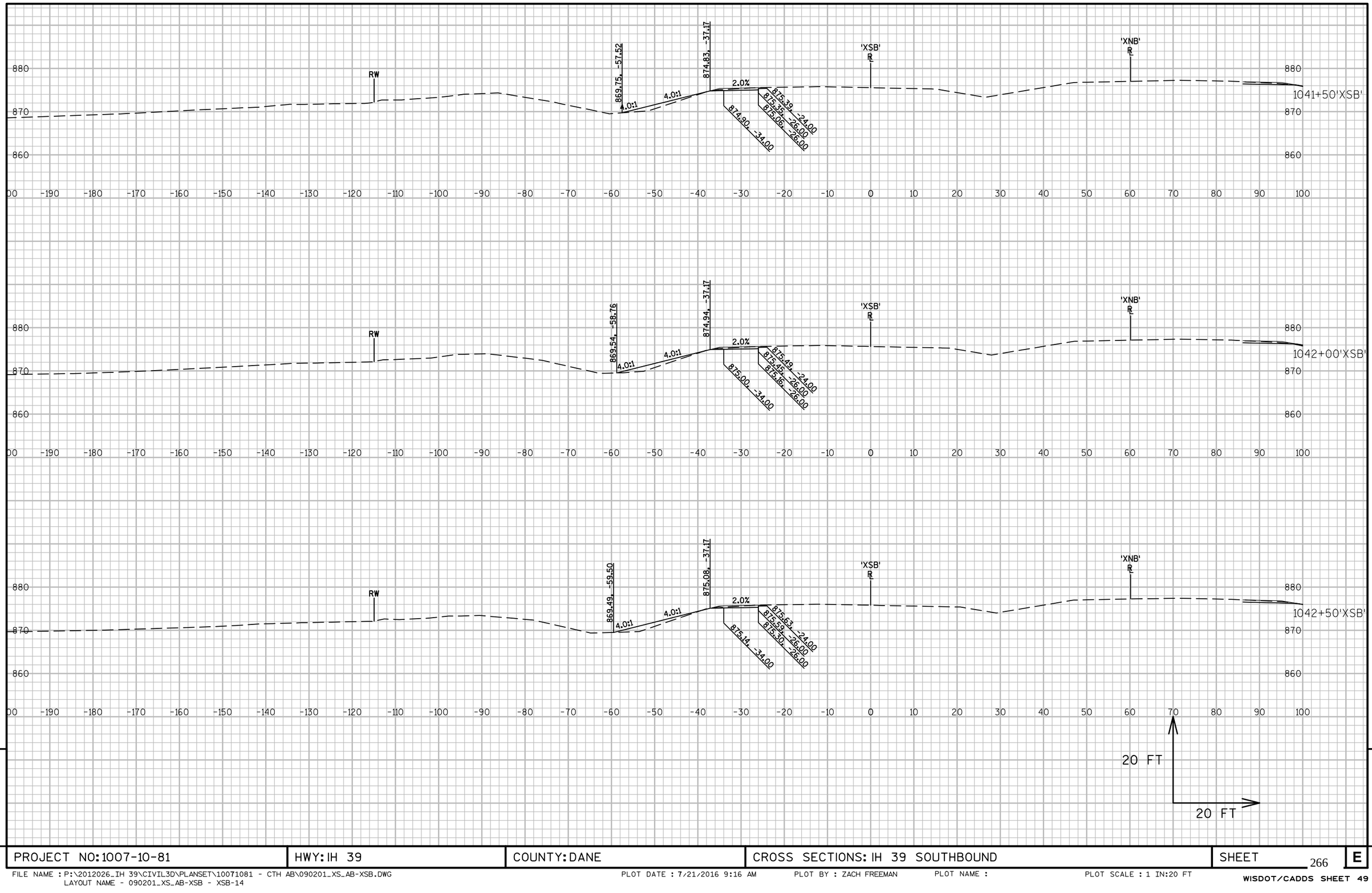


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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 265	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-13
PLOT DATE : 7/21/2016 9:15 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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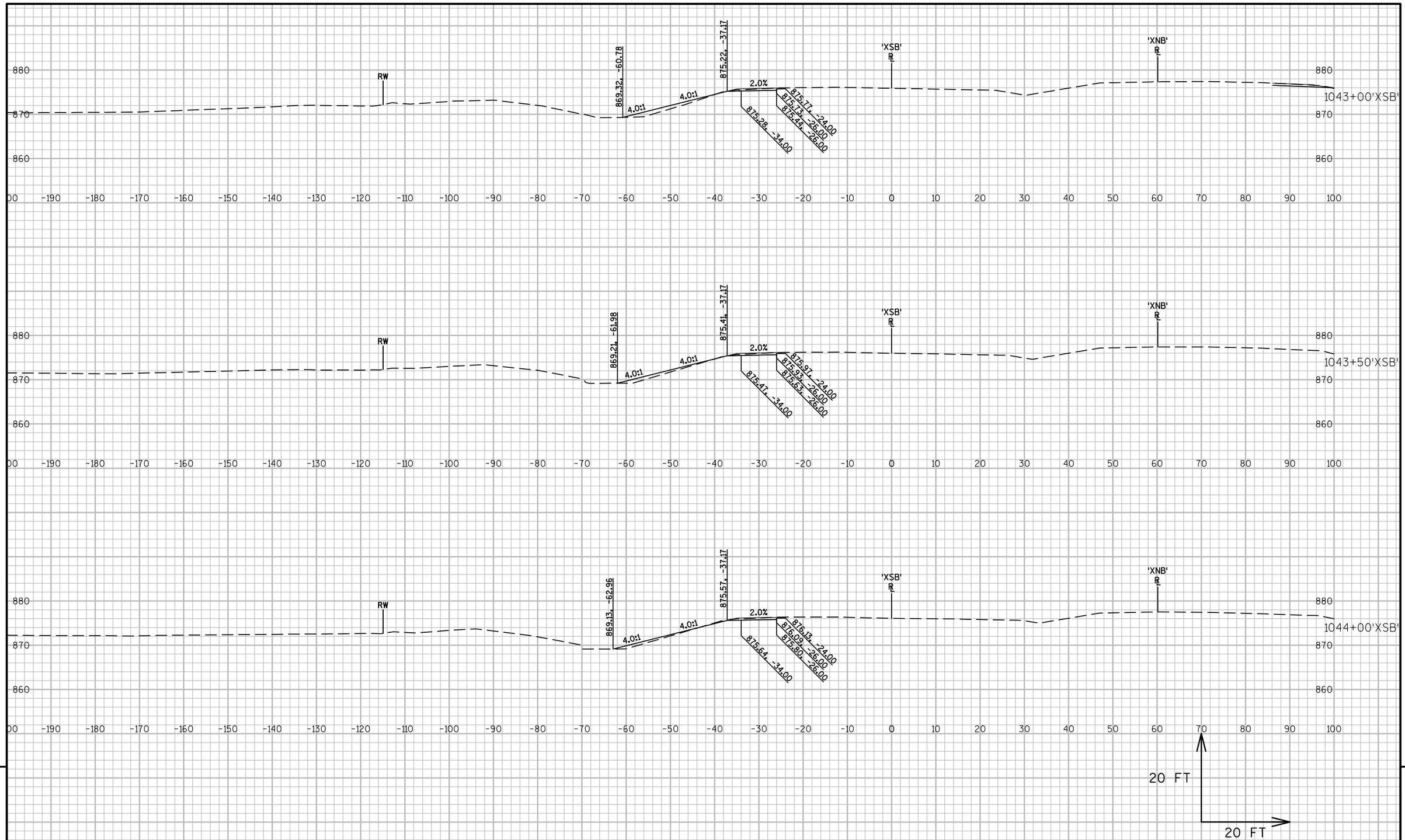
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 266	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-14

PLOT DATE : 7/21/2016 9:16 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

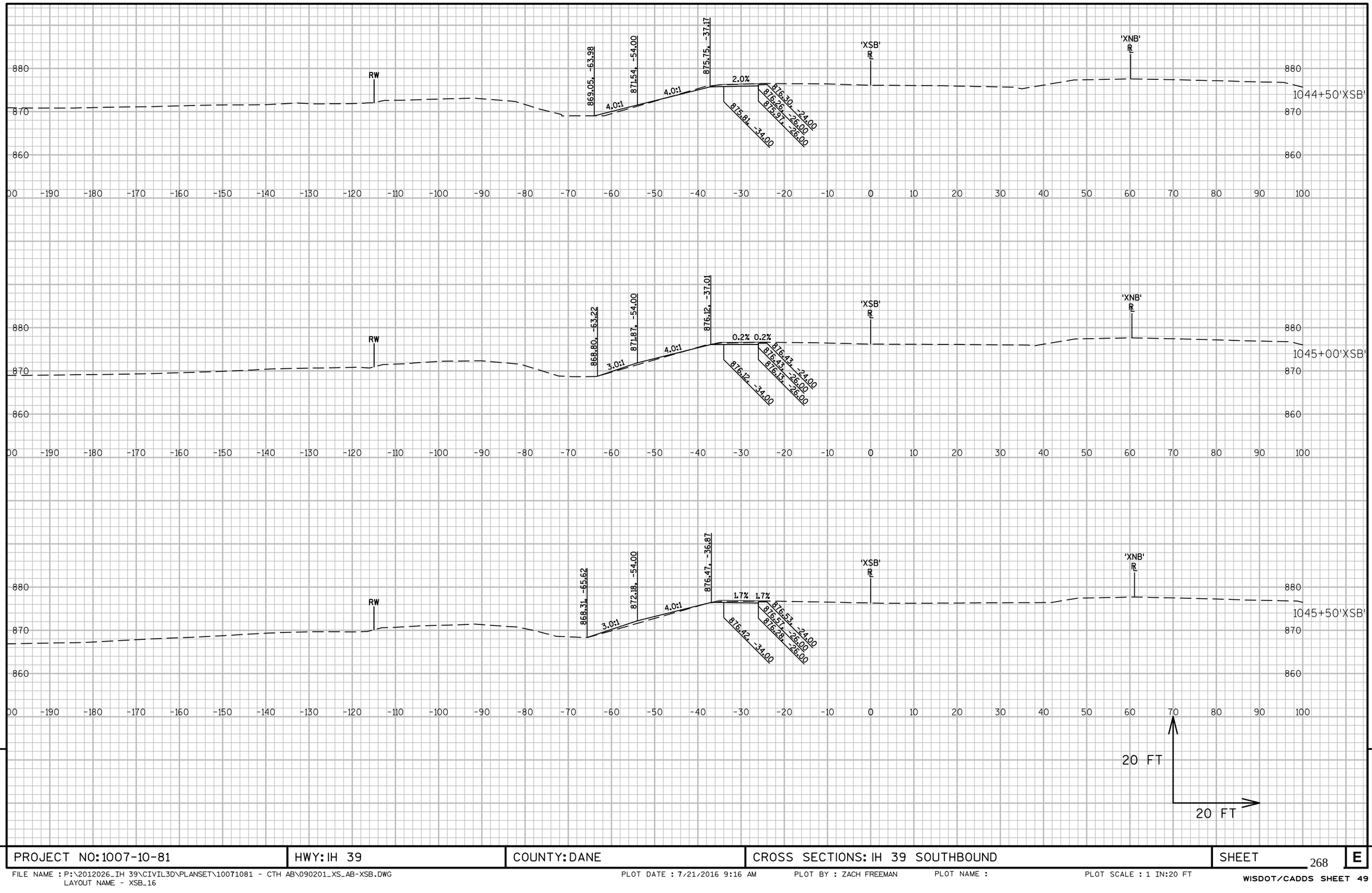
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 267	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - 090201_XS_AB-XSB - XSB-15

PLOT DATE : 7/21/2016 9:16 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

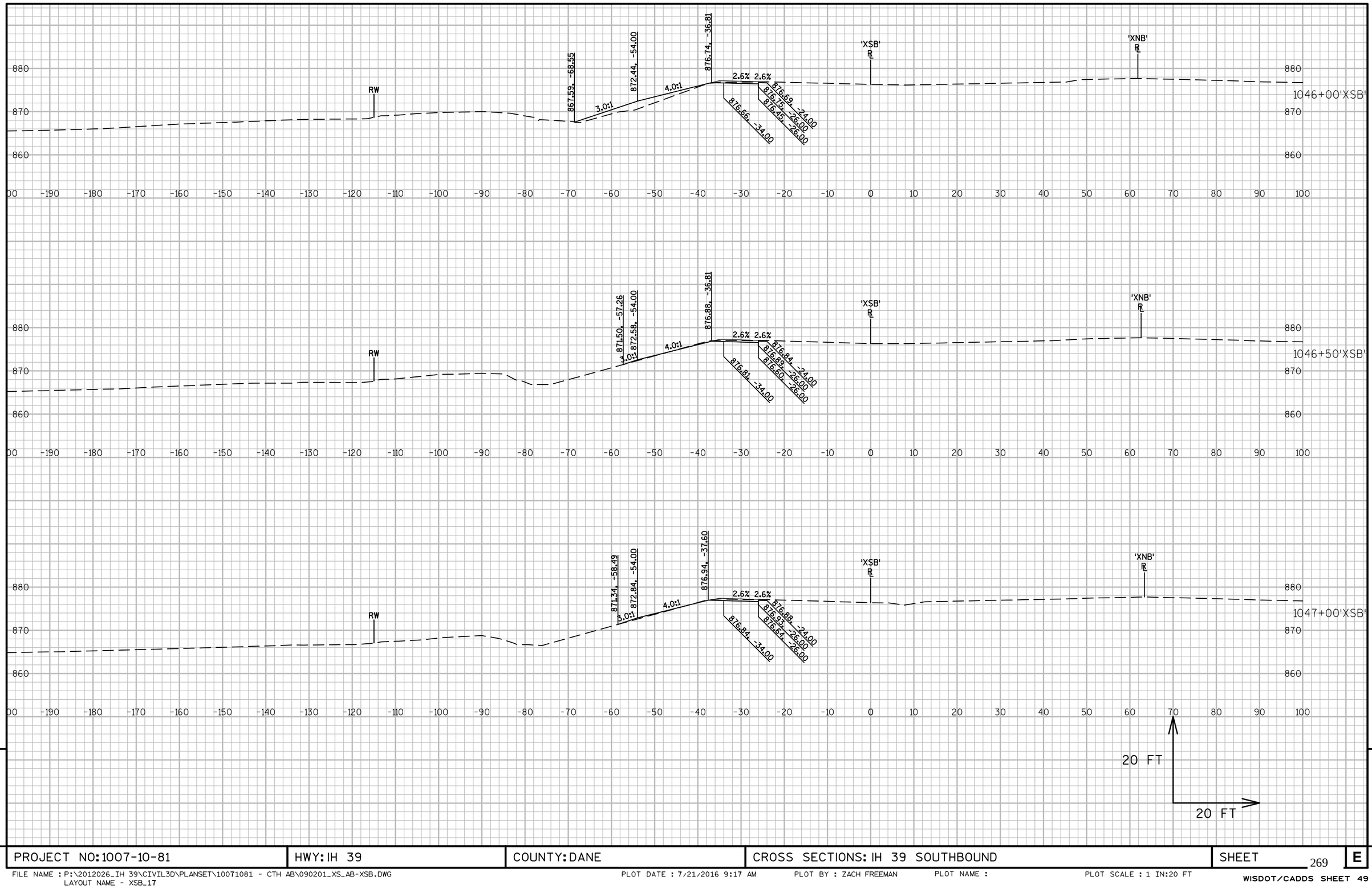


PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 268	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - XSB_16

PLOT DATE : 7/21/2016 9:16 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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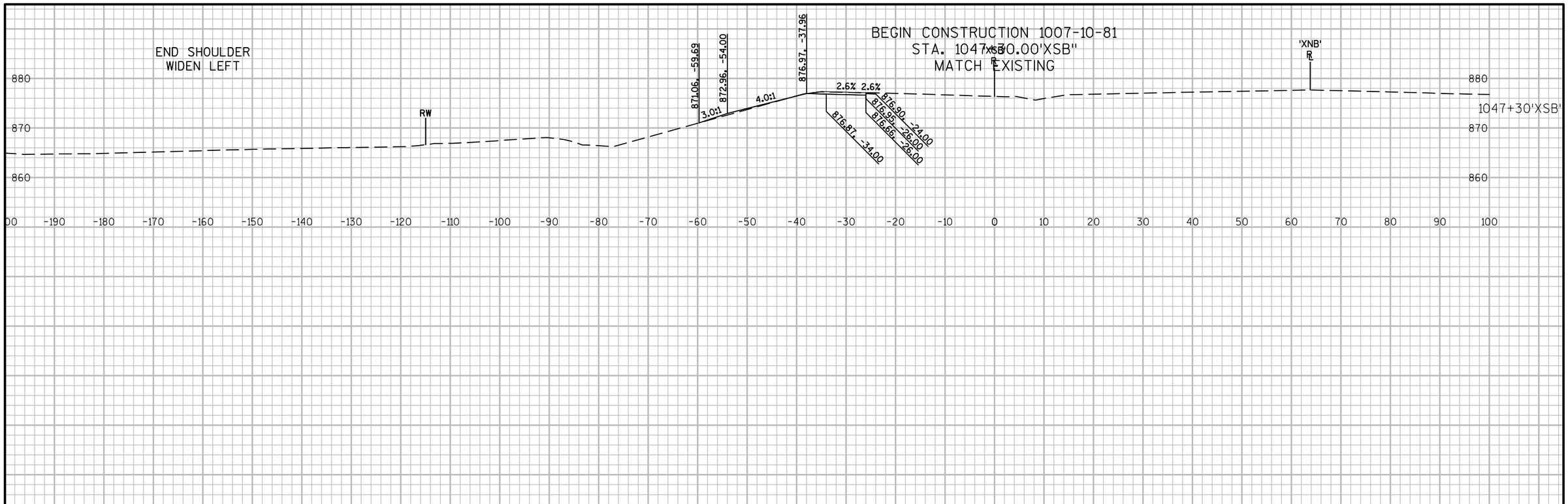
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 269	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - XSB_17

PLOT DATE : 7/21/2016 9:17 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

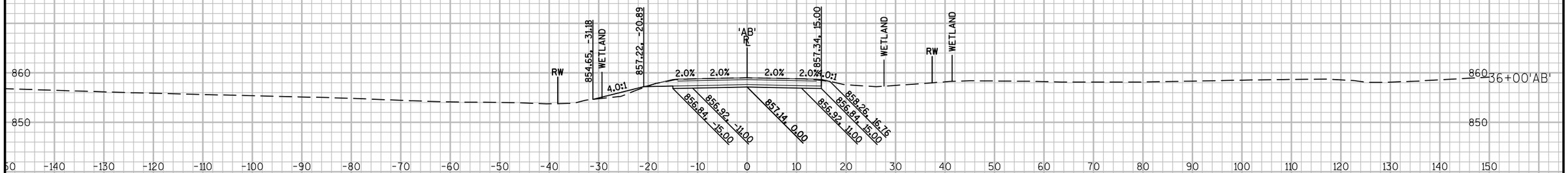
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: IH 39 SOUTHBOUND	SHEET 270	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-XSB.DWG
LAYOUT NAME - XSB_18

PLOT DATE : 7/21/2016 9:17 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

BEGIN PROJECT 1007-10-81
STA. 36+00.00'AB'
MATCH EXISTING









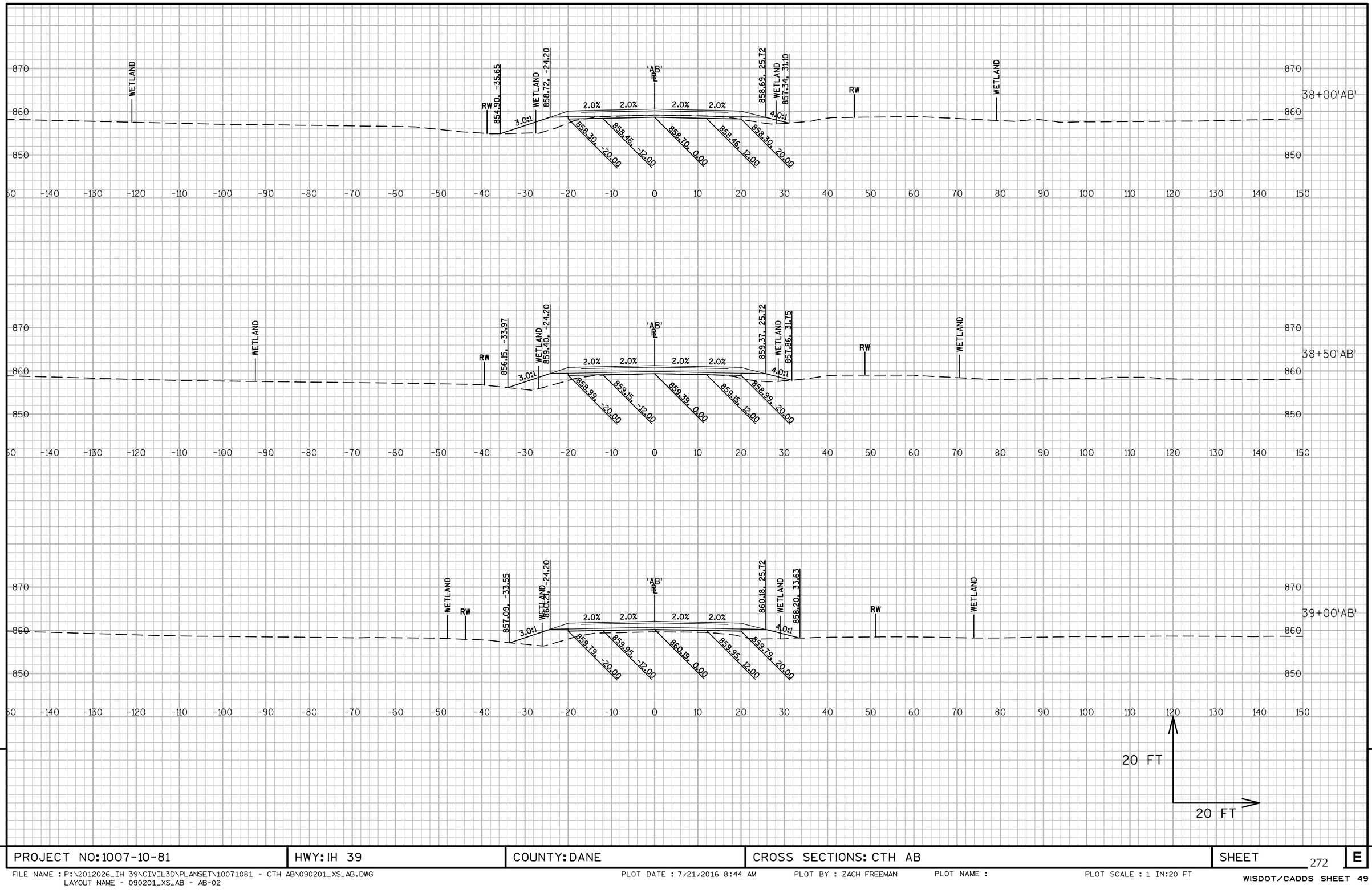
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 271	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-01

PLOT DATE : 7/21/2016 8:43 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



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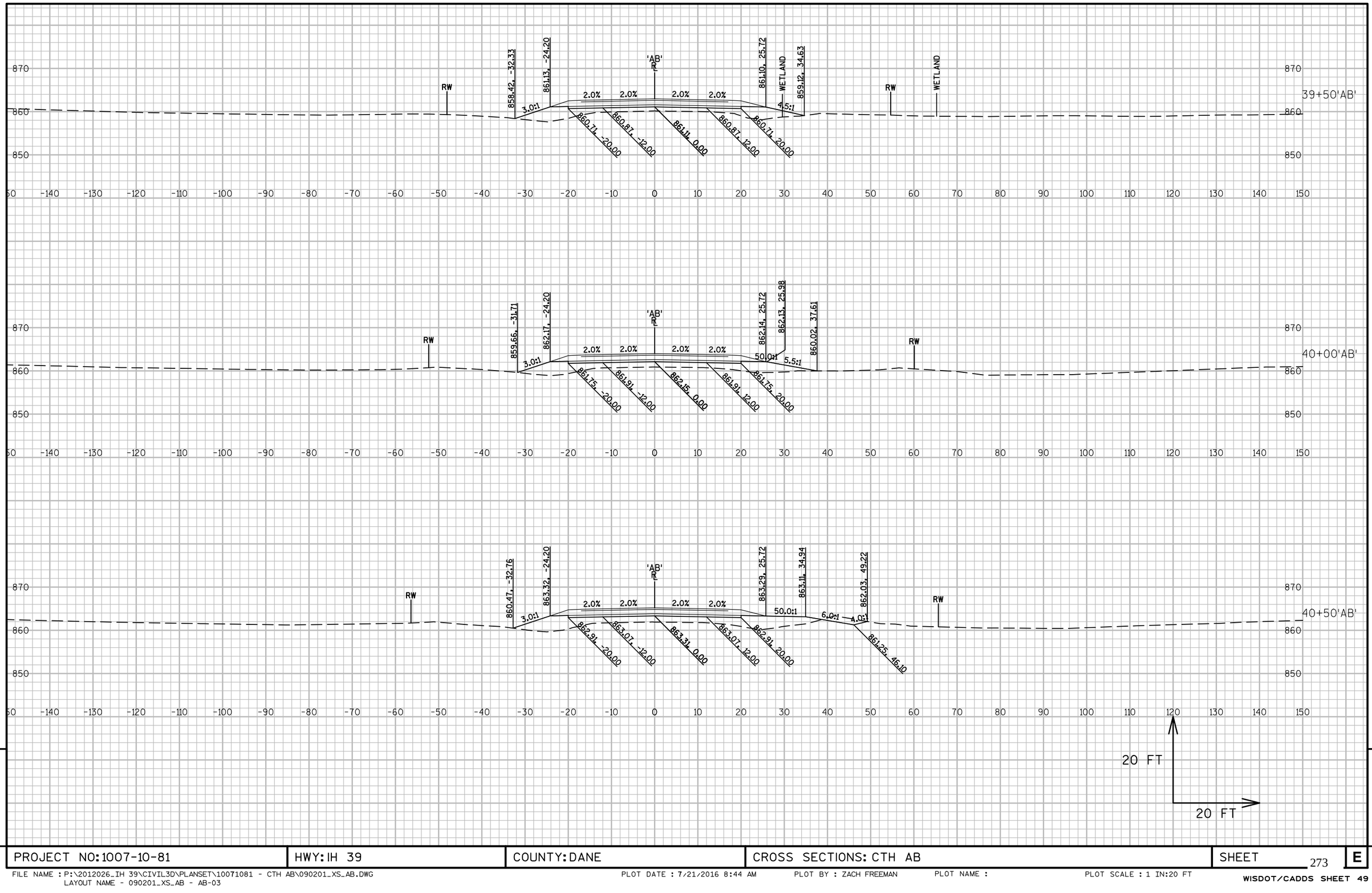
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 272	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-02

PLOT DATE : 7/21/2016 8:44 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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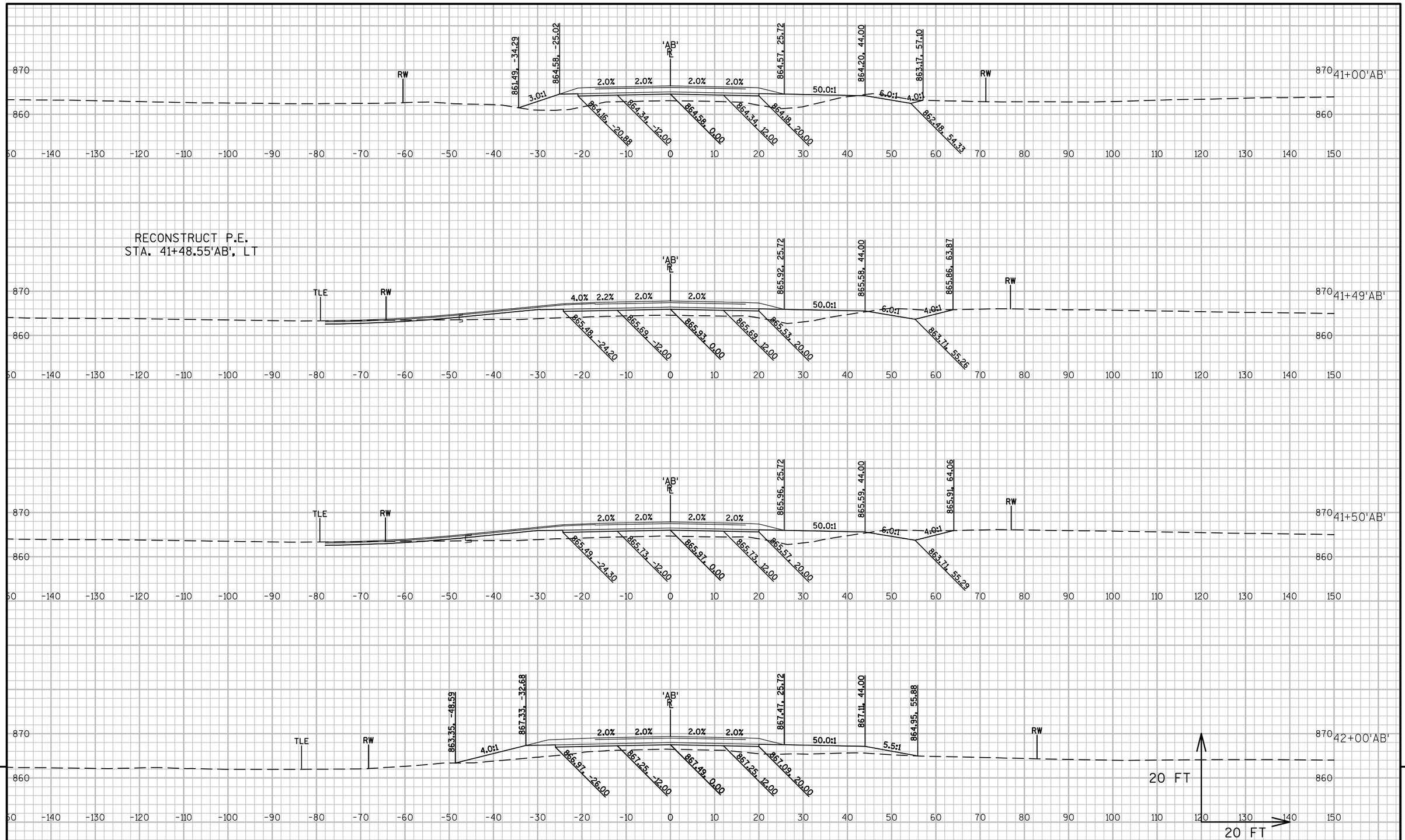
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 273	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-03

PLOT DATE : 7/21/2016 8:44 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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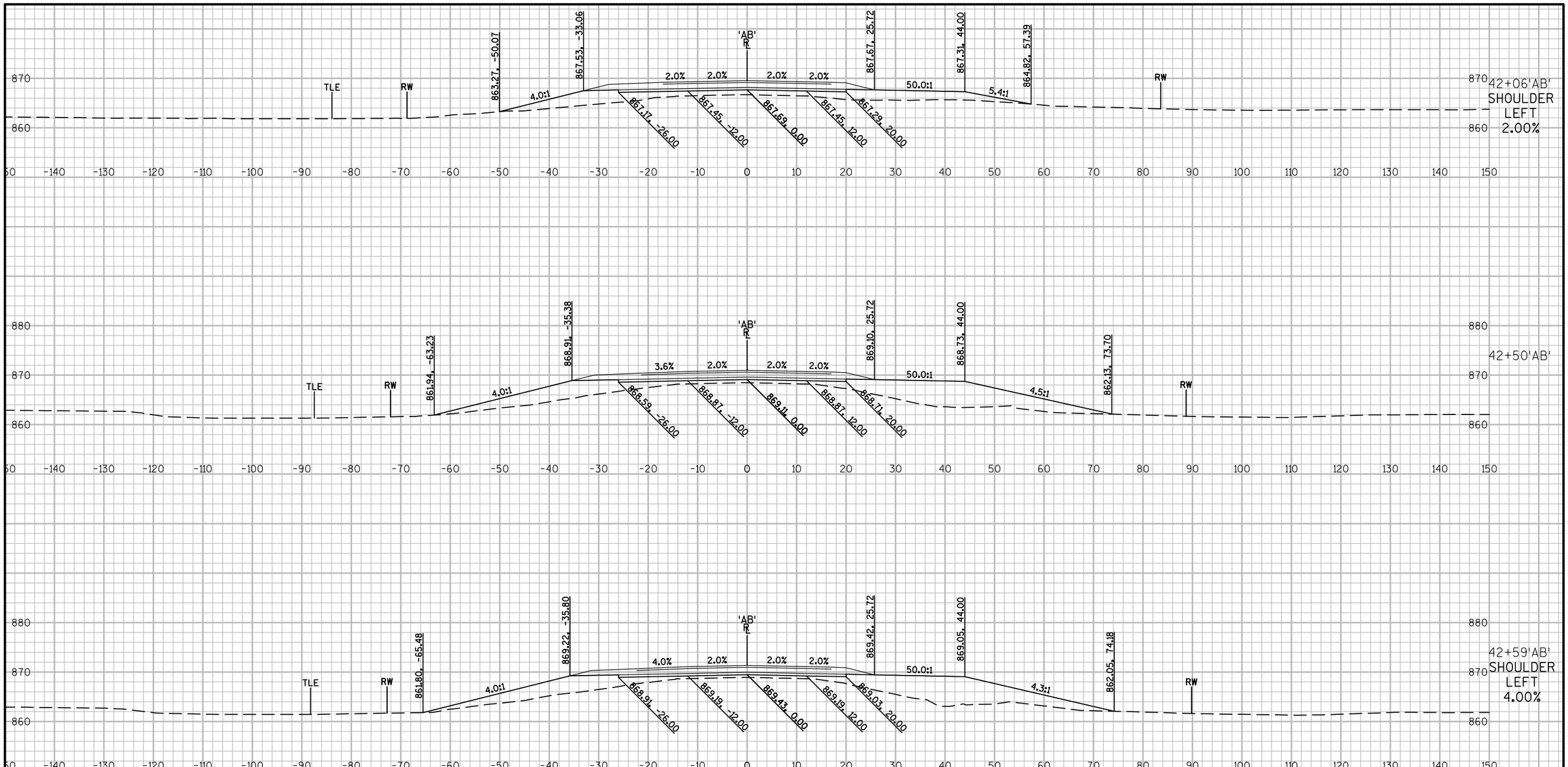
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 274	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-04

PLOT DATE : 7/21/2016 8:45 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

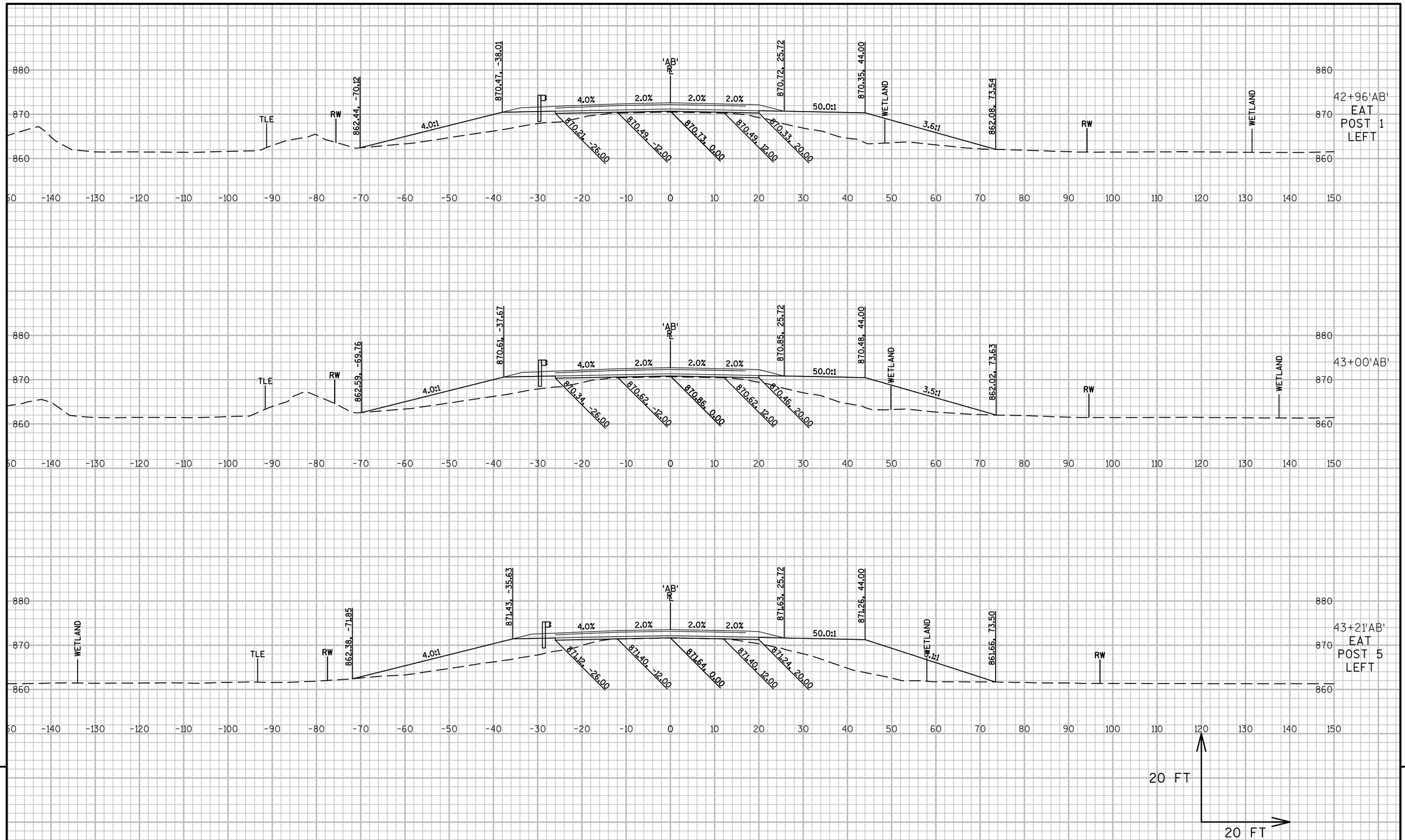


PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 275	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-05

PLOT DATE : 7/21/2016 8:45 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

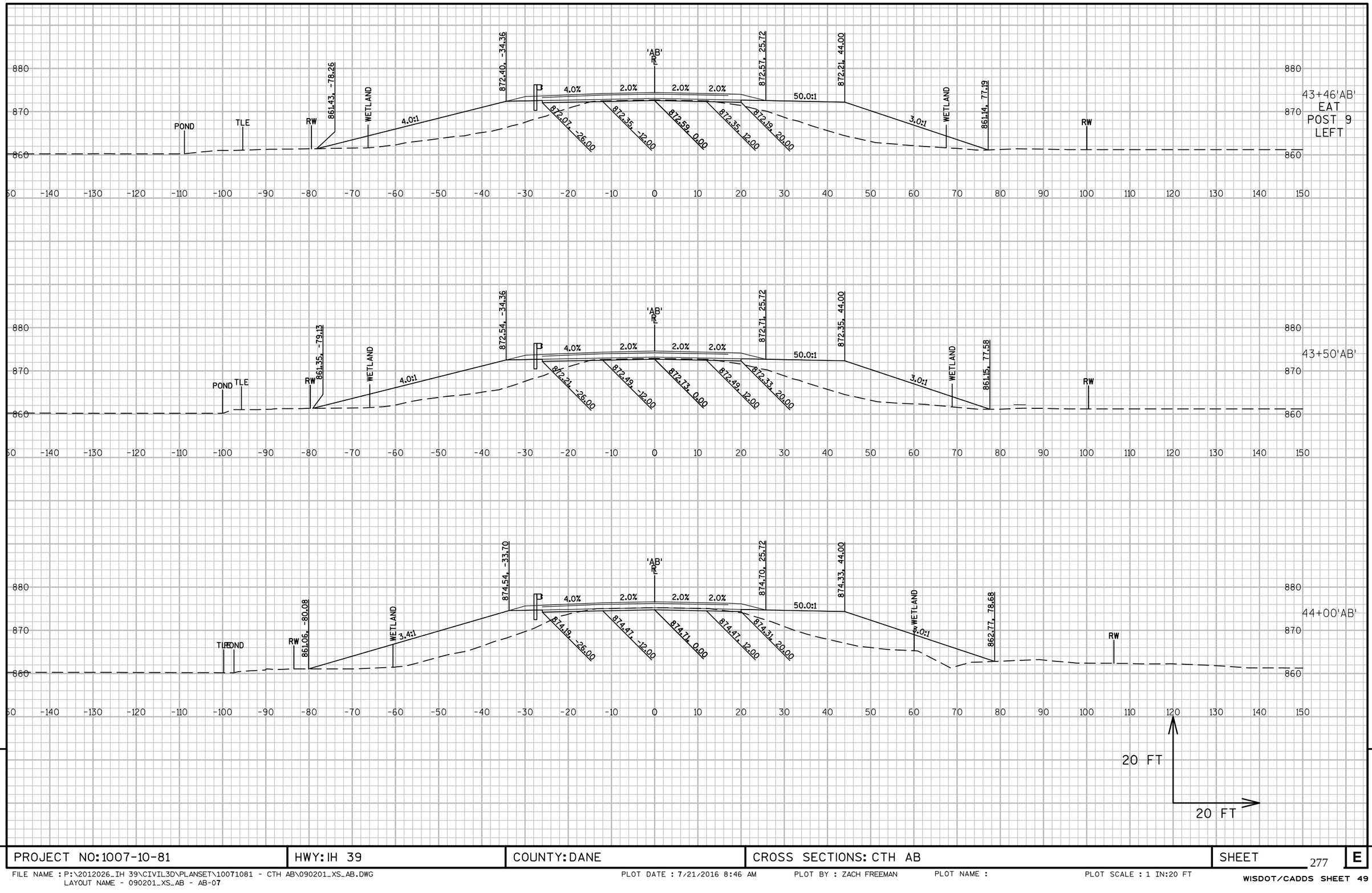


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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 276	E

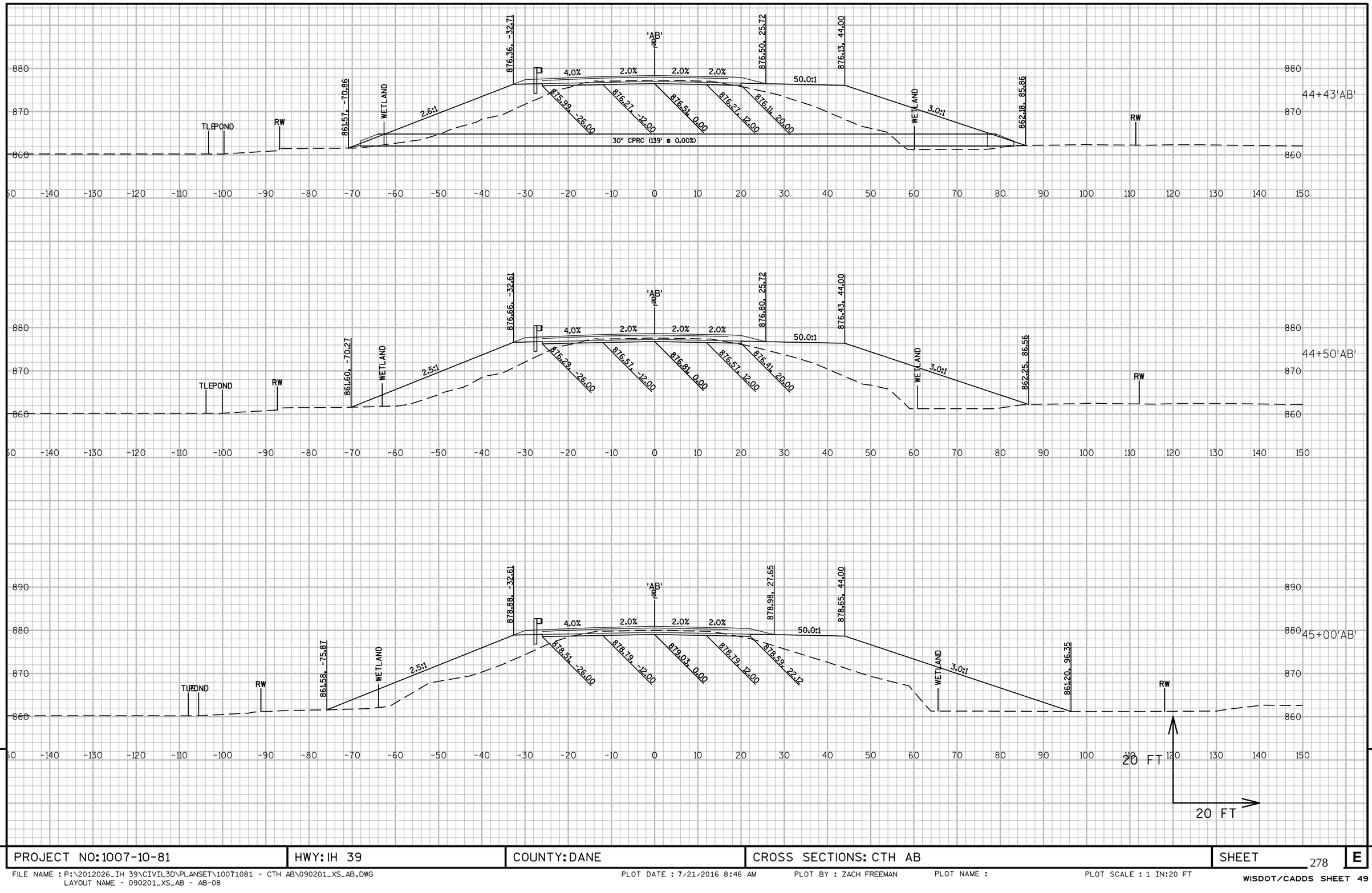
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-06
PLOT DATE : 7/21/2016 8:45 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 277	E

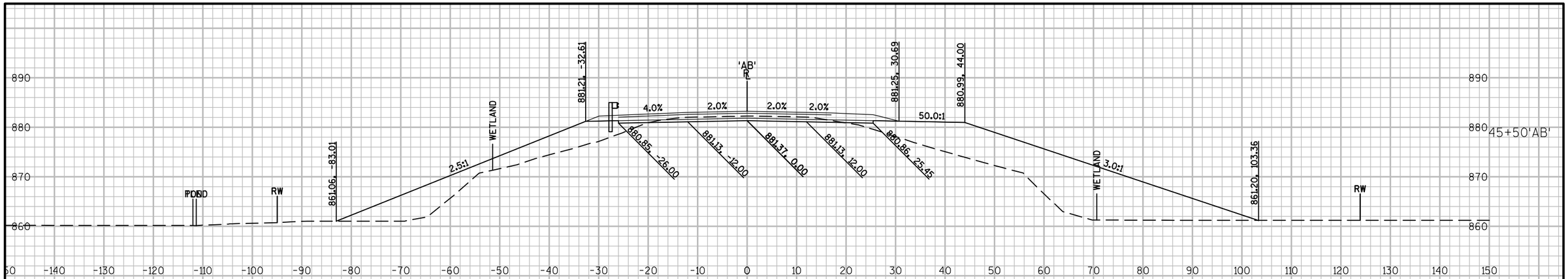


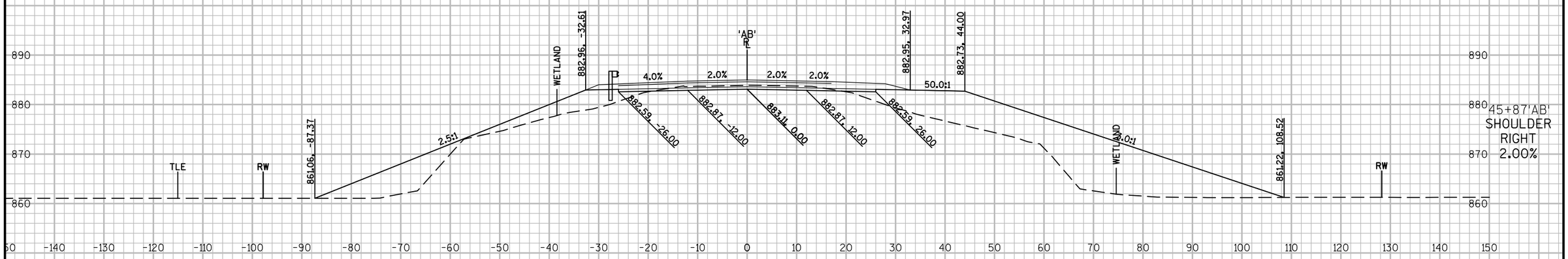
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 278	E

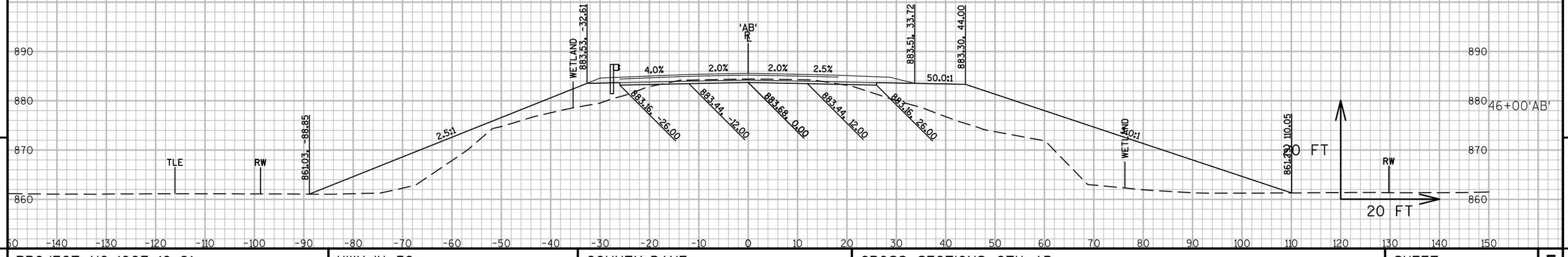
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-08

PLOT DATE : 7/21/2016 8:46 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





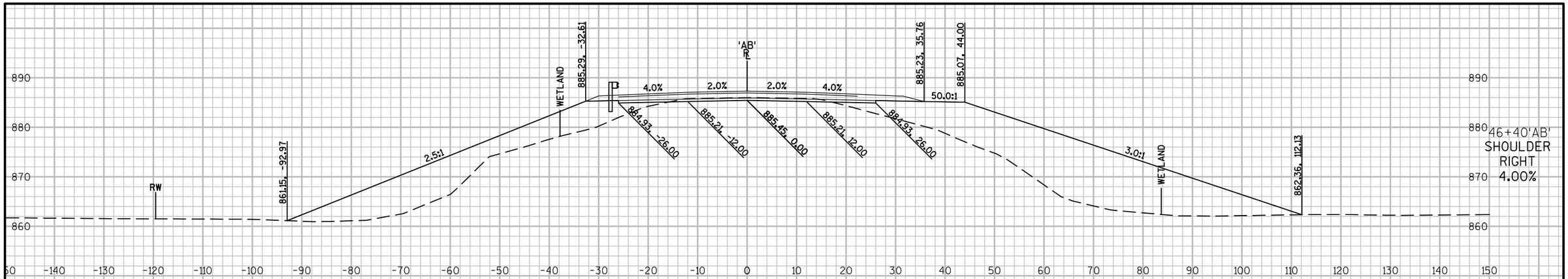


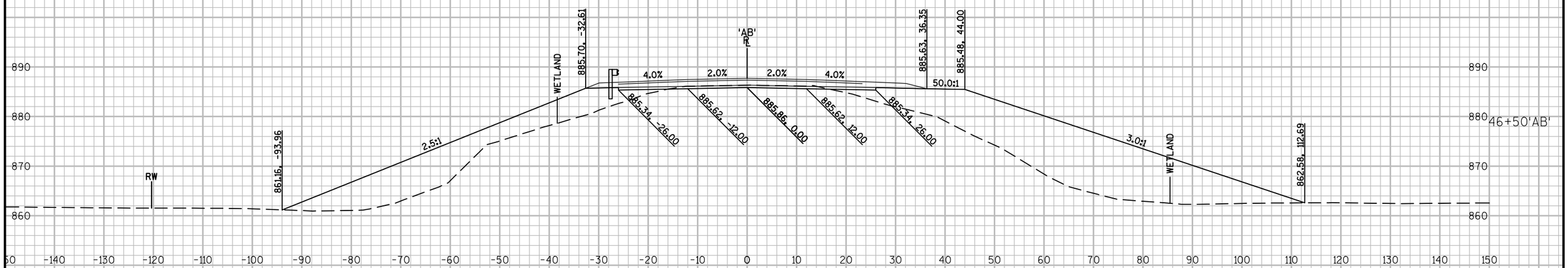
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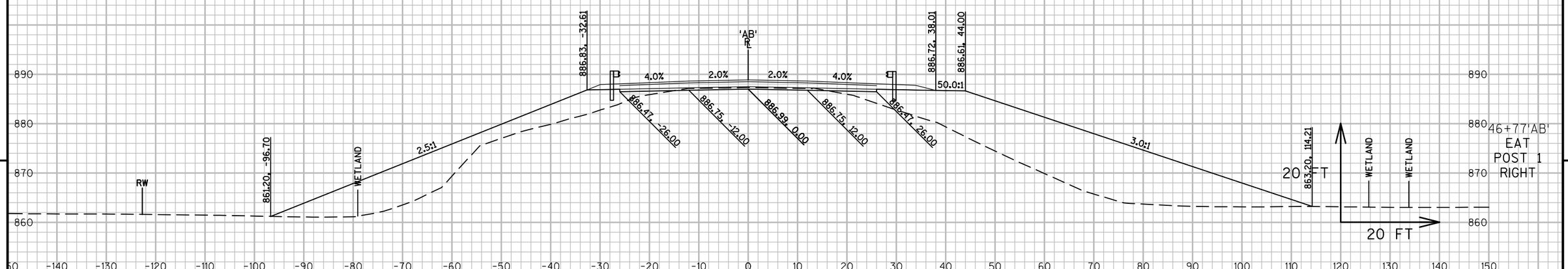
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 279	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-09

PLOT DATE : 7/21/2016 8:46 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT





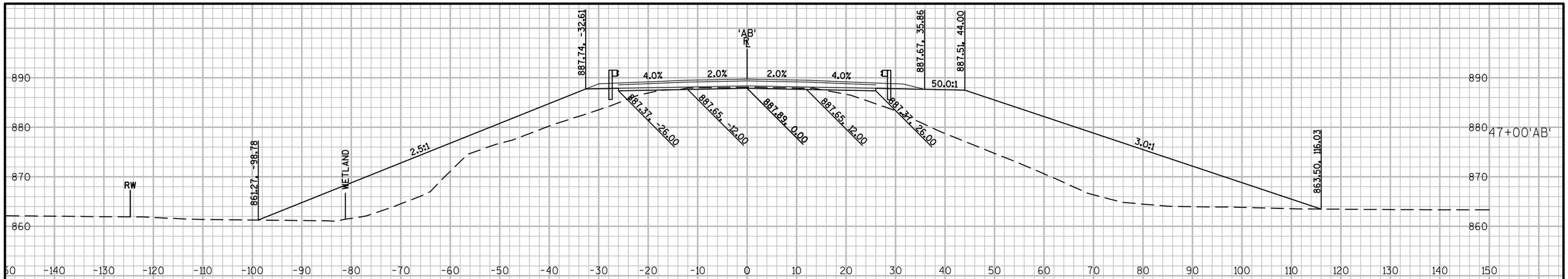


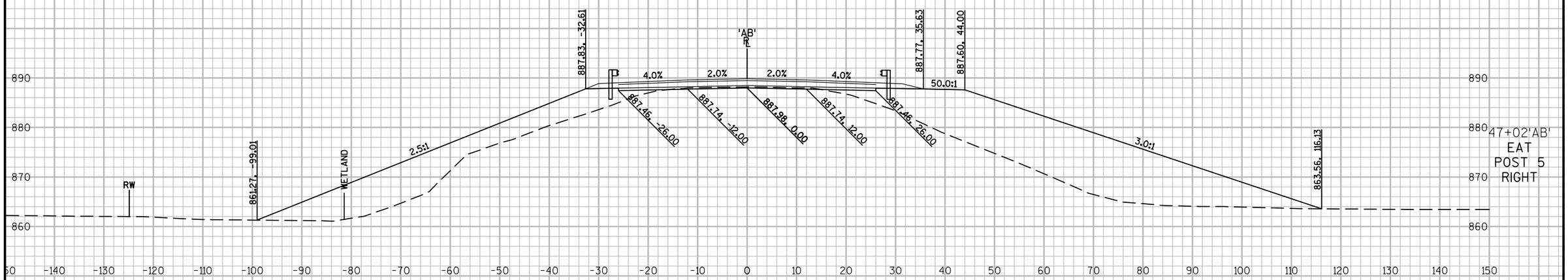
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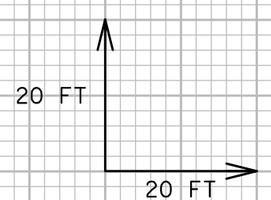
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 280	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-10

PLOT DATE : 7/21/2016 8:47 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT







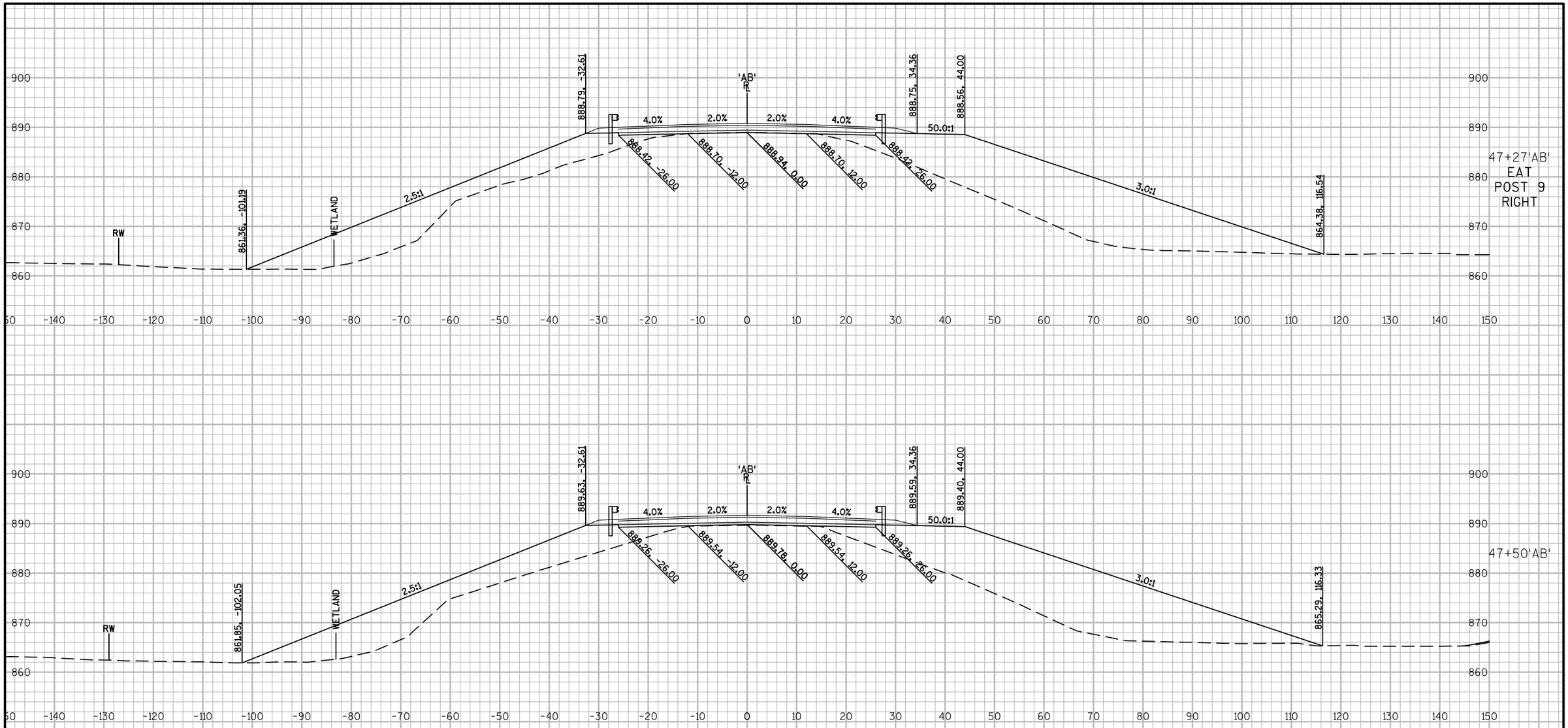
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 281	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-11

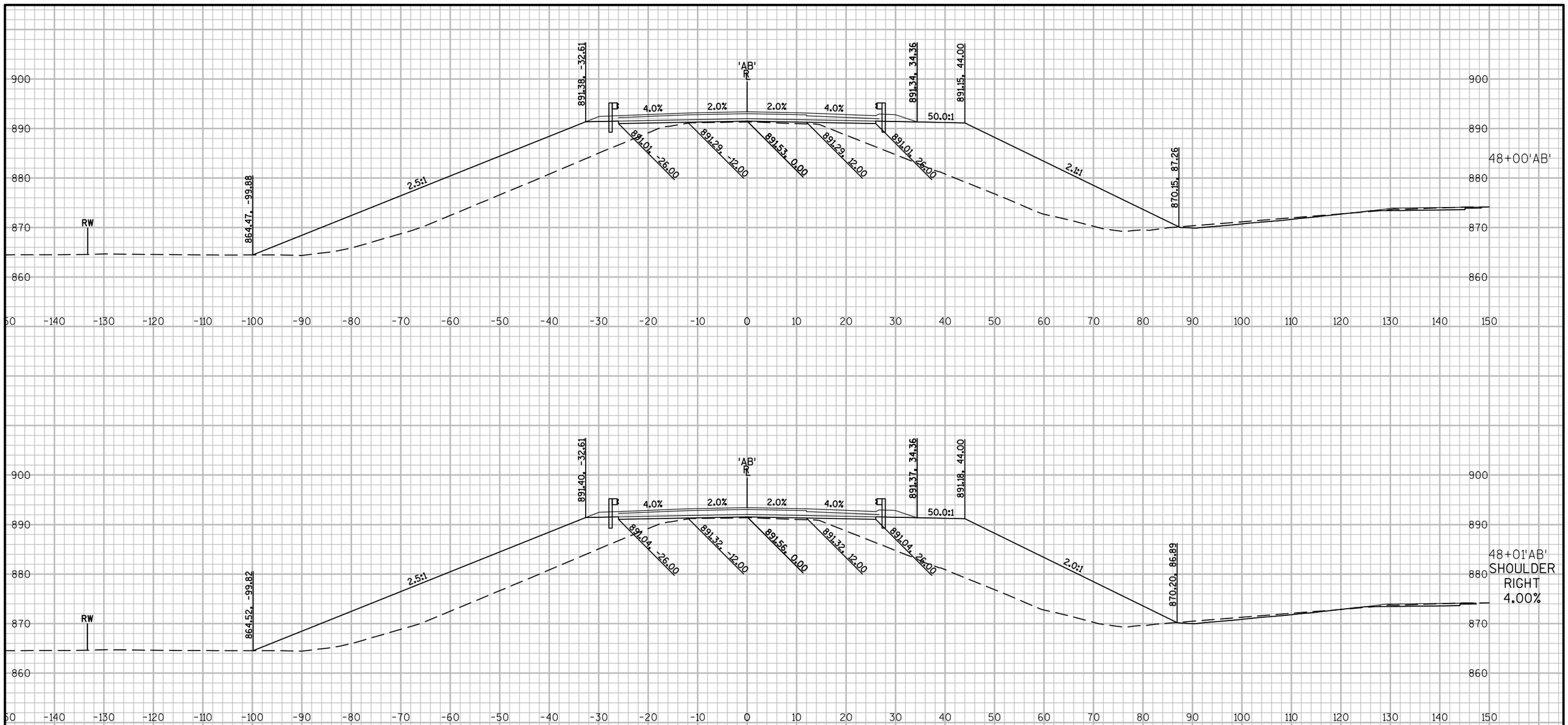
PLOT DATE : 7/21/2016 8:47 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 282	E



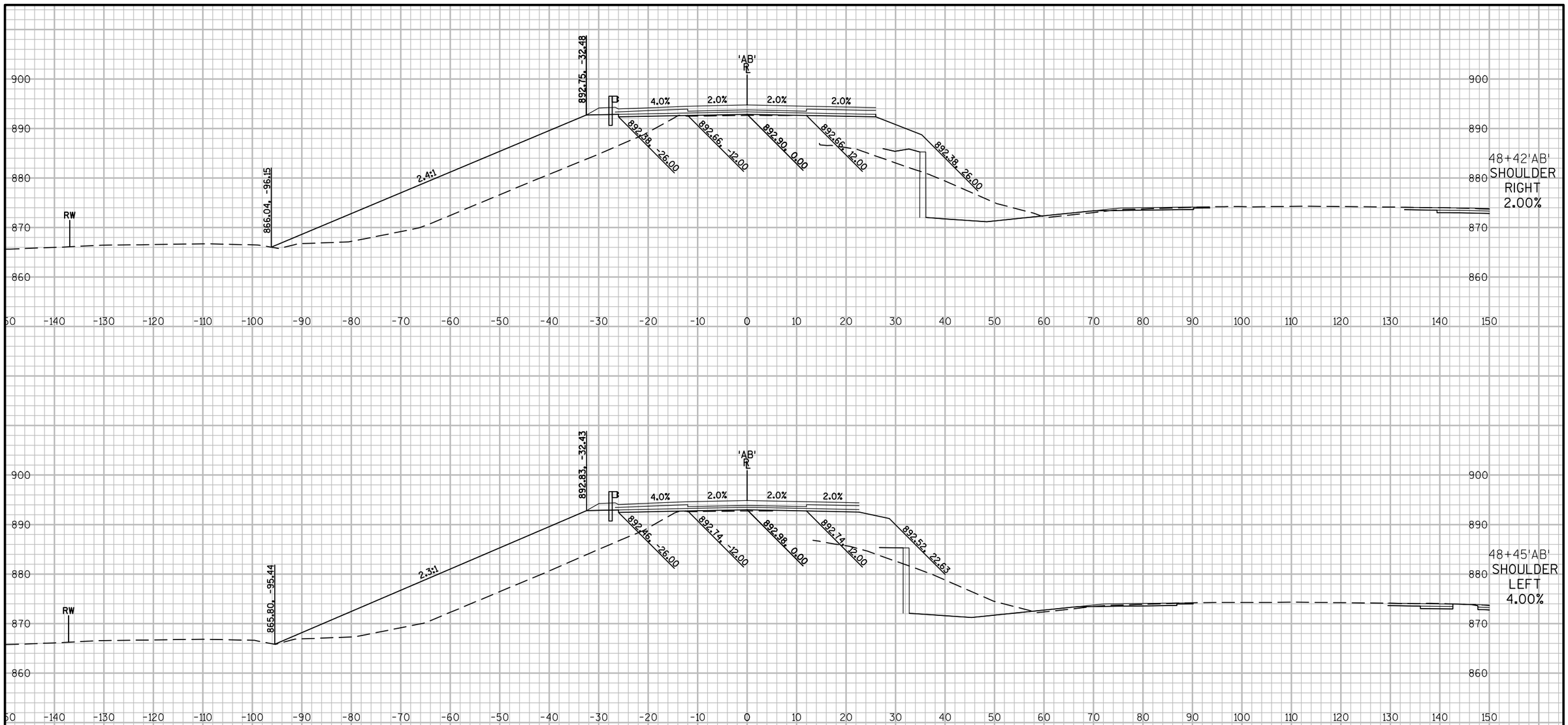
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 283	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-13

PLOT DATE : 7/21/2016 8:48 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



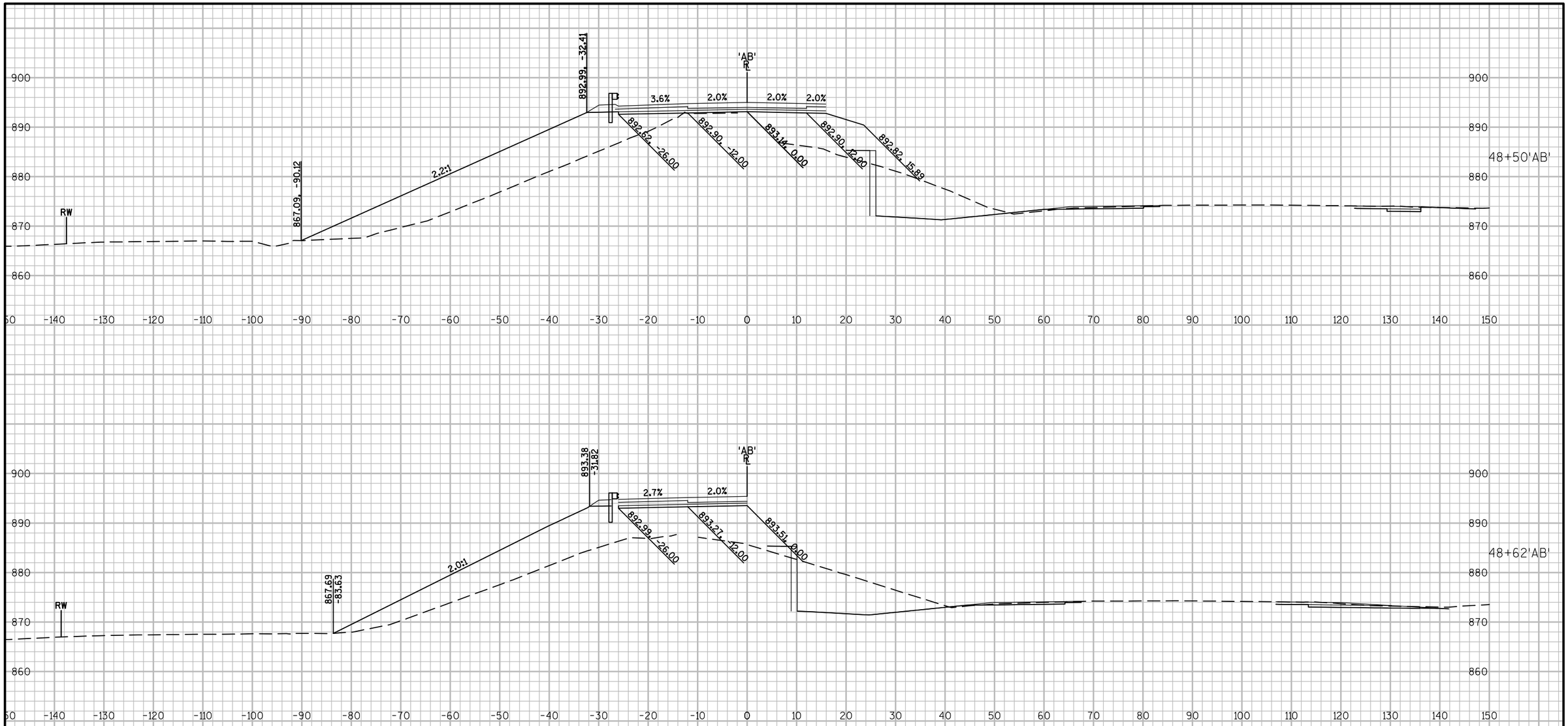
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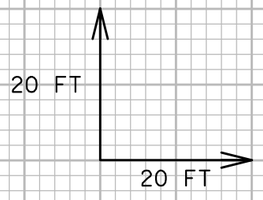
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 284	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-14

PLOT DATE : 7/21/2016 8:48 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



BEGIN BRIDGE DECK
STRUCTURE NO. B-13-726
STA. 48+62.23'AB'



9

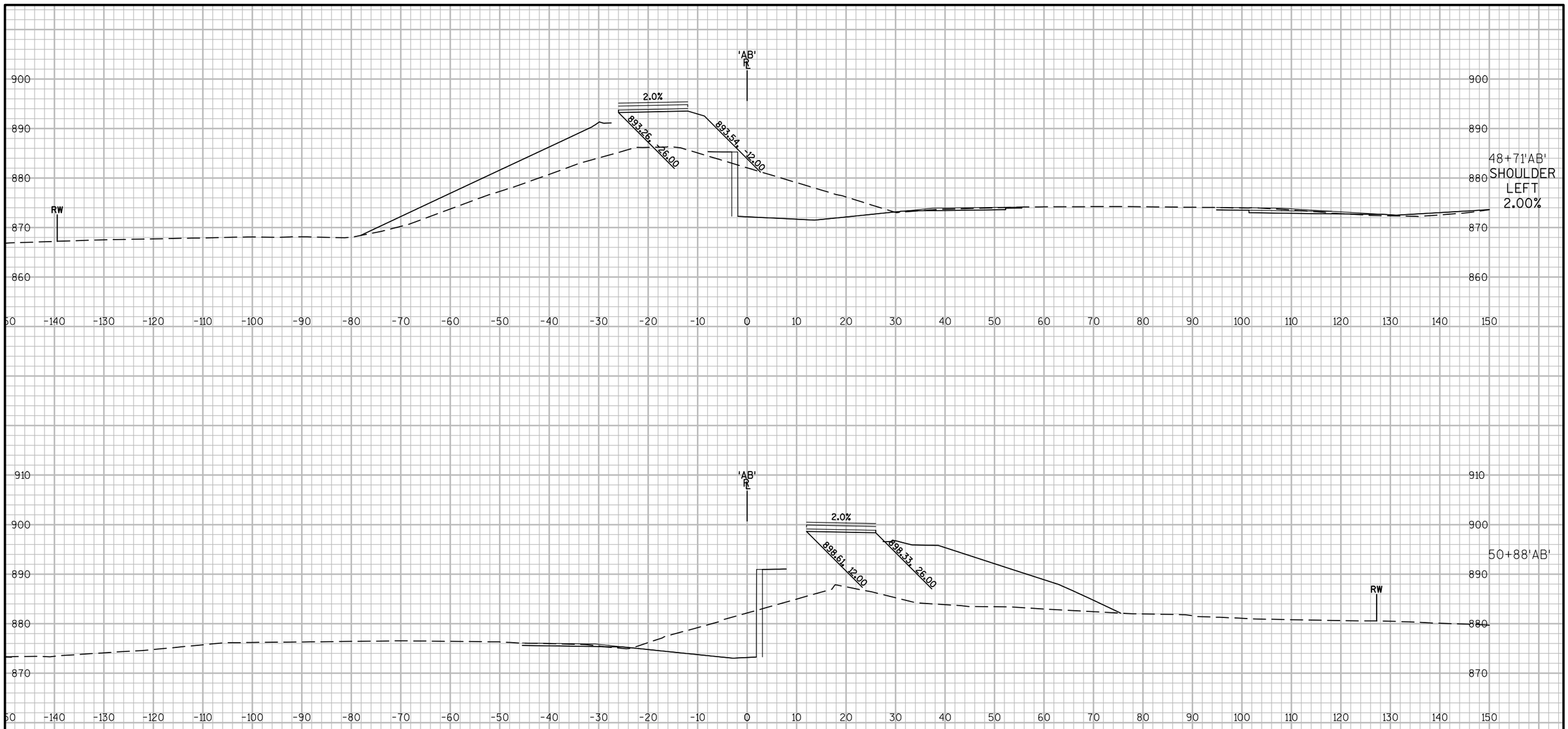
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 285	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-15

PLOT DATE : 7/21/2016 8:48 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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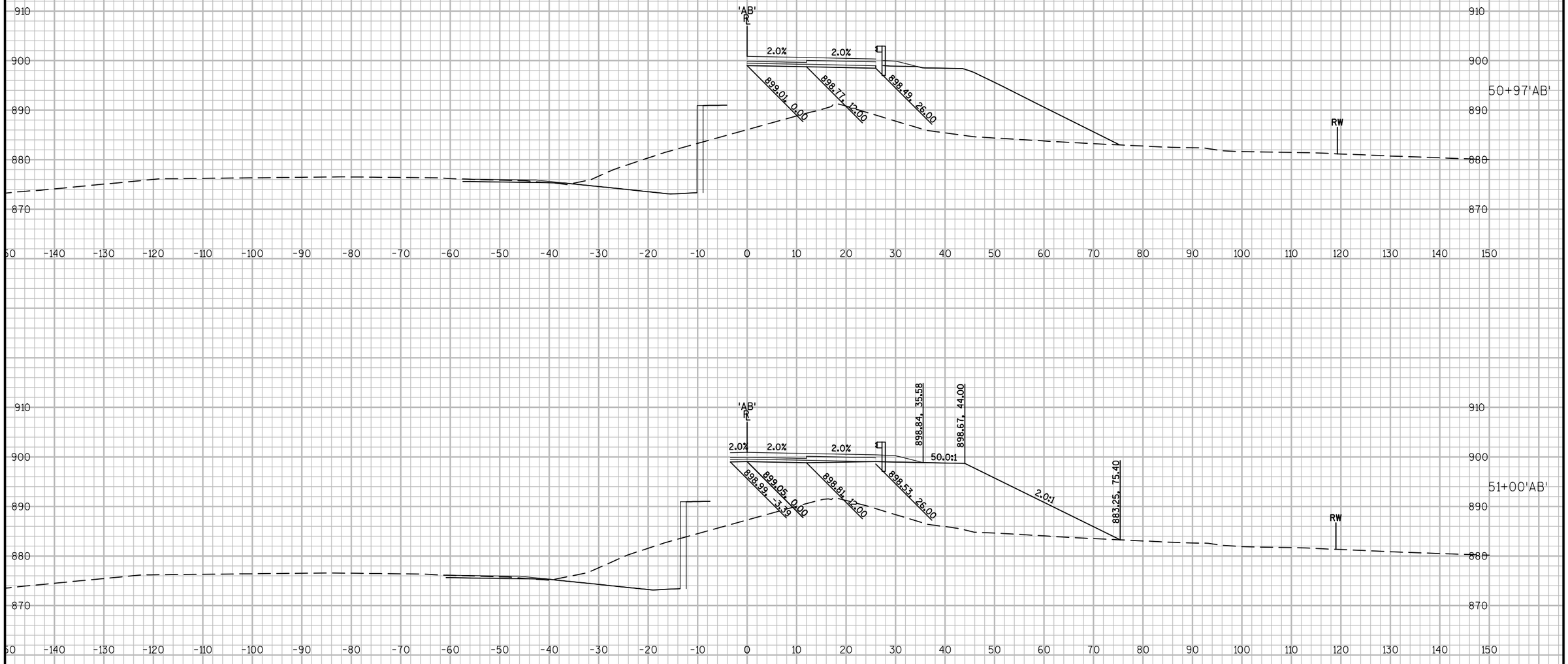
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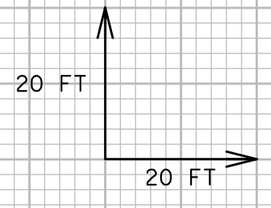
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 286	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-16

PLOT DATE : 7/21/2016 8:49 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

END BRIDGE DECK
STRUCTURE NO. B-13-726
STA. 50+97.39'AB'

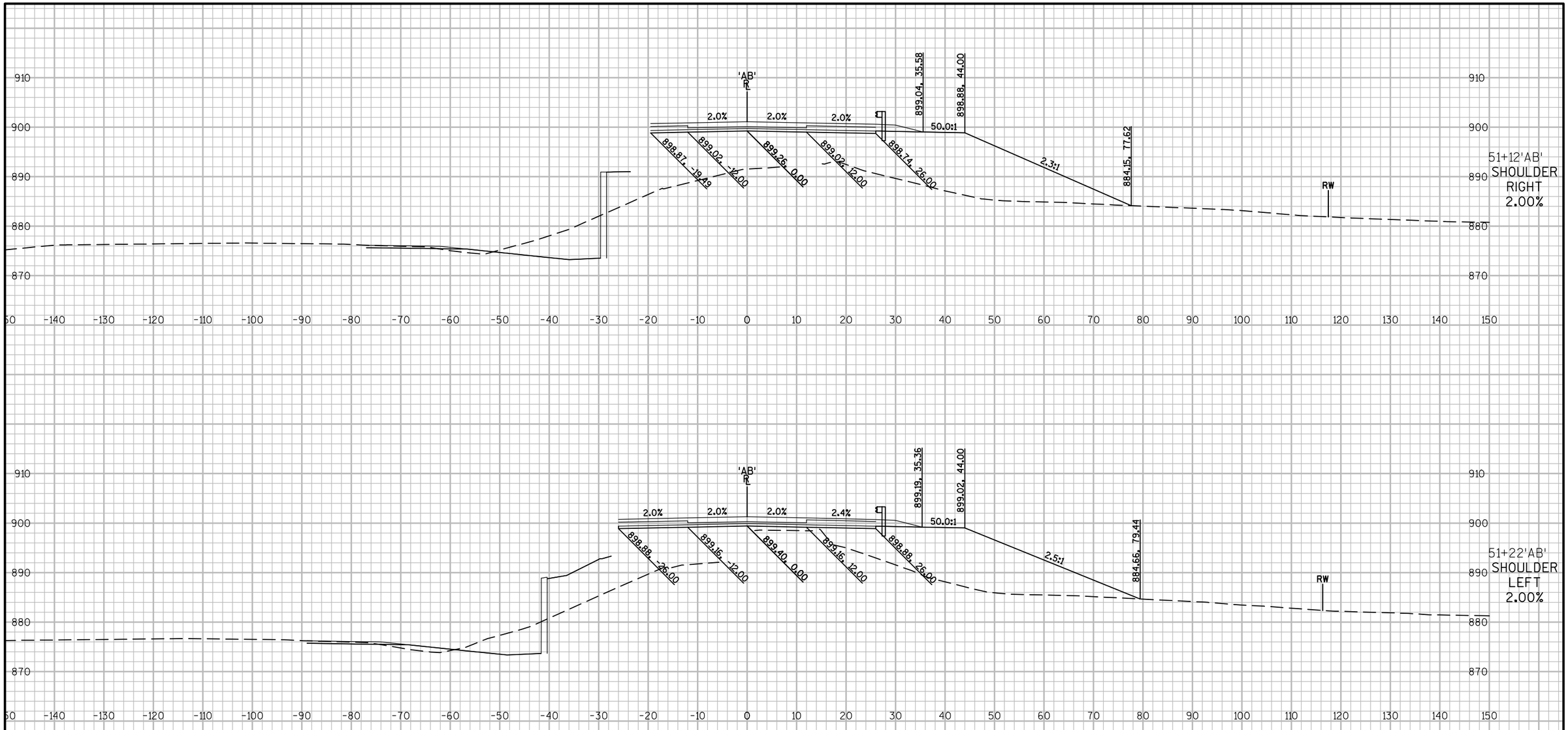




9

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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 287	E



9

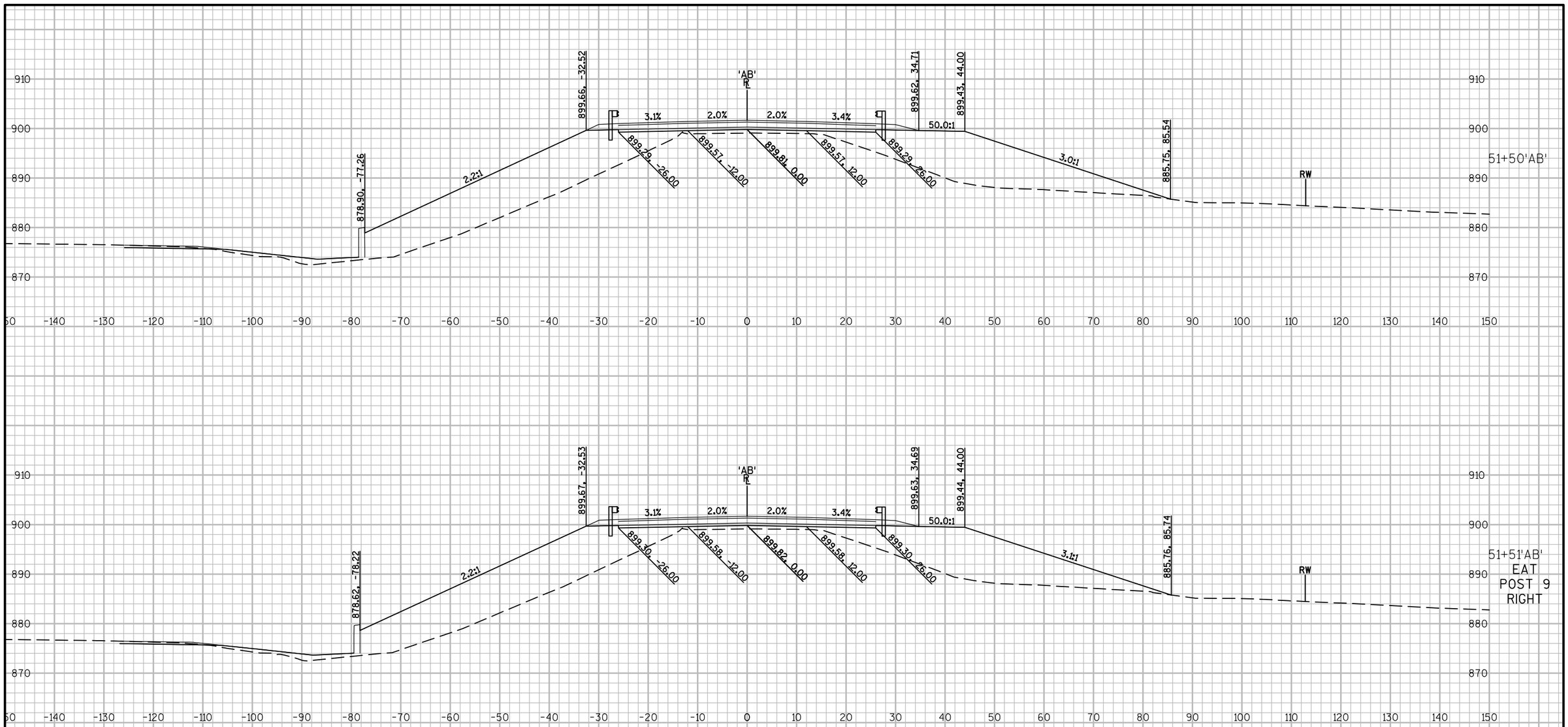
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 288	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-18

PLOT DATE : 7/21/2016 8:49 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

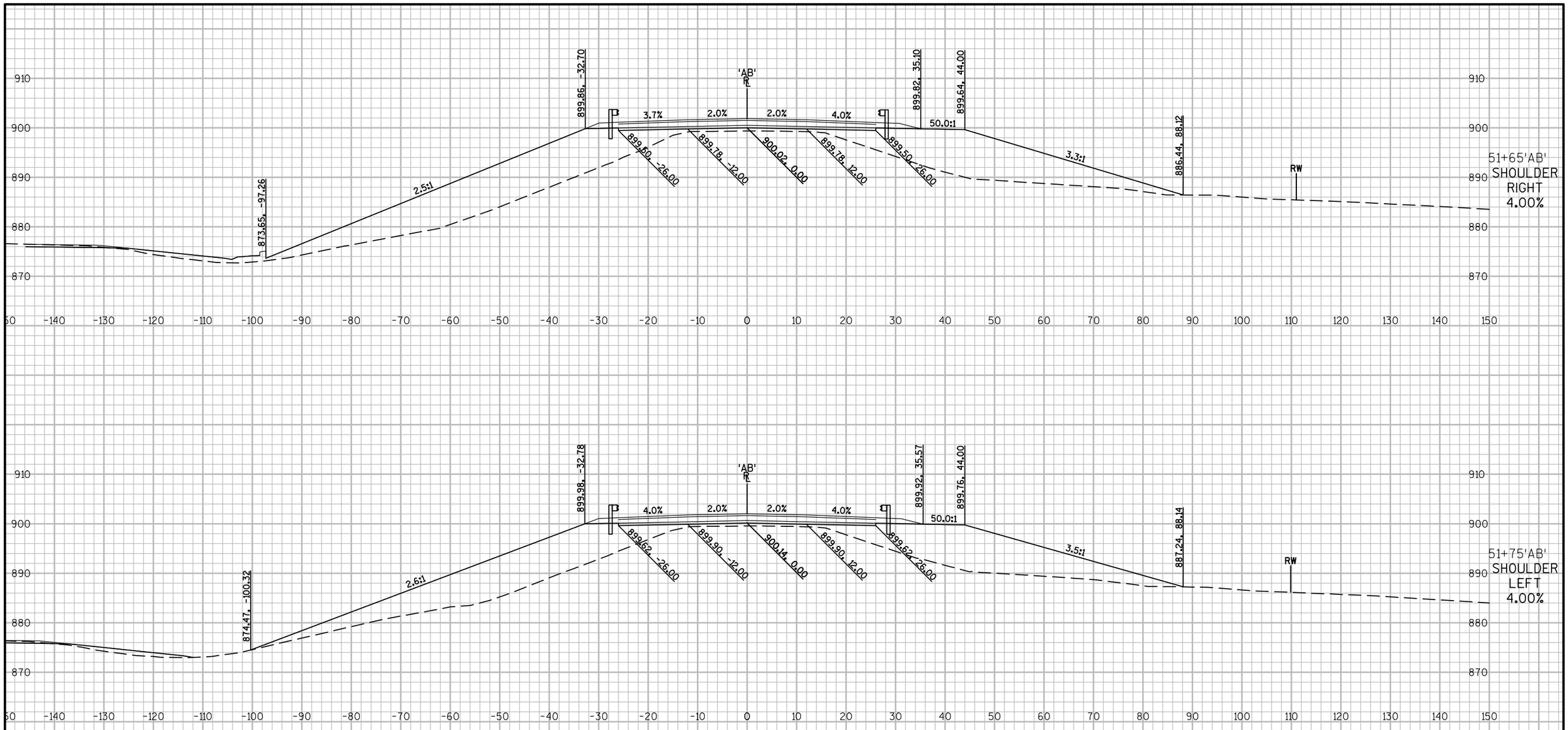
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 289	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-19

PLOT DATE : 7/21/2016 8:50 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

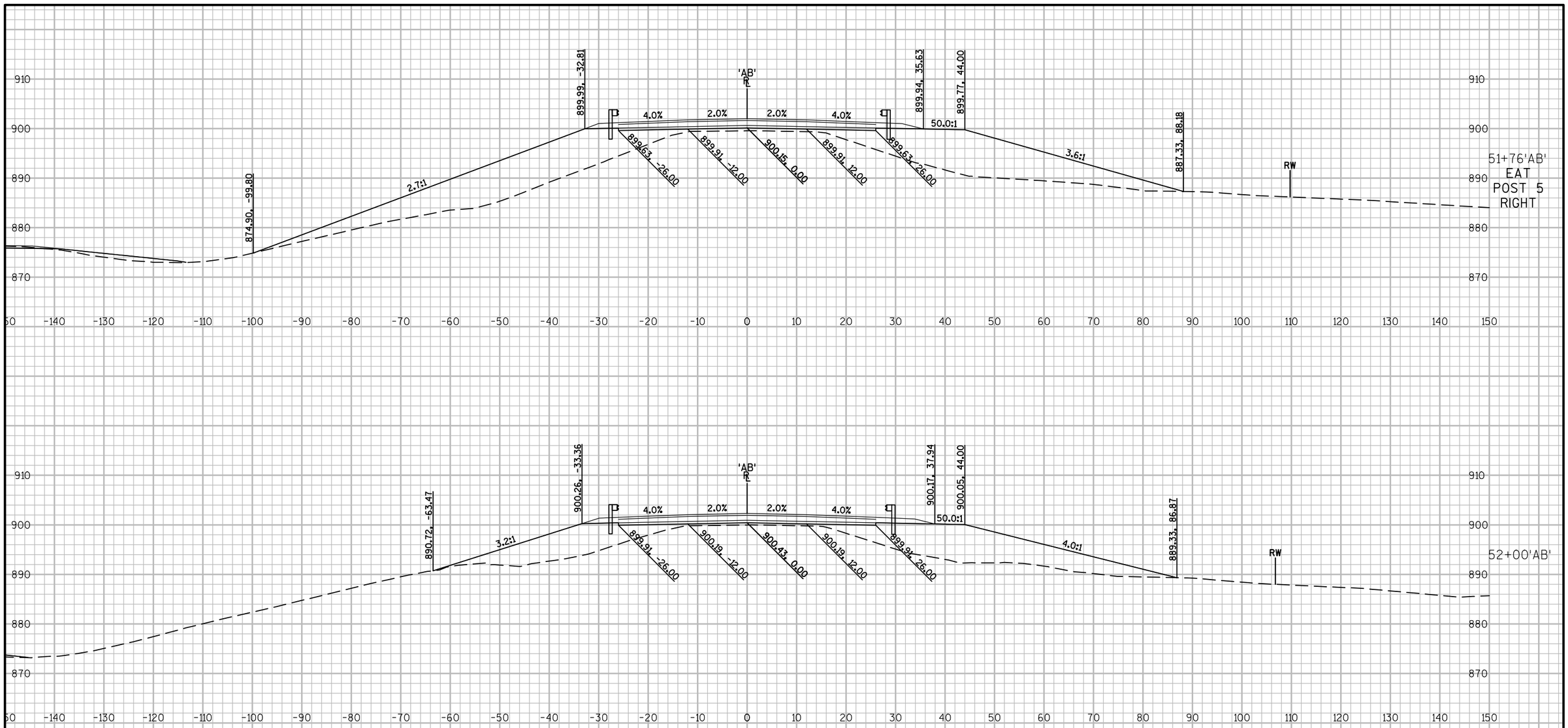
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 290	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-20

PLOT DATE : 7/21/2016 8:50 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

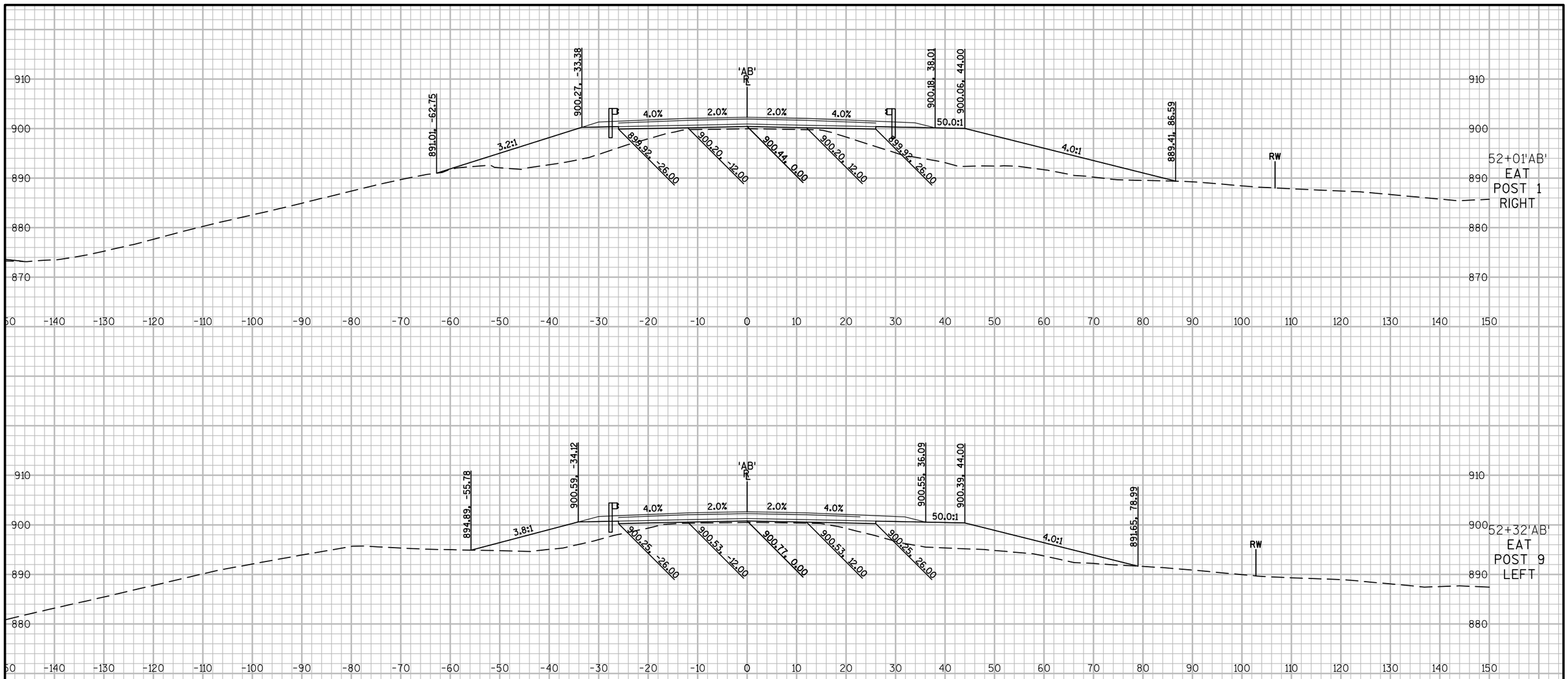
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 291	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-21

PLOT DATE : 7/21/2016 8:50 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

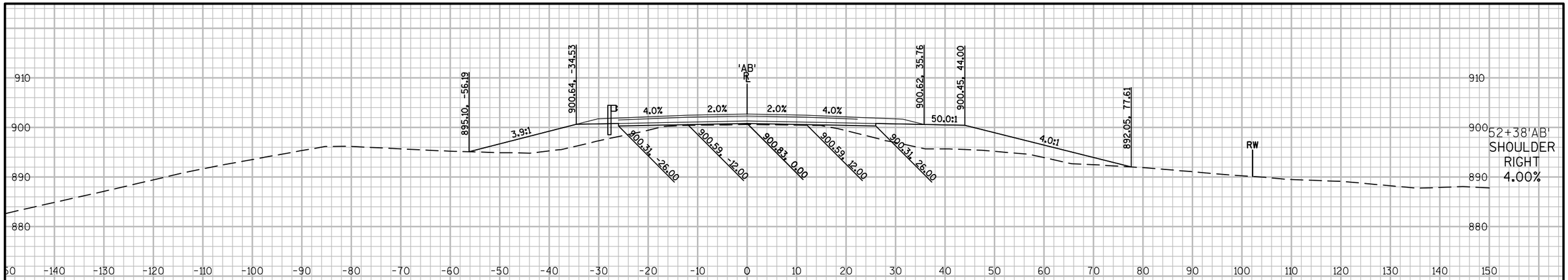
WISDOT/CADDS SHEET 49

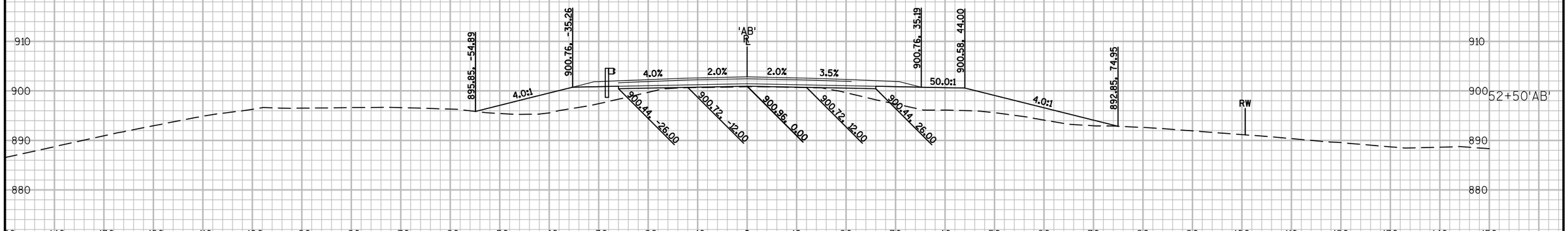


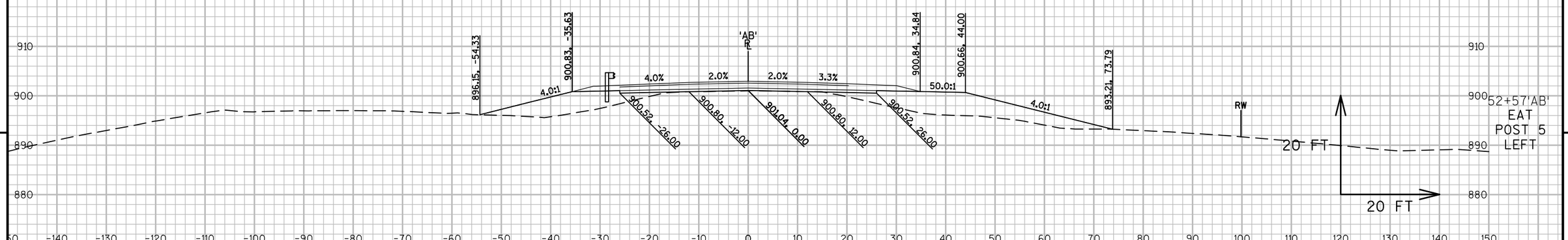
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 292	E



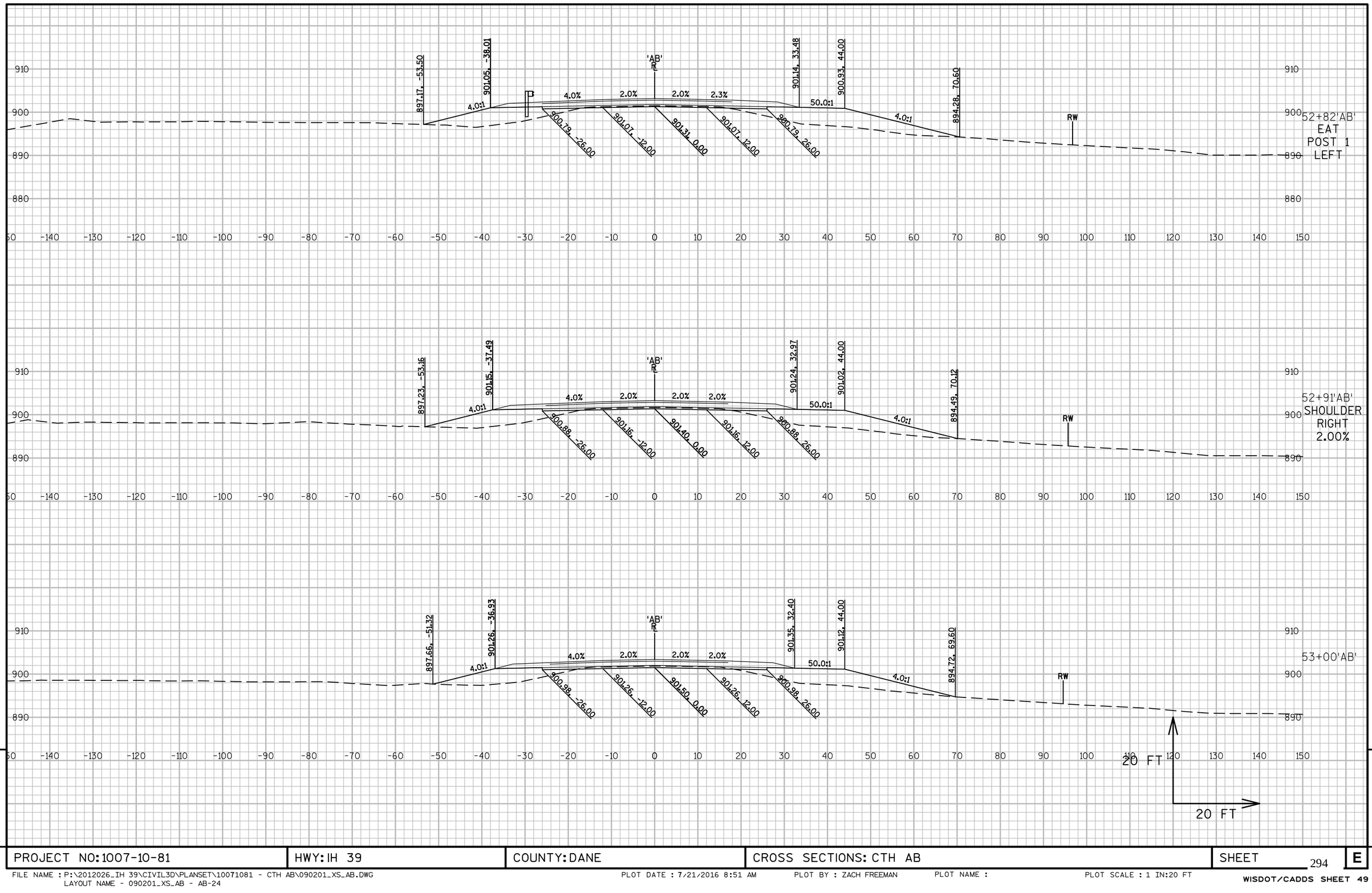




9

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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 293	E



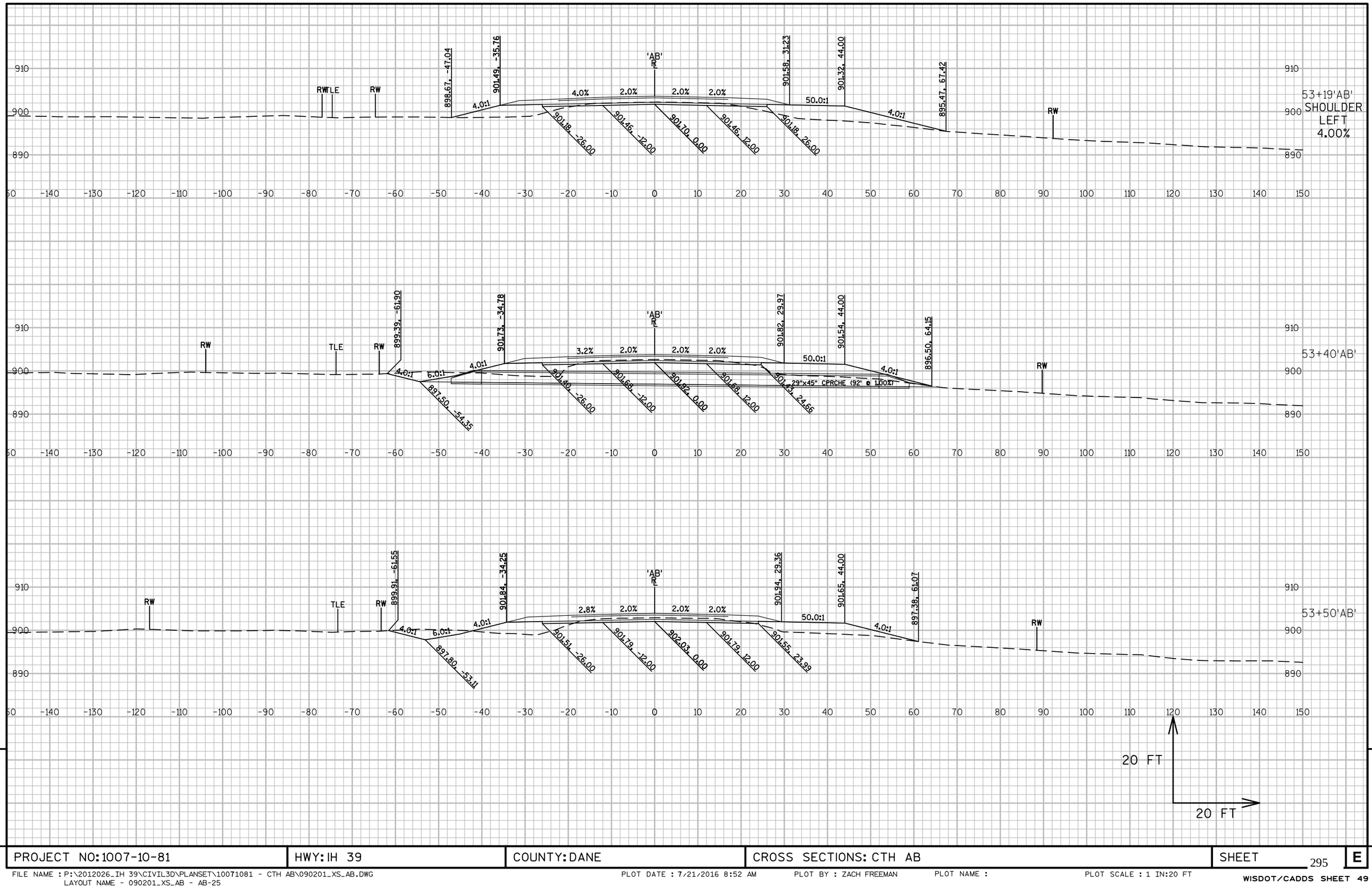
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 294	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-24

PLOT DATE : 7/21/2016 8:51 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

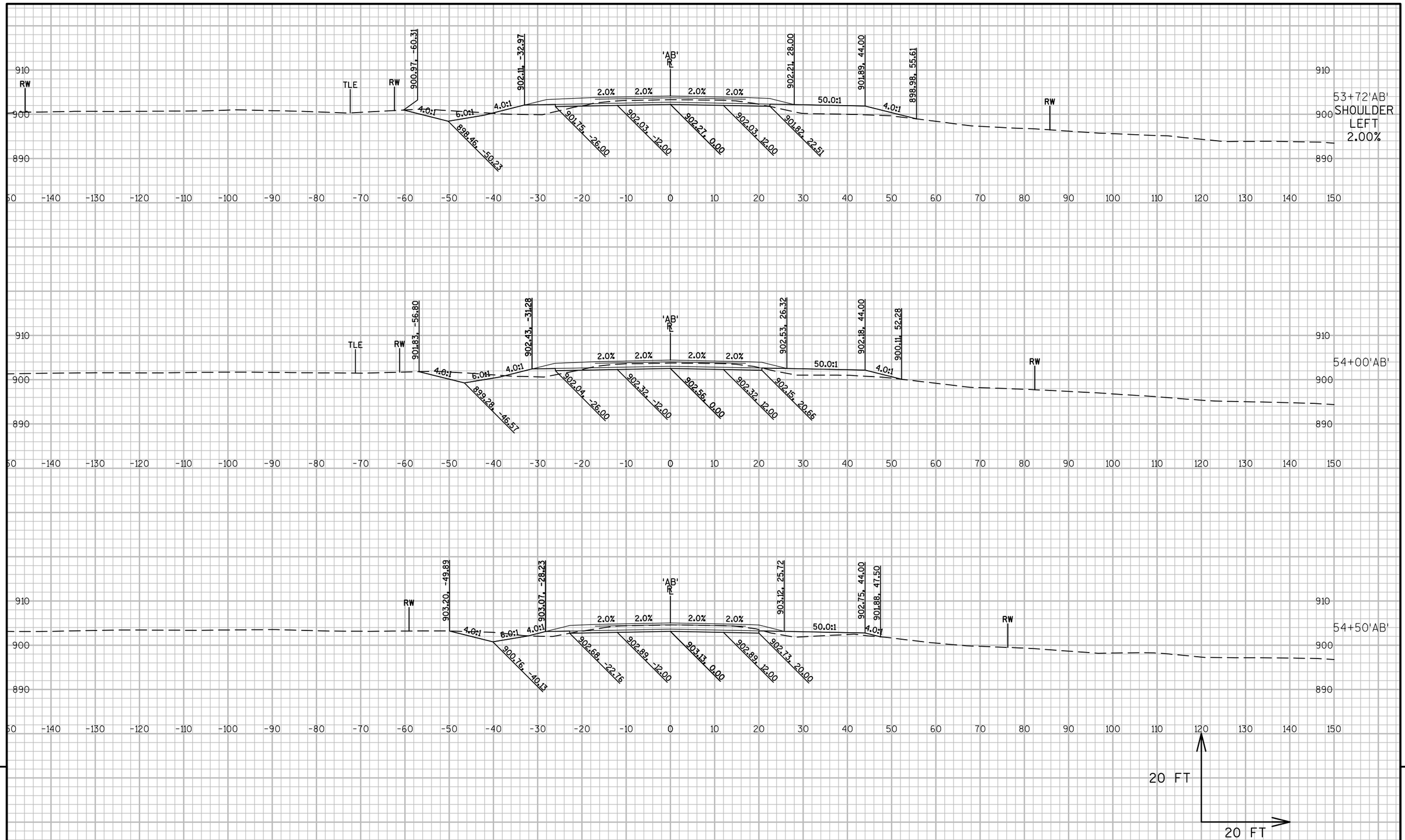
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 295	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-25

PLOT DATE : 7/21/2016 8:52 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

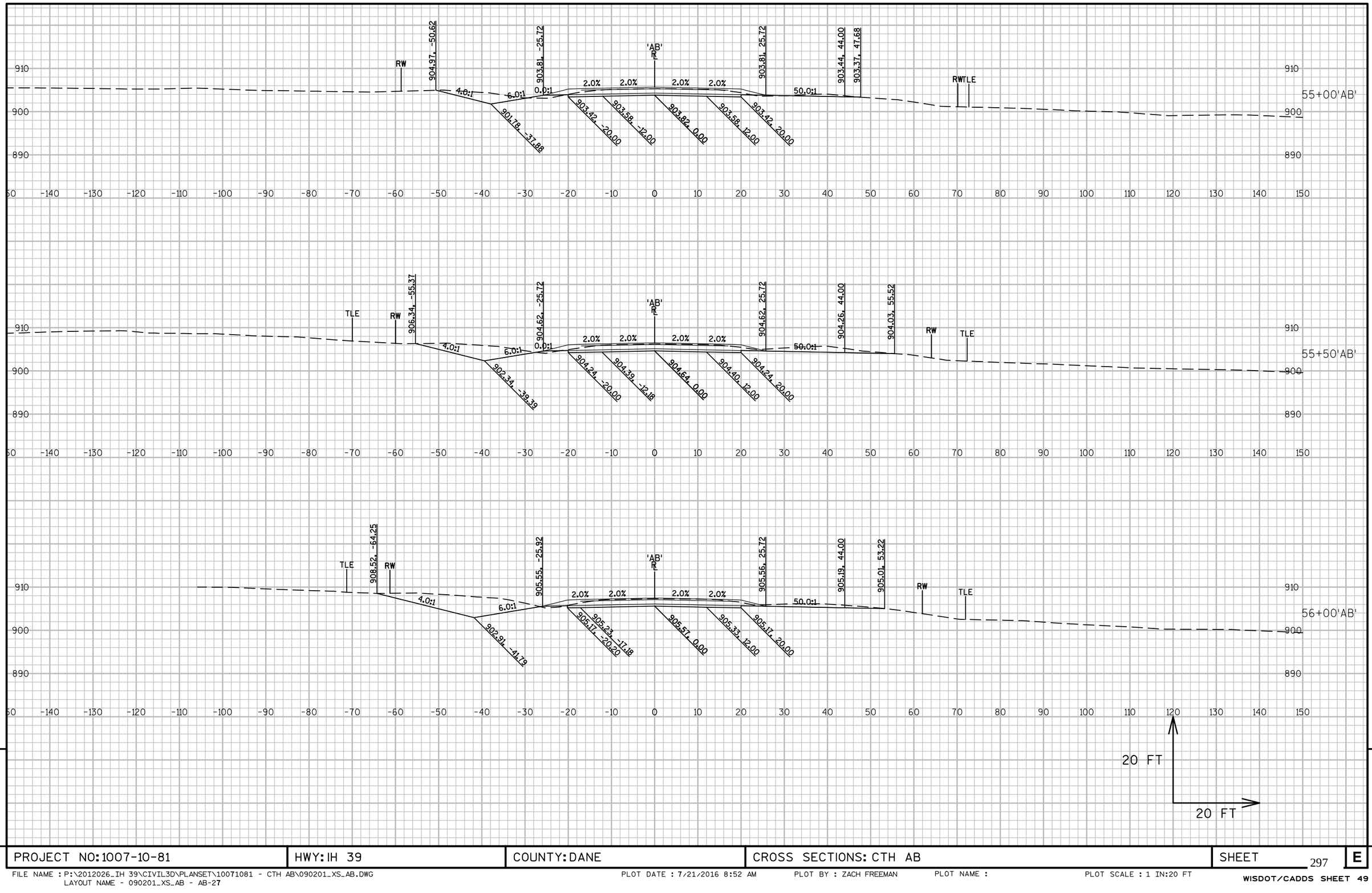


PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 296	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-26

PLOT DATE : 7/21/2016 8:52 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



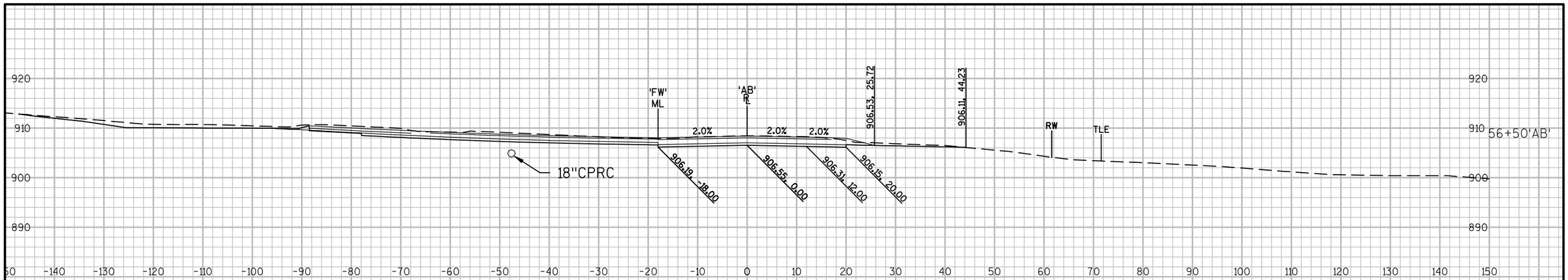
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 297	E

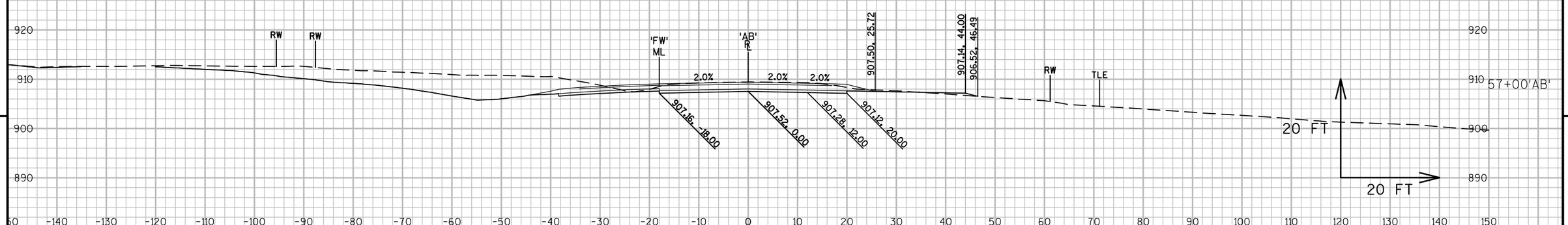
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-27

PLOT DATE : 7/21/2016 8:52 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT



FREEWAY COURT
INTERSECTION
STA. 56+61.55'AB'





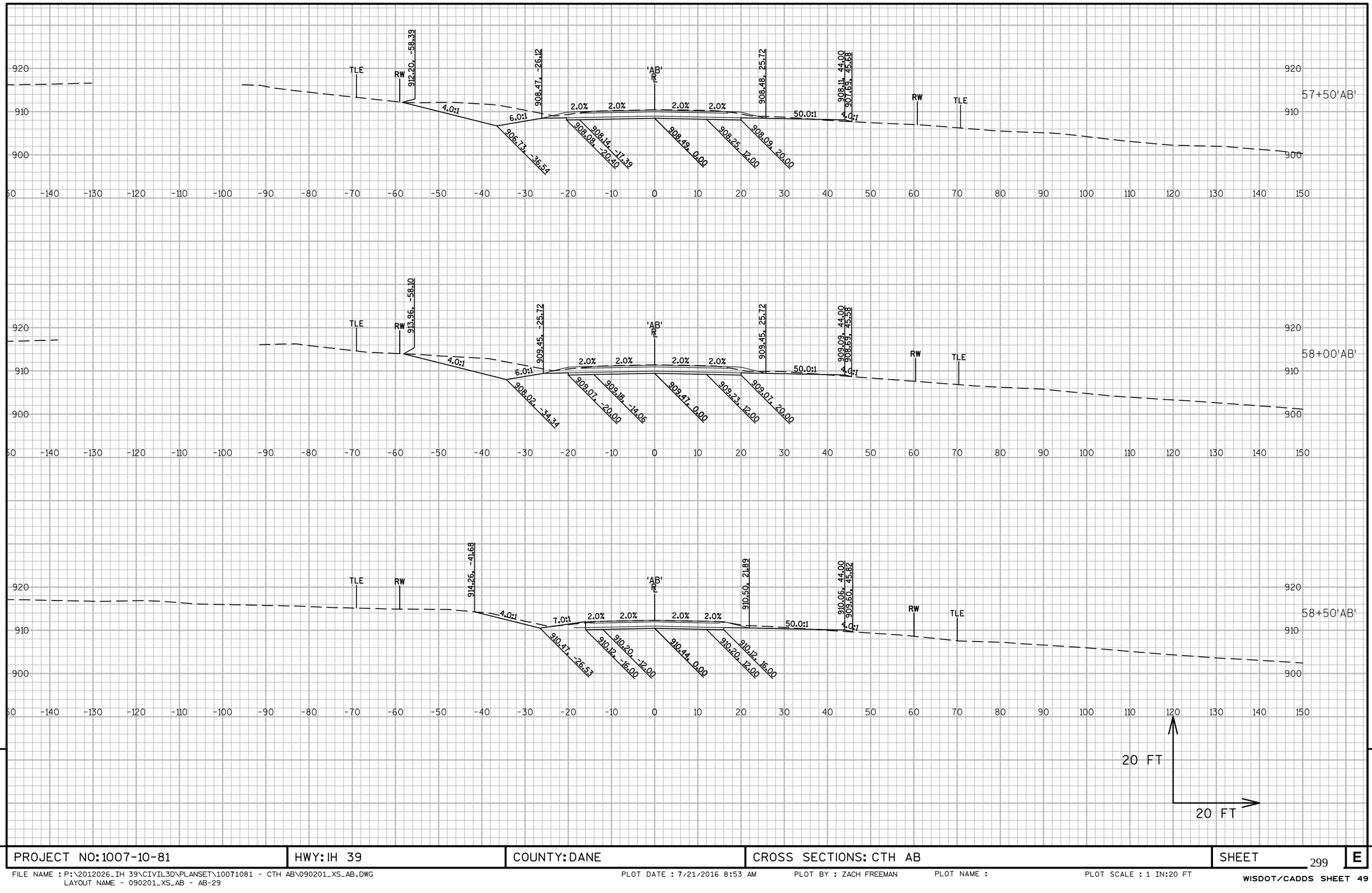
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 298	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-28

PLOT DATE : 7/21/2016 8:53 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

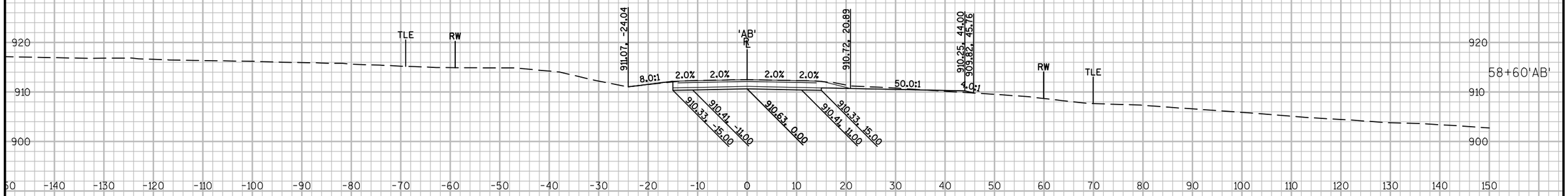


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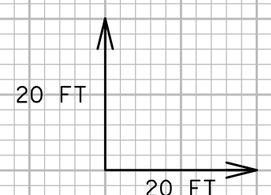
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PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 299	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-29
PLOT DATE : 7/21/2016 8:53 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



EAD PROJECT 1007-10-81
STA. 58+60.00'AB'
MATCH EXISTING



9

9

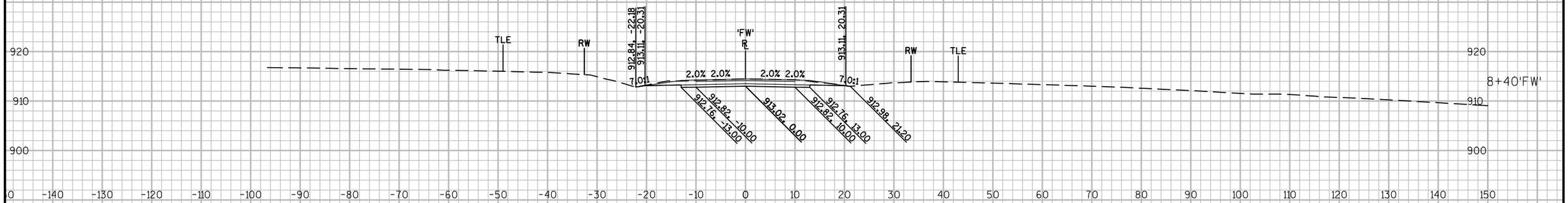
PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB	SHEET 300	E

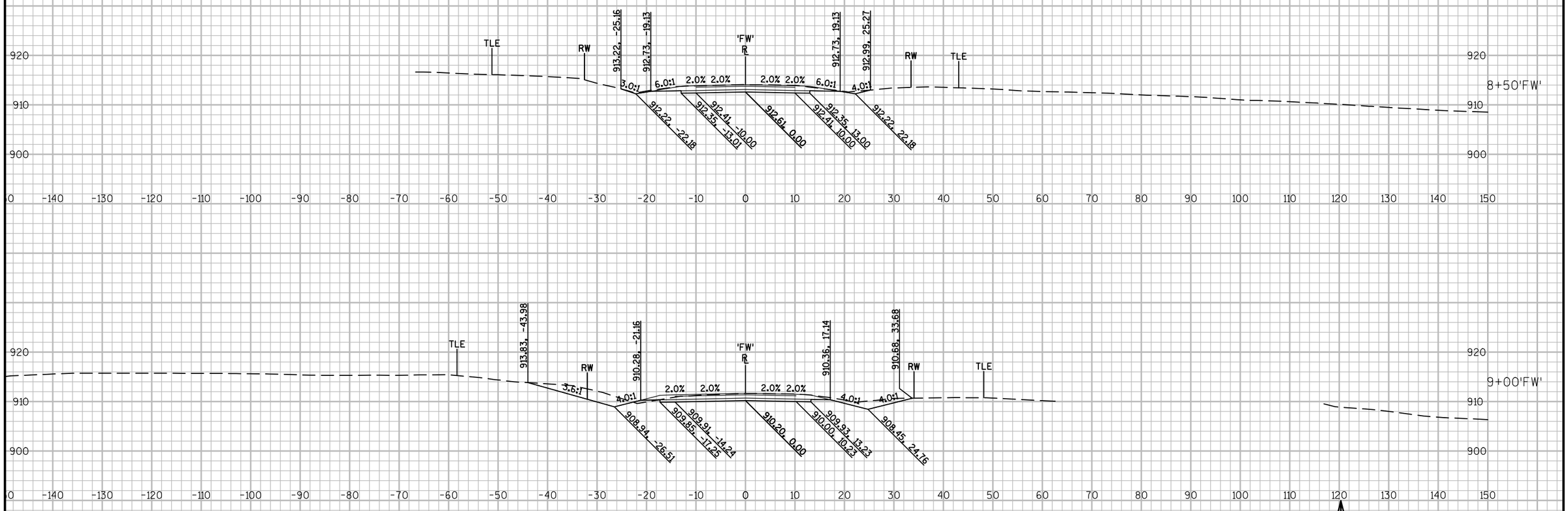
FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB.DWG
LAYOUT NAME - 090201_XS_AB - AB-30

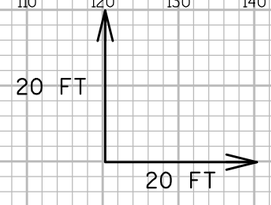
PLOT DATE : 7/21/2016 8:53 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION 1007-10-81
STA. 8+40.00'FW'
MATCH EXISTING







9

9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB - FREEWAY COURT	SHEET 301	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-FW.DWG
LAYOUT NAME - FW-01

PLOT DATE : 7/21/2016 8:56 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

RECONSTRUCT P.E.
STA. 9+24.60'FW', RT

9+25'FW'

RW
RW
'FW'
R
RW
TLE
18"CPCM

5.6:1 4.7:1 4.4:1 3.9:1 908.72, -23.27 5.2% 2.0% 2.0% 3.8%
908.35, -19.26 908.45, -16.22 908.78, 0.00 908.53, 12.28 908.47, 15.29

9+50'FW'

'AB'
ML
'FW'
R
'AB'
ML
RW

43.8:1 7.1:1 6.5:1 4.6:1 906.86, -34.74 8.0% 3.9% 2.0% 2.0% 4.4% 907.63, 22.23 3.9:1 41.7:1 14.1:1 9.6:1 11.0:1
908.34, -78.37 908.11, -68.27 904.91, -45.69 905.80, -39.64 906.63, -29.85 906.81, -26.19 907.31, -15.00 907.61, 0.00 907.23, 18.28 907.31, 15.24 904.92, 32.95 904.78, 38.60 905.35, 46.54 905.39, 52.02 905.68, 54.69

SKEW 4°

9+52'FW'

'AB'
ML
'FW'
R
'AB'
ML

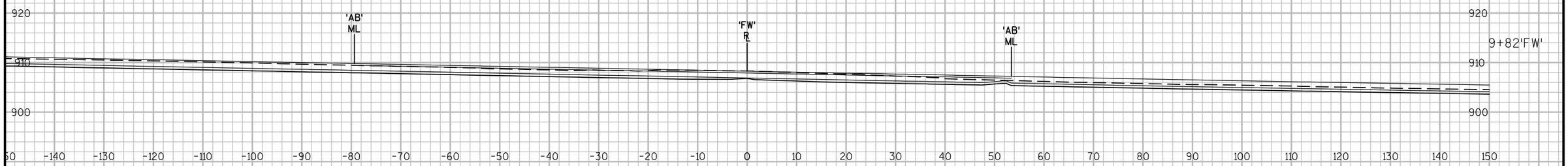
16.1:1 6.1:1 17.1:1 16.0:1 4.5:1 906.86, -34.80 7.8% 3.9% 1.8% 2.2% 4.9% 907.46, 23.04 4.0:1 8.1:1 32.7:1 7.1:1
909.08, -78.34 908.29, -65.54 905.00, -44.10 905.66, -40.14 906.60, -30.13 906.81, -26.92 907.26, -15.04 907.53, 0.00 907.18, 15.85 907.09, 18.93 903.79, 37.54 904.61, 44.22 904.79, 50.01

18" CPRC (62' @ 1.37%)

20 FT
20 FT

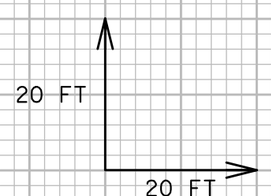
9 9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB - FREEWAY COURT	SHEET 302	E



MATCH LINE CTH AB
STA. 9+82'FW' = 56+61.55'AB' -18' LT

TYPE C MODIFIED INTERSECTION



9

9

PROJECT NO: 1007-10-81	HWY: IH 39	COUNTY: DANE	CROSS SECTIONS: CTH AB - FREEWAY COURT	SHEET 303	E

FILE NAME : P:\2012026_IH 39\CIVIL3D\PLANSET\10071081 - CTH AB\090201_XS_AB-FW.DWG
LAYOUT NAME - FW-03

PLOT DATE : 7/21/2016 8:56 AM PLOT BY : ZACH FREEMAN PLOT NAME : PLOT SCALE : 1 IN:20 FT

Wisconsin Department of Transportation

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